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2023 Country Report - France

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

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European Commission

France

2023 Country Report

ECONOMIC AND EMPLOYMENT SNAPSHOT

France's economy slows down in 2023 amid still high inflation

France's economy slowed significantly in the second half of 2022, but activity is expected to recover as of the second half of 2023. This deceleration stemmed from significant supply bottlenecks and rising energy and commodity prices, and supply shortages that remained significant. After the strong rebound of 6.8% in 2021, real GDP is estimated to have expanded by 2.6% in 2022. Economic activity is expected to remain subdued over the first half of 2023. Investment, in particular, is set to fall on the back of higher production costs, tighter financial conditions and heightened uncertainty. However, the projected decrease in inflation is expected to allow for a gradual recovery in the second half of the year. Activity is thus forecast to increase by 0.7% and by 1.4% in 2023 and 2024 respectively.

In 2022, Russia's invasion of Ukraine led to a surge in energy and commodity prices but large public support schemes significantly cushioned the shock to the private sector. The impact of the energy crisis on both households and businesses was largely mitigated by the government measures and inflation in France remained far below other EU countries in 2022, at +5.9% against +9.2% for the EU. From 2023 onward, the impact of the war in Ukraine on France's economy is expected to fade. However, at the start of 2023 the increase in regulated electricity and gas prices, the end of the fuel rebate and the delayed transmission of energy prices are set to feed into consumer prices. In 2023, inflation is expected to progressively slow down as wholesale prices of energy and commodities have fallen. Overall, inflation is projected to reach 5.5% in 2023 and 2.5% in 2024.

Measures to counter the impacts of the energy crisis held back an improvement in public finances after COVID-19. The general government deficit narrowed to 4.7% of GDP in 2022, down from 6.5% in 2021 and 9% in 2020. The decline in the deficit was driven by growth and continued dynamism in tax revenues, the phasing-out of most pandemic-related emergency measures and the planned lower impact of recovery measures. However, these deficit-reducing effects were partly offset by the budget cost of measures adopted to mitigate the impact of high energy prices and, more broadly, inflation (See Box 1). In turn, the interest burden on debt increased substantially, mainly driven by bonds indexed to inflation. Looking forward, the deficit is expected to reach 4.7% of GDP in 2023 (still reflecting the cost of the spending to counter the energy crisis) and to decrease to 4.3% of GDP in 2024. At 111.6% of GDP in 2022, public debt decreased only slightly and, going forward, is set to decline to 109.5% of GDP by 2024. However, thereafter public debt is projected to enter again an upward trend over the medium term in the absence of policy action.

France faces macroeconomic vulnerabilities, which are assessed in the in-depth review. ([1]) These vulnerabilities are related to high public debt and competitiveness challenges, but the policy response has been broadly appropriate. Indeed, the reform of public finance management entered into force in 2022 and a new mechanism to conduct annual public spending evaluations has been adopted. An effective implementation of these two reforms

([1]) European Commission (2023), In-Depth Review for France, Commission staff working document (COM(2023) 633 final).

remains central to help curb public expenditure and put public debt on a sustained downward trend. Major reforms to lower labour costs, reduce production taxes and the corporate tax rate have helped restore cost competitiveness. The implementation of recent reforms for the simplification of the business environment and productivity-enhancing investments included in the recovery and resilience plan (to support the green and digital transitions and research) will be key to addressing the persisting structural competitiveness challenges. Their full impact is expected to materialise over the medium term (see Annex 22).

Labour market developments

Labour market developments are positive, leading to higher employment. Despite the economic slowdown, the labour market remained dynamic in 2022, leading to further declines in the unemployment rate, which reached its lowest level since Q1 2008 (7.2% in Q4 2022). The employment rate for people aged 15 to 64 also reached 68.3% in Q4 2022, its highest recorded level. Despite some improvement, vulnerable groups still face persistent barriers to accessing the labour market (see Annex 14).

Labour shortages and skills mismatches remain important issues. Labour shortages were already high before the COVID-19 crisis and increased steadily in 2021, peaking in 2022. Employers are reporting the lack of adequately trained workers as one of the main barriers to recruitment, ahead of workers' demand for better working conditions. The main sectors affected are industry, construction, information and communication, education and health. The current outcomes of the deployed up-and re-skilling measures, such as the plan to reduce recruitment tensions, call for the available training to be better aligned with labour market needs (see Annex 14).

The effects of recent wide-ranging labour market reforms and support measures, as well as the pension reform, are set to support employment and economic growth. The unemployment insurance reform of 2019, which entered into force fully in 2021, including disincentives to the excessive use of short-term contracts, may have contributed to the decline of labour market segmentation below pre-crisis levels in Q4-2022, in line with the EU level trend. More recently, the December 2022 law introduced a countercyclical modulation of the duration of unemployment benefits, depending on the state of the labour market. Moreover, the increase in the effective retirement age included in the current pension reform is set to have a positive impact on potential growth in the medium term, through an increase in the working population. In line with principle 8 of the European Pillar of Social Rights, the active involvement of social partners and stakeholders is key to ensuring the acceptability of any reform.

France performs well overall on the social scoreboard linked to the European Pillar of Social Rights. All of the scoreboard indicators (see Annex 14) are at or above the EU average. Some weaknesses nevertheless remain, such as the integration of vulnerable groups in the labour market, skills mismatches and low participation of low-qualified adults in learning. The education system is overall good, but the socio-economic inequalities continue to impact pupils' educational outcomes (see Further priorities ahead).

France performs well and is improving in most of the UN Sustainable Development goals (SDGs). Better performances can be observed in fairness-related SDGs such as gender equality (SDG 5) and some education indicators (SDG 4) (see Annex 1). The best improvements can be seen in responsible consumption and production (SDG 12) and decent work dimensions (SDG 8). However, France scores below the EU average in sustainable cities and communities (SGD 11) and has room for improvement in the 'no poverty' dimension (SDG 1). Indeed, France is deviating from its 2030 target on poverty reduction, as the number of persons at risk of poverty or social exclusion increased by 512 000 between 2019 and 2021. Poverty risks concern mainly single-parent families,

the low-skilled, children, those born outside the EU and the self-employed (see Annex 14).

Economic exposure to Russia's invasion of Ukraine

France's imports of fossil fuels from Russia are limited. With a sizeable share of nuclear energy, the French energy mix is less reliant on fossil fuels than other EU country. Moreover, Russia represented only 9% of coke and refined petroleum products and 11% of crude petroleum and natural gas imports in 2022. France also has very limited non-energy trade with Russia. However, some industrial sectors have been affected by supply disruptions of key components from Russia. This is the case in particular in the aeronautics (dependent on titanium) and automotive sectors (palladium).

High public and private debt and weak competitiveness remain macroeconomic challenges to be monitored

The coexistence of high public and private debt might be a source of vulnerability. Private sector debt was already high before the outbreak of the pandemic. In 2020 it surged further, also helped by the sizeable envelope of state-guaranteed loans deployed by the French government. This scheme proved successful in stabilising corporate balance-sheets and sustaining investment. The increase in corporate borrowing remained accompanied by increases in equity and the accumulation of liquidity buffers. Economic growth in 2021 facilitated a passive deleveraging, but credit flows, especially for corporations, remained dynamic throughout 2022, which led non-financial corporations' and households' debt ratios to increase and broadly stabilise, respectively. For both corporates and households, debt ratios remained high compared to reference benchmarks. Indebtedness in nominal terms keeps being fuelled by dynamic credit flows, which gained momentum for corporates, while slowed for households in 2022. Nevertheless, according to the euro area bank lending survey ([2]), credit standards tightened in the fourth quarter, especially for corporate and housing loans. There is no visible risk of a wave of corporate bankruptcies so far. After decreasing by a cumulative 50% in 2021 compared to 2019, corporate bankruptcies rose sharply in 2022, but remained around 20% below the pre-pandemic levels. The financial sector remains resilient and financing conditions are more favourable than in other EU countries, both in terms of credits volumes and interest rates. Yet high private debt might represent a source of vulnerability, in a context of rising interest rates. However, the structure of the French house credit market with a large majority of fixed-rates loans and macroprudential measures of the 'Haut Conseil de stabilité financière' on house credit and banks' exposures to large and high indebted corporate mitigate these risks.

France's exports were strongly hit by the COVID-19 crisis in 2020 and remained subdued in 2021 and 2022. Exports declined more than the EU average in 2020 and only rebounded moderately in 2021, partly due to unfavourable sectoral exposure to the COVID-19 crisis, including for aeronautics and tourism.

In 2022, net exports still contributed negatively to growth, remaining far below their pre-crisis level. Competitiveness improved in 2022 as a result of lower inflation in France than in its trading partners, the fall of the euro against the dollar and fiscal measures, notably reductions in taxes on production and the corporate tax rate. This came after two years of relative stability, as the increase in unit labour costs was in line with the euro area during the Covid-19 crisis.

However, figures in 2020 and 2021 are difficult to interpret, due to the massive deployment of partial unemployment schemes. Unit labour costs rose sharply in 2022 to partly offset the brisk increase in inflation

([2]) European Central Bank, January 2023 euro area bank lending survey, 2023

triggered by energy prices. Yet the increase was in line with those in the EU and the euro area as a whole.

While France's labour productivity growth caught up with the euro area and the EU, structural weaknesses remain. Labour productivity growth in France has caught up with the euro area and the EU average before the COVID-19 crisis. Although productivity growth has recently been reined in by still-ongoing post-COVID labour hoarding and the dynamic response of employment to recent policy measures, labour productivity, measured in full-time equivalent jobs, is projected to gain momentum, growing in line with the the euro area and EU averages in the medium term.

Despite this, structural weaknesses remain, including skills shortages and mismatches, the lack of digitalisation among small/medium-sized firms and stagnating business R&D intensity (see 'Further priorities ahead'). In addition, restrictive regulations in regulated professions and in retail have weighed on competition and business dynamics, with the risk of leading to higher prices, lower innovation and lower productivity gains (see Annex 12). Total factor productivity growth in France remains subdued and appears to be on a declining path. It is mainly accounted for by information and communication services, finance and insurance sectors, as well as manufacturing of electronic products.

In part, this can be explained by a rapidly increasing productivity gap between the highest and least-performing firms, in particular in services. Another explanation lies with the training of France's workforce, as the skills of its workforce are below that of some peers (notably the Netherlands and Germany).

The French recovery and resilience plan and the 'France Relance' plan aim to make the economy more competitive by fostering the digitalisation and the inclusion of young people into the labour market and reducing taxes on production. A range of measures had been taken before the pandemic to address weak competitiveness, such as the tax credit for competitiveness and employment (CICE), transformed in 2019 into a permanent decrease in payroll charges paid by employers.

Several reform measures also helped address the issue of sluggish productivity growth. The PACTE Law, adopted in May 2019, aimed to help firms grow by reforming the firm-size thresholds, improving the restructuring procedure and encouraging target-based compensation.

France is characterised by increasing regional disparities going beyond the enduring divide between its metropolitan and outermost regions. While the capital region (Ile-de-France) had a GDP per capita of 176% of the EU average, 23 out of 27 regions have lost ground relative to the EU average, with low or negative growth in 2010-2020 (see Annex 17).

The drop in GDP per capita was particularly severe in 2019 and 2020. As a result, only two French regions had a GDP per capita greater than the EU average in 2021. These disparities could be explained by variations in labour productivity as well as considerable differences in regional innovation performance (in predominantly rural, deindustrialized and outermost regions) and educational attainment.

The divide between urban and rural areas in terms of economic dynamism and long-term growth prospects has become an issue of public concern. Addressing regional imbalances is key to ensuring the success of sectoral strategies and improving France's long-term growth prospects.

Box1

Energy policy response in France

France has adopted various support measures to cushion the impact of energy price inflation on households and businesses. For 2023, the gross budget costs of these measures are projected – in the Commission 2023 spring forecast – to amount to 1.5 % of GDP. ([3]) Most measures do not preserve the price signal and are not targeted at the most vulnerable, who are proportionally the most impacted. Most of the measures are temporary and set to expire by January 2024 at the latest.

The most representative measure consists of a cap on regulated gas and electricity prices, benefitting households at large. For electricity, the increase was limited to 4% in 2022 and 15% until January 2024. The regulated gas price in 2022 was frozen at the level of October 2021 and its increase limited to 15% in 2023. Other significant measures include a widespread subsidised discount on retail liquid fuels in 2022, replaced by a fuel voucher for low-income households in 2023; subsidies to businesses, including smaller ones, to reduce their energy bills; and direct transfers to low-income households. Other permanent measures, aimed more broadly at offsetting the effects of inflation, included the frontloaded indexation of pensions and social benefits, the indexation of public sector wages and the withdrawal of the audio-visual tax.

Under Council Regulation (EU) 2022/1854, France applies the EU solidarity contribution ([4]) as well as the mechanism for capping infra-marginal market revenues from electricity generation. The budget cost of the support measures was also partly offset by savings stemming from public service energy obligations linked to renewable energy production.

([3]) For 2022, the gross budget costs of the measures amounted to 1.4% of GDP. Some of the measures outlined in this box were already in place in 2022.]

([4]) I.e. the application of a mandatory temporary solidarity contribution at a rate of at least 33% to the extraordinary and unexpected profits of businesses active in the extraction of crude petroleum, natural gas or coal, and the refinery sector. It is levied on any taxable profits (as determined under national tax rules in the fiscal year starting in 2022 and/or in 2023) which represent more than a 20% increase over average yearly taxable profits in 2018-2021.

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

The French recovery and resilience plan (RRP) aims to accelerate the green and digital transitions, increase growth potential and strengthen cohesion. The plan consists of 22 reforms and 70 investments that will be supported by EUR 39.4 billion in grants (1.6% of GDP). The first payment request submitted in November 2021 led to the disbursement of EUR 7.4 billion (see Annex 3).

The implementation of France's recovery and resilience plan is underway. France submitted one payment request, corresponding to 38 milestones and targets in the plan and resulting in an overall disbursement of EUR 7 400 000. They cover reforms in the areas of public finance, climate change, housing, mobility, labour market, skills and health. Several targets concern major investments in the fields of energy renovation of buildings, decarbonisation of industry, clean vehicles, research, youth employment, and education. France submitted a revision of its plan in April 2023, including a REPowerEU chapter. France's request to modify its plan is based on the need to factor in the high inflation experienced in 2022, supply chain disruptions and the downward revision of its maximum RRF grant allocation. The inclusion of the new REPowerEU chapter in the recovery and resilience plan will allow additional reforms and investments to be financed in support of France's strategic objectives in the field of energy and the green transition.

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.

France's RRP played a key role in accelerating the energy renovation of buildings in 2021-22. By the end of 2022, most energy renovation projects for buildings had been selected and work had started, representing an investment of EUR 5.8 billion (with a heavy focus on public buildings). Public procurement for renovation work to improve building insulation had a strong leverage effect on the sector (upskilling workers and improving technical solutions). The fast deployment of the 'MaPrimeRénov' support scheme helped more than 700 000 households in their energy renovation work, and 40 000 social housing dwellings started renovation work, with a minimum energy-saving rate of 30%. This investment is supported by major reforms such as the climate and resilience law adopted in August 2021, which legislates against the two most energy-inefficient categories of dwellings in France (*passoires thermiques*, or 'thermal sieves') by progressively prohibiting the rental of these buildings. The revision of the regulation governing insulation of new buildings (RE2020) should help reduce the energy intensity of the building sector.

Investment in energy efficiency and decarbonisation processes in the industrial sector is underway. It is expected to reduce greenhouse gas emissions by 5 million tCO_2eq over the next 20 years. Despite France lagging behind on the 2020 renewable energy targets – with renewable energy representing just 19.1% of its gross final energy consumption, well below the 23% target – the initial RRP did not include investment dedicated to increasing renewable electricity capacity.

However, the RRP includes investment in renewable energy in heating systems, with renovations of buildings supported by the 'MaPrimeRenov' scheme including the rollout of heat pumps and biomass boilers, and partial and indirect support for renewable energy through measures supporting the decarbonisation of industry.

The RRP provides for major investment in sustainable transport. One of the largest measures in the RRP finances the reconstruction and modernisation of the railway network, in particular local railway and freight lines. The electrification of vehicles was accelerated with financial support for buying clean vehicles.

Reforms of public finance management and quality of public expenditure started to be delivered in 2022. The RRP includes measures to support the consolidation of public finances in the medium and long-term. The most important reform is the entry into force as of 2022 of an organic law on the modernisation of public finance management. The law introduces a multiannual expenditure rule applicable to total public spending, aimed at strengthening the multiannual dimension of budgetary decisions. This is further strengthened by extending the remit of the national fiscal council (High Council of Public Finances) to assess the consistency of the main annual fiscal targets with such new multiannual expenditure objectives, and to assess the plausibility of revenue and expenditure forecasts in the annual budget laws.

In this respect, France is expected to adopt a multiannual programming law for 2023-27. This law should set the multiannual targets that should underpin the stabilisation and then reduction of the debt ratio. The ultimate contribution of this reform to public debt reduction will crucially depend on the stringency of the multiannual expenditure targets and future compliance with them. In addition, the bases of a new spending review framework have been adopted, in the context of the 2023 budget law. As of 2023, regular public expenditure evaluations should be conducted, and their results factored into financial laws, so that they translate into expenditure savings and efficiency gains.

The RRP also supports the digital transition. Digitalisation of health is a priority, including support for digital medical records, interoperability, secure exchange of data and training of health professionals. The French plan invests in research and deployment of key digital technologies. Measures to support the digital skills of pupils are also underway and should, for instance, enable 1.4 million students in higher education to have access to digital training capacities by the end of 2024.

A significant share (around EUR 7.6 billion) of the plan supports measures relating to employment, education and skills, with a focus on youth. This should help implement the European Pillar of Social Rights. General measures support the upskilling and re-skilling of workers, with a special focus on digital skills. Nearly EUR 5.5 billion are dedicated to supporting young people, notably through the '1 young person, 1 solution' plan. Youth employment increased by 5 percentage points between Q3 2019 and Q3 2022, and half of this increase is due to the number of apprentices, which more than doubled over the period. A recent study ([5]) shows that while the net quantitative impact of the hiring subsidy targeted at people under 26 was limited, it helped young people get hired on permanent or longer fixed term contracts. The RRP also contributed to scale up orientation and labour market integration measures.

([5]) Dares, Les effets sur l'emploi de l'aide à l'embauche des jeunes instaurée en 2020, Document d'études n°266, 2023

Box 2:

Key deliverables under the recovery and resilience plan in 2023-24

- 700 000 “MaPrimeRenov” grants allocated to households, to improve the insulation of their homes
- 20 million square meters of public buildings with energy renovation completed
- Entry into force of the Climate and Resilience Law
- 700 projects financed that focus on ecological restoration and preservation of biodiversity in protected areas
- Operationalisation of France’s new spending review framework
- Entry into force of a new Public Finances Programming Law
- 45 000 new school classes equipped with digital resources
- 40 million patients having an electronic national health record
- 500 km of renovated local railway lines and 150 km of renovated freight lines
- 1 500 electric charging stations open to the public
- Entry into force of decrees implementing the research programming law

FURTHER PRIORITIES AHEAD

Beyond those tackled by the RRP, France faces additional challenges. The education system struggles to deliver good results and to address inequalities, especially as the socio-economic background of pupils remains a determinant of their educational outcomes.

France is lagging behind in terms of renewable energy production and could improve its performance on energy efficiency, notably by promoting thorough energy renovation of buildings. Both challenges would require investing in green skills for the workforce. France would benefit from putting its public debt on a downward trajectory, in particular by effectively implementing, in the medium term, the fiscal reforms included in the recovery and resilience plan. Finally, French businesses' competitiveness is still held back by several structural weaknesses.

Addressing these challenges will also help to make further progress in achieving those SDGs where France currently shows room for further improvement, namely Sustainable cities and communities (SDG 11) and No poverty (SDG 1).

An effective multiannual fiscal trajectory to curb public debt

France's high public deficit and debt continue to pose high sustainability challenges over the medium term. After the historical peaks reached in 2020, following the COVID-19 crisis, the public deficit remained elevated and public debt declined to 111.6% of GDP in 2022 and, according to the Commission 2023 spring forecast is expected to decline further, to 109.5% by 2024, Still well above pre-pandemic levels. This is largely due to a high level of public expenditure, exacerbated by the fiscal response deployed to counter the effects of recent energy price hikes.

In 2022, France's public expenditure, at 58.1% of GDP, remained the highest in the EU, well above the EU average of 49.8% of GDP. And, according to the Commission 2023 spring forecast, it is expected to remain so throughout 2023 and 2024. Public debt sustainability challenges are still assessed as high over the medium term, with public debt projections showing an upward trend again, although the projected decline in age-related expenditure helps mitigate such challenges in the long term (see Annex 21).

The fiscal reforms adopted under the French RRP constitute a promising avenue for controlling the dynamics of public spending and, ultimately, reducing public debt. The cornerstone of this effort is the setting of a stringent multiannual expenditure ceiling, starting from the adoption of the multiannual public finance programming law for 2023-27.

The newly adopted spending review framework should support compliance with the multiannual fiscal trajectory by duly identifying potential savings. Moreover, it should be key to increasing the efficiency of public expenditure and channelling resources towards priority policy areas, such as growth-enhancing investment, green and digital transition and social and economic resilience.

Ultimately, these reforms should help strengthen France's growth potential and mitigate public debt sustainability challenges. In this regard, it is of the utmost importance that the new spending review framework attains better results than past attempts, when they were either limited, short-lived or difficult to quantify. Likewise, compliance with the multiannual budget targets should be ensured, compared to the track record in the past.

The new pension reform is expected to have a positive impact on pension sustainability. This reform, presented in January 2023, strongly differs from the one envisaged during the previous presidential term, which focused on a broad unification of the pension regimes and was eventually abandoned in 2020. The main objective of the new reform is first and foremost to ensure the system is balanced by 2030 ([6]). Its chief elements are a progressive increase in the statutory retirement age from 62 to 64 years, the acceleration of a previous reform extending the required contribution period and the ending of some of the main special pension schemes. ([7])

By increasing the labour participation rate of older workers, the reform might positively affect potential growth in the medium term. Targeted actions to help senior workers integrate into the labour market could help support this.

Despite the envisaged positive impact on pension sustainability, as well as some progress in terms of convergence among pension schemes, the pension system in France remains complex and the multiplicity of schemes remains an obstacle to labour mobility ([8]). The distributional impacts of the reform call for close monitoring, and further detailed analysis is needed of the social effects of the reform.

([6]) According to projections by the pension advisory council (Conseil d'orientation des Retraites, COR) of September 2022, the current pension system would accumulate deficits of EUR 12.4 billion in 2027 and EUR 13.5 billion in 2030.

([7]) The reform integrates into the general pension regime the special schemes for all new recruits to: the Paris public transport company (RATP), the electricity and gas industries (e.g. EDF), the Banque de France, clerks of notaries and CESE (French Economic, Social and Environmental Council).

([8]) European Commission, *2022 Country Report – France*, SWD(2022) 612 final

Unlocking productivity growth to boost competitiveness

In the years before the COVID-19 crisis, France's trade performance showed some improvement, following a long period of deterioration. France faced a significant and continuous contraction in its export market shares over the decade until 2012 but they stabilised in 2013-19, accompanied by an improvement in cost-competitiveness. In particular, growth in unit labour cost was moderate in the few years before the COVID-19 crisis, when large cuts in social security contributions were adopted (tax credit for competitiveness and employment, CICE and Responsibility Pact). Unit labour costs increased moderately by 2.0% between 2013 and 2019 (5.7% in the euro area).

Despite rising wage growth in 2022, the increase in unit labour costs was in line with the EU and the euro area. Unit labour costs grew by 5.3% in France over 2020 and 2021, compared to 4.6% in the euro area. However, these figures are difficult to interpret; the massive deployment of partial unemployment schemes, reflecting labour hoarding, led to misleading productivity readings.

France's labour productivity's recent evolution appears positive compared with the euro area and the EU, but structural weaknesses persist. Labour productivity growth in France caught up with the euro area and the EU average before the COVID-19 crisis. Although productivity growth has recently been reined in by still-ongoing labour hoarding, labour productivity, measured in full-time equivalent jobs, is projected to gain momentum, growing in line with the euro area and EU averages in the medium term. Yet structural weaknesses remain, notably increasing skills shortages and mismatches, a stagnating business R&D intensity and lack of digitalisation among smaller firms. In addition, restrictive regulations in regulated professions and in retail have weighed on competition and business dynamics, with the risk of leading to higher prices, lower innovation and

productivity gains. In the retail sector, France has adopted stringent restrictions on operations and establishment since 2019 (see Annex 12).

Business R&D intensity is stagnating and France's innovation performance does not reflect the high level of public support for business innovation. The high level of public support for business innovation (the highest in the EU as % of GDP, relying primarily on the tax credit scheme 'crédit impôt recherche') has not had a tangible effect on innovation output, as measured for example by patents (see Annex 11).

Over the course of 2020, innovative activity among French businesses was significantly below that in the EU: less than 30% of French companies innovated in 2020 compared to 36% in the EU. However, the French RRP and the longer-term strategy France 2030 may boost innovation in the coming years, since they devote sizeable investment to research, development and innovation, targeting strategic sectors such as hydrogen, decarbonation of industry and advanced digital technologies.

Diffusion and adoption of digital technologies among French businesses is comparatively low. While the French RRP provides extra funding to the business digitalisation action 'France Num', smaller French firms' digital intensity (47%) is still lagging behind the EU average (55%). Only 12% of small businesses sell online (EU average: 18%). In term of digital skills, France faces a severe shortage of ICT specialists (see Annex 10).

Containing production costs and providing a favourable business environment are key for corporate investment and competitiveness. Firms in France have to face high compulsory levies. However, the recent reduction in the corporate tax rate and taxes on production could help preserve or attract industrial activity. Since 2022, as in other EU countries, labour shortages and skills mismatches, energy costs and general uncertainty about the future have weighed on corporate investment, although it has held up better than expected. While smaller firms' access to finance remains satisfactory, late payments from the public and private sectors have increased, at their expense. The integration of French businesses into the single market is the lowest in the EU ([9]). Higher integration could help them grow and boost productivity gains.

Large investment programmes supporting industry's transition towards net zero could reinforce competitiveness. Through its recovery and resilience plan and the long-term strategy 'France 2030', significant financial support is provided to businesses for their green transition and the growth of clean energy technologies. Indeed, France has a strong manufacturing base in low-carbon technologies and components, including hydrogen and nuclear, and is expected to expand to other decarbonised-generation technologies, including new offshore windfarms.

France represents nearly 11% of the EU's total venture capital investment in climate technology start-ups and scale-ups. France also suffers less than the rest of the EU from skills' shortages in the manufacturing of clean energy technologies. Despite the large public support however, only 29% of small French firms have invested more than 1% of their turnover to become resource efficient (EU average: 40%)

Investment in clean tech manufacturing is however hampered by long permitting procedures. It takes 17 months on average to obtain a building permit, receive environmental authorisation and carry out the public investigation process for an industrial project ([10]). The procedure involves bottlenecks, where the project owner must wait for replies from different bodies (administrative court, opinion of the environmental authority, report from the public investigator). Furthermore, a public consultation must be held for large

([9]) France's intra-EU trade as a share of GDP has slightly declined for several years and is now the lowest in the EU with 16.5% (against 42% on average for EU countries). Source: Eurostat

([10]) Assemblée nationale, Propositions des pilotes pour le projet de loi industrie verte, April 2023

industrial projects. This process can last at least 6 months, which adds to the average time of 17 months. Investment projects may also be subject to litigation procedures that can last several years, leading to projects being abandoned. The French government announced a bill of law for the green industries, which could include measures to accelerate factories' establishment ([11]).

Addressing inequalities in education

Despite public spending on education above the OECD average, the French education system is marked by a significant share of low achievers and high inequalities. The share of students lacking basic skills remains high, especially in mathematics. Performance remains strongly linked to socio-economic background. However, the COVID-19 pandemic did not significantly deepen existing socio-economic inequality, as measures taken to support the most disadvantaged pupils were successful, although to a higher extent in French than in mathematics. These inequalities weigh on the workforce's up- and re-skilling potential, fuelling at a later stage labour market and social challenges (see Annex 14).

Public spending in France is higher in secondary education but lower in primary and tertiary education compared to the EU average, while the OECD recommends prioritising spending in education from the earliest age to better tackle inequality and school dropout. ([12])

Reform measures adopted in 2017 to halve class sizes for the first and second grades in disadvantaged public primary schools helped bring class size more in line with the OECD average. While it is too early to assess the long-term impact of this reform on the learning outcomes of almost 300 000 students, a recent report by the Senate ([13]) shows encouraging results in maths, but outcomes in French are more mixed. It also welcomes the increased support for teachers, who benefited from vocational training to implement this policy, but calls for more sustained efforts to help teachers develop new pedagogical practices. Moreover, many socio-economically disadvantaged pupils are not covered by the measure, as they are not attending schools in priority areas (REP, REP+).

Underachievement in maths and major inequalities remain a source of particular concern, affecting potential growth. According to national and international surveys, average performance in mathematics has steadily decreased over the past 30 years for all categories of pupils, and in particular for disadvantaged pupils. According to researchers of the Economic Analysis Council ([14]), labour productivity in France could substantially increase if performance in mathematics improved (see Annex 15).

The percentage of early school leavers stood at 7.6% in 2022, continuing the downward trend of the last decade, but some disparities exist. Early leaving is higher among young people with low-educated parents and those born outside of France. Compared to the national average, boys and pupils living in rural areas and in outermost regions also lag behind. The inclusion of pupils with a disability, while progressing, remains a challenge, mainly due to the shortage of support specialists and low accessibility (see Annex 15).

Difficulties in recruiting teachers and their working conditions remain major challenges. The French Court of Auditors recently warned about the growing difficulties

([11]) France's Ministry of Economy, Industrie verte: un projet de loi en co-construction, April 2023 .

([12]) Cour des comptes, Mobiliser la communauté éducative autour du projet d'établissement, Rapport public thématique, 2023

([13]) French Senate, *Bilan des mesures éducatives du quinquennat*, Rapport d'information n° 543, 2022

([14]) https://www.cae-eco.fr/baisse-de-la-productivite-en-france-echec-en-maths

in recruiting teachers ([15]), particularly in certain regions and disciplines. Supply teachers are recruited to fill the vacant posts, but often do not have the same level of qualifications and practical experience as permanent teachers.

In 2022, the Council of the EU recommended that France improve working conditions and continuous training for teachers. In response, the French government upgraded teachers' wages in 2023 and opened new vocational training centres in 2022 (see Annex 15). Moreover, while OECD reports show that giving schools a high degree of autonomy can have a positive impact on pupils' performance (when coupled with accountability), the court of auditors warns that in practice head teachers have limited margins to adapt to students' needs and local circumstances. ([16])

Energy: focusing efforts on renewable energy, deep renovation, and green skills

France missed its renewables target for 2020 in terms of gross final energy consumption and could have difficulties meeting the new 2030 objective. France is lagging behind in terms of deploying renewable energy, in particular for electricity production and heating. Delays in permitting, for all technologies (onshore and offshore wind as well as solar) are related to a lack of political support for projects, inadequate planning and long and complex permitting procedures, as well as public acceptance and legal challenges, which create uncertainty for investors and developers.

The recently adopted law on the acceleration of renewable energy production acknowledged the need to considerably develop renewable heat and gas and increase electrification. The new law gives momentum to a faster deployment of renewable projects that could place France on a trajectory to achieve the 2030 objectives. It is therefore crucial to swiftly adopt implementing acts (e.g. based on overriding public interest, agrivoltaics, tariff reductions, etc.), as well as a new multiannual energy programme (Programmation Pluriannuelle de l'Energie) that reflects the level of political ambition of the new law and the appropriate balance between energy sources.

In addition, strengthening human and engineering capacities, both at the level of the state (central administration and decentralised services) and regional and local authorities will be key in accelerating the deployment of renewables on the ground.

France is facing rising temperatures and sea levels, and the increasing occurrence of heatwaves, droughts, and forest fires. Two thirds of the population is exposed to climate change and it is projected that by 2050 two billion cubic meters of water will be lacking (see Annex 6). France is facing an increasingly severe water scarcity challenge exacerbated by repetitive drought periods. ([17]) This questions the fair and sustainable distribution of scare resources for biodiversity, agriculture, energy production and drinking purposes. Mitigating water risks requires better synergies between national and local administrations and river basin management bodies. ([18])

Since 2000, nuclear production losses due to high river temperatures and low river flows have represented an average of 0.3% of annual production, which has a serious impact on the security of electricity supply. Security of supply has also been affected by the lower availability of hydropower output, exposed to droughts, while the trend for acute long dry periods is expected to become more frequent, even if it alternates with floods. Swift deployment of renewables would contribute to France's energy security.

([15]) Cour des comptes, Devenir enseignant : la formation initiale et le recrutement des enseignants, 2023

([16]) Cour des comptes, Mobiliser la communauté éducative autour du projet d'établissement, Rapport public thématique, 2023

([17]) Toreti, A., et al. *Drought in Europe March 2023*, European Commission, Joint Research Centre, 2023

([18]) Cour des comptes, Une organisation inadaptée aux enjeux de la gestion quantitative de l'eau, Rapport public annuel, 2023

Energy efficiency can help reduce emissions and dependence on fossil fuels. The French recovery and resilience plan contains major projects in building renovation, both for social and individual housing, as well as public buildings and smaller businesses. The heavy focus on renovating buildings belonging to the public sector has a knock-on effect on the renovation sector as a whole (improvement of technical processes, promotion of industrial and innovative solutions). In view of the challenge, efforts should be maintained, beyond the recovery and resilience plan, in particular for regional and local authorities, which should take advantage of all budget and financial engineering tools available, such as third-party financing.

Regarding the renovation of residential buildings, most projects benefitting from 'MaPrimeRénov' have focused on one-step works, leading to light renovations, while deep renovations could make a major dent in energy consumption. In the first half of 2022, only 27 % of works contained at least two steps of renovation, and only 5 % were global renovations ([19]). Public and private investment in building renovation should focus particularly on low-income households ([20]) and on the building stock with worst energy performance, to eradicate the 5.2 million most energy-inefficient dwellings (housing ranked F and G) by 2030.

The 2021 national Climate and Resilience Law introduced some measures which should incentivise the deep renovation of buildings, such as prohibition the renting of housing with an Energy Performance Certificate (EPC) of "G" class and consuming more than 450 kWh/m^2/year as from 2023, extended to other housing of "G" class in 2025, to "F" from 2028 and "E" from 2034.

Several other avenues could be explored, such as strengthening 'MaPrimeRenov' Sérénité' and reducing the remaining costs for the poorest households, as well as developing accompanying services (such as 'Mon accompagnateur Renov'). In addition, synergies between energy renovation support schemes and aid for self-consumption of energy and energy communities (the potential of which remains largely untapped) could also help cushion the consequences of the energy crisis and make renovations more efficient.

In France, 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. This has created bottlenecks in the transition to a net-zero economy. In 2022, labour shortages were reported in France for 54 occupations that required specific skills or knowledge for the green transition, including civil engineering technicians, power production plant operators, and engineering professionals. ([21]) The job vacancy rate increased across key sectors, such as construction (from 0.4% in 2015 to 2% in 2021) and manufacturing (from 0.6% in 2015 to 1.7% in 2021), with both sectors standing below the EU average of 3.6% and 1.9%, respectively, in 2021. ([22]) In 2022, labour shortages were reported as a factor constraining production in industry (for 19.3% of firms) and construction (for 45.3% of firms). ([23]) Upskilling and reskilling for the green transition, including for people most affected, and promoting inclusive labour

([19]) Inspection générale des Finances, Comité d'évaluation du plan France Relance, *Deuxième rapport France Stratégie*, 2022.

([20]) In 2021 6% of households were unable to keep their home adequately warm.

([21]) Data on shortages is based on European Labour Authority (2023), EURES Report on labour shortages and surpluses 2022. 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 is not comparable across countries and covers 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.

([22]) Eurostat (JVS_A_RATE_R2)

([23]) European Business and Consumer Survey

markets are essential policy levers to accelerate the transition to net-zero and ensure its fairness (see Annex 8).

Fiscal support for fossil fuels reduces the public budget available for investment in renewable energy and disincentivises consumers from switching to alternatives, notably in transport. France spent around EUR 11 bn of subsidies on fossil fuels in 2020 (second highest in the EU), an amount that rose significantly between 2015 and 2020. ([24]) That contribution accounted for around 20% of the total amount of fossil fuel subsidies granted that year in the EU.

Government support for fossil fuels was mostly directed at end-user beneficiaries, generally via tax expenditure such as an excise tax refund for diesel used in road freight transport ([25]). Regarding emergency measures to fight rising energy prices, France put in place support measures for households and businesses as recommended. Nevertheless, the measures were not targeted enough to the households or businesses most in need and did not preserve the price signal to reduce energy demand and increase energy efficiency. Most of the expenditure accounted for subsidised discounts on fossil fuels and compensation for gas suppliers, to limit gas prices (tariff shields).

([24]) European Commission, Directorate-General for Energy, Badouard, T., Bon Mardion, J., Bovy, P., et al., *Study on energy subsidies and other government interventions in the European Union : final report : 2022 edition*, Publications Office of the European Union, 2022

([25]) OECD, *Inventory of Support Measures for Fossil Fuels: Country Notes*, OECD Publishing, Paris, 2022 https://doi.org/10.1787/5a3efe65-en (accessed on 01 March 2023)

KEY FINDINGS

France's recovery and resilience plan includes measures to address a series of structural challenges through:

- significant investment in the green transition (building renovation, clean transport, industry decarbonisation, hydrogen, etc.);
- supporting the recovery of the labour market, focusing on young people;
- promoting reforms in public finances;
- the digitalisation of administration, education (including better digital skills) and the health system, and the deployment of optical fibre;
- orienting research towards the digital and green transitions.

France should proceed with the steady implementation of its recovery and resilience plan and swiftly finalise the addendum, including the REPowerEU chapter, with a view to rapidly starting its implementation.

Beyond the reforms and investment under the RRP, France would benefit from:

- ensuring effective control of current primary expenditure, so as to put public debt on a sustained downward trend;
- improving learning outcomes and addressing inequalities in education, raising the share of people with basic skills, providing additional work-based learning options;
- improving its competitiveness by addressing structural weaknesses, such as the lack of skills and skills' mismatches, stagnating business R&D intensity and lack of digitalisation among smaller firms;
- accelerating French industry's transition towards net zero and building a supporting regulatory environment, to increase investment in cleantech manufacturing, including by simplifying and speeding up permitting for net-zero manufacturing projects;
- accelerating the deployment of renewable energies and the related storage technologies, particularly by addressing permitting bottlenecks; an increased renewables share would attenuate the impact of droughts and heatwaves on hydropower and nuclear output.
- promoting the extensive renovation of buildings and the decarbonisation of heating, with a particular focus on low-income households and on the building stock with the worst energy performance;
- ensuring adequate training, to give the workforce the skills necessary for the green transition.

ANNEXES

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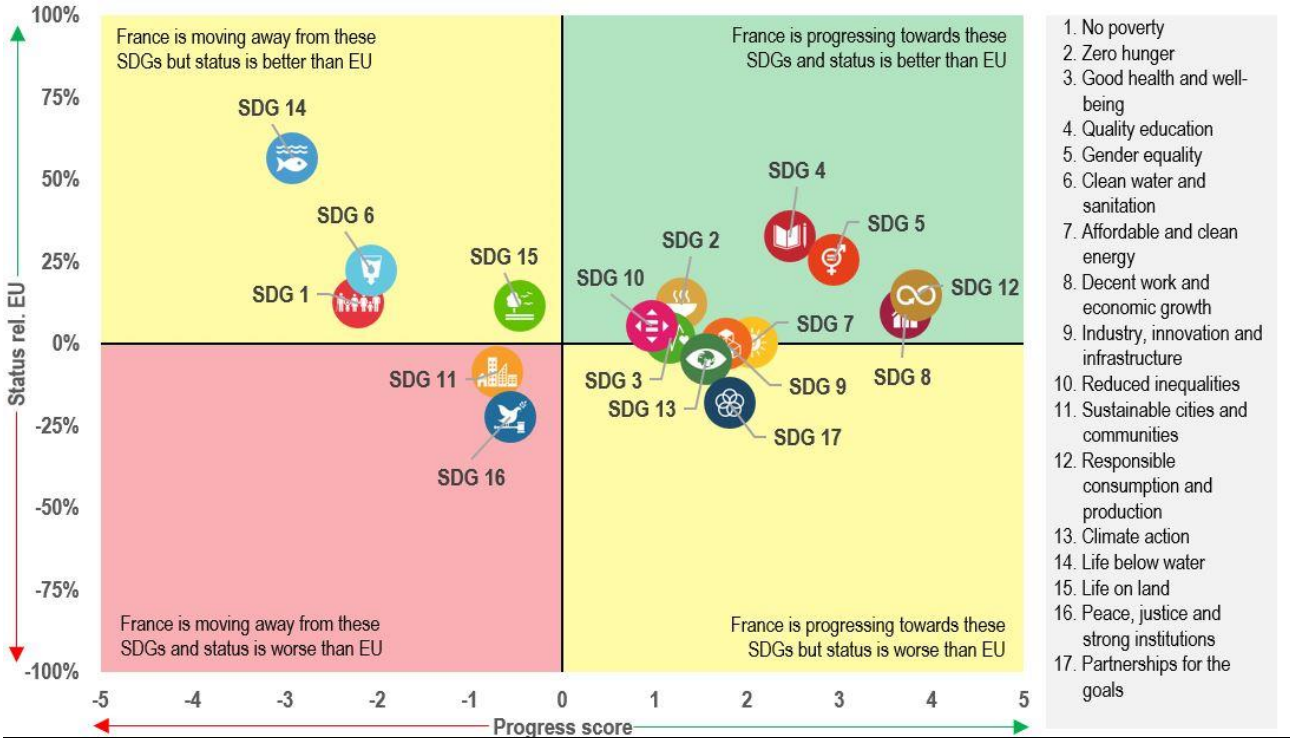
ANNEX 1: SUSTAINABLE DEVELOPMENT GOALS

This Annex assesses France'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.

France is improving on five SDG indicators (SDGs 2, 7, 9, 12, 13) related to *environmental sustainability*, but is moving away from the SDGs on four others (SDGs 6, 11, 14, 15). It needs to catch up with the EU average on SDG 11 (Sustainable cities and communities). France has made considerable progress on SDG 12 (Responsible consumption and production) and on SDG 13 (Climate action), in particular by reducing average CO_2 emissions per km from new passenger cars (from 109.8 g in 2016 to 108.6 g in 2021) and reducing the generation of waste. The French recovery and resilience plan (RRP) provides for large-scale investments in the green transition such as the energy efficiency of buildings, sustainable transport or the circular economy. However, France is moving away from SDG 11 on sustainable cities and communities and is below the EU average. Its performance is dragged down by more people suffering from severe housing deprivation (from 2.3% in 2015 to 3.8% in 2020), the population living in households suffering from noise (from 16.4% in 2015 to 20.7% in 2020), and the population reporting crime, violence or vandalism in their area (from 14.2% in 2015 to 17.7% in 2020). France is also moving away from SDG 6 on clean water and sanitation, but remains above the

Graph A1.1: **Progress towards the SDGs in France 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 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.

EU average. Upcoming investment in water networks is envisaged in the RRP, also in the outermost regions.

France is improving on almost all SDG indicators related to *fairness* (SDGs 3, 4, 5, 7, 8, 10), but is moving away from the goal on SDG 1 (No poverty). It performs very well on this dimension of the SDGs. Some indicators linked to quality education (SDG 4) are improving, such as the lower rate of early leavers from education and training (from 8.8% of the population aged 18-24 in 2017 to 7.6% in 2022) or higher tertiary educational attainment (from 44.5% of the population aged 25-34 in 2017 to 50.4% in 2022). However, these global indicators do not capture some specific issues encountered in the French education system, such as the persisting influence of socio-economic background on educational outcomes and peculiarities about some vulnerable groups (see Further priorities ahead). France is moving away from SDG 1 (No poverty), with more people at risk of poverty or social exclusion (from 18.7% of the population in 2016 to 19.2% in 2021) or living in households with very low work intensity (from 7.8% in 2016 to 10.7% in 2021).

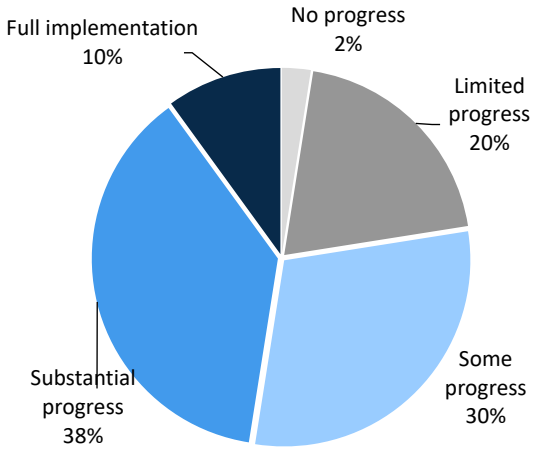
France is improving and performs well on all SDGs on *productivity* (SDGs 4, 8, 9). On SDG 8 (Decent work and economic growth), the country demonstrates progressive and high performance in its investment rate (24.2% of GDP versus 22.4% for the EU in 2021). Between 2017 and 2022, France managed to lower the share of young people not in education, employment or training (from 13.2% of the population aged 15-29 to 12.0%) and lower the long-term unemployment rate (from 2.9% of the active population to 2.0%). Although France is progressing towards SDG 9 (Industry, innovation and infrastructure) overall and is near the EU average, some innovation indicators are stagnating, such as gross domestic expenditure on R&D (2.22% of GDP in 2016, 2.21% in 2021) or the number of patent applications (159 per million inhabitants in 2017, 161 in 2022; see also Annex 11). The French RRP as well as the long-term investment plan 'France 2030' provide for significant investments in R&D in strategic sectors such as key digital technologies (cloud, quantum computing, cybersecurity), green transition (hydrogen, aeronautics, decarbonation of industry) and the digitalisation of administration (including e-health and digital education). However, structural challenges persist to improve productivity growth in France (see Further priorities ahead).

France is improving on SDG indicators related to *macroeconomic stability* (SDGs 8, 16, 17) but still needs to catch up compared to the EU. While it has made progress on SDG 16 (Peace, justice and strong institutions) and on SDG 17 (Partnerships for the goals), it performs below the EU average. France spends less on law courts (EUR 91.9 per capita) than the EU average (EUR 107.0) in 2021. The population now has less confidence in the European Parliament (38% of the population versus 49% for the EU). France is also penalised by its financial governance, with general government debt of 111.6% of GDP in 2022 (EU average 84.0%) and a low share of environmental taxes in total tax revenues (4.8% in 2021, EU average 5.5%). The French RRP contains reforms of the governance of public finances, which are expected to improve the quality and efficiency of public spending and allow it to prioritise growth and environmentally friendly expenditure.

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) ([26]) addressed to France as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 11 of the 17 Sustainable Development Goals (see Annexes 1 and 3). The assessment considers the policy action taken by France to date ([27]) and the commitments in its recovery and resilience plan (RRP) ([28]). At this stage of RRP implementation, 78% of the CSRs focusing on structural issues from 2019-2022 have recorded at least 'some progress', while 20% 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: **France's progress on the 2019-2022 CSRs (2023 European Semester)**



Source: European Commission

([26]) 2022 CSRs: EUR-Lex - 32022H0901(10) - EN - EUR-Lex (europa.eu)

2021 CSRs: EUR-Lex - 32021H0729(10) - EN - EUR-Lex (europa.eu)
2020 CSRs: EUR-Lex - 32020H0826(10) - EN - EUR-Lex (europa.eu)
2019 CSRs: EUR-Lex - 32019H0905(10) - EN - EUR-Lex (europa.eu)

([27]) 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).

([28]) 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'. These measures. 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**

France	Assessment in May 2023*	RRP coverage of CSRs until 2026**	Revelant SDGs
2019 CSR 1	**Limited Progress**		
Ensure that the nominal growth rate of net primary expenditure does not exceed 1,2 % in 2020, corresponding to an annual structural adjustment of 0,6 % of GDP.	Not relevant anymore	Not applicable	SDG 8, 16
Use windfalls gains to accelerate the reduction of the general government debt ratio.	Not relevant anymore	Not applicable	SDG 8, 16
Achieve expenditure savings and efficiency gains across all sub-sectors of the government, including by fully specifying and monitoring the implementation of the concrete measures needed in the context of Public Action 2022.	No Progress	Relevant RRP measures being planned as of 2022: Assessment of the quality of public spending (construction of financial laws) Relevant RRP measures being planned as of 2023: Governance of public finances (entry into force of a new Public Finances Programming Law)	SDG 8, 16
Reform the pension system to progressively unify the rules of the different pension regimes, with the view to enhance their fairness and sustainability.	Substantial Progress		SDG 8
2019 CSR 2	**Some Progress**		
Foster labour market integration for all job seekers, ensure equal opportunities with a particular focus on vulnerable groups including people with a migrant background	Some Progress	Relevant RRP measures being implemented as of 2021: Reform of the unemployment insurance, Hiring subsidies for youth under 26, Hiring subsidies for apprenticeships Relevant RRP measures being planned as of 2022: Hiring subsidies for professionalization contracts	SDG 8, 10
and address skills shortages and mismatches.	Some Progress	Relevant RRP measures being implemented as of 2021: Increase of resources for France Compétences Relevant RRP measures being planned as of 2022: FNE-Training	SDG 4
2019 CSR 3	**Substantial Progress**		
Focus investment-related economic policy on research and innovation (while improving the efficiency of public support schemes, including knowledge transfer schemes),	Substantial Progress	Relevant RRP measures being implemented as of 2021: Innovate for the green transition, Innovating for the resilience of our business models, Support teaching, research, development and innovation ecosystems, Governance of the Programme d'investissements d'avenir Relevant RRP measures being planned as of 2022: R&D recovery strategy - National Research Agency Relevant RRP measures being planned as of 2023: Structural aspects of the Research Programming Law	SDG 9, 10, 11
renewable energy, energy efficiency and interconnections with the rest of the Union,	Some Progress	Relevant RRP measures being implemented as of 2021: Energy renovation of private housing, Thermal renovation of public buildings, Support to demand for clean vehicles Relevant RRP measures being planned as of 2022: Revised thermal regulation RE2020, Develop decarbonised hydrogen	SDG 7, 9, 10, 11, 13
and on digital infrastructure, taking into account territorial disparities.	Substantial Progress	Relevant RRP measures being planned as of 2022: High-speed broadband plan	SDG 9, 10, 11
2019 CSR 4	**Substantial Progress**		
Continue to simplify the tax system, in particular by limiting the use of tax expenditures, further removing inefficient taxes and reducing taxes on production.	Substantial Progress		SDG 8, 9, 10, 12
Reduce regulatory restrictions, in particular in the services sector,	Limited Progress	Relevant RRP measures being planned as of 2022: Law on accelerating and simplifying public action ("loi ASAP"), Law on differentiation, decentralization, deconcentration and on various measures to simplify local public action (3DS)	SDG 8, 9
and fully implement the measures to foster the growth of firms.	Full Implementation	Not applicable	SDG 8, 9
2020 CSR 1	**Substantial Progress**		
In line with the general escape clause, take all necessary measures to effectively address the 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
Strengthen the resilience of the health system by ensuring adequate supplies of critical medical products and a balanced distribution of health workers, and by investing in e-Health.	Substantial Progress	Relevant RRP measures being planned as of 2022: Renovation of medico-social establishments Relevant RRP measures being planned as of 2023: Modernisation and restructuring of hospitals and health care supply Relevant RRP measures being planned as of 2024: Digital health	SDG 3

(Continued on the next page)

Table (continued)

2020 CSR 2	**Substantial Progress**		
Mitigate the employment and social impact of the crisis,	Substantial progress	Relevant RRP measures being implemented as of 2021: Hiring subsidies for youth under 26, Hiring subsidies for apprenticeships Relevant RRP measures being planned as of 2022: Hiring subsidies for professionalization contracts	SDG 1, 2, 8, 10
including by promoting skills	Substantial progress	Relevant RRP measures being implemented as of 2021: Reskilling through dual training programmes Relevant RRP measures being planned as of 2022: FNE-Training	SDG 4
and active support for all jobseekers.	Some progress	Relevant RRP measures being planned as of 2022: Aided contracts for youth, "Personalised guidance towards employment and autonomy" and youth guarantee, Personalised pathways for NEET youth aged 16-18, Increase of resources for Pôle Emploi	SDG 8
2020 CSR 3	**Substantial Progress**		
Ensure the effective implementation of measures supporting the liquidity of firms, in particular for small and medium-sized enterprises.	Full Implementation		SDG 8, 9
Front-load mature public investment projects	Substantial Progress	Relevant RRP measures being implemented as of 2021: Thermal renovation of public buildings Relevant RRP measures being planned as of 2022: Support for cultural sectors and heritage renovations, High-speed broadband plan	SDG 8, 16
and promote private investment to foster the economic recovery.	Substantial Progress	Relevant RRP measures being implemented as of 2021: Energy renovation of private housing Relevant RRP measures being planned as of 2022: Digitization of companies Relevant RRP measures being planned as of 2023: Energy renovation of very small enterprises (VSEs) and small and medium sized enterprises (SMEs)	SDG 8, 9
Focus investment on the green and digital transition, in particular on sustainable transport,	Substantial Progress	Relevant RRP measures being implemented as of 2021: Support to the railway sector, Support to demand for clean vehicles, Daily mobility: development of public transport, Mobility law Relevant RRP measures being planned as of 2022: Support plan to the aeronautics sector	SDG 11
clean and efficient production and use of energy,	Some Progress	Relevant RRP measures being implemented as of 2021: Energy renovation of private housing, Thermal renovation of public buildings, Decarbonisation of industry Relevant RRP measures being planned as of 2022: Develop decarbonised hydrogen	SDG 7, 9, 13
energy (infrastructures)	Some Progress	Relevant RRP measures being implemented as of 2021: Acceleration of work on transport infrastructure Relevant RRP measures being planned as of 2023: Strengthening the resilience of electricity networks and energy transition in rural areas	SDG 7, 9, 13
and digital infrastructures	Substantial Progress	Relevant RRP measures being planned as of 2022: High-speed broadband plan	SDG 9
as well as research and innovation.	Substantial Progress	Relevant RRP measures being implemented as of 2021: Innovate for the green transition, Innovating for the resilience of our business models, Support teaching, research, development and innovation ecosystems Relevant RRP measures being planned as of 2022: R&D recovery strategy - National Research Agency	SDG 9

(Continued on the next page)

Table (continued)

2020 CSR 4	**Some Progress**		
Continue to improve the regulatory environment,	Limited Progress	Relevant RRP measures being planned as of 2022: Law on accelerating and simplifying public action ("loi ASAP"), Law on differentiation, decentralization, deconcentration and on various measures to simplify local public action (3DS)	SDG 8, 9
reduce administrative burdens for firms	Some Progress	Relevant RRP measures being planned as of 2022: Law on accelerating and simplifying public action ("loi ASAP")	SDG 8, 9
and simplify the tax system.	Substantial Progress		SDG 8, 9, 10, 12
2021 CSR 1	**Some Progress**		
In 2022, use the Recovery and Resilience Facility to finance additional investment in support of the recovery while pursuing a prudent fiscal policy. 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.	Limited 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	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.	Some progress	Not applicable	SDG 8, 16
2022 CSR 1	**Some Progress**		
In 2023, ensure prudent fiscal policy, in particular by limiting the growth of nationally financed primary current expenditure below medium-term potential output growth, 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.	Full Implementation	Not applicable	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union 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 and ensuring credible and gradual debt reduction and fiscal sustainability in the medium term through gradual consolidation, investment and reforms.	Limited Progress	Not applicable	SDG 8, 16
Reform the pension system to progressively unify the rules of the different pension regimes to enhance its fairness while underpinning its sustainability.	Substantial Progress		SDG 8
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 13 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.		
Swiftly finalise the negotiations with the Commission of the 2021-2027 cohesion policy programming documents with a view to starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	**Some Progress**		
Address the shortage of skills by raising the share of people with basic skills, providing additional work-based learning options and	Some Progress	Relevant RRP measures being implemented as of 2021: Plan for youth: higher education for post-baccalaureate students; Increase in the resources of France Compétences Relevant RRP measures being planned as of 2023: Reskilling through dual training programmes	SDG 4
improving the learning outcomes of all students, in particular by adapting resources and methods to the needs of disadvantaged students and schools	Limited Progress	Relevant RRP measures being planned as of 2022: digital transformation of the school; Personalised pathways for NEET youth aged 16-18	SDG 4, 8, 10
and by improving the working conditions and continuous training of teachers.	Some Progress	Relevant RRP measures being planned as of 2022: digital transformation of the school	SDG 4

(Continued on the next page)

Table (continued)

2022 CSR 4	**Limited Progress**		
Reduce overall reliance on fossil fuels.	Limited Progress	Relevant RRP measures being implemented as of 2021: Mobility law; Energy renovation of private housing; Support to the railway sector Relevant RRP measures being planned as of 2022: Revised thermal regulation RE2020; Climate & Resilience Law	SDG 7, 9, 13
Accelerate the deployment of utility-scale and decentralised renewable energies through increased public investment and by facilitating private investment, including by further streamlining permitting procedures and ensuring adequate staffing of authorising administrations.	Limited Progress	Relevant RRP measures being planned as of 2022: Climate & Resilience Law; Develop decarbonised hydrogen	SDG 7, 8, 9, 13
Improve the policy framework to incentivise the deep renovation of buildings.	Limited Progress	Relevant RRP measures being planned as of 2022: Revised thermal regulation RE2020; Climate & Resilience Law	SDG 7, 8, 9
Expand energy interconnection capacity.	Some Progress		SDG 7, 9, 13

Note:

* See footnote ([26]).

** 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). France submitted its current recovery and resilience plan (RRP) on 29 April 2021. The Commission's positive assessment on 23 June 2021 and Council's approval on 13 July 2021 paved the way for disbursing EUR 39.4 billion in grants under the RRF over the 2021-2026 period.

Table A3.1:**Key elements of the French RRP('s)**

	Current RRP
Scope	Initial plan
CID adoption date	13 July 2021
Total allocation	EUR 39.4 billion in grants (1.6% of 2021 GDP)
Investments and reforms	70 investments and 22 reforms
Total number of milestones and targets	175

Source: European Commission

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 France was moreover updated on 30 June 2022 to an amount of EUR 37.5 billion in grants.

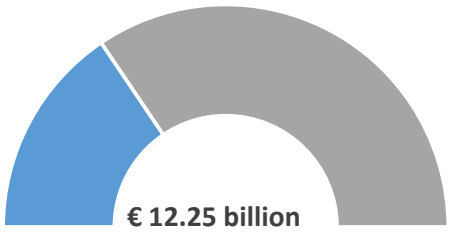
In this context, **France submitted an amended RRP to the Commission on 20 April 2023 to** take account of the revised maximum financial contribution, in line with Article 18 of the RRF Regulation and due to objective circumstances that make it no longer possible to achieve certain milestones and targets in the RRP in line with Article 21 of the RRF Regulation. France's request to modify its plan is based on the need to factor in the high inflation experienced in 2022, supply chain disruptions and the downward revision of its maximum RRF grant allocation. The revised RRP includes a new REPowerEU chapter with additional reforms and investments related to renewable energy, energy efficiency, net-zero industry and fossil-free hydrogen. This is part of the EU's efforts to respond to the economic hardship and global energy market disruptions caused by Russia's invasion of Ukraine.

France's progress in implementing its plan is published in the Recovery and Resilience Scoreboard ([29]). 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 France and subsequently assessed as satisfactorily fulfilled by the Commission.

EUR 12.25 billion has so far been disbursed to France under the RRF. The Commission disbursed EUR 5.1 billion to France in pre-financing in September 2021, equivalent to 13% of the financial allocation. France's first payment request was positively assessed by the Commission, taking into account the opinion of the Economic and Financial Committee, leading to EUR 7.4 billion being disbursed in financial support (net of pre-financing) on 4 March 2022. The related 38 milestones cover reforms in the areas of public finance, housing, mobility, unemployment insurance, skills, and health, as well as investments in energy renovation of buildings, decarbonisation of industry, clean vehicles, research, youth employment, and education.

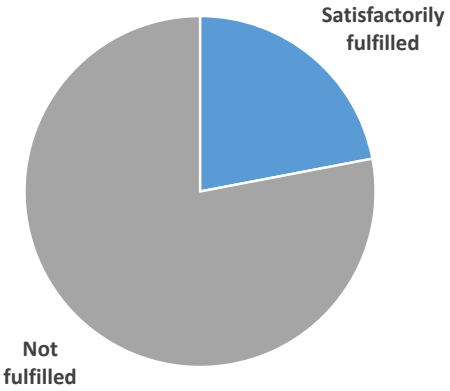
([29]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A3.1: **Total grants disbursed under the RRF**



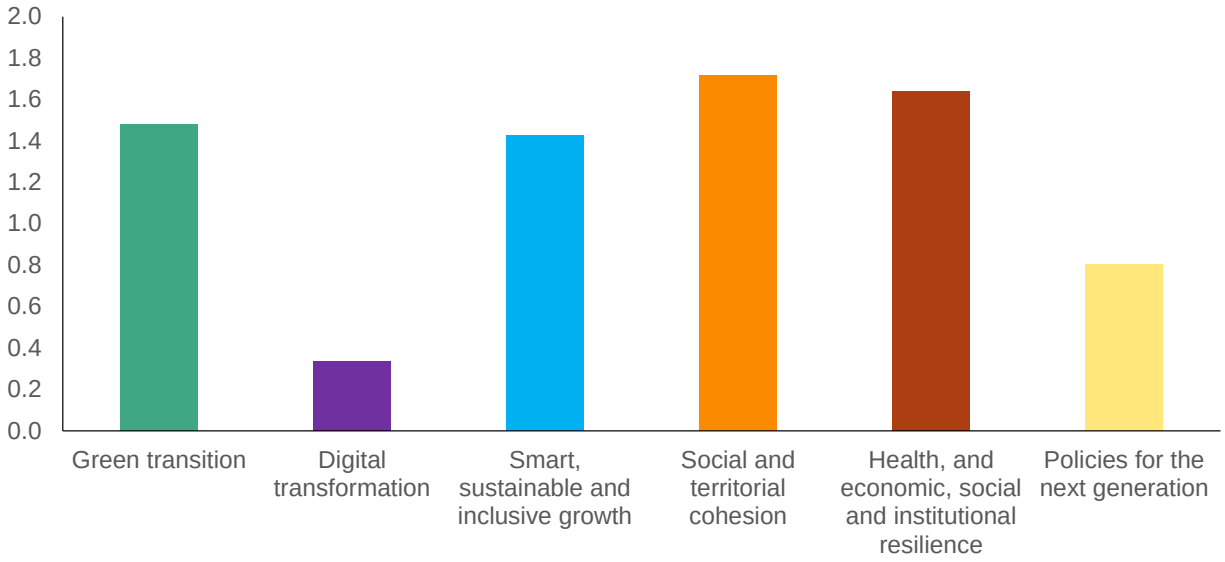
Note: This graph displays the amount of grants disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and the total estimated cost of the respective RRP.
Source: RRF Scoreboard

Graph A3.2: **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: RRF Scoreboard

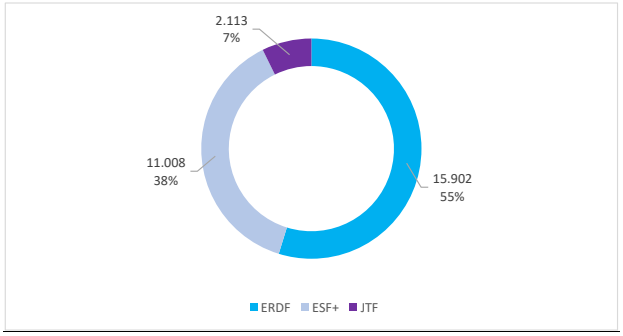
Graph A3.3: **Disbursements per pillar**



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: RRF 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 France: budget by fund**

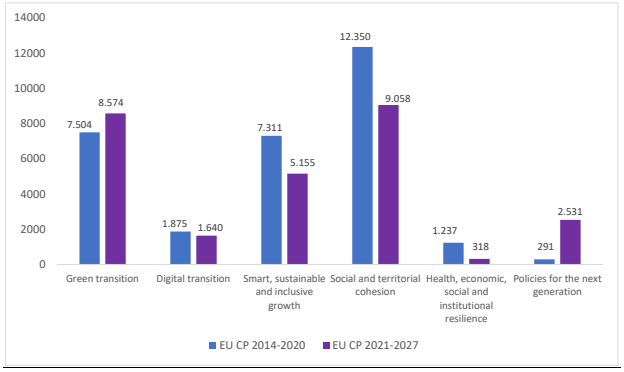


(1) million EUR in current prices, % of total; (total amount including EU and national co-financing)
Source: European Commission, Cohesion Open Data

In 2021-2027, in France, cohesion policy funds ([30]) will invest EUR 8.6 billion in the green transition and EUR 1.6 billion in the digital transformation as part of the country's total allocation of EUR 29 billion. In particular, the European Regional Development Fund (ERDF) will boost R&D, innovation and digitalisation by allocating over EUR 3.3 billion for a smarter Europe. This will notably help France to increase the share of GDP devoted to R&D to the European target of 3% (compared to 2.2% in 2018). The ERDF will also promote the energy transition by supporting energy performance improvements for about 100 000 households and more than 1 000 000 square meters of public buildings in all French regions. Particular attention should be paid to supporting the growth and competitiveness of over 100 000 SMEs by introducing innovations into products or processes. The Just Transition Fund (JTF) will deliver further economic diversification and foster job creation in areas most affected by the energy transition, while promoting the up- and reskilling of workers. It will in particular enable the creation of 3 250 jobs in the industrial areas in the northern part of the country. Under the European Social Fund Plus (ESF+), France allocates EUR 2.78 billion to reducing poverty and social exclusion. Benefits of this funding include: tailored guidance to support social inclusion; and support for the most vulnerable including food aid, and help with exercising rights and accessing social services such as housing.

Of the investments mentioned above, EUR 2.3 billion will be invested in line with REPowerEU objectives. This is on top of the EUR 1.7 billion dedicated to REPowerEU under the 2014-2020 budget**.** EUR 1.5 billion (2021-2027) and EUR 1.2 billion (2014-2020) is for improving energy efficiency; EUR 789 million (2021-2027) and EUR 528 million (2014-2020) is for renewable energy and low-carbon R&I; and EUR 64 million (2021-2027) is for smart energy systems.

Graph A4.2: **Synergies between Cohesion policy funds and RRF pillars in France**



(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 18.7 billion available to France ([31]), with an absorption of 67% ([32]). Including national financing, the total investment amounts to EUR 32.6 billion - around 0.2% of GDP for 2014-2020.

France continues to benefit from cohesion policy flexibility to support economic recovery, step up convergence and provide vital support to regions following the COVID-

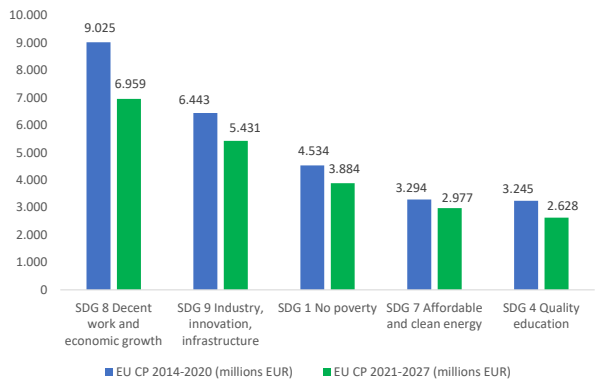
([30]) European Regional Development Fund (ERDF), European Social Fund+ (ESF+), Just Transition Fund (JTF), excluding Interreg programme. Total amount includes national and EU contributions. Data source: Cohesion Open Data.

([31]) Cohesion policy funds include the ERDF, 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.

([32]) 2014-2020 Cohesion policy EU payments by MS is updated daily on Cohesion Open Data.

19 pandemic. The Recovery Assistance for Cohesion and the Territories of Europe instrument (REACT-EU) ([33]) under NextGenerationEU provides EUR 3.9 billion on top of the 2014-2020 cohesion policy allocation for France. REACT-EU finances short-term support schemes for over 5 400 firms and helps improve health services for more than 2.8 million individuals. In addition, EUR 736 million was provisionally allocated to France through the Brexit Adjustment Reserve (BAR), and Cohesion's Action for Refugees in Europe (CARE) supports France and its regions in providing emergency assistance to people fleeing from Russia's invasion of Ukraine. With SAFE (Supporting Affordable Energy), the 2014-2020 cohesion policy funds may also be mobilised by France to support vulnerable households, jobs and companies particularly affected by high energy prices.

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



(1) 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 8 'decent work and economic growth' and SDG 9 'industry, innovation and infrastructure' ([34]).

Other EU funds provide significant support to France. The common agricultural policy (CAP) made available EUR 81.4 billion in 2014-2022 and will keep supporting France with EUR 45.6 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 588 million available to France in 2014-2020 and the European Maritime, Fisheries and Aquaculture Fund allocates EUR 567 million in 2021-2027.

France 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 288.5 million to 25 specific projects on strategic transport networks. Similarly, Horizon Europe has so far allocated nearly EUR 1.1 billion to French R&I on top of the EUR 7.4 billion earmarked under the previous programme (Horizon 2020). The Public Sector Loan Facility set up under the Just Transition Mechanism makes EUR 78 million of grant support from the Commission available for projects located in France for 2021-2027, which will be combined with loans from the EIB to support investments by public sector entities in just transition regions.

The Technical Support Instrument (TSI) supports France in designing and implementing growth-enhancing reforms, including those set out in its recovery and resilience plan (RRP). France has received significant support since 2017. Examples ([35]) include support to facilitate the deployment and adoption of the French digital application for special educational needs; and to develop digital solutions to support, protect and promote the rights of victims of crime.

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

([34]) 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).

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

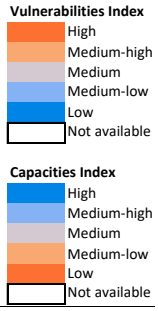
This Annex illustrates France's relative resilience capacities and vulnerabilities using the Commission's resilience dashboards (RDB) ([36]). Comprising a set of 124 quantitative indicators, the RDB provide broad indications of Member States' ability to make progress across four interrelated dimensions: social and economic, green, digital, and geopolitical. The indicators show vulnerabilities ([37]) and capacities ([38]) 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 France and the EU-27 ([39]).

According to the set of resilience indicators under the RDB, France generally displays a similar level of vulnerabilities compared to the EU average. France shows medium vulnerabilities in the social and economic, digital and green dimensions, and medium-low vulnerabilities in the geopolitical dimension of the RDB. It has higher vulnerabilities than the EU average in the areas 'cybersecurity' and 'digital for personal space'. France has relatively low vulnerabilities in relation to 'raw material and energy supply', 'security and demography', and 'inequalities and the social impact of the transitions'.

Compared to the EU average, France shows an overall similar level of capacities across all RDB indicators. It has overall medium-high resilience capacities in the social and economic, digital and green dimensions of the RDB, and medium capacities in the geopolitical dimension. France shows stronger capacities than the EU average in the areas 'sustainable use of resources', 'cybersecurity', 'digital for personal space' and 'inequalities and social impact of the transitions'. There is room for improving capacities compared to the EU in 'financial globalisation'.

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

Dimension/Area	Vulnerabilities		Capacities	
	FR	EU-27	FR	EU-27
Social and economic				
Inequalities and social impact of the transitions				
Health, education and work				
Economic & financial stability and sustainability				
Green				
Climate change mitigation & adaptation				
Sustainable use of resources				
Ecosystems, biodiversity, sustainable agriculture				
Digital				
Digital for personal space				
Digital for industry				
Digital for public space				
Cybersecurity				
Geopolitical				
Raw material and energy supply				
Value chains and trade				
Financial globalisation				
Security and demography				



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

([36]) 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).

([37]) 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.

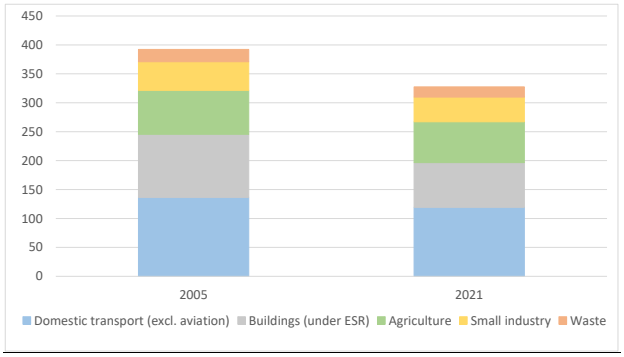
([38]) Capacities refer to enablers or abilities to cope with crises and structural changes and to manage the transitions.

([39]) 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.

France's green transition requires continued action on several aspects including deploying renewables, improving energy efficiency, and reversing the decrease in the capacity for net carbon removals through land use. Implementation of the European Green Deal is underway in France; this Annex provides a snapshot of the key areas involved ([40]).

France has not yet defined all the climate policy measures it needs to reach its 2030 climate target for the effort sharing sectors ([41]). Data for 2021 on greenhouse gas emissions in these sectors are expected to show the country generated less than its annual emission allocations ([42]). Current policies are projected to reduce these emissions by -31% relative to 2005 levels in 2030, not a sufficient reduction to reach the effort sharing target even before the target was raised in line with the EU's 55% objective, let alone France's new target to reduce by 47.5% ([43]). France allocates 46% of its Recovery and Resilience Facility grants to key reforms and investments to attain the climate objectives ([44]). France has a legally binding national objective, adopted through the 2019 energy and climate law, to reach climate neutrality by 2050.

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



Source: European Environmental Agency.

France is not on track to meet its net carbon removals target for 2030 for its land use sector. France's forests and, to a lesser extent, grasslands achieve a major share of net carbon removals through land use, while croplands and settlements are net emission sources. For 2030, France's land use, land use change and forestry (LULUCF) net removals target implies to remove 34 046 kt CO_2eq (see Table A6.1) ([45]). While the LULUCF sink grew between 1990 and 2008, followed by a period of stagnation, it has been in sharp decline since 2013. This is caused by higher tree mortality due to droughts and pest attacks and larger wood harvests.

In France, the composition of its energy mix and its relative distribution among energy sources has not changed in the last decade. The share of fossil fuels in France's energy mix has been around half of its energy mix, reaching 47% in 2021. The share of nuclear in the energy mix has been stable at 40% since 2016 and renewable sources have been slightly increasing from 8% in 2011 to 13% in 2021 (see Graph A6.2). In 2021, France's electricity mix was highly

([40]) 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.

([41]) 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.

([42]) France's annual emission allocations for 2021 were some 334.4 Mt CO_2eq, and its approximated 2021 emissions were at 327.5 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).

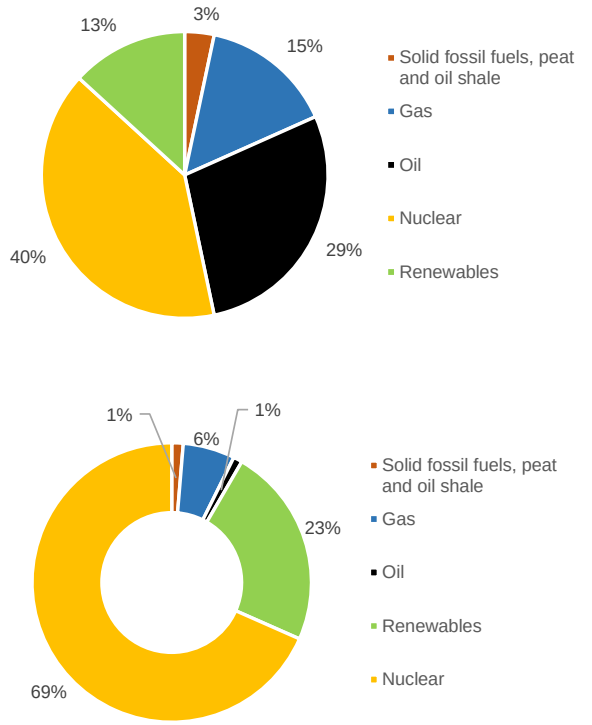
([43]) See the information on the distance to the 2030 climate policy target in Table A6.1. Existing and additional measures as of 15 March 2021.

([44]) For example, investments in buildings renovation, decarbonisation of industry, clean mobility, support for low-carbon and renewable hydrogen production, as well as legislation on climate resilience with reforms for the greening of industry, buildings, transport or agriculture.

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

decarbonised, with 69% coming from nuclear, 23% from renewable sources and 8% from fossil fuels. In 2021, France relied on natural gas for 42% of its heat and on primary solid biofuels for up to 29% while 10% was covered by non-renewable waste. France intended to phased out coal in 2022, but it allowed two coal plants to continue production in the winter 2022/23 and another one is set to operate until 2024.

Graph A6.2: **Thematic - 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.

France's high share of nuclear energy together with renewables play a central role in decarbonising its energy system. In 2021, in the electricity mix the share for wind reached 7% and the share for solar reached 3%. Hydropower continues to be the largest source of renewable energy within the electricity mix (12% share). France missed its 2020 renewables target of a 23% share of renewable energy sources in final energy consumption by 4 percentage points. France's NECP sets a 33% target of renewable sources in gross final energy consumption by 2030, which was considered as adequate. France will need to substantially strengthen 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. France's RRP does not contain direct support measures to increase the production of renewable energy. As regards the consumption of renewables, the most relevant investment is the 'decarbonised hydrogen' measure, amounting to EUR 1 925 billion (as part of a larger national strategy involving EUR 7 billion until 2030).

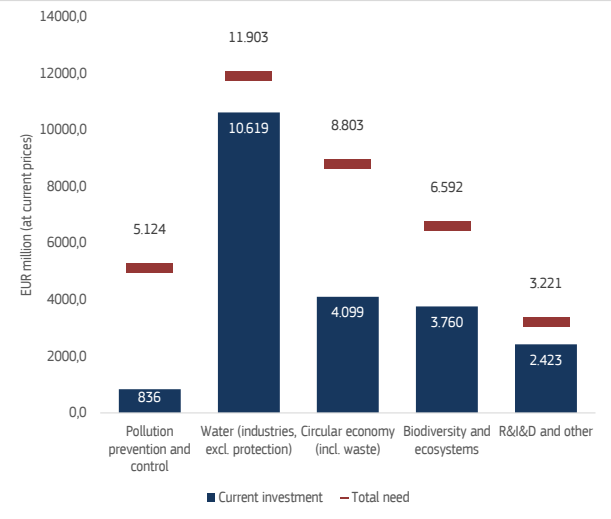
France faces major challenges in decarbonising its building sector and increasing its energy performance. France's NECP targets for primary and final energy consumption (PEC and FEC) were considered of modest and sufficient ambition respectively in the 2020 Commission assessment. Based on the energy consumption trajectory for 2018-2021, France is expected to be on track to meet its 2030 target for primary and final energy consumptions notified in the current NECP ([46]). The decarbonisation and upgrade in the energy performance of the building stock (which represents 45% of final energy consumption and 25% of greenhouse gas emissions) pose major challenges. According to France's RRP, around one third of around EUR 18 billion allocated to green investments will be spent on building renovation. The RRP tackles energy efficiency, notably with substantial investments in building renovations across different sectors: public buildings, private residential buildings and social housing, and SMEs. The reform of thermic regulation of new buildings (RE2020) will enshrine good practices in the area of housing. Measures for decarbonising industrial processes and the circular economy are also expected to help achieve a more efficient and sustainable use of energy.

France is relatively well positioned on sustainable mobility, but air pollution remains a concern. CO_2 emissions from transport rose until 2005 but have declined since. Zero-emission vehicle registrations are growing fast; in 2022, France was among the top 10 EU countries concerning the share of zero-emission

([46]) 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.

passenger cars in new registrations. The electrification of the railway network is above the EU average. In 2020, rail represented a relatively low share in the modal split of freight, but for passenger transport, its share was the second highest in the EU. The French RRP includes reforms and investments to support the rail sector and encourage zero-emission mobility and public transport. The RRP also aims to accelerate transport investments, yet it lacks focus on cross-border aspects of the Trans-European Transport network. France is facing continuous air quality and air pollution concerns, particularly in relation to nitrogen dioxide and PM10 despite reductions in air pollutants and fine particulates. France has the potential to rely more on environmental taxes to reduce air pollution and to promote resource efficiency, waste reduction and apply the polluter pays principle ([47]) (see Annex 19).

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



Source: European Commission.

France would benefit from investing more in environmental protection and in measures addressing pollution, protecting biodiversity and promoting the circular economy ([48]). Between 2014 and 2020, environmental investment needs were estimated to be at least EUR 35.6 billion, while yearly investment stood at EUR 21.7 billion, with a gap of at least EUR 13.9 billion, per year (see Graph A6.3) ([49]). France aims to have 30% of its protected under environmental law. To date, 27.6% of land and 37.7% of marine areas (44,7% including outermost regions) are protected ([50]). Investment in wastewater treatment is needed in some 100 urban areas.

Rising temperature and sea levels, and the increasing occurrence of heatwaves, droughts, and forest fires are the most significant risks from climate change. Two thirds of the population are exposed to climate change, and it is projected that by 2050 two billion m^3 of water will be lacking. The stress on crops caused by heat and drought depresses yields. The share of forests at risk of fire is rising. It is projected that half of France's forests will be subject to that risk by 2050 ([51]). Risks differ significantly at regional and local levels, and different sectors of government provide the policy response. This calls for national coordination, including through setting clear objectives and targets ([52]). France's RRP supports actions on urban densification, protecting biodiversity, strengthening water networks, and restoring forests. Concerning water-related risks, France presented a water plan on 30 March 2023, aimed to adapt water management policy to climate change.

France provides fossil fuel and other environmentally harmful subsidies that could 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, mining and quarrying and construction sectors. In its green budgeting exercise, France identified EUR 10.8 billion of expenses in its 2022 budget that are 'unfavourable to the environment', mostly tax rebates and exemptions on energy

([47]) European Commission, 2021, Green taxation and other economic instruments – Internalising environmental costs to make the polluter pay, Ensuring that polluters pay.

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

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

([50]) In 2021, France had 28% terrestrial protected areas (Natura 2000 and nationally designated areas), against the EU average of 26.4% (European Environment Agency, 2023, Natura 2000 Barometer).

([51]) 2ème Plan National d'Adaptation au Changement Climatique, Ministère de la Transition Écologique et Solidaire, 2018.

([52]) Renforcer l'atténuation, engager l'adaptation, Haut Conseil pour le Climat, Rapport annuel 2021.

products. Their amount has increased by some EUR 9 billion, aimed at mitigating the social impact of energy price increases on households and various economic sectors including the construction industry. Examples of such subsidies include the reduced VAT rate for fertilisers and pesticides, the excise tax refund for diesel fuel used in agriculture, the reduced energy tax rate for light fuel oil used in mobile machinery, the excise tax exemption on coal for biomass producers, the excise tax exemption on the use of natural gas or the reimbursement of excise duty on diesel used in freight and other categories of passenger transport ([53]). France could build on its green budgeting exercise to prioritise candidates for reform.

France could further apply environmental taxes to mitigate pressures on environmental resources. While revenue from environmental taxes increased in 2021, it is still not back to pre-COVID-19 levels (see Annex 19). For instance, taxation could help reduce the amount of soil that is artificialised in order to reduce the pressure on agriculture lands, forestry, and water ecosystems, in line with the French strategy and the ongoing legislative process on 'zero net artificialisation' of soils by 2050.

([53]) 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	Distance	
			2005	2017	2018	2019	2020	2021	target/value	WEM	WAM
Progress to policy targets	Greenhouse gas emission reductions in effort sharing sectors [1]	Mt CO_2eq; %; pp	398,2	-11%	-14%	-16%	-23%	-	-47,5%	-16,5	-16,5
	Net carbon removals from LULUCF [2]	kt CO_2eq	-50.711	-20.592	-19.652	-18.227	-21.622	-17.055	-34046	n/a	n/a

								National contribution to 2030 EU target
		2005	2017	2018	2019	2020	2021	
Share of energy from renewable sources in gross final consumption of energy [3]	%	9%	16%	16%	17%	19%	19%	33%
Energy efficiency: primary energy consumption [3]	Mtoe	261,0	239,3	238,6	235,2	207,9	224,4	202,2
Energy efficiency: final energy consumption [3]	Mtoe	160,1	149,0	146,5	145,1	130,0	143,2	120,9

			France						EU		
			2016	2017	2018	2019	2020	2021	2019	2020	2021
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	2,2	2,3	2,4	2,3	2,2	2,2	2,4	2,2	2,2
	Environmental taxes (% of total taxation)[4]	% of taxation	4,9	5,0	5,1	5,1	4,8	4,8	5,9	5,6	5,5
	Government expenditure on environmental protection	% of total exp.	1,7	1,7	1,7	1,8	1,7	1,8	1,7	1,6	1,6
	Investment in environmental protection [5]	% of GDP	0,4	0,4	0,4	0,5	-	-	0,4	0,4	0,4
	Fossil fuel subsidies [6]	EUR2021bn	8,7	9,3	11,7	12,1	10,8	-	53,0	50,0	-
	Climate protection gap [7]	score 1-4					0,5	1,3			1,5
Climate	Net greenhouse gas emissions	1990 = 100	84,0	87,0	84,0	82,0	73,0	77,0	76,0	69,0	72,0
	Greenhouse gas emission intensity of the economy	kg/EUR'10	0,22	0,22	0,21	0,20	0,20	-	0,31	0,30	0,26
	Energy intensity of the economy	kgoe/EUR'10	0,12	0,12	0,11	0,11	0,11	-	0,11	0,11	-
Energy	Final energy consumption (FEC)	2015=100	101,3	100,6	98,9	98,0	87,6	96,7	102,9	94,6	-
	FEC in residential building sector	2015=100	104,8	103,0	99,6	99,3	96,6	105,8	101,3	101,3	106,8
	FEC in services building sector	2015=100	100,6	102,1	100,3	98,4	91,6	98,4	100,1	94,4	100,7
Pollution	Smog-precursor emission intensity (to GDP) [8]	tonne/EUR'10	0,6	0,6	0,5	0,5	0,5	-	0,9	0,9	-
	Years of life lost due to air pollution by PM2.5	per 100.000 inh.	435,9	399,1	395,4	323,7	261,3	-	581,6	544,5	-
	Years of life lost due to air pollution by NO_2	per 100.000 inh.	149,0	143,2	127,8	116,5	69,9	-	309,6	218,8	-
	Nitrates in ground water	mg NO_3/litre	22,4	22,1	27,9	18,9	19,2	-	21,0	20,8	-
Biodiversity	Land protected areas	% of total	17,5	22,0	-	26,9	26,9	28,0	26,2	26,4	26,4
	Marine protected areas	% of total	15,0	-	-	37,7	-	37,6	10,7	-	12,1
	Organic farming	% of total utilised agricultural area	5,3	6,0	7,0	7,7	8,7	-	8,5	9,1	-

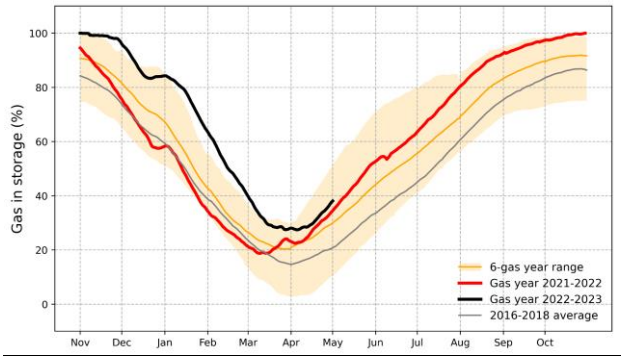
			2017	2018	2019	2020	2021	2022	2020	2021	2022
Mobility	Share of zero-emission vehicles [9]	% in new registrations	1,2	1,4	1,9	6,7	9,8	12,8	5,4	8,9	10,7
	Number of AC/DC recharging points (AFIR categorisation)		-	-	-	n/a	54653	76454	188626	330028	432518
	Share of electrified railways	%	57,1	58,2	58,5	n/a	n/a	63,0	56,6	n/a	56,6
	Hours of congestion per commuting driver per year		30,1	30,1	30,8	30,8	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).

France is highly dependent on imported fossil fuels in general. This makes its economy particularly sensitive to global price developments, requiring it to step up efforts on the energy transition. Its electricity production was severely affected by low nuclear and hydro output, meaning that France became a net importer for the first time since at least 1980 ([54]). This Annex ([55]) sets out actions carried out by France 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 ([56]).

France showed a high level of gas supply security despite the challenging circumstances. Although its nuclear park experienced considerable stress, its decarbonised electricity generation capacity can contribute to overall security of supply in Europe. In 2021, 22% of France's gas imports came from Russia (11 billion cubic metres (bcm)), which was below the EU average (24%). The country has considerable liquefied natural gas (LNG) import potential and is the second largest LNG importer in the EU with 114 mcm/d. France fulfilled its gas storage obligations last winter, reaching 100% by 1 November 2022, (20 percentage points above its legal obligation), and ended the heating season with a filling gas storage at 28.90% by 15 April 2023 (see Graph A7.1) ([57]).It has a total capacity of 132 TWh in gas storage facilities ([58]). France's energy system is currently under considerable stress as a large part of its nuclear park is undergoing, or has undergone in 2022, maintenance works. To compensate for the loss of electricity production, France temporarily suspended the emissions cap on its coal-fired power plants and recommissioned two more coal power plants. Although EDF shows not to be in any significant way dependent on Russian uranium or services, EDF is nevertheless dependent on Russia for recycling its spent nuclear fuel (uranium), given that certain steps of the recycling process can currently only be carried out in Russia.

Graph A7.1: **Storage levels in France**



Source: JRC calculation based on AGSI+ Transparency Platform, 2022 (Last update 2 May 2023)

To address security of supply, France's response comprised demand reduction measures alongside energy efficiency improvements. France launched a strategy to reduce demand and the energy consumption of gas, fuel and electricity. The goal is to achieve a 40% demand reduction in order to be net zero by 2050. Recent measures and the high energy prices led to a gas demand reduction of about 16% over the period August 2022 – March 2023 when compared to the previous 5-years average.

([54]) Germany, Spain and the UK went from importers of French electricity to exporters to France.

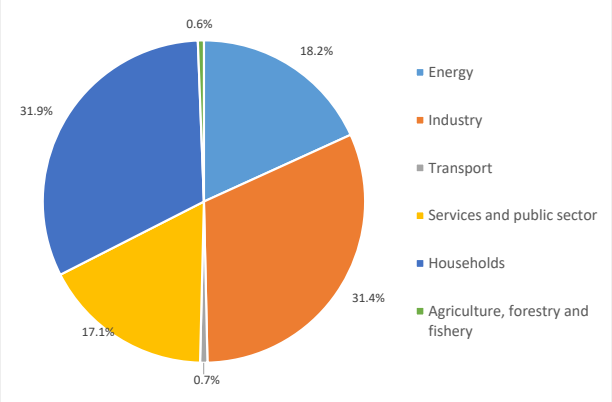
([55]) It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition, by Annex 8 on the actions taken to mitigate energy poverty and protect the most vulnerable ones, by Annex 9 as the transition to a circular economy will unlock significant energy and resource savings, 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.

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

([57]) Regulation of the European Parliament and of the Council amending Regulations (EU) 2017/1938 and (EC) No 715/2009 with regard to gas storage and 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.

([58]) Fourteen storage facilities (Saint-Illiers, Beynes Supérieur, Beynes Profond, Gournay-sur-Aronde, Chéméry, Céré-la-Ronde, Soings-en-Sologne, Trois Fontaines l'Abbaye, Cerville, Germiny-sous-Coulombs, Saint-Clair-sur-Epte) are managed by Storengy and VGS Lussagnet and Izaute are managed by Teréga.

Graph A7.2: **Share of gas consumption per sector, 2021**



Source: Eurostat

France's electricity system is interconnected with six of its neighbouring countries, four of which are EU Member States (Belgium, Germany, Italy and Spain). Its cross-border electricity interconnection level is currently below the 15% target for 2030. Cross-border energy infrastructure is key to the security of supply, market integration and the integration of renewables. Several new cross-border electricity projects are being developed: notably a first interconnector with Ireland, and additional capacities or capacity increases with Belgium, Germany and Spain. Some of these projects have suffered delays. France's gas system is interconnected with four countries, including Belgium, Germany and Spain. It includes a pipeline linking France to Norwegian gas fields and comprises four LNG terminals ([59]). In view of the changing supply situation, the interconnector between France and Germany has recently been fitted to allow for a reverse flow of gas into Germany without the need for a deodorisation unit. Physical gas flows from France to Germany started in October 2022. Also, in October 2022, the French, Spanish and Portuguese heads of state and governments issued a joint statement proposing a Green Energy Corridor.

([59]) The gas is delivered to the French territory through seven entrance points, including five gas pipelines interconnected with the Belgian (Taisnières), Spanish (Larrau, Biriatou), German (Obergailbach) and Norwegian (Dunkerque) networks and four LNG import terminals with a total capacity of around 34 bcm/year: Tonkin (3 bcm/year); Montoir-de-Bretagne (10 bcm/year), Fos Cavaou (8.25 bcm/year), and Dunkerque (13 bcm/year, since 2017).

The availability of the French nuclear fleet for the coming months is a key factor for the security of power supply in France, with potential impact also beyond France. The rate of return to service of reactors currently shut down as part of scheduled maintenance, or the specific programme for monitoring and repairing stress corrosion cracking (SCC), are therefore crucial. Up until the beginning of December 2022, the availability of the nuclear fleet followed the trend envisaged by the French electricity transmission system operator RTE. From December 2022, the availability of the nuclear fleet was expected to increase slightly to around 45 GW (out of an installed capacity of 61.3 GW) at the end of January 2023, before decreasing again from February onwards with the start of the 2023 outage campaign ([60]). With regard to SCC-related work, EDF reported that a total of 16 reactors are among the most susceptible to SCC. In December 2022, the work was either finished or ongoing for 4 reactors. Inspection and repair work has begun on 6 reactors and will be carried out in 2023 on 6 other reactors. The normal functioning of nuclear power plants was also affected in summer 2022 by successive heat waves, causing few nuclear reactors to reduce their power, while high temperatures are expected to become more frequent.

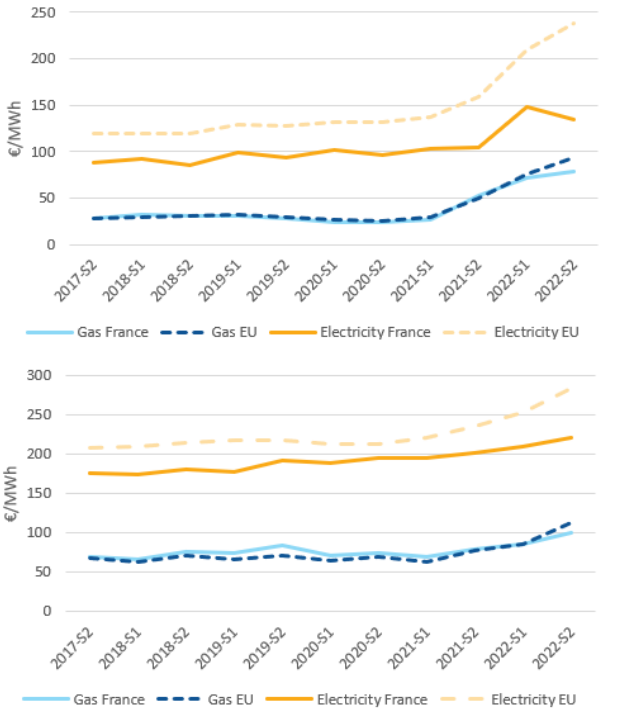
Although its electricity production is already largely decarbonised, France is lagging behind on deploying renewable energy, in particular for electricity production and heating, which affects its energy security. The installed capacity of wind and solar PV amounted to 21.1 GW and 17.4G W respectively at the end of 2022. This showed a considerable increase in 2022 of solar PV (2.6 GW) and wind installation (2.8 GW). The delays in renewables deployment are related to a combination of political and regulatory factors – from a lack of political support for projects, inadequate planning and long and complex permitting procedures, to issues related to public acceptance and legal challenges. These create uncertainty for investors and developers. The recent legal proposal for the deployment of renewable energy includes measures on renewables in power production, in particular on permitting, offshore renewables and public acceptance. However, although the production of heat by heat pumps increased

([60]) RTE – Analyse du passage de l'hiver 2022-2023 – December 2022.

considerably in 2021 (+13%) ([61]), the untapped potential for renewables in heating and cooling requires further action, including on district heating and waste heat.

Energy efficiency measures helped to improve energy security in France, with a major information campaign, guidelines for public buildings, and even an 'electricity forecast' app, which is part of daily weather forecasts on TV. However, the effects of more structural measures such as renovation work on buildings remain to be seen and monitored. Among the measures implemented to improve security of supply, France has also focused on increasing energy efficiency, combining short-term measures with implementation of the national Long-term Renovation Strategy. In its 2021 Climate and Resilience Law, France has made progress in strengthening building codes, labelling and the application of energy audits for businesses. This law also introduced some measures which should incentivise the deep renovation of buildings, such as the renting prohibition of housing with an Energy Performance Certificate (EPC) of "G" class and consuming more than 450kWh/m^2/year as from 2023, extended to other housing of "G" class in 2025, to "F" in 2028 and "E" in 2034. However, France is still carrying out a very low number of checks on products covered by ecodesing and energy labelling. This generates serious 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 savings ([62]).

Graph A7.3: **France''s energy retail energy prices for indusutry (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

France has taken important measures to protect households and businesses in order to address rising energy prices, however it didn't target those most at risk. It has introduced price interventions through regulated tariffs ('tariff shield'), freezing the regulated price of natural gas ('bouclier tarifaire gaz') and partially freezing the regulated price of electricity ('bouclier tarifaire électricité'). It also provides fossil fuel discounts. To a lesser extent, France has introduced targeted payments for households, giving vouchers to low-income households to cover either electricity, gas or heating oil bills as well as vouchers to low-income households that use their vehicles for work. France has also put in place measures to help energy intensive industries and SMEs to face energy price increases (Annex 12). High level of subsidies did not always target those most at risk and supported the consumption of fossil fuels without contributing to lower the bills on a more permanent basis by swiftly accelerating self-consumption and energy efficiency.

France has a strong manufacturing base of low-carbon technologies and components (including hydrogen and nuclear), and is

([61]) France has the second most air source heat pumps in the EU (9 million), which are mainly used for cooling - Heat Pumps in the European Union - 2022 Status Report on Technology Development, Trends, Value Chains and Markets (Clean Energy Technology Observatory).

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

expected to expand it to other decarbonised generation technologies, in particular new offshore windfarms. France is among the leading countries in Europe that export nuclear technologies worldwide. French resilience and recovery plan focuses heavily on hydrogen, while France is one of the world's top hydrogen providers. France is well positioned in the field of hydrogen, with industry leaders in hydrolysis and fuel cell technologies. The transition to clean energy is mineral intensive and will require a substantial supply of many critical minerals. To this end, despite limited mineral resources, the country is considering extracting lithium from its soil. In addition, the deployment of some renewable technologies such as solar PV remains hindered by the lack of available and trained workforce for the installation of energy generation assets, despite a level of shortages that is below the EU average in the manufacturing of clean energy technologies. There are French companies among the biggest European manufacturers of nuclear equipment and smart meters. There are also major new French players in the batteries field, with as many as three gigafactories planned in the territory of France, two of which by French companies, in collaboration with French car manufacturers. In October 2021, France announced an additional EUR 30 billion investment plan for 2030. This targets French industrial development in the energy, automotive and space sectors, including EUR 8 billion earmarked for energy technology investment in the decarbonisation of industry, in hydrogen and in small modular reactors; EUR 4 billion for electric and plug-in hybrid vehicles. However, public investment in research and innovation (R&I) as an EU Energy Union priority slightly decreased from 0.076% in 2014 to 0.073% in 2021 (as a share of GDP). There was nonetheless an upward trend in venture capital invested in climate tech start-ups and scale-ups (6% in 2021 compared to 4.2% in 2020 as a percentage of total venture capital invested in France), with France representing nearly 11% of the EU's total venture capital investments in climate tech start-ups and scale-ups. These investments play a key role in bridging the gap between R&I and market uptake, helping to boost EU competitiveness.

Relying mainly on the schemes implemented by ADEME and BPIFrance, as well as the PIA funds, France has setup a very comprehensive set of support measures (consisting of loans, subsidies, investment vehicles, funds of funds, etc.) in order to support innovators in setting up and scaling the development of their solutions in the clean energy sector. This set of financing measures is completed with a number of successive regulatory sandboxes setup by CRE and the relevant ministers in the field of energy. These allowed a number of experiments to take place, for instance on the participation of battery storage in system services, dynamic retail electricity pricing schemes, biomethane/synthetic methane injection into distribution networks, or pooling of different types of renewable energy generation assets (e.g. solar and wind) under the same connection point to build on their complementarity. France's many renowned universities and grandes écoles offering top-level training courses on environment, climate and clean energy technologies constitute an asset for its innovation ecosystem. However, in the nuclear sector, the absence of new construction projects between early-1990s and the mid-2000s (up to the launch of the Flamanville EPR construction in 2007) resulted in a loss of experience which partly explains the delays and additional costs faced by this latest project.

Table A7.1:**Key Energy Indicators**

		FRANCE				EU			
		2018	2019	2020	2021	2018	2019	2020	2021
ENERGY DEPENDENCE	**Import Dependency [%]**	47%	48%	44%	44%	58%	61%	57%	56%
	of Solid fossil fuels	101%	100%	96%	73%	44%	44%	36%	37%
	of Oil and petroleum products	98%	98%	99%	97%	95%	97%	97%	92%
	of Natural Gas	105%	104%	95%	96%	83%	90%	84%	83%
	Dependency from Russian Fossil Fuels [%]								
	of Hard Coal	31%	27%	34%	35%	40%	44%	49%	47%
	of Crude Oil	14%	13%	9%	9%	30%	27%	26%	25%
	of Natural Gas	20%	20%	17%	22%	40%	40%	38%	41%

		2015	*2016*	2017	2018	2019	2020	2021	2022
ELECTRICITY	**Gross Electricity Production (GWh)**	579,465	564,082	561,977	581,819	570,949	532,386	555,283	-
	Combustible Fuels	51,180	63,969	72,878	57,647	62,148	56,901	58,263	-
	Nuclear	437,428	403,195	398,359	412,942	399,012	353,833	379,361	-
	Hydro	60,513	65,686	55,135	70,472	61,572	67,095	63,956	-
	Wind	21,421	21,381	24,609	28,599	34,722	39,861	36,831	-
	Solar	7,754	8,660	9,587	10,925	12,330	13,459	15,732	-
	Geothermal	92	98	133	127	128	133	100	-
	Other Sources	1,077	1,094	1,276	1,108	1,037	1,104	1,039	-
	Net Imports of Electricity (GWh)	-64,063	-41,501	-40,129	-62,967	-57,667	-45,039	-44,892	-
	As a % of electricity available for final consumption	-14%	-9%	-9%	-14%	-13%	-11%	-10%	-
	Electricity Interconnection (%)	-	-	9.40%	7.89%	8.10%	8.50%	5.07%	5.63%

		2015	2016	2017	2018	2019	2020	2021	2022*
DIVERSIFICATION OF GAS SUPPLIES	**Gas Consumption (in bcm)**	39.8	43.2	43.4	41.5	42.4	39.3	41.6	37.5
	Gas Imports - by type (in bcm)	47.9	51.2	55.7	57.5	73.5	62.3	61.3	-
	Gas imports - pipeline	42.4	44.4	46.5	47.1	53.2	45.3	45.3	-
	Gas imports - LNG	5.5	6.8	9.2	10.5	20.3	17.0	15.9	-
	Gas Imports - by main source supplier (in bcm)* (1)								
	Norway	20.0	18.6	19.3	18.0	18.7	16.8	14.5	-
	Russia	5.4	8.9	8.6	10.1	16.7	11.2	13.4	-
	Not specified	2.6	1.7	2.8	6.2	6.5	11.6	8.6	-
	Algeria	7.7	9.4	7.6	6.9	7.5	7.2	7.6	-
	Others	12.2	12.6	17.4	16.3	24.1	15.4	17.2	-

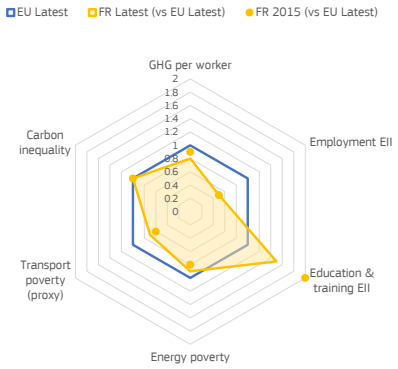
		2019	2020	2021	2022
	LNG Terminals				
	Number of LNG Terminals (2)	4	4	4	4
	LNG Storage capacity (m3 LNG)	1,370,000	1,370,000	1,370,000	1,370,000
	Underground Storage				
	Number of storage facilities	15	15	15	15
	Operational Storage Capacity (bcm)	13.4	13.2	13.2	13.7

		2019	2020	2021	2022
CLEAN ENERGY	**VC investments in climate tech start-ups and scale-ups (EUR Mln) (3)**	166.8	314.7	738.4	n.a.
	as a % of total VC investments in France	2.7%	4.2%	6.0%	n.a.
	Research & Innovation spending in Energy Union R&i priorites (2)				
	Public R&I (EUR mln)	1458.5	1618.9	1822.2	n.a.
	Public R&I (% GDP)	0.060%	0.070%	0.073%	n.a.
	Private R&I (EUR mln)	2970.6	n.a.	n.a.	n.a.
	Private R&I (% GDP)	0.12%	n.a.	n.a.	n.a.

(1) The ranking of the main supliers 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 France's progress in ensuring a fair transition towards climate neutrality and environmental sustainability, notably for workers and households in vulnerable situations. Up-and reskilling action is key to support a fair green transition in line with the Council Recommendation ([63]) and the implementation of REPowerEU. France's recovery and resilience plan (RRP) puts a significant focus on a fair green transition, especially through energy renovation of buildings, including social housing ([64]), complementing the territorial just transition plans and action supported by the European Social Fund Plus (ESF+).

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



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

Employment in France's sectors most affected by the green transition slightly declined while the green economy is expanding. The greenhouse gas (GHG) emissions intensity of France's workforce decreased from 12.5 to 10.6 tonnes per worker between 2015 and 2021, and is now below the EU average of 13.7 tonnes (see Graph A8.1, Table A8.1). Employment in French energy-intensive industries (EII) represented a share of 1.4% of total employment in 2020 (EU average: 3.0%). Since 2015, employment in mining and quarrying decreased by 11.8% along with the closure of the remaining coal mines and the decline of petroleum refineries. The number of jobs in the French green economy has risen quickly. Total jobs in the environmental goods and services sector grew by 15.1% during 2015-20 (EU: +14.6%), reaching 2.3% of total employment (EU: 2.5%; see Annex 9 for circular jobs specifically). A wider variety of relevant green jobs amounts to 14% of total employment, with only 19% of these jobs held by women ([65]). The job vacancy rate in construction, which is a key sector for the green transition, is 2.5% amongst business units with 10 employees or more ([66]). The low carbon strategy would create 200 000 jobs over the 2019-2030 period. ([67])

Up- and reskilling actions in declining and transforming sectors decreased, in a context of skills shortages. In energy-intensive industries, workers' participation in education and training declined from 20.5% in 2015 to 15.1% in 2022, though it remained above the EU average (10.4%). In France, 42% of citizens believe they do not have the necessary skills to contribute to the green transition (EU: 38%). ([68]) In the light of available forecasting studies ([69]), developing such skills appears to be a priority. In December 2022 the government announced the launch of the National Observatory for Green Jobs and Skills ([70]), tasked with identifying training needs. In this context, social partners also play a key role as stakeholders of organisations that promote training and skills for workers ([71]). Inequalities in education and training systems persist, and vulnerable groups still face barriers to access training. To address these challenges, specific investment under the Just Transition Fund (JTF) will support the up- and re-skilling of workers and jobseekers in regions most affected by the climate transition and help them adapt to new emerging employment opportunities. In addition, 5.8% of ESF+ funding in France contributes to green skills and jobs, notably through by developing academic guidance and educational content promoting green jobs.

([63]) 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.

([64]) See 2022 Country Report (Annex 6).

([65]) Margontier S. (2021), Métiers verts et verdissants: près de 4 millions de professionnels en 2018, Ministère de la Transition Ecologique et de la Cohésion des territoires.

([66]) Eurostat (JVS_A_RATE_R2)

([67]) DARES & France Stratégie, Les métiers en 2030, Quelles perspectives de recrutement en région et au niveau national?, 2022.

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

([69]) DARES & France Stratégie, 2022.

([70]) https://www.ecologie.gouv.fr/lobservatoire-national-des-emplois-et-metiers-leconomie-verte

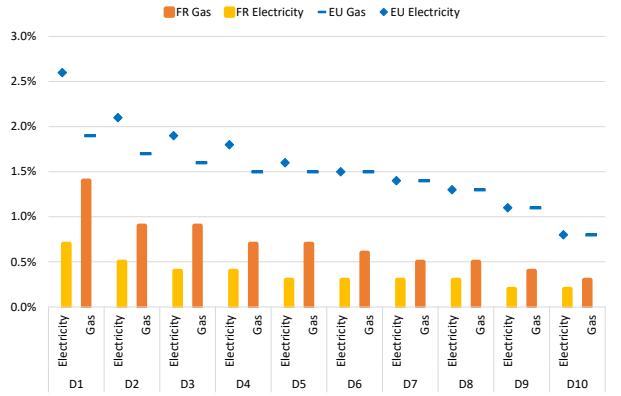
([71]) France Stratégie, Les opérateurs de compétences au défi de la transition écologique, July 20222.

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

Indicator	Description	FR 2015	FR Latest	EU Latest
GHG per worker	Greenhouse gas emissions per worker - CO2 equivalent tonnes	12.5	10.6 (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) - %	1.5	1.4 (2020)	3 (2020)
Education & training EII	Adult participation in education and training (last 4 weeks) in energy-intensive industries - %	20.5	15.1 (2022)	10.4 (2022)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm - %	5.5	6 (2021)	6.9 (2021)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport - %	23.5	25.5 (2023)	37.1 (2023)
Carbon inequality	Average emissions per capita of top 10% of emitters vs bottom 50% of emitters	4.8	4.8 (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).

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



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.

Energy poverty indicators have worsened in recent years and the spike in energy prices can be expected to aggravate the situation. The share of the population unable to keep their homes adequately warm increased from 5.5% in 2015 to 6% in 2020 (EU: 6.9%) ([72]) and is expected to have increased further in light of rising energy prices. In 2021, 15.5% of the population at risk of poverty (AROP) (EU: 16.4%) and 6.5% of lower middle-income households (in deciles 4-5) were affected (EU: 8.2%). The announced energy saving plan aims to help people reduce their energy use, including financial support for switching from gas boilers to more energy-efficient heat pumps. Before the price hikes, an estimated 16.5% of the total and 42.1% of the (expenditure-based) AROP population had residential expenditure budget shares on electricity, gas, and other fuels ([73]) that were above 10% of their household budget (below the estimated EU averages of 26.9% and 48.2%, respectively). In October 2022, the government set a target of cutting France's energy consumption by 10%, from 2019 levels, by 2024 – a first step in a longer-term plan to become carbon neutral by reducing energy use 40% by 2050.

The increased energy prices in 2021-2023 negatively affect households' budgets, in particular for low-income groups. As a result of energy price changes during the August 2021 to January 2023 period relative to the 18 months prior (cf. Annex 7), in the absence of policy support and behavioural responses, the share of individuals living in households spending more than 10% of their budget on energy would have increased by 7.1 percentage points (pps) overall and by 8.1 pps among the (expenditure-based) AROP population (below the EU-level increase of 16.4 pp and 19.1 pps, respectively) ([74]). Expenditure shares of low and lower-middle income groups would have increased the most, in particular for gas, but less than EU-level effects for all groups (see Graph A8.2). Among the (expenditure-based) AROP population, the share of individuals living in households with budget shares for private transport fuels ([75]) above 6% would have increased by 2.0 pps, less than the EU average increase (by 5.3 pps), reaching 25.5% in January 2023 due to the increase in transport fuel prices (vs. 37.9% in the EU).

Access to public transport displays an urban-rural divide. Roughly half of French citizens perceive public transport to be available (49% vs 55% in the EU), affordable (51% vs 54% in the

([72]) 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.

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

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

([75]) ECOICOP: CP0722.

EU) and of good quality (55% vs 60% in the EU). In this respect, rural areas in France perform significantly worse than urban areas and worse than rural areas in the EU overall ([76]). The average carbon footprint of the top 10% of emitters among the population in France is about 4.8 times higher than that of the bottom 50% (see Graph A8.1), i.e. slightly less pronounced than the EU average (5.0 times). In France, the average levels of air pollution in 2020 stood above the EU average (8.6 vs 11.2 µg/m^3 PM2.5), with 16% of the population living in regions exposed to critical levels of air pollution ([77]), leading to significant health impacts, in particular on vulnerable groups, and 16 540 premature deaths annually ([78]).

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

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

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

ANNEX 9: RESOURCE PRODUCTIVITY, EFFICIENCY AND CIRCULARITY

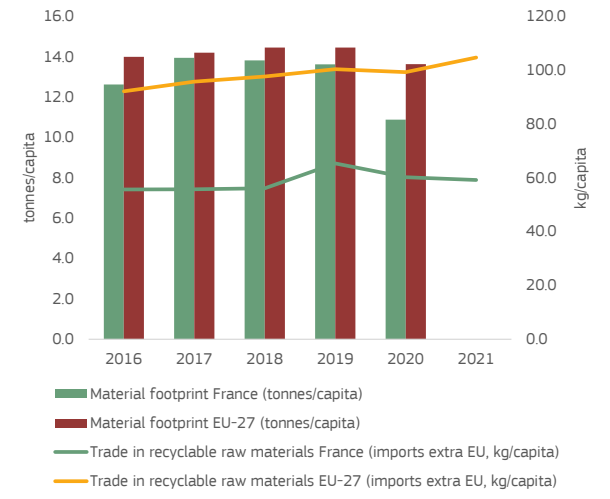
The circular economy transition is key to delivering on the EU's climate and environmental goals and provides large socio-economic benefits. It spurs job growth, innovation and competitiveness and fosters resilience and resource security. The circularity transition of industry, the built environment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

France is on track to meet the EU's circular economy goals, although there remain areas in which improvement is needed. The EU's 2020 circular economy action plan (CEAP) aims at doubling circular material use by 2030. In this respect, France's performance rose to 19.8% in 2021 compared to 19.4% in 2016, far above the EU average of 11.7% in 2021. The CEAP also aims to significantly decrease the EU's material footprint. France's performance is below the EU average, with 10.9 tonnes per head vs 13.7 tonnes per head in 2020, and has been decreasing by 3% points since 2010. 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 ([79]).

France recently adopted new policies to address remaining circular economy challenges. The 2020 'loi relative à la lutte contre le gaspillage et à l'économie circulaire' (anti waste and circular economy law) contains 50 measures and obligations to deliver on the objectives of the CEAP. Measures notably target plastic and food waste, information to consumers, reuse, repair, and planned obsolescence.

The current generation and treatment of waste, in particular municipal waste, is stagnating. France's generation of municipal waste remains above the EU average of 530 kg per head. With a recycling rate of municipal waste of 45.1% in 2021, France has missed the EU target for recycling 50% by 2020. France is at risk of missing the EU's recycling target for municipal waste for 2025. France is also considered to be at risk of missing the 2025 recycling target of 50% for plastic packaging waste. This is in particular due to the inefficient collection and treatment of municipal biowaste. The packaging waste stream of most concern is plastic; with a 26.9% recycling rate in 2019, it is far from the 2025 target (50%). The landfilling rate stands at 25% in 2021, above the EU average (23% in 2021) and far from the target of 10% by 2035. France will need to make further efforts to meet the EU's recycling targets through improvements in separate collection and treatment of waste in view of recycling, in particular for biowaste and plastic packaging.

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



Source: Eurostat

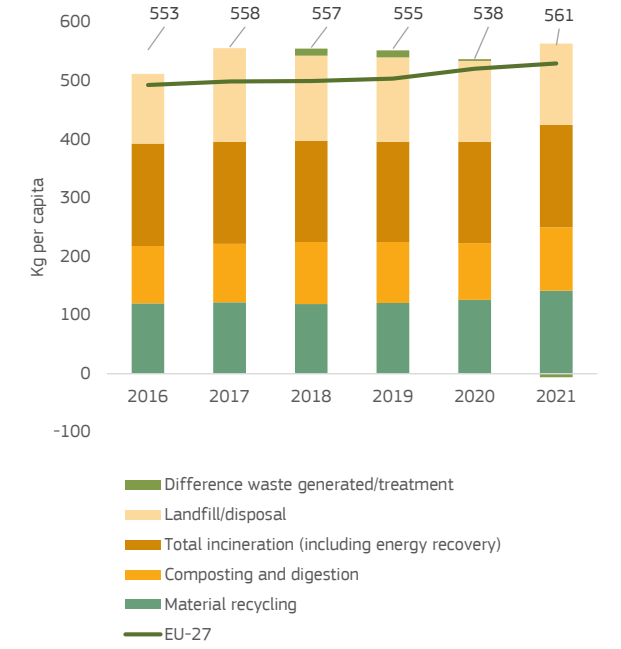
The industrial system is increasingly circular. With regard to resource productivity, the French industrial system is performing better than the EU average, with a purchasing power standard per kilogramme of 3.1 vs 2.3 for the EU in 2021, further increasing France's resilience (see Annex 5). France's inter-company synergy programme can further develop opportunities for industrial symbiosis. France's commitments for green growth encourage industries and economic players to develop new circular models.

The built environment system continues to exacerbate the depletion of resources, despite recent improvements. The recovery rate of construction and demolition waste has slightly increased since 2016 but remains well below the EU average (74% vs 89%). There is scope for renovating existing buildings and improving their use instead of building new ones, as well as increasing the share of secondary raw materials used in construction. With regard to soil

([79]) 9.45 fatal accidents p. 100 000 employed in 2018-2020 vs 2.94 for all sectors in France; 6.33 in the EU-27 for waste collection, treatment and disposal activities

sealing, positive note is taken of the ongoing efforts to reach net zero artificialisation by 2050. An extended producer responsibility scheme for the building sector was introduced in January 2022 to help stimulate the secondary raw material market. It includes the separate collection free of charge and traceability of construction and demolition waste.

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



Source: Eurostat

The agri-food system is an important part of the French economy, and it needs to accelerate its circularity transition. Further progress can be made towards sustainable, circular models in food production. Despite measures such as banning supermarkets and commercial catering from destroying unsold food products, France's food waste is close to the EU average of 131 kg per head, and remains an issue. The food value chain circularity still remains to be developed. France's composting and anaerobic digestion increased to 108 kg per head in 2021.

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 4.7 billion per year between 2014 and 2020. Over this period, investment needs were estimated to be at least EUR 8.8 billion per year, while investment baselines were EUR 4.1 billion per year (see Annex 6). Investing in the circular economy is key to achieving the transition. Investment areas such as eco-design, repair, reuse and remanufacturing as well as the uptake of new business models will be necessary to reach the EU's circular economy objectives. France is already using funds from the ERDF, EAFRD and the RRF, but further investments are needed.

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)	12.6	14.0	13.8	13.6	10.9	-	13.7	2020
YoY growth in persons employed in the circular economy (%)[1]	-1.3	7.2	-	-	-	-	2.9	2019
Water exploitation index plus (WEI+) (%)	2.1	3.3	1.7	2.8	-	-	3.6	2019
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	2.7	2.6	2.8	2.9	3.1	3.1	2.3	2021
Circular material use rate (%)[2]	19.4	18.8	19.7	20.0	19.2	19.8	11.7	2021
Recycling rate (% of municipal waste)	39.7	40.2	40.7	41.0	41.7	45.1	49.6	2021
Built environment								
Recovery rate from construction and demolition waste (%)[3]	71.0	-	73.0	-	74.0	-	89.0	2020
Soil sealing index (base year = 2006)[4]	105.0	-	109.2	-	-	-	108.3	2018
Agri-food								
Food waste (kg per capita)[5]	-	-	-	-	133.0	-	131.0	2020
Composting and digestion (kg per capita)	98.0	100.0	106.0	104.0	97.0	108.0	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, including composting and digestion; (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.

Source: Eurostat, European Environment Agency

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 France'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). France allocates 21% of its total RRP budget to digital (EUR 8.4 billion) ([80]).

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 ([81]). 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 ([82]). Digital technologies, infrastructure and tools all play a role in the fundamental transformation needed to adapt the energy system to the current structural challenges ([83]).

France is in line with the EU average in terms of digital skills, but it is still far from the EU frontrunners and faces a severe shortage of ICT specialists. It scores above the EU average for basic digital skills and matches the EU average for ICT specialists. There is an imbalance between the 190 000 recruitment needs for computer engineers and the number of young beginners (155 000) ([84]). A RRP measure supporting the acquisition of digital skills across the workforce by increasing personal training budgets to develop digital skills for 20 500 employees is expected to help address the skills related challenges.

France made considerable progress in digital infrastructure/connectivity. Coverage of fibre to the premises (FFTP) increased substantially by 10 percentage points, standing at 73 % in 2022 (compared to 56 % in the EU). Coverage in rural areas also increased considerably, with a coverage of fibre to the premises at 46% against an EU average of 41%. The RRP supports the 'France Très Haut Débit' plan to accelerate the deployment of optical fibre across the whole country. The plan's objective is for everyone living in France (including in rural areas), to be able to access digital connectivity of more than 100Mbit/s at home and work by the end of 2025. As regards mobile connections, overall 5G coverage increased to 89% (above the EU average of 81%) and 5G coverage on the 3.4-3.8 GHz spectrum band, which is essential for enabling advanced applications requiring large spectrum bandwidth, stands at 52% (above the EU average of 41%).

Overall, French companies have increased their use of digital technologies in business operations, but SMEs are lagging behind. As part of its RRP, France plans to invest EUR 385 million to help small, medium and mid-tier companies to finance digitalisation strategies by 2022. This includes an additional allocation for 'France Num' and a plan to help retailers digitalise their operations. Moreover, as part of the fourth 'programme d'investissements d'avenir (PIA4)', the RRP includes innovation support programmes and activities to foster the research and innovation ecosystem. These actions are focused on strategic technologies in key markets in which France considers it essential to be a global player (quantum computing, cybersecurity, artificial intelligence, cloud, etc.). France started to implement these actions, with strategies per key area being published. 22% of enterprises use big data, compared with an EU average of 14%, and 45% use electronic information sharing. But the

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

([81]) 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.

([82]) 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).

([83]) 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.

([84]) France Stratégie, Les métiers en 2022 – résultats et enseignements, 2014

share of small and medium-sized enterprises (SMEs) with at least basic digital intensity levels is below the EU average. In particular, only 13% of French SMEs sell online, compared with an EU average of 19%.

France scores fairly on digitalisation of public services. France's performance on digital public services for citizens and businesses is below the EU average, but its share of e-Government users is high. Moreover, France has one electronic identification (eID) scheme notified under the eIDAS regulation. However, France is not performing well on the access to electronic health records and pre-filled forms, where its score is significantly lower than the EU average (54 vs 71 and 47 vs 68).

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

	France			EU	Digital Decade target by 2030 (EU)
	DESI 2021	DESI 2022	DESI 2023	DESI 2023	
Digital skills					
At least basic digital skills	**NA**	**62%**	**62%**	**54%**	**80%**
% individuals		2021	2021	2021	2030
ICT specialists ([1])	**4.5%**	**4.5%**	**4.5%**	**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	**53%**	**63%**	**73%**	**73%**	**100%**
% households	2020	2021	2022	2022	2030
Fibre to the Premises (FTTP) coverage ([2])	**53%**	**63%**	**73%**	**56%**	**-**
% households	2020	2021	2022	2022	2030
Overall 5G coverage	**0%**	**74%**	**89%**	**81%**	**100%**
% populated areas	2020	2021	2022	2022	2030
5G coverage on the 3.4-3.8 GHz spectrum band	**NA**	**NA**	**52%**	**41%**	**-**
% populated areas			2022	2022	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	**NA**	**NA**	**64%**	**69%**	**90%**
% SMEs			2022	2022	2030
Big data ([3])	**22%**	**22%**	**22%**	**14%**	**75%**
% enterprises	2020	2020	2020	2020	2030
Cloud ([3])	**NA**	**25%**	**25%**	**34%**	**75%**
% enterprises		2021	2021	2021	2030
Artificial Intelligence ([3])	**NA**	**7%**	**7%**	**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**	**80**	**79**	**84**	**100**
Score (0 to 100)		2021	2022	2022	2030
Access to e-health records	**NA**	**NA**	**54**	**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 France's research and innovation system, which is essential for delivering the twin green and digital transition.

France is a strong innovator according to the 2022 edition of the European Innovation Scoreboard ([85]) but its performance lead over the EU average is narrowing. France's innovation performance is below the average of the EU's strong innovators (105.4% compared to 114.5%) and is decreasing over time (-1.0%). Total R&D intensity stood at 2.21% in 2021, slightly below the EU average and still far from the target of 3% initially set for 2020.

Over the last decade, France has not been able to enhance the performance of its public research system and to fully restore the attractiveness of academic research careers. Between 2009 and 2019, there has been a slight, but steady, decline in public R&D intensity ([86]) which has been detrimental to the country's scientific performance. Notably, the share of France's scientific publications among the top 10% most cited publications worldwide has been on a slightly declining trend since 2010 and fell to 8.9% in 2019, below the EU average of 9.8%. While the country has the second-highest proportion of new science graduates in the EU, which hints at an abundant pool of human resources for research and innovation, it has not been able to fully take advantage of this key strength as the French research system continues to suffer from the increasing precarity of academic research careers. As an illustration, over the last decade the age at which young researchers are able to secure a stable position as researcher or lecturer has increased by almost 2 years, while the age at which the doctoral degree is obtained has remained stable ([87]).

With the adoption of the Research Programming Law in December 2020, whose implementation is a key deliverable under the French Recovery and Resilience Plan, France has taken an important first step towards tackling this challenge. On top of setting a budgetary path to progressively enhance public R&D funding until 2030, the Research Law aims to make research careers more attractive, notably through better remuneration and the introduction of new recruitment channels. These include a new tenure-track programme called '*chaires de professeur junior*'. However, the programme concerns only a small proportion of positions and it has gotten off to a slow start, as noted in the Senate's report on the implementation of the Research Law of July 2022 ([88]).

Business R&D intensity is stagnating and France's innovation performance is not on par with the high level of public support for business innovation. Business R&D intensity has remained stable at around 1.44% between 2012 and 2021. So far, the large volume of public support for business innovation – which is the highest in the EU as a percentage of GDP and relies primarily on a tax credit scheme called *crédit impôt recherche* (CIR) – has not had a tangible effect on innovation output, as measured for example by patents. Rather, France's international patenting activity has steadily declined over the last 10 years and is now below EU average. Regarding the efficiency of the CIR, the evaluation conducted by the National Commission for the Evaluation of Innovation Policies showed that the scheme had positive effects on small and medium-sized enterprises (SMEs) (both in terms of R&D activity and economic performance) but no significant effects on larger firms ([89]). In that regard, an OECD study notably demonstrated that the amount of R&D induced by one euro of R&D tax subsidy is lower in France than in the countries used for comparisons, where the tax aid is often less generous and targeted at smaller firms ([90]).

France can count on a vibrant and well-developed start-up ecosystem which however

([85]) 2022, European Innovation Scoreboard, Country profile: France (https://ec.europa.eu/assets/rtd/eis/2022/ec_rtd_eis-country-profile-fr.pdf). The EIS provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems.

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

([87]) L'état de l'emploi scientifique en France, rapport 2020, Ministère de l'Enseignement Supérieur et de la Recherche.

([88]) http://www.senat.fr/rap/r21-766/r21-766.html

([89]) https://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs-2021-rapport-cnepi-cir-juin.pdf

([90]) OECD (2020), 'How effective are R&D tax incentives? New evidence from the OECD microBeRD project', Directorate for Science, Technology and Innovation Policy Note, OECD, Paris, http://www.oecd.org/sti/microberd-policy-note.pdf.

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

France	2010	2015	2019	2020	2021	EU average (1)
Key indicators						
R&D intensity (Gross domestic expenditure on R&D as % of GDP)	2.18	2.23	2.19	2.30	2.21	2.26
Public expenditure on R&D as % of GDP	0.78	0.75	0.71	0.74	0.72	0.76
Business enterprise expenditure on R&D (BERD) as % of GDP	1.38	1.44	1.44	1.52	1.45	1.49
Quality of the R&I system						
Scientific publications within the top 10% most cited publications worldwide as % of total publications	10.2	9.7	8.9	:	:	9.8
Patent Cooperation Treaty (PCT) patent applications per billion GDP (in PPS)	4,1	4.2	3,1	:	:	3,3
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	7.4	8	8.5	8.4	8.6	7.1
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.034	:	0.032	:	:	0.054
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	:	20.9	22.6	24.1	:	16
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	0.421	:	:	:	:	0.194
R&D tax incentives: foregone revenues as % of GDP	0.274	0.282	0.284	:	:	0.1
Green innovation						
Share of environment-related patents in total patent applications filed under PCT (%)	15.1	14.8	14.1	:	:	13.3
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.029	0.033	0.066	0.076	0.096	0.074
Employment in fast-growing enterprises in 50% most innovative sectors	5.1	4.1	4.1	:	:	5.5

(1) EU average for the latest available year or the 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

remains highly concentrated geographically. According to the State of EU Tech 2022, France is, after Germany, the EU Member State with the highest number of USD 1billion+ European tech companies, or 'unicorns'. This favourable environment for start-ups is notably linked to the country's capacity to attract investors and, in particular, to the growing availability of venture capital over the last decade (venture capital investment as percentage of GDP has more than tripled between 2010 and 2021). While very dynamic, France's start-up ecosystem remains, however, highly concentrated in the Paris region ([91]). On a per capita basis, France is only slightly above European average when it comes to the number of start-ups per 1 m inhabitants (307, compared to 269 for the European average) ([92]). This is also a reflection of the existing disparities in terms of innovation performance within the country, with many regions lagging behind compared to the capital region (Annex 17).

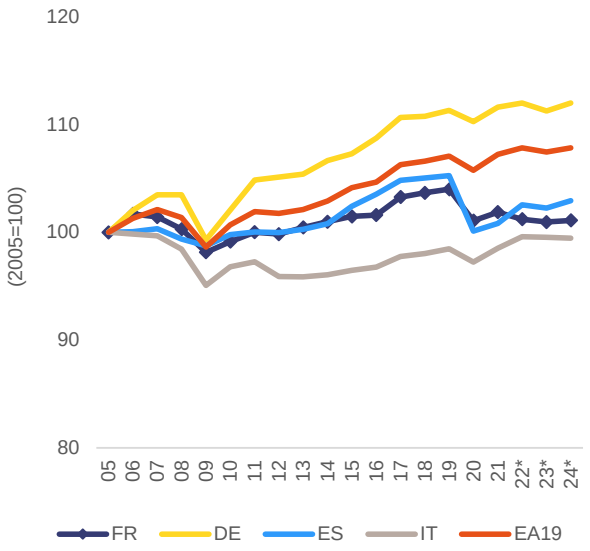
France has been gradually equipping itself with the appropriate instruments and governance framework to increasingly direct R&I efforts towards accelerating the twin transition. The share of green inventions in France's patenting activity (based on patents filed under the PCT) has remained stagnant, at around 15%, over the last ten years. As part of the Recovery and Resilience Plan, significant investments, undertaken under the four Investments for the Future Programme (PIA4), will be directed towards the development of key technologies for the green and digital transitions. To support these efforts, the governance of the PIA4 has been revised with a view to ensuring a clearer strategic steer of its different thematic investment strategies. As a complement to the PIA4, the challenge-oriented investment plan 'France 2030', launched in 2021, will provide an additional EUR 34 billion to foster innovation and help new 'champions' emerge in key sectors, with a particular focus on low-carbon energy and the decarbonisation of industry.

([91]) More than half of French start-ups are located in the Paris region, according to La French Tech's startup ecosystem map, powevered by Dealroom.co.

([92]) State of European Tech 2022

France's productivity has been hampered by structural weaknesses. Since the 2000s, labour productivity has increased less in France than in the euro area, with the highest gains for the manufacturing sector and the worst results for the construction sector. The slow growth of labour productivity is partly due to the stagnation of the total factor productivity.

Graph A12.1: **Total factor productivity (2005=100)**



* European Commission forecast.
Source: Ameco, European Commission.

Low gains in productivity are linked to France's structural weaknesses. The latter include the lack of skills and skills' mismatches (annex 14), the lack of digitalisation among SMEs (annex 10) and a stagnating business R&D intensity (annex 11). Investment under France's recovery plan will help tackle those structural weaknesses.

Containing production costs is key to increasing industrial competitiveness. According to France's national productivity board ([93]), its low competitiveness is mainly due to rising production costs rather than unfavourable specialisation. Faced with rising costs, many firms have located their production sites abroad. Employment in the foreign industrial subsidiaries of French groups corresponds to 68% of employment in the industrial sector in France, compared to 35% in Germany, 27% in Italy and 10% in Spain. Taxes, like other costs, influence location decisions. France reduced the corporate tax rate and taxes on production, but further reduction could help preserve or attract industrial activity. According to France's national productivity board, if France had the same level of production taxes as its partners, its share of production site creation by non-EU multinationals in Europe would increase by 17%.

Soaring energy costs have further penalised industrial competitiveness. From October 2021 until September 2022, production prices in French industry increased by 26%, mainly due to the increase in energy prices (+61%) ([94]). While the whole of European industry has experienced the increase in gas prices since Russia's invasion of Ukraine, French industry has been further penalised by the unavailability of many French nuclear power stations. Wholesale electricity prices in France have become higher than in Germany, whereas they used to be lower ([95]). Although the loss of French industrial production due to higher energy prices is estimated to be just 1.5%, it will be higher in the energy-intensive industries (4.5% for metallurgy and 3.8% for the wood and paper industry) ([96]). Together with concerns about security of energy supply, higher energy prices could also prompt industrial companies to further locate their production sites outside France and the EU. France has put in place measures which help energy-intensive industries and SMEs to face the energy price increases. France also subsidises firms' investment to increase energy efficiency and decarbonise production processes, especially under its recovery plan and the France 2030 investment plan. The government also announced a bill of law to support the green transition of industry.

Industry in France increasingly suffers from disruptions of supply chains. In 2022, 43% of French firms faced constraints linked to materials shortage. This share has been soaring since 2020, when it was only 16%. It is now above the EU average (32%). This has heavily impacted industries which have a high share of material inputs, such as automotive, aerospace, defence, and consumer goods ([97]).

([93]) Conseil national de la productivité, Productivité et compétitivité, 5/2022

([94]) INSEE

([95]) C. Mini C and M. Bordigoni, L'industrie face aux prix de l'énergie, Les Notes de La Fabrique, 10/11/2022.

([96]) Insee, Refroidissement, note de conjuncture, 12/2022

([97]) France's supply chain and Roland Berger, Les enjeux stratégiques des opérations en 2021, 2021

France's strategic dependencies appear to be in line with the EU average. Regarding critical raw materials, France's import concentration index is just slightly above the EU average. Regarding products, France had a lower number of vulnerable products ([98]) than its main European neighbours in 2020 ([99]). Products for which French imports appeared to be sourced from a limited number of countries included chemicals, pharmaceuticals, metals and some capital goods. For 25% of these products, the main non-European supplier is China.

Corporate investment has held up better than expected, but too few SMEs invest to innovate and become greener. In 2022, net private investment represented 4.7% of France's GDP, above the EU average (3.4%). However, only a little more than 20% of French firms invested to develop new products, processes and services in 2021, against 50% of firms in the best performing Member States ([100]). Only 29% of SMEs invested more than 1% of their turnover to become resource efficient (EU average: 39%) ([101]).

The main barrier to investment has been the lack of available staff. When asked about long-term barriers to investment ([102]), French firms point to the lack of available staff (84% of firms in France vs 85% in the EU), energy costs (78% vs 82%), uncertainty about the future (74% vs 78%), labour regulations (64% vs 60%), business regulations (58% vs 61%), demand for products or services (54% in France vs 53% in the EU) and the availability of finance (45% vs 43%). SMEs' access to loans is good, whereas access to equity is around the EU average ([103]).

Long permitting procedures have hampered investment in renewable energy infrastructure, but France has adopted a law to improve the situation. To accelerate the deployment of renewable energy, France adopted a law on 10 March 2023. The law deals with several causes of long administrative procedures, such as frequent updating of urban planning documents, delays due to requests for complementary information and tedious procedures for ground-mounted photovoltaic projects. France still needs to increase the staffing in the competent authorities.

Long permitting procedures have hampered investment in clean tech manufacturing. It takes 17 months on average to obtain a building permit, receive environmental authorisation and carry out the public investigation process for an industrial project ([104]). The procedure involves bottlenecks, where the project owner must wait for replies from different bodies (administrative court, opinion of the environmental authority, report from the public investigator). Furthermore, a public consultation must be held for large industrial projects. This process can last at least 6 months, which adds to the average time of 17 months. Investment projects may also be subject to litigation procedures that can last several years, leading to projects being abandoned.

Late payments have reduced SMEs' liquidity. Late payments from the public and business sectors drastically increased in France in 2022, compared to 2021, and are now above the EU average ([105]). 40% of public health bodies pay after the deadline ([106]), which significantly impacts SMEs. Large companies' payment periods have also kept increasing since 2019: only 41% of them pay on time (vs 75% of SMEs). Due to late payments, SMEs had EUR 12 bn less in liquidity in 2021, while large companies had EUR 16 bn more.

Regarding integration into the Single Market and digitalisation, French SMEs are lagging behind. SMEs represent a share of French added value which is small (42.3%) compared to the EU average (51.8%) ([107]). French businesses and in particular SMEs could better exploit the single market opportunities to grow. Intra-EU imports and exports as a share of GDP have slightly declined for several years. They are now the lowest in the EU with 16.5% of GDP (against 42% on average

([98]) Products for which imports are concentrated in some extra-EU countries and which have low diversification potential

([99]) Ministry of Economy, France, Vulnerability of French and European imports, 17/12/2020.

([100]) EIBIS 2022, EU overview, 8/11/2022, p.13

([101]) EC, Flash Eurobarometer 498: SMEs, resource efficiency and green markets, 2022

([102]) EIBIS 2022, EU overview, 8/11/2022, p.23

([103]) European Investment Fund, EIF SME access to finance index, 2022, 14/10/2022.

([104]) Assemblée nationale, Propositions des pilotes pour le projet de loi industrie verte, April 2023

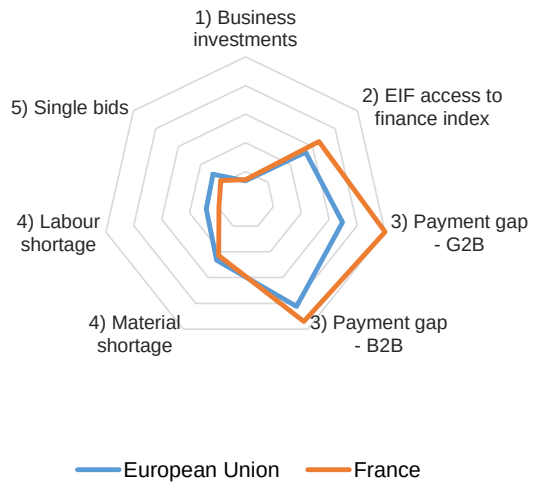
([105]) Intrum, European payment report 2022, 21/6/2022. Survey conducted between January and April 2022

([106]) Banque de France, Rapport de l'observatoire des délais de paiements, 6/2022

([107]) EC, SME Performance Review, France country sheet, 7/2022

for EU Member States). Only 6% of French SMEs sell online cross border (EU average: 9%) ([108]). SMEs' digitalisation is still lagging behind the EU average. Only 47% of French SMEs have at least a basic level of digital intensity against 55% in the EU.

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.

France could do more to facilitate businesses' integration into the Single Market. France is among the five Member States with the highest number of infringement cases relating to Single Market rules. While it implements most directives into national law on time, the conformity deficit is slightly higher than the EU average ([109]). France's SOLVIT centre, which helps businesses and citizens deal with breaches of EU rights in other EU countries, is understaffed.

Reducing regulatory restrictions in services could boost competition and productivity. Regulatory restrictions remain high in several regulated professions, in particular accountants and tax advisers, patent agents, estate agents and architects, mostly in the form of shareholding requirements and company form restrictions. Exclusive rights for accountants and tax advisers remain broad, harming the development of innovative services. The long duration of the mandatory qualification for estate agents could be an obstacle for new market entrants. For lawyers, which is the most regulated profession in the EU, regulatory restrictions are only slightly below the EU average ([110]). In the retail sector, France has adopted stringent restrictions on operations and establishment since 2019 (ELAN, Egalim 1, 2 and 3, PACTE and CLIMA laws). It is the most restrictive Member State regarding retail regulatory frameworks ([111]). The recently adopted Egalim 3 law ([112]) introduces new restrictions on promotions and commercial negotiations, which may have a negative impact on consumer choice and prices.

([108])EC, Digital Economy and Society Index 2022

([109])EC, Single Market Scoreboard, 2022

([110])EC, Communication on updating the reform recommendations for regulation in professional services, COM(2021)385. 9/7/2021

([111])EC, Retail restrictiveness indicator (2022 update), forthcoming

([112])Loi n° 2023-221 du 30 mars 2023 tendant à renforcer l'équilibre dans les relations commerciales entre fournisseurs et distributeurs (JO, 31 mars 2023).

Table A12.1:**Industry and the 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]	4.6	4.7	3	4.7	4.8	**3.7**
		Net public investment, level of public capital stock, net of depreciation, % GDP [1]	0.1	0.4	0.2	0.2	0.3	**0.4**
		Real labour productivity per person in industry (% yoy)[2]	2.1	-1.2	-9.7	4.2	-2.8	**1.4**
	Cost competitive-ness	Nominal unit labour cost in industry (% yoy)[2]	-0.5	-2.5	7.7	0	6	**2.9**
RESILIENCE	Shortages	Material shortage (industry), firms facing constraints, % [3]	22	18	16	31	43	**47**
		Labour shortage using survey data (industry), firms facing constraints, % [3]	13	14	10	11	19	**28**
		Vacancy rate (business economy)[4]	n.a.	n.a.	n.a.	n.a.	0.7	**3.1**
	Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials [5]	0.2	0.17	0.16	0.17	0.19	**0.18**
		Installed renewables electricity capacity, % of total electricity produced [6]	37.2	38.9	40.4	41.5	n.a.	**50.9**
SINGLE MARKET	Single Market integration	EU trade integration, % [7]	16.9	16.8	15.2	16.5	19.4	**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]	17	19	18	19	22	**29**
BUSINESS ENVIRONMENT - SMEs	Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle [10]	22.9	24.9	21.9	21.3	22.8	**29.6**
	Business demography	Bankruptcies, Index (2015=100)[11]	85	80.6	49.1	43.1	65.2	**86.8**
		Business registrations, Index (2015=100) [11]	132.7	153.1	159.4	186	189.8	**121.2**
	Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment [12]	2	10	15	12	16	**13**
		Payment gap - public sector, difference in days between offered and actual payment [12]	11	12	13	8	23	**15**
		Share of SMEs experiencing late payments in past 6 months, % [13]	n.a.	50.8	43.9	43.5	47.3	**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]	0.91	0.76	0.83	0.85	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]	0.21	0.36	0.13	0.2	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. Eurostat

This Annex outlines the performance of France's public administration, which is essential for providing services and carrying out reforms. After the 'yellow vest' and COVID-19 crises, perceptions of government effectiveness in France fell to the level of the EU average. In response to these crises, France revised its public administration reform agenda, with a shift towards more simplification and proximity at territorial level ('re-arming the State' at departmental level), and launching the reform of the senior civil service. These reforms are part of its recovery and resilience plan (RRP).

The civil service in France is experiencing several challenges. While the number of public employees as a proportion of the population is higher than in other Member States, the public administration is confronted with an ageing civil service and decreasing attractiveness. Recruitment issues also vary according to the territory and type of position. The government's main response to the reduced attractiveness of the civil service as a place to work has been to use more contract agents and increase starting salaries.

The cross-cutting reform of the senior civil service, set out in the recovery and resilience plan, is under way. France has taken several measures to reform recruitment procedures and competency frameworks. These aim to: (i) diversify the profiles of senior civil servants; (ii) harmonise initial training; (iii) develop continuing education to improve the culture of public service; (iv) develop career paths by adapting selection procedures and encouraging mobility between the civil service and the private sector.

Challenges persist as regards gender equality among senior civil servants. Gender parity in senior administrative positions is below the EU average. The Sauvadet Law, which ten years ago brought in quotas for women in senior civil service positions, seems to be having less effect. The proportion of women continues to fall further below the 40% target set by the law.

The OECD indicators on regulatory policy and governance show below-average performance on public consultation (Graph A13.2). While the use of evidence-based policymaking instruments is generalised, public consultations on non-environmental issues are not conducted on a systematic basis. This can make for less inclusive policymaking.

As a response to the pandemic and to reform its territorial management, France launched a new decentralisation process. The new 3DS Law (differentiation, decentralisation, devolution and simplification) aims to give local governments more discretion in various fields (transport, social housing, health, etc.) and provides for a limited transfer of competences on a case-by-case basis, while also simplifying local public services. The participation of local authorities in health policy is supported by Article 119 of the 3DS Law, which modifies the rules of organisation, operation and supervision of the regional health agencies. Implementation has not really begun yet: only 2 decrees implementing the 3DS Law have been published, compared to the 80 decrees that are expected.

France's performance on digital public services is slightly below the EU average (Table A13.1 and Annex 10). The government has made significant efforts on digitalisation in recent years. The France Connect platform provides access to more than 1 000 administrative services, according to the government.

The justice system is still facing challenges as regards judicial efficiency. The estimated time needed to resolve cases fell in 2021 but remains above the levels reached in previous years (440 days for civil, commercial, administrative and other cases and 495 days for litigious civil and commercial cases). The overall quality of the justice system is good, although digital tools are used in only some courts. Investments are being made to increase the level of digitalisation, in particular for civil and criminal proceedings, and to make court decisions available online. Significant investments have been made and major initiatives have been taken to address the ongoing lack of human resources. No systemic deficiencies in judicial independence have been reported ([113]).

France lags in most indicators that measure performance on the single market governance tools (Graph A13.1 and Annex 12).

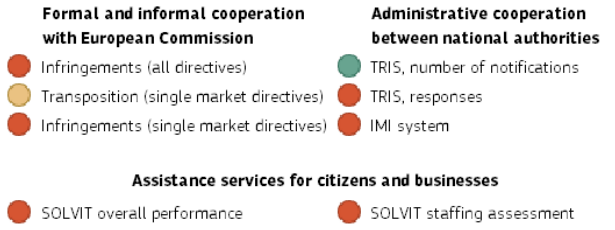
([113])For a more detailed analysis of the performance of the justice system in France, see the 2023 EU Justice Scoreboard (forthcoming) and the country chapter for France in the 2023 Rule of Law Report (forthcoming).

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

FR	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 (%)	77.0	79.5	82.4	n/a	87.1	n/a	64.8
2	E-government benchmark overall score ([3])	n/a	n/a	n/a	71.6	69.7	69.7	72.9
3	Open data and portal maturity index	n/a	0.8	0.9	0.9	1.0	1.0	0.8
Educational attainment level, adult learning, gender parity and ageing								
4	Share of public administration employees with tertiary education (levels 5-8, %)	39.7	40.0	41.1	42.2	45.1 (b)	48.1	52.0
5	Participation rate of public administration employees in adult learning (%)	24.2	24.0	25.5	15.3	13.6 (b)	17.0	16.9
6	Gender parity in senior civil service positions ([4])	37.0	40.4	42.8	38.6	37.8	37.8	11.0
7	Ratio of 25-49 to 50-64 year olds in NACE sector O	1.6	1.6	1.6	1.6	1.5 (bd)	1.6 (d)	1.5
Public financial management								
8	Medium term budgetary framework index	0.7	0.7	0.7	0.7	0.7	n/a	0.7
9	Strength of fiscal rules index	0.9	0.9	0.9	0.9	0.9	n/a	1.5
Evidence-based policy making								
10	Regulatory governance	1.88	n/a	n/a	n/a	1.89	n/a	1.7

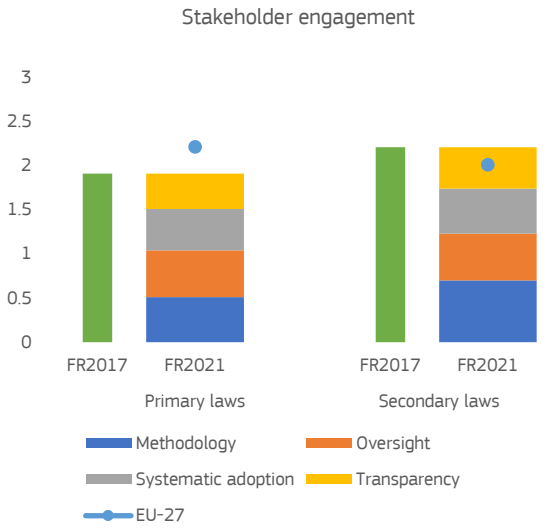
([1]) High values denote a good performance, except for indicator # 6. ([2]) 2022 value. If not available, the 2021 value is shown.
([3]) Measures the user centricity (including for cross-border services) and transparency of digital public services as well as the existence of key enablers for the provision 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).

Graph A13.1: **France. Performance on the single market scoreboard governance tools**



Red denotes a poor performance; green, a good performance
TRIS: Technical Regulation Information System
IMI: Internal Market Information System
Source: Single Market Scoreboard

Graph A13.2: **France. Indicators of Regulatory Policy and Governance: stakeholder engagement**



Source: OECD 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 France'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 France**

Policy area	Headline indicator	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24, 2022)	7.6
	Share of individuals who have basic or above basic overall digital skills (% of population aged 16-74, 2021)	62.0
	Youth NEET rate (% of population aged 15-29, 2022)	12.0
	Gender employment gap (percentage points, 2022)	5.8
	Income quintile ratio (S80/S20, 2021)	4.41
Dynamic labour markets and fair working conditions	Employment rate (% of population aged 20-64, 2022)	74.0
	Unemployment rate (% of active population aged 15-74, 2022)	7.3
	Long term unemployment (% of active population aged 15-74, 2022)	2.0
	GDHI per capita growth (2008=100, 2021)	108.22
Social protection and inclusion	At risk of poverty or social exclusion rate (% of total population, 2021)	19.2
	At risk of poverty or social exclusion rate for children (% of population aged 0-17, 2021)	22.7
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2021)	46.44
	Disability employment gap (percentage points, 2021)	24.1
	Housing cost overburden (% of total population, 2020)	5.6
	Children aged less than 3 years in formal childcare (% of population under 3-years-old, 2021)	57.1
	Self-reported unmet need for medical care (% of population 16+, 2021)	2.8

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. Indicator on housing cost overburden not yet available for 2021.
Source: Eurostat

Although the economy and employment continue to improve after the COVID-19 crisis overall, vulnerable groups still face difficulties in integrating into the labour market. The employment rate has continued to increase for the overall population (74.0% in 2022) and for young people (aged 15-29; 48.6% in 2022). Both are still below the EU average (74.7% and 49.2% respectively). Nevertheless, the situation of vulnerable groups continues to be challenging. For some, such as non-EU-born people, the employment gap is increasing as their situation is improving at a slower pace. In Q4-2022, the employment rate of several groups remained significantly below the overall average. This included low-qualified people (ISCED 0-2; 53.9%) and non-EU-born people (61.2%), among whom women are particularly affected (51.7%). Inequalities in educational outcomes (see Annex 15) affect employment perspectives for these groups. Further attention is needed on evaluating and adjusting active labour market policies to the specific needs of vulnerable groups. European Social Fund Plus (ESF+) investments in France support this, particularly through tailored employment and social guidance and access to training for the unemployed.

Skills mismatches and low adult learning participation of low-qualified people are key challenges for the digital and green transitions. The share of low-qualified adults (aged 25-64, ISCED 0-2) participating in adult learning is significantly lower (5.3% in 2022) than that of the more qualified (ISCED 3-8, 14.9%). Evaluations show that low-qualified people benefit less from training leading to qualifications (see Education and Training Monitor 2022). The Monitor and the conclusions of the third evaluation of the *plan d'investissement dans les compétences* point to the need to further support these groups to help them access training and improve their mobility on the labour market. This builds on the already significant investments made in up- and reskilling and should be done in coordination with ESF+ programmes. Effective coordination between the regional authorities in charge of training for the unemployed and the French public employment services (PES) is key, particularly in light of the reorganisation of the PES to create *France Travail*. The lack of candidates with adequate skills has been continuously reported by employers as one of the main barriers to recruitment ([114]), while labour shortages remain stable and high (2.4% in Q4-2022). This is observed particularly in the construction and services sectors ([115]). In 2021, 62.0% of individuals had basic or above basic

([114])DARES, Analyses n°26, June 2022.

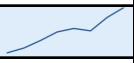
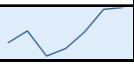
([115])Banque de France, Point sur la conjoncture française à début novembre 2022, 2022.

overall digital skills, 8 percentage points (pps) above the EU average (53.9%) but still far from the EU's best performers. France invests heavily in up- and reskilling, such as under the *plan de reduction des tensions de recrutement*; however, the observed challenges suggest there is scope to better align training systems with labour market needs and target support at vulnerable groups. The country's recovery and resilience plan includes top-ups of individual learning accounts for digital skills, and the ESF+ co-finances access to vocational training for unemployed people. This is expected to contribute to achieving the French target to have at least 65% of all adults participating in training every year by 2030 (starting from 51.3% in 2016).

France has a high rate of enrolment in early childhood education and care of children aged less than 3 years, but inequalities and staff shortages persist. In 2021, 57.1% of under-3-year-olds benefited from childcare (EU: 36.2%). However, the enrolment gap between children at risk of poverty and social exclusion and those without such a risk is among the highest in the EU at 40.6 pps (2020). Around 80% of families below the poverty threshold do not use childcare services ([116]). Severe staff shortages further limit the availability of childcare. While early school leaving shows a downward trend (7.6% in 2022, below the EU average of 9.6%), big urban-rural differences remain, and the high impact of socio-economic inequalities on pupils' educational outcomes continues to be a problem (see Annex 15).

Despite an overall stable poverty rate since the beginning of the COVID-19 crisis, some indicators suggest the social situation is deteriorating. Social transfers have a strong impact on poverty reduction in France (46.44% vs. 37.08% for the EU in 2021). After transfers, the share of people at risk of poverty or social exclusion remained stable between 2020 (19.3%) and 2021 (19.2%), and below the EU average (21.9% in 2021) but the number of people affected increased by 35000, and by 512 000 compared to 2019 (break in time series). Certain groups are particularly affected, such as single-parent families, low-qualified people, children, non-EU-born people and self-employed people, particularly in the outermost regions. Some measures, such as the December 2022 unemployment insurance system reform and the reform of the minimum income could negatively affect the social situation of some groups and their impact should be monitored. Lack of access to affordable housing increases poverty risks. Amid declining public investment, there is a high level of unmet need for social housing (2.15 million on a waiting list in 2020 and increasing) ([117]). In 2020, it is estimated that around 300 000 persons were homeless, among which about 40 000 were rough sleepers ([118]). The adoption of the draft law preventing the illegal occupation of properties would make it easier to end a lease if rent is not paid although this may harm some vulnerable groups. In 2021, despite an overall reduction in the number of minimum income beneficiaries, most food banks (57%) reported a large or moderate increase in the number of beneficiaries compared to the situation before the COVID-19 crisis ([119]). The assessment of the anti-poverty plan by *France Stratégie* ([120]) points to implementation difficulties, notably with measures on access to housing, and the need to ensure that the social impact of un-employment and pension reforms is duly taken into account.

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

Indicators	Latest data	Trend (2015-2022)	National target by 2030	EU target by 2030
Employment (%)	74.0 (2022)		78	78
Adult learning[1] (%)	48.4 (2016)		65	60
Poverty reduction[2] (thousands)	+512 (2021)		-1 100	-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

([116])Cnaf, France Stratégie, HCFEA, *Séminaire premiers pas, 2021*.

([117])Fondation Abbé Pierre, L'état du mal-logement en France, 2022.

([118])Cour des comptes, L'hébergement et le logement des personnes sans domicile pendant la crise sanitaire du printemps 2020, 2020.

([119])DREES, Études et Résultats n° 1218, February 2022.

([120])France Stratégie, Évaluation de la stratégie nationale de prévention et de lutte contre la pauvreté, 2022.

This Annex outlines the main challenges for France'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.

Pupil backgrounds remain a strong predictor of education outcome. Socio-economic performance gaps are stable or widening, depending on subject and grade ([121]). In 2022, the Council of the EU therefore recommended France to raise the share of people with basic skills (reading, writing, maths) by addressing inequalities in the education system and improving the working conditions and continuous training of teachers.

France has achieved the EU-level targets on enrolment in early childhood education and care and early leaving from education and training, but some disparities exist. For children above 3, enrolment in pre-primary school is mandatory and almost universal. For those under 3, the participation rate is also high, at 57.2% (EU: 32.3%), but participation among disadvantaged children is much lower, at 24.3% (see Annex 14). Early school leaving stood at 7.6% in 2022, continuing the downward trend of the last decade; however, it is higher among young people with low-educated parents (19.1%) ([122]) and those born outside of France (around 12%). Compared with the national average, boys and those living in rural areas also lag behind (see Table A15.1).

Underachievement and major inequalities in maths are of particular concern. In maths, both top performers and low achievers lag behind pupils in other Member States ([123]). According to national and international surveys, average maths performance, in particular of disadvantaged pupils, has continuously fallen in the last three decades ([124]). Comprehensive national competence tests showed that, in 2021, 9 in 10 pupils of the 20% socio-economically most advantaged quintile had at least a satisfactory level in maths, while only half of pupils in the most disadvantaged quintile did ([125]). Researchers of the government's Economic Analysis Council found that labour productivity in France could substantially increase if maths performance improved ([126]).

Shortages of teachers and their working conditions remain major challenges. According to a 2023 report of the French Court of Auditors, around 1100 posts remained vacant every year on average between 2017-2021 following public teacher entry exams ([127]), ([128]). Contractual teachers are recruited to fill the vacant posts, but often do not have the same level of qualifications and experience as permanent teachers. In 2022, 4500 new contractual teachers had to be recruited, against 1730 in 2021. The Court also remarked that given the low number of candidates at the entry exams in certain subjects (such as maths, technology, engineering and certain foreign languages), success rates are high, casting doubts on the quality of recruitments. Additionally, the French Court of Auditors recommended to improve initial teacher education and recruitment procedures. The French government has implemented various measures: in 2022, new continuous training centres opened their doors; in 2023, salaries (especially of beginning and mid-career teachers) increased and top-ups for additional tasks are planned.

As landmark reforms of recent years are coming to a close, their long-term impact on learning outcomes of pupils remains to be assessed. The major reform of reducing class sizes has been completed for the first and second grades in disadvantaged public primary schools, bringing class sizes more into line with the OECD average. Class sizes of the last pre-primary year will continue to be reduced until 2023/24. Regular national tests taken by all pupils in certain grades

([121])DEPP (ed.), L'État de l'école – édition 2022, Ch. 29, Les inégalités sociales dans l'enseignement scolaire.

([122])Eurostat (EU Labour Force Survey 2021 - ad hoc module for parental education).

([123])2019 *Trends in International Mathematics and Science Study*.

([124])DEPP (ed.), L'État de l'école – édition 2022, Ch. 24, Les compétences des élèves en mathématiques depuis 1987.

([125])DEPP (ed.), *L'État de l'école – édition 2022, Ch. 29, Les inégalités sociales dans l'enseignement scolaire*, data source: Comprehensive national competence tests at the beginning of lower secondary school (6e) and the beginning of upper secondary school (2nde), September 2021.

([126])Conseil d'analyse économique, Martin/Renault/Roux, *Baisse de la productivité en France: échec en « maths »?*, September 2022.

([127])Ministère de l'Éducation nationale et de la Jeunesse, *Résultats des concours enseignants de la session 2022*, July 2022.

([128])Cour des Comptes, Devenir Enseignant : La formation initiale et le recrutement des enseignants des premier et second degrés, February 2023.

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

				2015		2022	
Indicator			**Target**	**France**	**EU27**	**France**	**EU27**
[1]Participation in early childhood education (age 3+)			**96%**	**100.0%**	**91.9%**	**100.0%** [2020, p]	**93.0%** [2020]
[2]Low achieving 15-year-olds in:		**Reading**	**< 15%**	**21.5%**	**20.0%**	**20.9%** [2018]	**22.5%** [2018]
		Mathematics	**< 15%**	**23.5%**	**22.3%**	**21.3%** [2018]	**22.9%** [2018]
		Science	**< 15%**	**22.1%**	**21.1%**	**20.5%** [2018]	**22.3%** [2018]
Early leavers from education and training (age 18-24)	**[3]Total**		**< 9 %**	**9.2%**	**11.0%**	**7.6%**	**9.6%**
	[3] By gender	*Men*		10.0%	12.5%	9.2%	11.1%
		Women		8.4%	9.4%	6.0%	8.0%
	[4] By degree of urbanisation	*Cities*		8.7%	9.6%	6.8%	8.6%
		Rural areas		7.7%	12.2%	8.3%	10.0%
	[5] By country of birth	*Native*		8.7%	10.0%	7.2%	8.3%
		EU-born		16.3% [u]	20.7%	11.1% [u]	20.3%
		Non EU-born		16.4%	23.4%	12.2%	22.1%
[6]Equity indicator (percentage points)				**:**	**:**	**20.9** [2018]	**19.3** [2018]
[7]Exposure of VET graduates to work based learning	**Total**		**≥ 60% (2025)**	**:**	**:**	**70.5%**	**60.1%**
Tertiary educational attainment (age 25-34)	**[8]Total**		**45%**	**44.8%**	**36.5%**	**50.4%**	**42.0%**
	[8] By gender	*Men*		40.6%	31.2%	46.6%	36.5%
		Women		48.8%	41.8%	54.0%	47.6%
	[9] By degree of urbanisation	*Cities*		52.4%	46.2%	59.6%	52.2%
		Rural areas		36.2%	26.9%	37.0%	30.2%
	[10] By country of birth	*Native*		45.7%	37.7%	50.9%	43.0%
		EU-born		41.3%	32.7%	40.8%	39.5%
		Non EU-born		38.1%	27.0%	48.5%	35.7%
[11]Share of school teachers (ISCED 1-3) who are 50 years or over				27.1%	38.3%	30.9% [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.

help to diagnose pupils' difficulties and to measure the performance of the education system.

Further measures focus on innovation, school autonomy, evaluation and digitalisation. In the context of the 'Conseil National de la Refondation' launched in September 2022, the French government opened a specific round of consultation on the future of education. It calls on schools to gather local authorities, teachers, parents and pupils and set up innovative pedagogical projects to improve pupils' learning outcomes. The projects might receive funding from the newly established 'pedagogical innovation fund', which provides schools with EUR 500 m for 2022-2027. All schools are evaluated externally every 5 years, combined with a self-evaluation. France also invests in the evaluation of education policies to promote evidence-based policy making, with the eight-year programme 'innovation, data and experimentation in education (IDEE)'. France also put in place a digital competence framework, based on the European DigComp framework. Pupils' digital skills are tested at regular intervals; they receive a certificate delivered via the public and open platform PIX. The platform also allows pupils to develop their digital skills.

The inclusion of pupils with a disability remains a challenge. While inclusion has progressed (an additional 78 500 pupils with a disability attend mainstream schools compared with 5 years ago), the shortage of support specialists and low accessibility (physical and pedagogical) have hampered further progress ([129]).

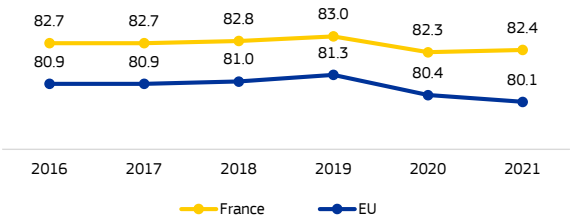
While tertiary education attainment is high, the number of STEM graduates remained roughly stable in the last 5 years. 50.4% of 25-34-year-olds held a higher education diploma in 2022, up from 44.8% in 2015. Between 2015-2020, the share of STEM graduates rose only slightly from 25.2% to 25.9%, leading to risks of skill mismatches and shortages.

([129]) Le Défenseur des droits de la République Française, *L'accompagnement humain des élèves en situation de handicap,* August 2022.

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 France.

Life expectancy in France is above the EU average and has slightly rebounded after it fell in 2020. This reflects the slight decrease in COVID-19 mortality in 2021 ([130]). France fares comparatively well in avoiding deaths from treatable causes. Cancers and circulatory diseases followed by COVID-19 are the leading causes of death.

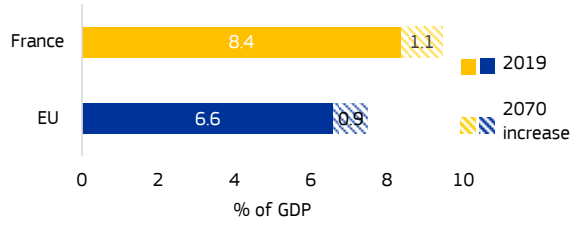
Graph A16.1: **Life expectancy at birth, years**



Source: Eurostat

Health spending relative to GDP in France was above the EU average in 2020. In 2020, total healthcare spending increased to 12.2% of GDP. This is in line with the upward trend in all Member States in 2020. In France, this increase is largely due to a substantial GDP contraction (by almost 8%, compared to 5.6% in the EU overall). As a share of total public spending, health expenditure increased slightly from 14.4% in 2019 to 14.6% in 2020. Health expenditure broken down by type of provider follows the EU average pattern. For instance, in 2020, primary healthcare accounted for around 12% of all health spending, slightly below the EU average of 13%. The total volume of antibiotics prescribed in primary care remains among the highest in the EU. Reducing the prescription of antibiotics may help safeguard public health. The public share of health spending is above the EU average (79% in 2020). Public spending on health is projected to increase by 1.1 percentage points (pps) of GDP by 2070 (compared to 0.9 pps for the EU overall).

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



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

Spending on prevention in France amounted to 2.9% of total spending on healthcare in 2020, compared to 3.4% for the EU overall. Between 2020 and 2019, spending on prevention in France increased by 59%, 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. Between 2019 and 2020, a remarkable proportional increase in reported spending was noted in France for early disease detection programmes and disaster preparedness and emergency response programmes. For the latter, France reported the second highest proportional increase of all Member States.

France faces a shortage of doctors. There were 3.2 practising doctors per 1 000 population in 2020 (against 4 on EU average). The increase since 2010, against a backdrop of an ageing population, is lower than in the EU overall. Furthermore, 46.5% of doctors are aged over 55, which may increase the shortage in the longer term if policies do not aim for more sustainable levels of staff. Another challenge is the territorial distribution of doctors, with no progress observed in closing gaps between regions in the last 10 years. The remuneration of doctors seems to be comparatively high, but the gap in remuneration between self-employed and salaried specialists is substantial. The limited increase of salaries for doctors since 2010 may make it less attractive for students to enter medical professions in the future. The density of nurses is above the EU average (11.3 per 1 000 population in 2020), but the remuneration of hospital nurses is comparatively low, also when comparing to other EU countries. This may pose a challenge to maintain the current provision rates of nurses in

([130])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)	62.1	61.3	60.6	59.0	NA	91.7 (2020)
Cancer mortality per 100 000 population	238.9	233.9	230.9	226.6	NA	242.2 (2020)
Current expenditure on health, % GDP	11.4	11.2	11.1	12.2	NA	10.9 (2020)
Public share of health expenditure, % of current health expenditure	83.0	83.3	83.6	84.7	NA	81.2 (2020)
Spending on prevention, % of current health expenditure	1.9	1.9	1.9	2.9	NA	3.4 (2020)
Acute care beds per 100 000 population	309	304	300	NA	NA	387.4 (2019)
Doctors per 1 000 population *	3.1	3.1	3.2	3.2	NA	3.9 (2020)
Nurses per 1 000 population *	10.5	10.8	11.1	11.3	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) **	23.0	23.6	23.3	18.7	19.9	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

the longer term, also in view of the pandemic and its impact on staff retention. Staff shortages will play out in particular in underserved areas ('medical deserts'), with a risk of exacerbating health inequalities. The creation of territorial communities of health professionals is expected to help improve access to care. It is necessary to assess the impact of Ma Santé 2022 measures, including internships of GPs in underserved areas, grants and installation support, support for new working solutions, and task-shifting solutions. Attracting health professionals to regions with a lower density of doctors may require more complex policy solutions, taking into account also other incentives than remuneration.

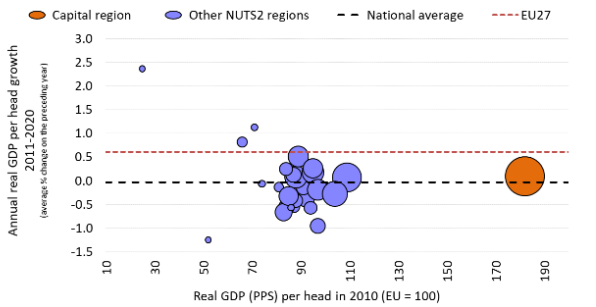
Through its recovery and resilience plan, France plans to invest EUR 4.5 billion (11.4% of the plan's total value) to strengthen its health system. This concerns the construction and refurbishment of facilities and the further digitalisation of health services. In addition, investments in long-term care in nursing homes (EUR 1.5 billion) are also expected to improve the delivery of health services.

Two reforms included in the plan were already implemented in 2021: (i) a law reforming hospital governance, which will make the organisation of hospitals more flexible; and (ii) a law on social debt and autonomy, which supports the independence of older people and people with disabilities.

This Annex showcases the economic and social regional dynamics in France, providing an update on economic, social and territorial cohesion in and among the French regions compared with the EU as a whole and the main regional economic recovery challenges.

Regional disparities have increased in France during the last decade. Most French NUTS 2 regions (23 out of 27) have lost ground relative to the EU average in terms of GDP per head (PPS). The drop in GDP per capita was particularly severe in 2019 and 2020, as a result of the COVID-19 outbreak, which caused the biggest post-war recession, with tourist and border regions suffering the most. Local tourism in the outermost regions also suffered, but they were the only French regions not to experience a decrease in GDP per capita. Only two French regions had a GDP per capita greater than the EU average in 2021 (Île-de-France at 176 and Rhône-Alpes at 105). Noticeable disparities persist in metropolitan France (with Lorraine and Picardie at the lowest end of the spectrum at 76) and, even more markedly, between metropolitan France and the French outermost regions, where GDP remains generally low. GDP per capita dropped from 74% of the EU average in 2010 to 65% in Guadeloupe in 2021, and from 52% to 44% in Guyane. GDP per capita has also been substantially lower in France's rural areas than in urban areas. Real GDP per capita growth was low (or even negative) in most French regions in 2010-2020, significantly affecting France's economic and social development perspectives.

Graph A17.1: **GDP per capita (2010) and GDP growth (2011-2020) - France**



(1) Bubble size corresponds to population size in 2020
Source: Eurostat

Most French regions are at risk of being caught in a development trap ([131]). These regions experienced frequent or long periods of below-average growth in GDP, productivity and employment, often due to the decline of industries that had once been their main source of wealth. This was a particular concern for regions such as Basse-Normandie, Picardie, Lorraine, Limousin, Languedoc-Roussillon and Auvergne, which all had a GDP per capita below the EU average.

Regional disparities in GDP per capita partly stem from wide variations in labour productivity. During the last two decades, labour productivity has been higher than the EU average in all French regions, except Mayotte. It is generally much lower in the less developed regions of the country. In 2021, productivity in Île-de-France was 1.7 times higher than in Limousin and 1.8 times higher than in Mayotte.

Most French regions are around the EU average on competitiveness ([132]). Ile-de-France is an exception being significantly more competitive than the EU average. Corse and the outermost regions are at the other end of the spectrum. Considerable differences persist in regional innovation performance. Innovation and technology-related activities are concentrated in the most developed regions of the country. Only five regions have a share of employment in such activities above the national average of 4.6% ([133]). There are also marked differences between the five regions with strong or very strong innovation performance (Ile-de-France, Rhône-Alpes, Midi-Pyrénées, Provence-Alpes-Côte-d'Azur and Bretagne), the seven metropolitan regions considered moderate innovators, and the five outermost regions plus Corse that are categorised as emerging innovators.

The uptake of ITC technologies by individuals is relatively high in France, albeit with some differences between regions and a moderately higher uptake in cities (83%) than in rural areas (78%).

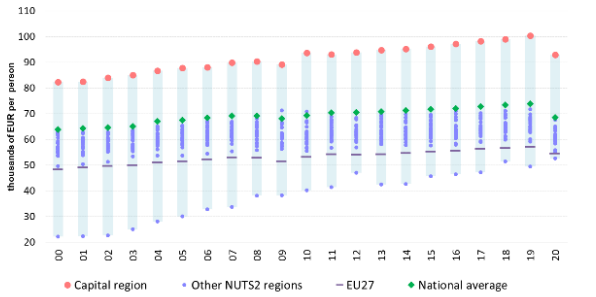
Some of the less developed regions are lagging behind in terms of human capital. The highest share of the population with tertiary education is found in Île-de-France (around 63%). It is much lower in regions like Corse (32%), Guadeloupe (30%) and Guyane (22%). The

([131])European Commission, 2021, Cohesion in Europe towards 2050, 8th report on economic, social and territorial cohesion.

([132])2022 regional competitiveness index.

([133])Source: regional innovation scoreboard, 2022

Graph A17.2: **Labour productivity, EU, France NUTS 2 regions, 2000-2020**



Source: Eurostat

Table A17.1:**Selected indicators at regional level - France**

NUTS 2 Region	GDP per head (PPS)	Productivity (GVA (PPS) per person employed)	Real productivity growth	GDP growth	GDP per head growth	Unemployment rate	R&D expenditure	Employment in high-technology sectors	Employment in knowledge-intensive services	Regional Competitiveness Index (RCI)	GHG emissions per head
	EU27 = 100 2021	EU27 = 100 2021	Average % change on the preceding year, 2011-2020	Average % change on the preceding year, 2011-2020	Average % change on the preceding year, 2011-2020	% of active population 2021	% of GDP, 2013	% of total employment, 2021	% of total employment, 2021	EU27 = 100 2022	tCO2 equivalent per head, 2021
European Union	100,0	100,0	0,2	0,8	0,6	7,0	2,3	4,8	40,7	100,0	7,2
France	104,0	114,0	-0,1	0,4	-0,1	7,9	2,2	4,6	46,6	108,9	6,1
Île-de-France	176,0	152,5	-0,1	0,5	0,1	7,9	2,9	8,1	55,1	142,8	3,6
Centre — Val de Loire	86,0	101,1	-0,2	-0,3	-0,4	7,2	1,6	3,8	42,4	100,3	7,3
Bourgogne	86,0	98,9	-0,1	-0,3	-0,2	7,1	1,0	2,3	43,5	96,7	8,6
Franche-Comté	78,0	95,8	-0,3	-0,5	-0,6	7,0	2,7	5,1	37,8	95,2	6,4
Basse-Normandie	81,0	92,4	-0,6	-0,5	-0,5	6,4	1,3	2,8	40,9	95,2	8,6
Haute-Normandie	87,0	105,8	-0,7	-0,9	-1,0	7,6	1,4	2,5	40,7	100,7	8,3
Nord-Pas de Calais	85,0	101,5	-0,1	0,2	0,1	8,8	0,9	2,9	47,2	101,6	8,4
Picardie	76,0	101,6	-0,3	-0,5	-0,6	9,7	1,4	2,3	43,0	102,1	6,5
Alsace	95,0	106,3	-0,1	0,2	-0,3	7,1	1,7	4,9	39,4	109,3	5,5
Champagne-Ardenne	86,0	100,2	-0,3	-0,7	-0,6	8,9	0,8	1,4	44,2	92,9	8,2
Lorraine	76,0	98,6	-0,4	-0,8	-0,7	8,5	1,3	2,1	43,1	96,2	13,8
Pays de la Loire	93,0	100,9	0,0	0,9	0,1	6,0	1,2	3,6	42,0	104,9	7,1
Bretagne	90,0	100,8	0,4	1,1	0,5	5,8	2,0	4,1	42,6	100,2	6,2
Aquitaine	92,0	101,8	-0,4	0,6	-0,2	7,4	1,6	3,0	44,6	102,2	5,3
Limousin	77,0	92,2	-0,1	-0,3	-0,2	6,2	1,0	1,9	51,2	95,5	10,8
Poitou-Charentes	85,0	99,3	0,1	0,4	0,1	8,6	0,9	1,7	43,2	94,3	7,0
Languedoc-Roussillon	79,0	100,2	-0,3	0,5	-0,4	11,4	2,4	3,4	49,0	98,5	5,0
Midi-Pyrénées	90,0	98,7	0,1	1,0	0,2	6,1	4,8	6,8	49,0	108,7	6,2
Auvergne	84,0	98,9	0,4	0,5	0,2	7,0	2,3	2,8	41,8	95,8	10,0
Rhône-Alpes	105,0	111,4	0,1	0,8	0,0	7,2	2,8	5,3	43,9	110,8	5,0
Provence-Alpes-Côte d'Azur	100,0	109,2	-0,5	0,2	-0,3	8,1	2,5	4,3	48,7	107,3	5,9
Corse	82,0	98,8	-0,8	0,5	-0,6	9,1	0,3		38,8	76,1	5,6
Guadeloupe	65,0	100,2	0,3	0,1	-0,2	17,1		2,1	46,4	75,8	5,2
Martinique	72,0	95,0	0,7	0,2	1,1	12,8			52,2	87,7	5,9
Guyane	44,0	99,5	-0,8	0,9	-1,3	14,6			51,3	61,4	21,5
La Réunion	66,0	92,7	-0,5	1,3	0,8	17,9		1,4	51,4	77,0	3,2
Mayotte	28,0	85,2	2,7	6,0	2,3	27,8			51,8	68,6	0,1

Source: Eurostat, EDGAR database

proportion of early school leavers is very high in Guyane where around 23% of the population aged 18-24 dropped out of school. Highly educated population tend to concentrate in cities, where 49% of the population aged 25-64 has a high level of educational attainment (compared with 32% in rural areas).

The French labour market still displays significant regional disparities, while the unemployment rate in 2021 was generally higher in France than the EU average. The unemployment rate is highest in the outermost regions (particularly Mayotte, 27.8%), but displays important differences also in metropolitan France. It is generally higher in cities (8.9%) than in rural areas (6.3%). Similarly, the incidence of poverty is higher in cities (more than 22% of the population were at risk of poverty and social exclusion) than in rural areas (less than 15%). Despite

unemployment and poverty risks being greater in urban areas, the divide between urban and rural areas in terms of economic dynamism and long-term growth prospects has gained crucial importance in the public debate. This is notably due to the difficulty of finding a job in rural areas for women and young people, as well as by the scarcity and remoteness of essential services, both private and public.

Despite the pandemic and the war in Ukraine, the French banking sector's solvency has remained quite solid. With an annualised return-on-equity of 6.2% in the first nine months of 2022 (vs 6.1% in the EU), profitability seems to have returned to pre-pandemic levels. The capital-adequacy ratio has remained broadly stable in recent years, and reached 18.8% in September 2022 (vs 18.6% in the EU). The banking sector's non-performing-loan ratio also reached a new all-time low at 1.8% (vs 1.8% in the EU) in September 2022. These good results may be partly due to temporary support measures by the ECB and the French government, like the sizeable public-guarantee scheme. Banks have ample liquidity, both from the ECB and depositors. Funding from the ECB is still substantial, even though it sharply dropped from 5.5% of banks' total liabilities in August 2021 to 3.6% in December 2022 (vs an average of 4.3% in the euro area). Even though loans have grown a little faster than deposits since 2021, funding from depositors remains solid with a loan-to-deposit ratio of 94.5% in September 2022 (vs 88.6% in the EU).

France's financial system has withstood the immediate impact of the Russian invasion of Ukraine and the related sanctions. Société Générale was the bank most exposed to Russia, with an exposure of EUR 18.6 bn, mainly via its Rosbank subsidiary. However, Société Générale decided on 11 April 2022 to cease its activities in Russia and to sign an agreement to sell Rosbank and its Russian insurance subsidiaries to Interros Capital. The sale will cut Société Générale's common equity tier 1 ratio by roughly 20 basis points and lead to writing off the net book value of divested activities by around EUR 2 bn. In all other respects (energy intensity, exports to/imports from Russia), the French economy is less vulnerable than most other Member States. Default rates might increase in some more vulnerable sectors, but banks are relatively well capitalised and their non-performing-loan ratios have never been so low. They should therefore be able to largely withstand a potential deterioration in the economic situation.

The residential real-estate market exhibits medium vulnerabilities that are mitigated by appropriate and sufficient macroprudential policy measures ([134]). In 2022, the European Systemic Risk Board (ESRB) identified several key vulnerabilities in the French real-estate market: (i) elevated household indebtedness; (ii) elevated rates of growth in home loans; (iii) loose lending standards (albeit improved since 2019); and (iv) signs of house-price overvaluation in some large cities. The ESRB considers that the current policy mix is appropriate and sufficient and has been instrumental in mitigating risks. The introduction of debt-service-to-income and maturity limits in the form of a recommendation in January 2021 led to a significant decrease in the share of new French home loans with risky characteristics. On 14 September 2021, the High Council for Financial Stability converted the recommendation into a legally binding measure. The internal ratings-based risk weights for mortgage exposures in France are among the lowest in the EU. The authorities should therefore consider: (i) increasing these risk weights if the associated vulnerabilities were to increase further; and (ii) rebuilding the countercyclical capital buffer or replacing it with a sectoral systemic risk buffer. In that context, the increase of the countercyclical capital buffer from 0% to 0.5% as of 7 April 2023, and a further increase to 1% as of January 2024, will help to reduce vulnerabilities.

French banks actively finance the economy on quite attractive terms. In December 2022, year-on-year credit growth reached 8.4% (vs 5.5% in the euro area) for lending to non-financial corporations and 5.2% (vs 3.7% in the euro area) for lending to households. Since 2008, interest rates for new loans to SMEs have been low in France. And with the introduction of government-backed loans during the COVID-19 pandemic, these rates fell to unprecedentedly low levels. Since February 2022 however, interest rates have increased across the board. Nevertheless, France continues to offer the lowest interest rates in the EU for loans for house purchase (1.83% vs 2.93% in the euro area in November 2022) and for corporate loans up to EUR 1 million (2.77% vs 3.32% in the euro area). In contrast, corporate loans above EUR 1 million have become particularly expensive, with interest rates jumping

([134]) https://www.esrb.europa.eu/pub/pdf/reports/esrb.report220211_vulnerabilities_eea_countries~27e571112b.en.pdf?cb8132dc3e0f0f53a4fce3292a690bd6.

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

	2017	2018	2019	2020	2021	2022	EU	Median
Total assets of the banking sector (% of GDP)	368.0	372.8	382.4	454.1	442.3	439.1	276.8	207.9
Share (total assets) of the five largest banks (%)	45.4	47.7	48.7	49.2	49.3	-	-	68.7
Share (total assets) of domestic credit institutions (%)[1]	95.2	95.3	95.2	95.8	96.3	96.4	-	60.2
NFC credit growth (year-on-year % change)	6.6	6.4	5.6	12.2	4.5	8.4	-	9.1
HH credit growth (year-on-year % change)	6.0	5.6	6.4	4.9	5.6	5.2	-	5.4
Financial soundness indicators:[1]								
- non-performing loans (% of total loans)	3.1	2.7	2.5	2.2	1.9	1.8	1.8	1.8
- capital adequacy ratio (%)	17.8	18.0	18.6	19.5	19.7	18.8	18.6	19.8
- return on equity (%)[2]	6.4	6.5	6.0	4.1	7.1	6.2	6.1	6.6
Cost-to-income ratio (%)[1]	71.6	74.1	72.3	70.4	65.5	64.5	60.6	51.8
Loan-to-deposit ratio (%)[1]	105.1	109.1	107.3	95.4	92.5	94.5	88.6	78.0
Central bank liquidity as % of liabilities	2.3	1.9	1.6	5.1	5.6	3.6	-	2.9
Private sector debt (% of GDP)	145.0	148.4	153.1	175.0	167.8	-	-	120.7
Long-term interest rate spread versus Bund (basis points)	49.2	38.7	38.3	36.5	38.0	55.9	-	93.3
Market funding ratio (%)	59.0	58.1	57.7	55.9	55.5	-	50.8	40.0
Green bonds issued to all bonds (%)	1.3	1.4	1.9	2.3	3.2	3.5	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 is annualized.
Source: ECB, Eurostat, S&P Global Capital IQ Pro.

from 1.07% in December 2021 to 3.74% in November 2022 (vs 3.26% in the euro area).

The rise in interest rates could present a challenge for weaker non-financial corporations. Interest rates are now going up at a time when the outstanding consolidated gross debt of French non-financial corporations (NFCs) remains relatively high in comparison with elsewhere in Europe and the rest of the world. Market-financing rates for French companies are now rising, with yields for the lowest-rated companies showing an especially pronounced increase. However, volumes of issuance via the bond market do not indicate that companies are facing any particular difficulties in accessing market financing. The only exception is a slowdown in issuances by speculative-grade NFCs. Since their debt-maturity profile is spread over time and much of their borrowing is at fixed rates, French NFCs should be resilient to additional increases in interest rates.

In general, French banks seem to make more effort than their global (and especially US) peers to reduce their financing of the fossil-fuel industry. The main French banks have all joined the Net-Zero Banking Alliance (NZBA) launched in April 2021 by the Finance Initiative of the UN Environment Programme. These banks committed to transition their lending and investment portfolios to align with pathways to net-zero GHG emissions by 2050 or sooner. Loans made by French banks to the renewables sector increased by 8% between 2019 and 2020 to reach EUR 44.3 bn in 2020. French banks have also accelerated their withdrawal from lending to the coal industry, which only represented EUR 2.1 bn of their portfolio in 2020. In 2021, the six largest French banks were the first in the world to collectively exit the unconventional oil and gas sector (such as tar sands and fracking). Since January 2022, they no longer finance any company with a more than 30% share of revenues from unconventional hydrocarbons.

Insurers continue to boast high solvency and liquidity levels, but unexpectedly high inflation is a concern for the non-life insurance sector. Insurers' capital requirements are comfortably covered, although coverage levels vary considerably across undertakings. Underwriting profitability generated in the past has enabled insurers to strengthen their capital. However, as is the case elsewhere, the unexpectedly high level of current inflation is likely to generate significant losses for insurers in the non-life sector in France, especially for long-tail business.

Investment funds have continued to grow. As in 2019, investment funds benefited from strong growth in assets under management (+8.3%, EUR 4.45 bn) in 2020. The impact of the pandemic was therefore only temporary, as the drop in the first half of 2020 was largely offset by the increase observed in the second half of the year. In terms of market share, most investment funds continue to be organised as subsidiaries of banks and insurers.

This Annex provides an indicator-based overview of France's tax system. It includes information on the tax structure (the types of tax that France 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.

France's tax revenues are among the highest in the EU in relation to GDP. Table A19.1 below shows that France's tax revenues as a percentage of GDP were considerably higher than the EU aggregate in 2021, although they decreased by 0.4 percentage points (pps) as compared with 2020. Revenues from labour and capital taxes were in particular higher than the EU aggregate as a share of GDP. Revenue from property taxes (as % of GDP and as % of total taxation) is relatively high in an EU comparison, in particular from recurrent property taxes, which are among the taxes least detrimental to growth (see Graph A19.1). Revenue from environmental taxes is close to the EU aggregate (as % of GDP and as % of total taxation).

The performance of the tax system should be viewed in the context of a high public deficit and a high debt-to-GDP ratio. Fiscal sustainability challenges could be addressed by making greater use of relatively underused tax types, such as environmental and consumption taxes. In line with its Recovery and Resilience Plan (RRP), France enhanced certain fiscal measures to favour the energy transition and reduced tax reliefs for certain polluting activities (e.g. the penalty system within the road vehicles pollution tax). However, there is still scope to address environmentally harmful subsidies – e.g. the reduced rate of excise duty on fuel for commercial transport by road (EUR 1.2 billion) and non-road diesel (EUR 1.1 billion - *Rapport sur l'impact environnemental du budget de l'Etat*, October 2022).

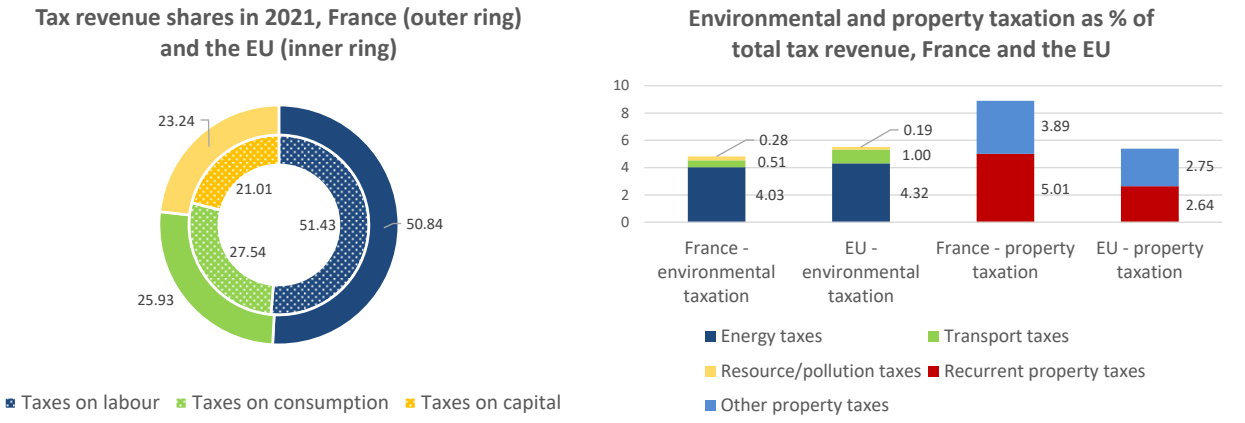
Taxes on production are being further reduced. The gradual abolition of the business value-added contribution (*cotisation sur la valeur ajoutée des entreprises – CVAE*), a production tax which concerns all French businesses with turnover over EUR 500,000, was adopted in October 2022. CVAE tax rates will be reduced in 2023 to half the 2022 level and CVAE will be fully abolished in 2024. CVAE raised EUR 8.7 billion in 2022, forecast to decline to EUR 5.1 billion in 2023. Furthermore, the cap on the regional economic contribution (which includes the CVAE and the company property tax (*cotisation foncière des entreprises – CFE*), which is based on the rental value of the properties owned by the taxpayer) will be reduced from 2% of the value added of the company in 2022 to 1.625% in 2023. A further

Table A19.1:**Taxation indicators**

		France					EU-27				
		2010	2019	2020	2021	2022	2010	2019	2020	2021	2022
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	42.3	45.3	45.5	45.1		37.9	39.9	40.0	40.6	
	Labour taxes (as % of GDP)	22.2	23.1	23.4	22.9		20.0	20.7	21.3	20.9	
	Consumption taxes (as % of GDP)	10.7	11.6	11.4	11.7		10.8	11.1	10.7	11.2	
	Capital taxes (as % of GDP)	9.4	10.6	10.7	10.5		7.1	8.1	8.0	8.5	
	Total property taxes (as % of GDP)	4.0	4.5	4.6	4.0		1.9	2.2	2.2	2.2	
	Recurrent taxes on immovable property (as % of GDP)	2.9	3.0	3.0	2.3		1.1	1.2	1.2	1.1	
	Environmental taxes as % of GDP	1.9	2.3	2.2	2.2		2.4	2.4	2.2	2.2	
Progressivity & fairness	Tax wedge at 50% of average wage (Single person) (*)	34.1	29.3	24.9	26.8	26.9	33.9	32.3	31.9	32.1	31.7
	Tax wedge at 100% of average wage (Single person) (*)	49.9	47.2	46.5	46.9	47.0	41.0	40.1	39.9	39.6	39.7
	Corporate income tax - effective average tax rates (1) (*)		31.7	29.4	25.9			19.5	19.4	19.1	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	7.9	8.5	10.4	10.8		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 %) (*)		4.0	4.3				31.6	40.7		
	VAT Gap (% of VAT total tax liability, VTTL)		8.6	8.0				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, T*axation 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.

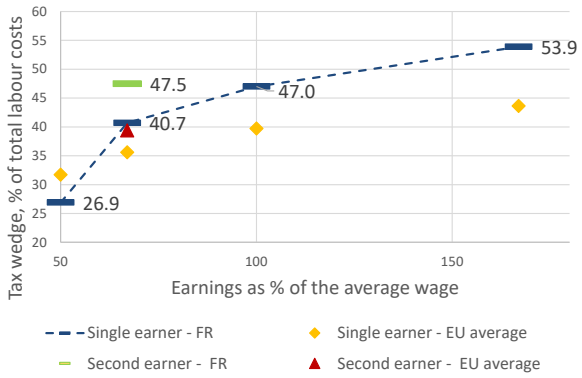
Graph A19.1: **Tax revenues from different tax types, % of total taxation**



Source: European Commission

reduction to 1.25% is planned for 2024.

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



Second earner tax wedge assumes first earner at 100% of the average wage and no children.
Source: European Commission

France's labour tax burden is higher than the EU average, except for workers earning low wages. Graph A19.2 shows that the labour tax wedge for France in 2021 was below the EU average for single people earning 50% of the average wage, but higher than the EU average at higher levels of income, especially those above the average wage. This makes the French tax system more progressive than the EU average.

Second earners at a wage level of 67% of the average wage, whose spouses earn the average wage, were subject to a tax wedge much higher than the EU average. Past reforms increased incentives for employment at lower earnings levels. They also increased the ability of the tax and benefits system to reduce income inequality which, as measured by the effect of taxes and benefits on the GINI coefficient, is now above the EU average.

France performs relatively well on tax compliance and tax administration. France is doing moderately well on digitalisation of the tax administration, which can help reduce tax arrears and compliance costs. Tax arrears have slightly increased by 0.3 pps to 4.3% of total net revenue in 2020. This remains significantly below the EU-27 average of 40.7%, though that average is distorted by very large values in a few Member States. The VAT gap (an indicator of the effectiveness of VAT enforcement and compliance, where a low gap means high effectiveness) has decreased by 0.6 pps to 8.0%, which is below the EU-wide gap of 9.1%.

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)	2.3	0.4	1.4	-7.8	6.8	2.6	0.7	1.4
Potential growth (y-o-y)	1.8	1.2	0.8	0.8	1.1	1.1	1.1	1.1
Private consumption (y-o-y)	2.3	0.6	1.3	-6.7	5.3	2.9	0.1	1.5
Public consumption (y-o-y)	1.7	1.5	1.2	-4.0	6.4	2.6	1.1	0.9
Gross fixed capital formation (y-o-y)	3.9	-0.9	2.1	-8.2	11.5	2.2	1.2	1.7
Exports of goods and services (y-o-y)	4.5	1.2	3.2	-16.8	8.8	7.0	4.4	3.8
Imports of goods and services (y-o-y)	6.0	1.2	3.7	-12.8	8.0	8.9	3.6	3.5
Contribution to GDP growth:								
Domestic demand (y-o-y)	2.5	0.5	1.4	-6.5	7.0	2.7	0.6	1.4
Inventories (y-o-y)	0.2	-0.1	0.1	-0.2	-0.3	0.6	0.0	0.0
Net exports (y-o-y)	-0.4	0.0	-0.2	-1.2	0.1	-0.7	0.1	0.0
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	0.5	0.4	0.2	0.5	0.7	0.7	0.7	0.6
Capital accumulation (y-o-y)	0.8	0.6	0.5	0.3	0.5	0.6	0.6	0.6
Total factor productivity (y-o-y)	0.6	0.3	0.1	-0.1	-0.1	-0.1	-0.1	0.0
Output gap	1.7	-1.2	-0.5	-6.5	-1.2	0.2	-0.3	0.0
Unemployment rate	8.7	9.0	9.7	8.0	7.9	7.3	7.4	7.5
GDP deflator (y-o-y)	2.1	1.1	0.8	2.8	1.3	3.0	5.4	2.6
Harmonised index of consumer prices (HICP, y-o-y)	1.9	1.9	0.9	0.5	2.1	5.9	5.5	2.5
HICP excluding energy and unprocessed food (y-o-y)	1.6	1.5	0.8	1.0	1.2	3.8	5.4	2.8
Nominal compensation per employee (y-o-y)	3.0	2.3	1.3	-2.7	4.7	5.0	5.4	3.1
Labour productivity (real, hours worked, y-o-y)	1.0	0.2	0.9	0.5	-1.5	-1.9	0.2	1.0
Unit labour costs (ULC, whole economy, y-o-y)	1.5	2.1	0.6	4.8	0.5	4.8	4.9	2.1
Real unit labour costs (y-o-y)	-0.5	0.9	-0.3	2.0	-0.9	1.8	-0.4	-0.5
Real effective exchange rate (ULC, y-o-y)	0.2	0.0	-0.7	0.5	0.1	1.6	-0.6	-1.5
Real effective exchange rate (HICP, y-o-y)	0.4	-0.8	0.2	1.0	-0.2	-4.1	.	.
Net savings rate of households (net saving as percentage of net disposable income)	9.2	10.0	8.6	15.5	12.8	.	.	.
Private credit flow, consolidated (% of GDP)	8.6	5.6	5.7	13.5	6.5	.	.	.
Private sector debt, consolidated (% of GDP)	110.9	131.7	144.5	175.0	167.8	.	.	.
of which household debt, consolidated (% of GDP)	42.9	53.0	57.9	68.6	66.7	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	68.0	78.8	86.6	106.4	101.1	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	2.6	4.2	3.2	2.0	1.7	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	0.9	0.9	-0.2	-1.1	1.3	-1.1	0.0	0.4
Corporations, gross operating surplus (% of GDP)	18.0	17.4	17.5	17.1	18.7	17.6	18.0	18.0
Households, net lending (+) or net borrowing (-) (% of GDP)	2.3	3.7	2.8	7.6	4.8	3.3	3.5	3.0
Deflated house price index (y-o-y)	9.7	-0.3	0.1	4.1	4.7	1.3	.	.
Residential investment (% of GDP)	6.3	6.4	6.2	6.1	6.9	6.8	.	.
Current account balance (% of GDP), balance of payments	0.2	-0.7	-0.5	-1.8	0.4	-2.1	-0.5	-0.3
Trade balance (% of GDP), balance of payments	0.1	-1.3	-0.8	-1.8	-1.2	-3.3	.	.
Terms of trade of goods and services (y-o-y)	-0.7	-0.4	0.7	0.8	-0.2	-3.2	3.8	0.4
Capital account balance (% of GDP)	0.0	0.0	0.0	0.1	0.5	0.4	.	.
Net international investment position (% of GDP)	-4.8	-11.9	-17.4	-30.7	-32.1	-26.2	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (2)	-6.7	-23.8	-31.6	-41.3	-37.2	-31.8	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	175.3	239.1	240.7	299.4	286.0	278.7	.	.
Export performance vs. advanced countries (% change over 5 years)	-5.3	-9.1	-3.2	-8.0	-7.4	.	.	.
Export market share, goods and services (y-o-y)	-4.4	-4.0	0.3	-6.9	-1.1	3.0	1.7	0.0
Net FDI flows (% of GDP)	1.7	1.5	1.0	0.2	-0.4	-0.4	.	.
General government balance (% of GDP)	-3.0	-5.5	-3.4	-9.0	-6.5	-4.7	-4.7	-4.3
Structural budget balance (% of GDP)	.	.	-2.9	-4.8	-5.6	-4.7	-4.4	-4.2
General government gross debt (% of GDP)	65.6	83.1	96.5	114.6	112.9	111.6	109.6	109.5

(1) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
(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 France 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 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) ([135]). Gross financing needs are expected to remain large at more than 22% of GDP in the short term (i.e. over 2023-2024), although declining compared with the recent peak in 2020 (Table 1 in this annex). Financial markets' perceptions of sovereign risk remain overall positive. However, Fitch downgraded France to AA- at the end of April 2023 on account of social protests against the pension reform and high budget deficits. Meanwhile, Standard & Poor's credit rating for France stands at AA with a negative outlook.

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

The DSA for France shows that, under the baseline, the government debt ratio is projected to increase over the medium term, reaching around 126% of GDP in 2033 (Table 1) ([136]) ([137]). The assumed structural primary balance (a deficit of 2.2% 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 projection benefits up to 2033 from a still favourable (although declining) snowball effect, notably thanks to the impact of Next Generation EU, with real GDP growth at around 0.5% over 2025-2033. Government gross financing needs are expected to remain large and increase over the projection period, reaching around 27% of GDP in 2033, above the level forecast for 2024.

The baseline projection is stress-tested against four alternative scenarios to assess the impact of changes in key assumptions (Graph 1). For France, reverting to a historical fiscal position under the 'historical structural primary balance (SPB)' scenario would slightly improve the government debt trajectory. If the SPB gradually converged its historical 15-year average (a deficit of 1.8% of GDP), the projected debt-to-GDP ratio would be about 3 pps. lower than in the baseline by 2033. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario (with a differential 1 pp. higher than the baseline) would result in a persistently higher debt ratio, by around 10 pps. by 2033, as compared with the baseline. A temporary worsening of financial conditions, as reflected in the 'financial stress' scenario (with a temporary increase of interest rates by 2.3 pps.), would lead to a slightly higher debt ratio (+2 pps. of GDP by 2033) compared with the baseline. The 'lower structural primary balance' scenario (with the SPB level permanently 0.3 pp. lower than in the baseline) would also lead to a higher government debt-to-GDP ratio (+3 pps. by 2033) compared with the baseline.

Additionally, stochastic debt projections also indicate high risk (Graph 2) ([138])**.** These projections point to a 59% probability of the debt ratio in 2027 being greater than in 2022, entailing high risk given the initial high debt level. The uncertainty surrounding the baseline debt projection (as measured by the difference between

([135])The S0 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.

([136])The assumptions underlying the Commission's 'no-fiscal-policy-change' baseline notably comprise: (i) a structural primary deficit, before ageing costs, of 2.2% 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 0.5%); (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).

([137])Table 1 shows the baseline debt projection 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.

([138])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

the 10th and 90th debt distribution percentiles) is however limited.

3 - Long-term risks to fiscal sustainability are medium overall ([139])**.**

The S2 sustainability gap indicator (at 1.2 pps. of GDP) points to low risk. This suggests that France would need to improve its structural primary balance only by a limited amount to ensure debt stabilisation over the long term. This result is underpinned by the projected decrease in ageing-related costs (contribution of -1.3 pps. of GDP) while the initial budgetary position is unfavourable (contribution of +2.5 pps. of GDP) (Table 2). Long-term developments in ageing costs are primarily driven by the projected decrease in public pension expenditure (contribution of -2.1 pps. of GDP). However, health care and long-term care expenditure is projected to increase significantly (joint contribution of 1.3 pps. of GDP).

Yet, combined with debt vulnerabilities highlighted by the S1 indicator, overall long-term risks are assessed as medium. Indeed, the S1 sustainability gap indicator signals that a significant consolidation effort of 2.8 pps. of GDP would be needed to reduce debt to 60% of GDP by 2070 (Table 2). This result is mainly driven by the high level of the French government deficit and debt (contributing 2.0 pps. and 1.1 pps. of GDP, respectively), only slightly offset by the projected overall decline in ageing-related public spending.

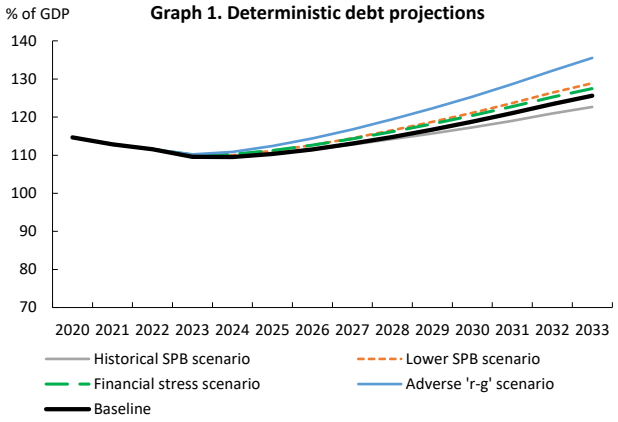
Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors relate to the recent increase in interest rates, the expected increase in gross financing needs over the medium term and the contingent liability risks stemming from the private sector, including via the possible materialisation of state guarantees granted to firms and self-employed during the COVID-19 crisis. 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.

([139])The S2 fiscal sustainability indicator measures the permanent SPB adjustment in 2024 that would be required to stabilise public debt over the long term. It is complemented by the S1 indicator, which measures the fiscal gap in 2024 to bring the debt-to-GDP ratio to 60% in the long term. 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 – France**

Table 1. Baseline debt projections	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	**114.6**	**112.9**	**111.6**	**109.6**	**109.5**	**110.3**	**111.5**	**113.0**	**114.8**	**116.7**	**118.8**	**121.0**	**123.4**	**125.6**
Changes in the ratio	17.2	-1.8	-1.3	-2.0	0.0	0.8	1.2	1.5	1.8	1.9	2.1	2.2	2.4	2.2
of which														
Primary deficit	7.7	5.1	2.8	2.7	2.3	2.3	2.4	2.4	2.5	2.6	2.6	2.6	2.6	2.6
Snowball effect	6.6	-7.4	-4.2	-4.5	-2.3	-1.5	-1.2	-0.9	-0.8	-0.6	-0.5	-0.4	-0.2	-0.5
Stock-flow adjustments	3.2	0.2	0.1	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	28.0	25.0	23.0	22.7	22.5	22.8	23.2	23.7	24.3	24.8	25.3	25.9	26.6	27.1

Graph 1. Deterministic debt projections



Graph 2. Stochastic debt projections 2023-2027

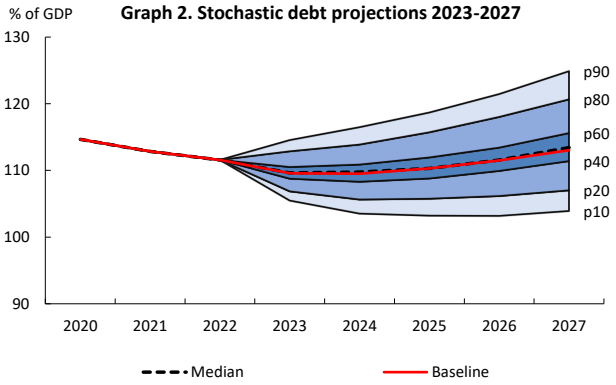


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

		S1	**S2**
Overall index (pps. of GDP)		**2.8**	**1.2**
of which			
Initial budgetary position		2.0	2.5
Debt requirement		1.1	
Ageing costs		-0.3	-1.3
of which	*Pensions*	-0.8	-2.1
	Health care	0.5	0.6
	Long-term care	0.4	0.7
	Others	-0.3	-0.4

Source: Commission services.

Table A21.2: **Heat map of fiscal sustainability risks – France**

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	**HIGH**	Overall	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**LOW**	**MEDIUM**	**MEDIUM**
		Debt level (2033), % GDP	125.6	122.7	128.9	135.5	127.5				
		Debt peak year	2033	2033	2033	2033	2033				
		Fiscal consolidation space	92%	88%	93%	92%	92%				
		Probability of debt ratio exceeding in 2027 its 2022 level						59%			
		Difference between 90th and 10th percentiles (pps. GDP)						21.0			

(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.

The Macroeconomic Imbalance Procedure matrix presents the main elements of the in-depth review conducted for France. ([140]) France was selected for an in-depth review in the 2023 Alert Mechanism Report. This in-depth review on the prevention and correction of macroeconomic imbalances presents the main findings on the gravity and evolution of the challenges identified, as well as policy responses and potential policy needs. Findings cover all areas of vulnerability assessed in the in-depth review.

Vulnerabilities relate to high public debt, which is gradually declining, as competitiveness and low productivity growth challenges continue to recede. Yet, cost-competitiveness indicators were less affected than in the main EU partners, while labour productivity is reined in by the very positive response of employment to a number of fiscal measures and reforms. Exports have recently been negatively affected due to trade specialisation in sectors severely hit by the crisis and concomitant disruptions in supply chains, but they are expected to improve going forward. With the economic recovery during 2021 and 2022, the government debt-to-GDP ratio edged down, though some risks remain as public debt is compounded by the high private-sector debt.

Going forward, competitiveness is set to improve further, backed by labour productivity gaining momentum. Cost-competitiveness indicators are forecast to improve in the coming years as the effect of policy measures feeds through, while the labour share should stabilise at a high level in the medium term. This should translate into faster productivity increases that would also be underpinned by recent measures and upcoming reforms implemented under the RRP, as well as by the effects of the investment plan France 2030. In turn, lower inflation in France compared to peers is projected to keep improving cost competitiveness. Public debt is forecast to keep falling by around 2 points of GDP until end-2024, although still remaining well above its pre-pandemic level. However, in absence of any further policy action, public debt is projected to rise again in the medium term, to 125% of GDP by 2033. Likewise, private debt is set to remain high, although dynamic corporate credit flows are set to lose momentum due to higher interest rates and decelerating private-sector investment.

The policy response to imbalances has been broadly appropriate, but its full impact will only materialise over time. Important reforms over the recent years have contributed to alleviating the fiscal burden on labour, while incentivising employability of the low-skilled. These measures have brought about a dynamic employment response that allowed for a gradual decline in the unemployment rate. while temporarily weighing on labour productivity. The full absorption of these effects, as well as the implementation of the reforms and the productivity-enhancing investments in the RRP are expected to further invigorate productivity growth. Coupled with improved growth prospects, the reform of public finances management that entered into force in 2022, and a new mechanism to conduct annual public spending evaluations should help curb public expenditure and to put public debt on a sustained downward trend. Finally, the recently adopted pension reform is expected to have a positive impact on public debt sustainability.

Based on this assessment, the Commission considered in its communication European Semester – 2023 Spring Package (COM(2023) 600 final) that France continues to experience imbalances.

([140]) European Commission (2023), In-Depth Review for France, Commission staff working document (COM(2023) 633 final), in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances.

Table A22.1:**Assessment of macroeconomic imbalances matrix**

	Gravity of the challenge	Evolution and prospects	Policy response
	Unsustainable trends, vulnerabilities and associated risks		
Competitiveness	In the 2010s, France faced weak labour productivity growth. Low productivity growth, in combination with high public debt, increased the vulnerabilities of the French growth model. The productivity challenge remained the key determinant affecting non-price competitiveness, which had also been highlighted by weak export performance. Reforms enacted over the last decade and years aimed to address such vulnerabilities and raise productivity. Data after the subsiding of the Covid and terms-of-trade shocks confirm the recovery of French price and non-price competitiveness, as well as the improved outlook going forward.	Lower inflation in France compared to peers allowed for a real depreciation in 2021 and 2022, which reflects structural advantages. Labour productivity growth in France caught up with the euro area and the EU average before the COVID-19 crisis and is projected to expand in line with them over the forecast horizon, while total factor productivity remains subdued. Despite productivity growth has recently been reined in by labour hoarding after the COVID-19 crisis, unit labour costs have grown more moderately than in other euro area and EU countries as wage developments remain contained. The expected improvements in productivity, jointly with the recovery of demand for key French sectors and the fading of supply-chain disruptions should boost export prospects going forward.	Recent policy actions are having and expected to have a significant impact on productivity, thereby improving both cost and non-cost competitiveness. The continued impact from the 2019 PACTE law and the 'France Relance' plan are likely to further foster productivity and potential growth. The investment plan France 2030 is expected to foster investment over the next decade on the green transition, state-of-the-art R&D and on the digital realms. Cost-competitiveness has been supported by a number of fiscal measures in recent years. They include the cut in social contributions since 2019, cuts in taxes on production, the support to apprenticeship contracts and the successive cuts in the corporate income tax. The unemployment benefit reforms that entered into force in 2021 and 2023 improve labour market efficiency by providing stronger incentives to work and hire as well as promoting decentralised bargaining.
Public debt	General government debt rose sharply to 114.6% of GDP, in 2020 as a result of the COVID-19 crisis, and declined thereafter to 111.6% in 2022, which remains very high. This fiscal space available to respond to future shocks and weighs on growth prospects, by crowding out productive public expenditure and requiring a high tax burden. Refinancing risks have been mitigated by the lengthening of the average debt maturity. The investor base remains diverse, both by type and geographically. Significant fiscal efforts are needed to put France's public debt on a sustained downward trajectory.	From 6.5% of GDP in 2021, the general government deficit narrowed further, to 4.7% in 2022, and is projected to fall to 4.3% of GDP by 2024. The public debt ratio is expected to rise to 125% of GDP over the medium term. Medium-term sustainability risks are assessed as high.	The recent policy response to public debt vulnerabilities has been accurate. A reform of public finances management entered into force in 2022. It includes a multiannual expenditure rule and the extension of the prerogatives of the national fiscal council. However, approval is still pending on the public finances programming law on multiannual fiscal targets, which is essential for the proper functioning of the new framework. A new mechanism aimed to conduct regular evaluations of public spending, with the aim of identifying the most efficient expenditures has also been approved. The French government has passed a new pension reform, aiming at restoring the financial balance of the system by 2030. The reform embeds an increase of the statutory retirement age from 62 to 64 years, the acceleration of a previous reform extending the required contribution period for full pension and the ending of some of the main special pension schemes. The reform is expected to have a positive impact on public debt sustainability.

Source: European Commission