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2025 Country Report - Croatia

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Recommendation for a COUNCIL RECOMMENDATION

on the economic, social, employment, structural and budgetary policies of Croatia

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European Commission

Croatia

2025 Country Report

ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

Strong economic momentum continues

The Croatian economy continues to grow strongly. Since its accession to the euro in January 2023, Croatia's real GDP expanded by 3.3% in 2023 and 3.9% in 2024, driven by domestic demand. Significant growth in real wages and employment, along with strong credit activity, fuelled household consumption in this period. At the same time, a surge in construction, underpinned by EU transfers, boosted investment, while public wages expenditure drove government consumption. In 2024, the rise in domestic demand led to a rise in imports and a decrease in net exports. Given the rise in prices of tourism-related services (which accounted for 11.3% of GDP in 2022 ([1])), the sector has now lost some of its export price competitiveness, and this contributed to a decline in exports of services. Economic growth is expected to slow down slightly to 3.2% in 2025 and 2.9% in 2026, as growth in domestic demand gradually slows.

The impact of US tariffs on Croatia is expected to be comparatively low. Croatia's gross exports of goods to the US amounted to 3.4% of its total goods exports in 2024. The share of domestic value added in goods exported to the US accounted for about 0.5% of GDP in 2022, roughly equally split between direct and indirect exposure through other countries. In the same year, the share of domestic value added in services exported to the US was equivalent to 0.6% of GDP – the lowest in the EU. Two thirds of this services exposure stems from indirect effects through other countries.

Inflation remains high. Croatia's output is estimated to be above its potential. This creates price pressures, which are easing only slowly. Inflation, measured by the Harmonised Index of Consumer Prices (HICP), decelerated from 8.4% in 2023 to 4% in 2024, still above the euro area inflation rate of 2.4%. Inflation has been particularly high for services, especially those related to tourism. Inflation is now expected to slow down to 3.4% in 2025 and 2% in 2026.

Job creation has been sustained, leading to new employment records and labour shortages. In 2024, the unemployment rate declined to 5%, compared with 5.9% for the EU, and the employment rate reached a new high at 73.6%, further narrowing the gap to the EU average of 75.8%. Increases in both employment and labour force participation were particularly strong for women, but the female employment rate – at 70.6% – lags behind that of men. The continued inflow of non-EU workers (estimated at 206 000 in 2024, from 172 000 in 2023) contributed substantially to employment growth, with nearly two thirds of these workers employed in construction, catering and tourism services. However, labour shortages, also caused by skills mismatches, remain prevalent and are a significant barrier to growth and investment. The tightness of the labour market contributed to the sharp wage increases of 15% in nominal terms and 10.5% in real terms for 2024 ([2]), raising living standards and boosting consumption. This was especially the case for public sector wages following a reform of the public wage-setting system.

([1]) Croatian Bureau of Statistics (2025), "Tourism satellite account for the Republic of Croatia 2022", First Release, Year: LXI., Zagreb, 26 March 2025.

([2]) Average monthly gross wages per person in paid employment in legal entities. Source: Croatian Bureau of Statistics (CBS). Deflated by HICP.

Croatia continues its convergence towards EU average living standards. From Croatia's EU accession in 2013 to 2024, real expenditure per capita (in purchasing power standards) rose from 61% to 77% of the EU average, with 11 pps of this progress achieved after 2020. While initial productivity growth was not as strong as among EU peers, it accelerated rapidly after 2020, although this growth was characterised by pronounced regional differences. In parallel, Croatia's population was declining due to natural decrease coupled with net migration outflows before 2022, with a reduction in population of 367 000 (8.7% of the total population) between 2013 and 2022 ([3]). This trend stopped in 2023, as immigration accelerated, and emigration decreased thanks to rising real incomes and employment opportunities.

Sustained productivity growth will hinge on the transition to higher-value activities. Although the tourism industry is a significant driver of economic activity, tourism-dependence creates significant distortions and may not be sustainable in the long term. Overreliance on tourism income, including rental accommodation, has several disadvantages. For example, it: (i) discourages labour-market participation, especially in coastal areas; (ii) crowds-out investment and business development in higher-value-added activities; (iii) hinders housing affordability; and (iv) exposes the domestic economy to external shocks. While the recovery and resilience plan (RRP) contains several reforms and investments to improve the sustainability, resilience and efficiency of the sector, tourism's potential to contribute to future growth seems limited. Investments and reforms to diversify the economy toward higher-value-added activities will be needed for sustained productivity growth. Making the National Productivity and Competitiveness Board operational (it was set up in 2020 but has not yet begun work) would also make it easier to identify reforms to boost productivity and achieve sustainable economic growth.

([3]) Croatian Bureau of Statistics, end-year population estimate.

Public finances remain sound

Croatia is in a relatively strong fiscal position. The general government deficit was 2.4% of GDP in 2024, and the debt-to-GDP ratio was 57.6%. The deficit is expected to increase to 2.7% in 2025 and slightly decrease to 2.6% in 2026, while debt is forecast to stabilize above 56%. In recent years, strong growth in tax revenue has been underpinned by solid GDP growth and favourable employment trends, while expenditure was driven by: (i) public investments fuelled by the high level of EU funds; (ii) higher public sector wages; and (iii) an increase in social assistance benefits.

Croatia's net expenditure growth is above the recommended path. In 2024, net expenditure ([4]) in Croatia grew by 17.4% (see Annex 1). This increase is mainly driven by the growth in expenditure related to public wages and social benefits – in particular pensions. In 2025, net expenditure is forecast by the Commission to grow by 7.9%, which is above the maximum growth rate recommended by the Council([5]). Drivers of the growth in net expenditure are (i) a continued rise in public wages due to carry over effects of the new public wage act that entered into force in 2024; (ii) social benefits increases, in particular related to pensions, due to the change in indexation formula; and (iii) a strong increase in investments due to a pick-up in the RRF implementation. The cumulative growth rate of net expenditure in 2024 and 2025 taken together is projected at 26.6%, which is above the maximum rate recommended by the Council. The projected deviation is allowed

([4]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of (i) interest expenditure, (ii) discretionary revenue measures, (iii) expenditure on programmes of the Union fully matched by revenue from Union funds, (iv) national expenditure on co-financing of programmes funded by the Union, (v) cyclical elements of unemployment benefit expenditure, and (vi) one-off and other temporary measures.

([5]) Council Recommendation of 21 January 2025 endorsing the national medium-term fiscal-structural plan of Croatia (OJ C, C/2025/638, 10.2.2025, ELI: http://data.europa.eu/eli/C/2025/638/oj).

under the conditions of the national escape clause on current projections for defence spending.

Seizing the economic momentum to build buffers would help tackle the challenges ahead. Croatia embarked on a procyclical expansionary fiscal policy in 2024. In the coming years, an ageing population, the green transition, and increased spending on defence are likely to create pressure on public finances. For this reason, it is warranted for Croatia to purse: (i) further improvements in the quality and efficiency of public spending; (ii) debt management; and (iii) the prioritisation of growth-enhancing investments.

Reforming and simplifying the taxation system could help support competitiveness, labour participation and the green transition. Croatia's tax mix relies strongly on consumption taxes, which accounted for nearly half of the tax revenues in 2023 (Annex 2), with tourism playing a significant role. Although the tax reform introduced in January 2025 increased taxation on secondary property and short-term rentals, revenues from both taxes are expected to remain below the EU average. The effective level of carbon pricing is also low, and the redistributive effect of Croatia's tax-benefits system remains limited. At the same time, tax compliance is regarded as burdensome by businesses, weighing on competitiveness. Croatia could simplify tax compliance and facilitate tax collection by aligning its corporate tax-administration procedures with EU best practice. In particular, it would be beneficial to pay special attention to simplifying capital-gains taxation paid by individuals to incentivise retail participation in the capital market. Redesigning the taxation of labour income to minimise disincentives for 'second earners' to join the labour market could help ease current labour shortages. Reviewing tax expenditures that undermine carbon-pricing signals could also help make the taxation system more supportive of the green transition.

The mandate, capacity and independence of Croatia's Fiscal Policy Committee (FPC) could be improved. Due to obstacles related to the recruitment process (including wage levels and eligibility criteria), the Committee is facing challenges in attracting personnel and performing its analytical and outreach functions, resulting in limited interaction with Parliament, government and other institutions. (Annex 1).

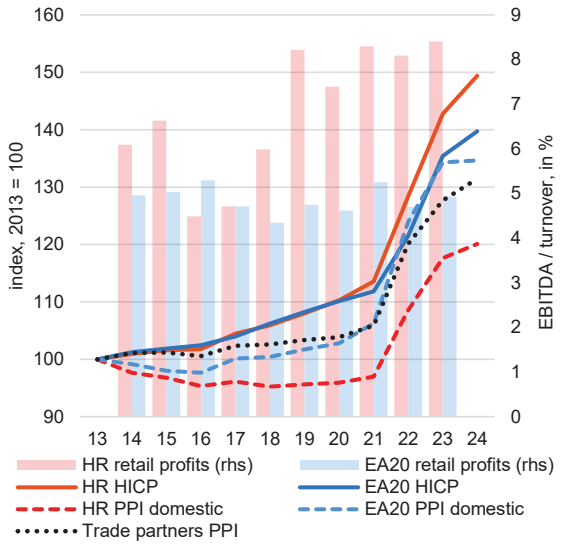
High inflation and labour costs weigh on price competitiveness

Inflation has been higher in Croatia than in the euro area since 2021. This has been fuelled by strong post-pandemic demand, increasing wages, rising employment, strong credit activity, and specific price shocks in energy and food. The Croatian central bank has announced the introduction in July 2025 of borrower-based measures that should mitigate credit-financed consumption. Price pressures from foreign tourists are now weakening as demand for tourism services stabilised in 2024 following sustained price increases.

Inflation for some goods in Croatia may partly be due to weak competitive pressures. For some groups of products, primarily processed food (including alcohol and tobacco), consumer prices have been increasing more rapidly than producer prices of closely comparable groups of goods. While this excess growth of consumer over producer prices of processed food has accelerated recently, it has been consistently recorded since 2012, including when consumption declined (Graph 1.1) ([6]). At the same time, the profitability of Croatian retail companies has been higher than retail companies elsewhere in the euro area and continues to increase. Along with some regulatory market restrictions (see Section 2), this may indicate weak competitive pressures at the retail or wholesale stages of the supply chains.

([6]) There have been similar episodes in some other Member States, but they were milder and shorter. Consumer price growth for Croatia also surpassed the growth of export prices of producers of processed food in the main euro area trade partners.

Graph 1.1: **Consumer vs producer price indices of processed food**



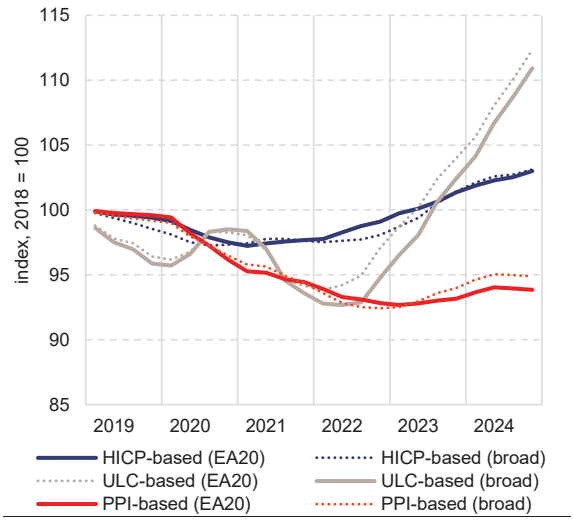
(1) HICP: consumer prices of processed food (incl. alcohol and tobacco); PPI domestic: domestic market producer prices of food products; beverages and tobacco products; Trade partners PPI: export market producer prices of the same products, of the four main euro area trade partners (average). Retail profits: aggregate for firms (excl. SMEs) in food retail sector (NACE Rev.2 classes 47.11 and 47.2). The lower aggregate profits in Croatia during 2016-2018 are mainly due to reduced profits of Croatia's largest food retailer at the time.
Source: Eurostat and ORBIS, retrieved in March 2025.

The deterioration of price competitiveness remains contained despite strongly rising wages. The sharp wage growth in Croatia in 2023 and 2024 resulted in a strong appreciation of the real effective exchange rate (REER) deflated by unit labour costs (ULC). However, the appreciation of the REER deflated by consumer (HICP) and producer prices (PPI) has been more contained over this period (Graph 2).

Nevertheless, the sustained price growth of tourism-related services contributed to weaker real exports in 2024.

Productivity-enhancing investments are key to offset the impact of increasing labour costs on profitability. Rising wages lowered profitability in parts of Croatia's manufacturing industry that were facing more stagnant external demand and less scope for price increases due to stronger competition. If labour costs continue to outpace productivity growth, some exporters may be forced to exit the market. Although appropriately targeted policies could facilitate the restructuring of the economy toward higher-value-added activities, there is a risk that the tradable sector will shrink if cost pressures become excessive.

Graph 1.2: **Real effective exchange rates**



(1) Real effective exchange rates of Croatia vis-à-vis the euro area and the broadest available group of trade partners, deflated by HICP, ULC and PPI, four quarters moving averages.
Source: ECB.

Box 1:

UN Sustainable Development Goals (SDGs)

Croatia is improving on all SDGs related to macroeconomic stability, productivity and fairness. However, it is deteriorating on three SDGs related to environmental sustainability (SDGs 6, 13 and 14) where Croatia's performance is nevertheless still better than the EU average on SDG 6 and 14.

Although Croatia is improving on most SDGs, on many (12 out of the 17 SDGs) the country is performing below the respective EU average. The biggest gap is recorded on SDG 9 – Industry, innovation and infrastructure, due to low levels of expenditure on R&D and the lower share of households with high-speed internet connections (see Annex 15). The RRP has a component dedicated to supporting R&D development and reforms/investments to strengthen digital connectivity.

Other macroeconomic and competitiveness challenges

Strong house price increases and low affordability remain a key macroeconomic challenge. House prices grew by 10.4% in 2024, following growth of 11.9% in 2023, hindering housing affordability and posing potential risks to the stability of the financial sector. Rental prices grew by 4.4% in 2024, down from 6.3% in 2023, with 9% of the population living in a rented dwelling. However, the number of sales transactions for real estate, including by non-residents, decreased for the second consecutive year in 2024, and the number of issued building permits remains high. Housing supply should also be incentivised by: (i) the newly introduced taxation of vacant housing units; (ii) stronger taxation of income from short-term rentals; and (iii) instruments in the recently adopted national housing policy plan until 2030 (see Section 4). But despite policy efforts and the recent rise in incomes, housing affordability remains comparatively low, also constraining labour mobility. Nevertheless, several factors mitigate the potential risks to financial stability from the housing sector. Firstly, household debt in Croatia is comparatively low, at 30.3% of GDP and consisting mostly of bank credit. Secondly, the banking sector itself is profitable, well capitalised, and very liquid. Thirdly, new loans for house purchases slightly decreased as a share of GDP in 2024, as interest rates remained stable and are now higher than for the euro area. Fourthly, the stock of housing credit remained broadly unchanged at 13.9% of GDP in 2024 given strong nominal GDP growth. Finally, the Croatian central bank announced the introduction in July 2025 of borrower-based measures that limit debt-service-to-income ratios, loan-to-value ratios, and the maximum maturity of housing loans ([7]), all of which should further mitigate housing market risks.

Several factors are holding back Croatia's productivity and competitiveness. Croatia trails behind its EU peers on innovation (Section 2 and Annex 3), and skills mismatches continue to be a major cause of labour shortages, the low employment rate and sluggish productivity growth (Section 4 and Annex 10). Croatian businesses have limited access to non-bank finance due to both the limited availability of diverse sources of financing. Businesses in the country continue to navigate complex administrative processes, with limited mechanisms in place to encourage the participation of SMEs in public contract bidding. Croatian firms are also integrating into the EU's single market more slowly than the EU average, largely due to delays in transposing single market directives (Section 2 and Annex 4). High electricity prices, in part due to the limited uptake of solar energy, weigh on the price competitiveness of industry and business (Section 3 and Annex 8). Croatia is increasing its efforts to mitigate these challenges, including with reforms and investments under the RRP and recent policy initiatives. Nevertheless, there is scope for further progress, especially in fostering the business environment, promoting single market integration, and accelerating the rollout of renewable energy.

([7]) https://www.hnb.hr/en/-/priopcenje-o-donosenju-odluke-o-kriterijima-kreditiranja-potrosaca.

Box 2:

Barriers to private and public investment

Investment has been a significant driver of growth in Croatia in recent years, helped by the absorption of EU funds. However, several barriers contribute to holding back private and public investment. These include:

- **Labour and skills shortages.** Labour force gaps, particularly in services and industry, are a very significant barrier to investment, with over 90% of firms citing them as a major constraint.
- **A fragmented R&I system.** Fragmentation, low R&D intensity, and weak technology-transfer mechanisms continue to hinder Croatia's ability to commercialise research and foster innovation.
- **Limited access to non-bank finance.** Businesses face limited access to diverse funding sources, with heavy reliance on bank loans and frontier capital markets restricting investment, particularly for start-ups and SMEs.
- **Regulatory and administrative barriers.** Complex regulations, slow permitting processes and delays in implementing EU directives discourage both domestic and foreign investment.

Croatia has taken significant steps to strengthen its financial system and improve the environment for investment. The country benefits from a stable and resilient banking sector, and the authorities are increasing their efforts to deepen the country's capital markets and promote the role of non-bank financial institutions. Public policy has started to address structural investment gaps through strategic planning, regulatory reforms and targeted support for innovation and capital-market development. Nonetheless, key barriers to effective investment planning, financing and execution persist. For example:

- **Small and underdeveloped capital markets.** Equity market capitalisation in Croatia remains significantly below the EU average, and market liquidity is low. The limited range of investment products and exit opportunities continues to hinder the development of venture and growth capital. The participation of retail and institutional investors in private capital markets remains narrow.
- **Underutilisation of domestic savings.** Despite a structurally positive net savings position, a large share of Croatia's household and institutional savings is invested abroad. The availability of domestic capital for productive investment is restricted by: (i) high holdings of cash and deposits (46.4% of household assets); (ii) a preference for real estate investment; and (iii) limited direct retail participation in capital markets.
- **Conservative investment strategies of institutional investors.** The portfolios of Croatian pension funds and insurers remain heavily skewed towards government bonds. This limits the availability of long-term risk capital, particularly for innovative enterprises and start-ups. Pension fund commitments to private equity and venture capital remain among the lowest in the EU.
- **A fragmented innovation finance ecosystem.** Croatia's venture capital and private equity activity remains low, leaving early-stage firms without sufficient access to growth financing. Despite some initiatives taken by the government in recent years to address this problem, the depth of the innovation finance ecosystem is insufficient to meet the needs of high-potential firms.

The implementation of Croatia's RRP is well underway. At present, Croatia has fulfilled 36% milestones and targets in its RRP. However, the implementation of investment projects under the RRP remains hampered by administrative capacity constraints, complex public procurement procedures, protracted permitting processes and coordination inefficiencies. Croatia has also strengthened its public investment framework through a high-level strategy and a new standardised project assessment methodology, improving planning and alignment with priorities. However, external quality assurance remains largely confined to EU-funded projects, while systematic ex post evaluations are still lacking.

It remains important to accelerate the implementation of cohesion policy programmes. The mid-term review offers opportunities to speed up progress and better address EU strategic priorities related to competitiveness, defence, housing, water resilience and the energy transition. While Croatia has signalled interest in leveraging the Strategic Technologies for Europe Platform under cohesion policy, Croatia can further support the development or manufacturing of critical technologies in the areas of digital and deep tech, clean and resource efficient technologies, and biotechnologies.

INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

Transforming research into innovation

Croatia's R&I system is improving but weaknesses persist. Despite improvements in innovation performance in recent years and ambitious investment and reforms, Croatia remains an emerging innovator, with low innovation performance but the potential for further growth ([8]). Structural weaknesses continue to hinder its ability to commercialise research and increase competitiveness.

Croatia's fragmented public R&D sector weakens the efficiency of public investment in research. Croatia's public R&D system includes over 25 public research institutes and 8 universities, with more than 110 autonomous faculties. This dilutes resources and limits collaboration. R&D intensity is growing but is characterised by stark regional variations and remains substantially below the EU average. This highlights the need to ensure continuous increases in public R&D investment (Annex 3 and 17). The recovery and resilience plan (RRP) supports Croatia's innovation ecosystem through reforms in R&I, including funding to merge universities and research institutions, offering an opportunity to improve institutional efficiency. However further effort in this area is required. Addressing this fragmentation through analytically grounded consolidation efforts, including incentives for mergers, could improve coordination and maximise the impact of Croatia's R&I.

Despite progress in recent years, private sector R&D investment remains substantially below the EU average. The main bottlenecks to private sector R&D include the fragmentation of the research landscape, ineffective coordination between relevant players, and constraints on technology transfer. There is also a need to increase Croatia's R&D expenditure and innovation activity in the private sector and promote the digitalisation of SMEs. Patent applications remain limited, reflecting weak incentives for the creation of proprietary knowledge. Furthermore, despite recent improvements, Croatia lags behind other Member States in venture capital investment, and this limits funding for high-growth start-ups and deep-tech innovation. A continuous increase in R&D expenditure, both public and private, is needed to close the gap with the EU average.

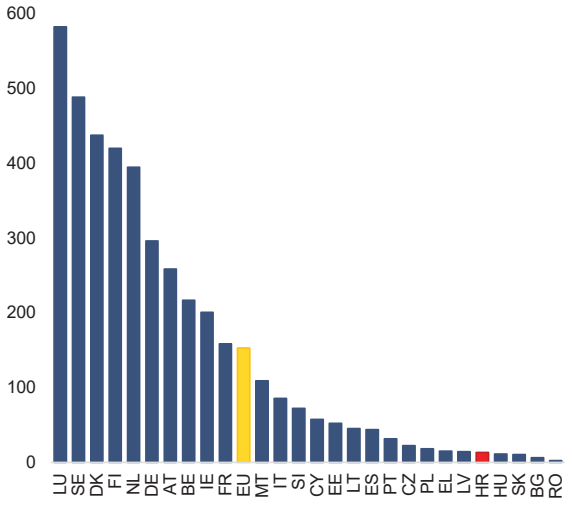
Business-science ties are improving, but steady support is key. Despite many available programmes for collaborative research, many Croatian SMEs rely on traditional bank financing rather than innovation partnerships. And, even with a strong public-private co-publication rate, these public-private collaborations often fail to lead to commercial applications ([9]) due to weak technology-transfer mechanisms. Croatia's system for licensing research outputs and facilitating university spin-offs remains lacklustre. Although technology - and knowledge-transfer mechanisms are being strengthened to improve commercialisation, including via the RRP and cohesion policy, weaknesses remain. Technology-transfer offices (TTOs) face project-based funding constraints that complicate staff retention, while the lack of a robust technology-transfer culture diminishes buy-in from universities and trust from beneficiaries (Annex 3). To address these issues, a system for continuous and

([8]) European Innovation Scoreboard, Croatia, 2024.

([9]) European Innovation Scoreboard, Croatia, 2024.

permanent funding for TTOs should be developed, accompanied by efforts to embed a culture of knowledge and technology transfer across academic and research institutions.

Graph 2.1: **Number of patent applications per million inhabitants, 2023**



(1) Patent applications to the European Patent Office by applicants' country of residence
Source: Eurostat

Better R&I performance needs improved governance. The implementation of Croatia's new R&I governance system experienced significant delays with the National Innovation Council established only in April 2025, while work at the technical level remains limited. Collaboration between the three main ministries (Ministry of Science, Education and Youth, Ministry of the Economy, and Ministry of Regional Development and EU Funds), while permanent and continuous, could be strengthened to increase the potential to design comprehensive support measures across all technology readiness levels. To overcome these barriers, and ensure more effective policy design and delivery, it would be beneficial for Croatia to: (i) further operationalise the S3 governance system; (ii) improve coordination between academia, industry and government (including inter-ministry coordination) through a continuous entrepreneurial discovery process; and (iii) design programmes and calls to target consortia of stakeholders.

Unlocking diversified sources of financing

Croatia's financing landscape lacks diverse sources of funding. Businesses primarily rely on bank loans (representing 31.6% of all funding sources for non-financial corporations, 16.9% of all firms' funding source) and own funds, while market-based finance is limited. The predominance of bank finance over market-based options underscores the limited availability of alternative funding sources for businesses, particularly those whose needs are less suited to traditional financing, such as start-ups and scale-ups. In addition, despite the banking sector's high liquidity and resilience, there are signs that bank lending to corporates, while increasing, remains below potential (Annex 5). In 2024, a slightly higher share of Croatian SMEs reported late payments from both private and public entities than the EU average (Annex 4). In addition, persistent payment delays – reported by a growing share of SMEs – can exacerbate cash flow pressures and increase the need for short-term financing.

As a frontier market, Croatia's capital market is evolving but requires further development to broaden access to finance. Equity market participation is considerably lower than the EU average, as reflected in low trading volumes and stock listings. This constrains the ability of Croatian businesses to access long-term investment from domestic sources, particularly from households and institutional investors. A significant share of Croatian net savings continues to be invested abroad, as reflected in structurally positive net lending to foreigners, with net lending to foreigners averaging 2.3% of GDP over the past decade and peaking at 3.9% in 2019 (Annex 5). At the same time, domestic capital markets provide limited opportunities for channelling these funds into productive business investment. Investment funds and insurance undertakings in Croatia do not play a significant role as institutional investors, while pension funds mainly invest in sovereign bonds. The lack of diversified financing options hinders economic

expansion and innovation, particularly for small and medium-sized enterprises. Moreover, there is scope to increase support for early-stage innovative firms through venture capital and private equity (Annexes 3 and 5).

Croatian households hold a significant portion of their assets in cash and deposits rather than in financial instruments. While the share of household financial assets allocated to pension and investment funds has grown in recent years, it remains below the EU average. Retail participation in financial markets, both direct and through intermediaries, has also increased but still lags behind European levels, further limiting financing opportunities for businesses. Although Croatia's capital gains tax is lower than in comparable markets, the administrative complexity and lack of digitalisation of the tax system may disincentivise retail participation in the capital markets.

Croatia aims to boost capital market development through regional integration, digitalisation, and regulatory reforms. As part of the RRP, the Ministry of Finance, in cooperation with the Croatian Financial Services Supervisory Agency and other stakeholders (Annex 5), have prepared a Strategic Framework for the development of the capital market in the Republic of Croatia 2025 – 2030.The framework and the action plan focus on: (i) regional integration; (ii) furthering the digitalisation of services for investors, through tools such as onboarding platforms; (iii) advancing corporate governance; (iv) improving the liquidity of the capital market; and (v) developing the offering of financial instruments. A strong response by retail investors to offerings of sovereign bonds and treasuries, facilitated by the e-government platform, further strengthens the case for prioritising digitalisation. Regulatory streamlining is a general enabler for attracting investors in this area. It also plays an important role in increasing cross-border investment flows. The regulatory streamlining initiative strengthens Croatia's commitment to advancing the EU's Savings and Investments Union and its own overall competitiveness.

Croatia's RRP is advancing financial sector reforms to diversify capital markets, support innovative SMEs, and promote sustainable finance. As part of the RRP, the country dedicates resources to financial sector reforms, with a focus on diversifying capital markets and improving access to alternative financing. A dedicated financial instrument supports venture capital and private equity for the start-up and growth stages of innovative and scale-up SMEs, complemented by cohesion policy measures. Further reforms in the RRP will strengthen the role of Croatia's financial sector's role in economic development through support for sustainable finance and green transition efforts. These reforms provide a structured roadmap for improving access to finance and fostering a more dynamic capital market.

Expanding access to diversified sources of financing will support sustainable growth and strengthen financial stability. Croatia is creating a stronger regulatory framework that fosters capital market growth, encourages alternative financing solutions, and improves financial literacy. Aligning its policies with broader EU financial integration efforts should improve investor confidence, attract foreign capital, and create a more balanced and resilient financial system. By expanding access to finance through diversified channels, Croatia can support sustainable economic growth and strengthen its overall financial stability.

Nurturing the business environment

Significant structural challenges hinder Croatia's business environment, with workforce shortages. Labour and skills shortages are among the most pressing constraints on business investment and expansion. Croatian employers increasingly report difficulties in finding qualified staff, and this is limiting their production capacity and competitiveness, particularly outside the capital region of Zagreb (Annex 17). This challenge is compounded by demographic

trends and the emigration of skilled workers to other EU countries. Wage increases in recent years, while supporting incomes, have also raised concerns among businesses about potential impacts on cost competitiveness.

Regulatory complexity and administrative inefficiencies continue to create obstacles for Croatian businesses. Despite recent improvements, firms perceive business regulations and labour market rules as significant barriers to investment, with compliance requirements often exceeding those of other EU Member States. Improving the regulatory framework could alleviate the challenges of meeting seasonal demands in tourism and related services. Increasing delays in transposing EU directives into national legislation further complicate the business environment. Additionally, disproportionate regulatory restrictions on certain professions, continue to limit competition and market efficiency (Annex 4). Improvements in both the availability of digital public services for businesses and the efficiency of the justice system would help strengthen the country's business environment.

The RRP contains several measures to help digitalise the public administration. These include: (i) the new functionalities of the public employee management system; (ii) a new system for monitoring and implementing wages; (iii) the introduction – coupled with IT support – of remote and hybrid work models; (iv) the digitalisation of strategic planning processes; and (v) an IT platform to support local government units that are undergoing mergers. The RRP also contains several measures to expand the capacity of the state 'cloud' and enable more users to benefit from its services and features. While these measures will help improve the efficiency of the public administration, Croatia could further promote the use of these new tools and functionalities and provide training where needed.

In the retail sector, regulatory barriers to competition remain high. According to the OECD indicators on Product Market Regulation ([10]), regulatory barriers to competition in Croatia are the eighth highest in the EU and the highest of small EU countries ([11]). While such barriers can hinder the daily operations of shops, they alone do not provide a sufficient explanation for the growing divergence between consumer and producer prices in Croatia (Section 1). An additional factor causing this divergence could be the presence of territorial supply constraints that may reduce price competition for branded products, as retailers and wholesalers in Croatia have reported difficulties in bypassing local exclusive distributors ([12]).

The authorities have taken some steps to increase competition. Croatia's national competition authority (AZTN) has reacted to the need to step up competition enforcement by prioritising the retail sector in 2025 and launching a sector inquiry into vertical relations between suppliers and retailers in the food and non-food supply chain. Croatia also introduced measures to improve price transparency and comparison possibilities for consumers by requiring retailers to publish the prices of all their products online from mid-May 2025 ([13]). However, to limit inflationary pressures, Croatia adopted the Act on Exceptional Price Control Measures, which entered into force on 8 March 2025. This Act stipulates that price control measures may be introduced exceptionally to prevent the negative consequences of price changes, mitigate inflation, prevent monopolistic pricing, and in other extraordinary circumstances. The government also widened the scope of price-capped food products from 30 to 70. Such price-control measures may undermine free access by traders to the Croatian market in

([10]) OECD, 2024, Product Market Regulation Country note – Croatia.

([11]) There are no product-market regulation scores for Romania. Small EU countries include all 12 EU countries with a population below 6 million.

([12]) Study on territorial supply constraints in the EU retail sector - Publications Office of the EU.

([13]) Similar mandatory price disclosure measures have led to reduced price levels in supermarkets in Israel. Ater and Rigbi (2018), The Effects of Mandatory Disclosure of Supermarket Prices.

conditions of effective competition and disturb the entire supply chain ([14]).

Territorial fragmentation of the public administration affects its efficiency and results in suboptimal support to businesses. The responsibilities and tasks of the local government units often do not match their administrative and financial capacities. This results in an uneven provision of public services for both citizens and businesses across financially strong and financially weak local units. At the same time, this hinders their capacity to implement policy and adequately use EU funding. The RRP includes reforms to address the situation by introducing the legal framework, coupled with a financial incentive system as well as an IT support system, to encourage either mergers of functions between local government units or actual mergers, however, while there is appetite for functional mergers, there is limited interest to undergo actual mergers and reduce the number of local government units. Further measures to improve the uptake by bolstering financial incentives or introducing additional legislative requirements could be beneficial to improve deliver of public services to businesses and citizens at the local level.

([14]) CJEU, case C-557/23 *SPAR v Hungary* paragraph 47.

DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

Unlocking Croatia's renewable potential to reduce electricity prices

High electricity prices for business and industry hold back competitiveness. Croatia had the third highest electricity price in the EU for business/industrial consumers in the first half of 2024. This continued to hold back the cost competitiveness of Croatian companies ([15]). Households were shielded from high electricity prices through government subsidies. However, household consumers still paid 3.3 times more per unit for of electricity than they did for gas in the first half of 2024, in part due to higher taxation on electricity, effectively disincentivising electrification ([16]). On the wholesale market, high electricity prices were driven by a mix of factors that affected both demand and generation, as prolonged summer heatwaves and a colder winter in the region led to higher consumption, while reduced hydropower reserves and limited non-fossil-fuel flexibility exacerbated the supply-demand gap (Annex 8).

Faster roll-out of new renewable energy capacity, especially solar, and non-fossil flexibility solutions could help reduce price levels. Croatia added a record 397 MW of solar capacity in 2024 (Annex 8), but the share of solar energy in electricity generation remains low, at less than 6%. However, increased uptake of large-scale renewables, including solar, is hampered by the lack of necessary regulatory framework. For example, the national energy regulator (HERA) has yet to set updated grid connection fees. This creates uncertainty for potential investors, some of which have decided to cease operations in Croatia. Currently, around 45 projects with the potential to add more than 2600 MW of new renewable energy capacity remain blocked and are unable to secure financing and continue with the permitting process.

Increased investment in the electricity grid will be crucial to unlock Croatia's renewable energy potential. The Croatian Recovery and Resilience Plan (RRP) includes reforms and investments with a focus on the 220/110 kV electricity grid. However, to fully access Croatia's solar and wind potential in the south of the country, significant investment will be required in the 400 kV electricity grid connecting Dalmatia on the south coast with the north of the country. Cost estimates for this grid expansion range from EUR 500 m for the connection of selected projects to EUR 1 billion for the entire network. Potential funding arrangements for grid development will need to strike a balance between contributions from current and future renewables investors, consumers, and public funding. While high-voltage network upgrades, may take 10-15 years to materialise, incentivising hybrid storage and renewable energy projects, especially in the southern region could, in the short term, support the integration of new renewable energy capacity without straining the grid.

Expanding clean-tech manufacturing would support Croatia's competitiveness while contributing to the resilient decarbonisation of the EU. Croatia has limited production capacity for net-zero technologies and does not fully exploit its potential in manufacturing and exporting these technologies (Annex 7). Despite some progress

([15]) Statistics | Eurostat

([16]) Source: Eurostat, S1 2024 energy price data (consumption band is DC for electricity and D2 for gas, which refer to medium-sized consumers and provide an insight into affordability)

in recent years (including the adoption up of a dedicated strategy for hydrogen in 2022), Croatia lacks a robust policy framework to develop clean-tech manufacturing. Main bottlenecks include long waits for industrial permits to be granted, a lack of incentives for private investment, and skills shortages.

Increasing demand response and consumer empowerment could improve electricity affordability. Dynamic contracts (according to which prices vary depending on the time of day or on weather patterns) help consumers optimise their consumption patterns and can help reduce demand and price peaks. However, the uptake of these contracts in Croatia is held back by a rather low share of installed smart meters. Only 24% of household consumers had smart meters installed in 2023, up from 19% in 2022 but significantly less than the EU target of 80% (Annex 8). The RRP is providing significant funding for the roll-out of smart meters, but further investments are necessary to empower consumers and increase flexibility. Generally, active market participation by consumers seems still limited, with electricity consumers switching to new providers at a rate of less than 2% a year. In addition, the number of registered energy communities remains low, mostly due to cumbersome registration requirements. Moreover, none of the registered energy communities is currently in operation as the distribution-system operator is working on the software needed to implement energy sharing.

Energy savings in Croatian industry and business could help lower energy costs. The energy renovations in residential and – to a larger extent – public buildings continued in 2024, with significant support from EU funds, including the Recovery and Resilience Facility (RRF). However, funding support for energy savings in industry and businesses remained low in 2024. Additional efforts to address the energy-savings potential in industry and business could support Croatia's competitiveness by lowering energy costs. This in turn could help further reduce the high greenhouse-gas-emissions intensity of Croatia's manufacturing sector if it is also combined with investments in the decarbonisation of the sector (Annex 9).

Phasing out fossil fuel subsidies

Croatia records sizeable relevant fossil fuel subsidies without a planned phase-out before 2030. Scaling down and phasing out these subsidies, which represent 0.63% of Croatia's GDP is in line with EU commitments and can contribute to easing limits of fiscal space. Fossil fuel subsidies that address neither energy poverty in a targeted way nor respond to genuine energy security concerns, hinder electrification and are not crucial for industrial competitiveness could be considered for priority phase-out. Nevertheless, it is noted that in Croatia the combination of national energy and carbon taxes and EU Emissions Trading leads in Industry to disincentives for fossil fuel use which are slightly higher than the EU average. The following remaining fossil fuel subsidies in Croatia are particularly damaging from an economic and environmental perspective (Annex 8): (i) the ongoing emergency price cap on petroleum products; and (ii) partial refunds of excise duties for diesel in commercial transport.

Accelerating circular material use

Despite positive trends, Croatia is trailing behind its EU peers in the transition to a circular economy. The use of circular materials stands at 6.2%, still significantly below the EU average of 11.8%. Croatia remains one of the lowest performing countries in the EU for sustainable waste management, with a recycling rate of only 36% ([17]) (Annex 7).

The Croatian RRP includes reforms and investments to accelerate the circular

([17]) https://ec.europa.eu/eurostat/databrowser/view/sdg_11_60/default/table.

transition. Examples of these reforms and investments include: (i) grants to entrepreneurs in the tourism industry; (ii) vouchers for training for green skills, including green skills related to circularity; and (iii) investments in infrastructure for improved waste management. Croatia introduced a landfilling tax as an economic incentive to make waste recycling and prevention more competitive. However, the effectiveness of this tax will depend on its implementation and enforcement. Cohesion policy programmes provide support to Croatian SMEs for innovative solutions and training (Annex 7).

Croatia could benefit from a comprehensive circular economy strategy. Croatia could increase resource efficiency by: (i) reducing, re-using and recycling key materials and products; (ii) creating market demand for secondary materials; (iii) promoting circularity from design to the end-of-life of products; and (iv) completing infrastructure investments (such as waste management centres). These actions would also have the additional benefits of creating green jobs and reducing Croatia's dependency on imports of critical raw materials (Annex 7).

Building resilience to climate risks

Croatia remains highly exposed to several adverse climate risks. Although a Climate Change Adaptation Strategy is in place since 2020, the implementation and monitoring of adaptation policies and measures need to accelerate at all levels in Croatia. Nature-based solutions and climate proofing needs to be more systematically applied across sectors, and there is an especially acute need to climate proof the country's strategic infrastructure. Economic losses and budgetary impacts from floods could be alleviated by improving the availability and affordability of insurance policies to cover climate hazards (Annex 9).

Croatia's economic resilience depends on the sound management of its environmental resources. The country's resilience needs to be strengthened to ensure a clean and sufficient water supply, which could preserve the long-term competitiveness of economic sectors depending on resilient water resources such as agriculture, tourism and renewable energy. Croatia also needs to improve the quality and availability of its environmental infrastructure. Investments in water infrastructure, mostly supported by EU funds, including the RRF, are helping to refurbish and extend water infrastructure. Nevertheless, the investment gap in the water-management sector is large and water losses in the water-supply network remain high. Croatia is lagging behind in meeting its obligations under the Urban Wastewater Treatment Directive. Only 7% of Croatia's wastewater is treated in line with EU legislation ([18]).

Fostering sustainable transport

Croatia faces significant challenges in terms of transport sustainability. Having a severely underdeveloped railway infrastructure for both passenger and freight transport., the country is also lagging in terms of TEN-T investments. Road transport is the most represented mode of transport in Croatia, for both domestic and tourist travellers. This not only keeps greenhouse-gas emissions high, but it also puts pressure on urban mobility and affects the local population. Investments in the rail network and sustainable urban mobility through a more coordinated and comprehensive approach could help Croatia to reduce its reliance on road transport and foster a more sustainable economy.

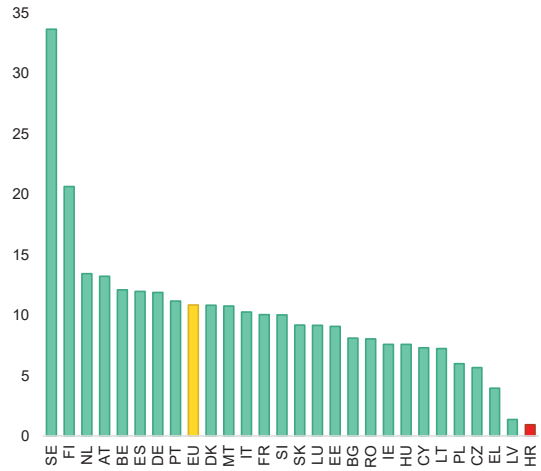
In 2023, the share of renewables in transport in Croatia was the lowest in the EU (0.9% vs 10.8% EU average). The drop in the share of renewables could be addressed by revising rules on the blending and mixing of biofuels. The RRP includes reforms and investments aiming to promote renewables in

([18]) Croatia | WISE Freshwater.

transport, but these are yet to gain ground and cannot yet be considered sufficient.

The uptake of electric vehicles in Croatia remains one of the lowest in the EU. Less than 5% of newly registered cars in 2023 were electric ([19]). The unpredictability of incentive schemes has reduced interest among potential owners of electric cars. However, in the next two years, investments focusing on boosting the demand for – and improving the availability of – charging infrastructure could speed up electrification if it is also combined with the phasing out of fossil fuel subsidies (Annex 7).

Graph 3.1: **Share of renewable energy sources in transport, 2023**



Source: Eurostat

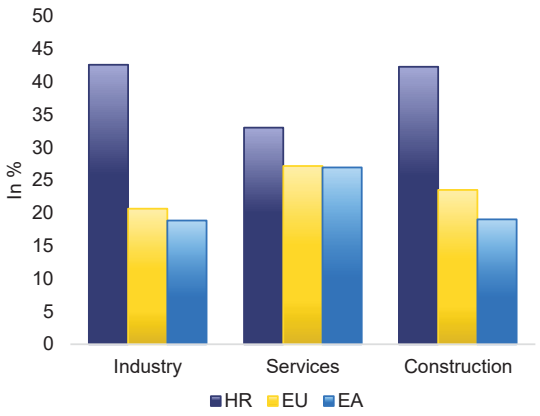
([19]) EEA, 2024, https://www.eea.europa.eu/en/analysis/indicators/new-registrations-of-electric-vehicles/newly-registered-electric-cars?activeTab=6fbd444d-c422-4a78-8492-fd496bd61b7a

Meeting labour-market needs

Croatia's labour market continues to improve, yet persistent structural and regional challenges hinder competitiveness and economic growth potential. Since its EU accession in 2013, Croatia has experienced a significant loss of population and labour force. This has only partially been compensated for by the immigration of mostly low-skilled workers in recent years. The employment rate remains below the EU average, despite improvements in recent years. Labour and skills shortages are reported in many sectors, while certain vulnerable groups remain inactive or face challenges in finding employment. This in turn increases the risk of poverty or social exclusion among these vulnerable groups (see Annex 10). Participation in adult learning is very limited (Annex 13), especially outside the capital region.

Addressing labour shortages and skills mismatches could boost competitiveness while ensuring social fairness. Croatia is increasing its efforts to tackle labour-market challenges. These increased efforts include: (i) amending the legislation to better integrate foreign workers into the labour market; (ii) implementing active labour-market policies (ALMPs – policies to help people find work or training); and (iii) providing upskilling and reskilling programmes. Many of these actions are part of the recovery and resilience plan (RRP) and/or are being funded by the European Social Fund Plus. Nevertheless, more focus is needed on increasing the effectiveness of ALMPs by better targeting vulnerable groups and facilitating their labour market activation. To achieve this, it will be necessary to: (i) increase participation in adult learning; (ii) improve the overall level of basic and labour-market relevant skills; and (iii) reduce the training coverage gap in the labour market, particularly given the significant recent inflows of non-EU workers.

Graph 4.1: **Labour shortages in Croatia in 2024**



(1) Percentage of companies which reported shortages of workers as the main factor limiting production.
Source: DG ECFIN Business Consumer Survey

Activating underrepresented groups could help build a more inclusive labour market and foster robust economic growth. Despite an overall improving labour market, some vulnerable groups – particularly older people, low-skilled workers and persons with disabilities – face persistent challenges in accessing quality employment. The disability employment gap (the gap between the employment rate of people with a disability and people without a disability) has increased significantly in recent years and reached 41.0 pps in 2024. This is worrying considering the already higher risk of poverty faced by this group. Further improvements in the labour market will be limited unless the effectiveness of ALMPs is increased through greater investment and effort in: (i) targeting vulnerable groups; (ii) providing professional coaching services and upskilling and reskilling measures; and (iii) more actively involving social partners in the planning of training activities. These targeted measures would also help better address the risk of poverty and social exclusion.

Stronger education for a more competitive and resilient economy

High-quality education at all levels is essential to ensure the competitiveness, resilience and fairness of the Croatian economy. Challenges at various levels of education result in low basic skills, low tertiary education attainment, and mismatches between people's skills and the needs of the jobs market. The rate of participation in early childhood education and care (ECEC) in Croatia is one of the lowest in the EU, mainly due to a lack of infrastructure and teacher shortages. Further efforts are needed to better equip students with basic skills, in particular in mathematics, as a basis for increasing students' interest in science, technology, engineering, and mathematics (STEM). The results of international education surveys (PISA) show that Croatia underperforms – and has low rates of top performance – in mathematics. This poor performance is aggravated by: (i) the shortage of teachers in mathematics and physics; and (ii) high levels of underachievement in basic digital skills (ICILS). Enrolment in STEM studies in Croatia is low and insufficient to meet the growing labour market demand for high-skilled ICT specialists (Annex 12). Reforms and investments under the RRP and cohesion policy aim to: (i) increase access to ECEC; (ii) improve learning outcomes in primary schools by extending the numbers of teaching hours; and (iii) increase students' enrolment in general secondary education.

Broader participation in labour-market-relevant upskilling and reskilling would help reduce skills shortages. Croatia is increasing the labour-market relevance, quality and attractiveness of adult education and vocational education and training (VET), including with reforms under the RRP. Nevertheless, participation in adult education remains limited and is insufficient to address skills shortages. More effort is needed to develop high-quality curricula in higher education, VET and adult learning that are relevant to the labour market. It would be beneficial to do this in closer cooperation with social partners, while also targeting upskilling and reskilling policies at vulnerable and underrepresented groups.

Further investments in individual learning accounts (ILAs) are important to make adult learning more attractive. Croatia's successful experience with the training-vouchers scheme implemented under the RRP could form a good basis for improving ILAs. Key points to address include widening the scope of the training offer and expanding the scheme by ensuring sustainable funding, including through private funding components. An important aspect of this work will be ensuring the transferability and accumulation of training entitlements.

These findings are consistent with the second-stage analysis of the EU's Social Convergence Framework. The analysis points to challenges related to: (i) low and decreasing rates of participation in adult learning; and (ii) the underrepresentation in the labour market – and the comparably low employment rate – of older people, the low-skilled and persons with disabilities. However, the analysis does not point to overall social convergence challenges for Croatia, also in light of the measures implemented or planned ([20]).

Making housing more affordable

Affordable housing remains a challenge in some regions in Croatia. The issue is more pronounced in the main urban and touristic coastal areas (Annex 17). Croatia has one of the highest percentages of its population living in overcrowded housing (31.7% in 2024) in the EU, and one of the highest average ages of people leaving the parental home in the EU (31.3 years). At the same time, a large share of dwellings in the

([20]) European Commission, SWD(2025)95. The analysis relies on all the available quantitative and qualitative evidence and the policy response undertaken and planned.

country is vacant ([21]). Croatia recorded substantial increases in housing prices in recent years, and this trend continues.

The new 2030 national housing policy plan seeks to address these challenges. The plan and its first action plan include measures to: (i) improve the legal framework for housing; (ii) increase the supply of affordable units; (iii) encourage long-term renting; (iv) increase the number of households in renovated units; and (v) implement targeted financial support related to real estate transactions ([22]). One target in the plan is that all large local government units ([23]) should have drawn up local housing programmes by 2030.

Recent tax reforms should also help increase the supply of housing for principal residences. In January 2025, Croatia introduced recurrent taxation of vacant housing units and increased the taxation of income from short-term rental properties, especially in high tourism areas. Nevertheless, both these tax rates remain low compared with equivalent taxes elsewhere in the euro area. These measures will help increase housing supply by shifting some of the vacant dwellings and tourist rentals toward long-term occupation, thus alleviating price pressures and improving housing affordability.

The lack of a comprehensive national urban planning policy negatively affects both the real estate market and housing availability ([24]). Close cooperation between government departments and local and regional authorities should be ensured to increase their capacity to develop and implement affordable and social housing projects and bring long-term stability to the housing market. The Tourism Act, introduced at the beginning of 2024 will: (i) further improve cooperation between local government, central government, and stakeholders; and (ii) help alleviate unsustainable increases in demand for short-term accommodation in high tourism regions.

Accelerating the modernisation of the property cadastre would help ensure the effective implementation of housing policy. Croatia is undertaking actions under the RRP to increase the volume and quality of linked data between the land registry and the cadastre in the Land Data Database (BZP), but there is scope for further improvements in this domain ([25]).

A more effective healthcare system

The Croatian health system faces significant challenges, resulting in poor health outcomes. Life expectancy at birth is low (Annex 14). Mortality rates from cardiovascular disease and cancer are among the highest in the EU. This reflects both a limited focus on disease prevention and the limited accessibility of the healthcare system. In addition, high rates of treatable and preventable mortality indicate significant shortcomings in the health system's effectiveness. A strong policy focus on both preventing disease and promoting healthy living is essential to address the high prevalence of chronic conditions.

Health expenditure per capita in Croatia is among the lowest in the EU, with suboptimal resource allocation. This is evident in both the geographical disparities in access to healthcare (Annex 17) and the low uptake of digitalisation in the healthcare system. The share of the population using online health services (excluding the phone) instead of in-person consultations is one of

([21]) OECD Economic Surveys: Croatia 2023.

([22]) 50% of the VAT on the purchase of a first property for young people is returned to the purchaser under certain conditions, and the purchaser is also exempt from the real estate transaction tax.

([23]) The city of Zagreb, 19 county seats and 5 large cities (Vinkovci, Pula, Velika Gorica, Kaštela and Samobor).

([24]) IMF, Republic of Croatia – Selected issues, 28 June 2024.

([25]) IMF, Republic of Croatia – Selected issues, 28 June 2024.

the lowest in the EU. The RRP supports telemedicine services in remote and island areas, complementing cohesion policy investments in helicopter emergency medical services. Nevertheless, a concerted effort is needed to increase equal access to primary care and outpatient/ambulatory care, especially in rural areas.

Croatia faces a shortage of healthcare professionals. General practitioners as a percentage of all doctors is low in Croatia (16% vs an EU average of 21%). The country also has one of the lowest densities of nurses in the EU (2.4 per 1 000 population in 2022, well below the EU average of 7.6) (Annex 14). The uneven distribution of doctors is a major barrier to access to care in remote/rural regions. Addressing workforce shortages requires bold initiatives to both: (i) expand the healthcare labour force; and (ii) improve the training, retention and recruitment of healthcare workers, especially considering geographical disparities. Limited actions have been taken within the RRP to address these issues, namely funding the specialisations of primary care doctors and training programmes for nurses.

Strengthening fairness and inclusion

Despite improving living standards, income inequality in Croatia is increasing. Although employment is on the rise, the number of people at risk of poverty and social exclusion is slowly increasing, with continued regional disparities (Annex 17). In addition, certain groups, such as older people and persons with disabilities, face higher and increasing poverty rates (Annex 11). The adequacy and coverage of Croatia's social protection system is insufficient. The impact of social transfers (excluding pensions) on poverty reduction is among the lowest in the EU (a 21.6% reduction in poverty vs 34.4% in the EU on average in 2024) and has significantly declined in the last decade. This is due to low levels of spending on social protection and the limited coverage and adequacy of benefits. Pension adequacy also remains low, leaving older people at a particularly high risk of poverty ([26]). In the context of increasing employment and wages, this has contributed to a rise in economic inequality. Croatia has improved the social policy framework with important reform measures included in the Social Welfare Act, the Inclusive Allowance Act and the amendments to the Pension Insurance Act. However, better effectiveness, adequacy and coverage of social benefits, particularly the guaranteed minimum income scheme and unemployment benefits, would help improve the living standards of people at risk of poverty and avoid their social exclusion.

The availability and quality of long-term care (LTC) remains a key challenge. Although Croatia's new national LTC strategic framework is a significant step forward, it has yet to be adopted by the government and its impact will need to be assessed. Due to low expenditure, shortages of qualified staff, and the underdeveloped LTC system, access to formal, community-based LTC is currently very limited. This has adverse effects on the labour market, as informal care responsibilities are preventing carers, mostly women, from taking up full and quality paid employment. With the support of the European Social Fund Plus, Croatia's new LTC strategy is an important milestone for future increased investment in good quality, adequate and accessible home-based and community-based LTC.

There is a substantial rural-urban digital connectivity gap that Croatia needs to address as a top priority. Low perceived demand deters commercial providers from investing in connectivity infrastructure in areas with low population density, resulting in a significant investment gap in underserved rural areas.

([26]) With unchanged policy, public pension spending would decline by 1.5 pps of GDP by 2070 (Annex 1).

KEY FINDINGS

To boost competitiveness, sustainability and social fairness, Croatia would benefit from:

- **accelerating the implementation of the recovery and resilience plan,** including the REPowerEU chapter, swiftly implementing cohesion policy, taking advantage of the opportunities under the mid-term review and making optimal use of EU instruments, including InvestEU and STEP, to improve competitiveness;

- **nurturing the business environment** by: (i) tackling shortages of skilled labour; (ii) reducing regulatory complexity and administrative inefficiencies; (iii) maintaining momentum in the digitalisation of public administration and government-to-business services; (iv) addressing barriers to competition in the retail sector; and (v) encouraging actual or functional mergers of local government units;

- **unlocking Croatia's renewable potential to reduce electricity prices for industry/businesses** by setting connection fees, increasing investments in the electricity grid, and addressing bottlenecks in the permitting process;

- **accelerating the green transition** by taking concrete steps to phase out fossil fuel subsidies;

- **strengthening Croatia's innovation system** by: (i) implementing the governance system set out in the S3; (ii) improving coordination among relevant players; (iii) providing incentives for further mergers of universities and research institutes; (iv) supporting technology transfers; and (v) ensuring continuous increases in public and private R&D expenditure;

- **unlocking non-bank finance** by: (i) ensuring effective implementation of the 2030 strategic framework for capital market development and; (ii) aligning policies with broader EU financial integration efforts, focusing on both effective cross-border integration of infrastructures, and incentives for investor participation, including digitalisation;

- **accelerating the circular economy transition and supporting the development of net-zero industry** by: (i) taking concrete steps to promote circularity from design to the end-of-life of products; and (ii) designing a comprehensive clean tech policy framework that would reduce administrative burden, accelerate permit-granting processes and ensure a skilled workforce;

- **fostering climate adaptation and water resilience** through swift implementation and close monitoring of adaptation and sustainable water-management policies at all levels, more systematic deployment of nature-based solutions and climate-proofing linked to investments in strategic infrastructures; and increasing insurance coverage;

- **making transport sustainable** by: (i) investing in the rail network and sustainable urban mobility; (ii) promoting the use of renewables in transport; (iii) incentivising the uptake of electric vehicles; and (iv) taking concrete steps to phase out fossil fuel subsidies;

- **easing labour and skills shortages** by (i) tackling challenges within the education system, in particular with basic skills and (ii) better targeting upskilling, reskilling and ALMP to vulnerable groups;

- **making housing more affordable** by: (i) ensuring effective and coordinated implementation of the 2030 national housing policy plan; and (ii) accelerating the modernisation of the cadastre;

- **to support upward social convergence, promoting more effective health and social protection systems** by: (i) addressing shortages of healthcare workers and the uneven geographical allocation of resources; (ii) improving the adequacy and coverage of social transfers and pension benefits; and (iii) broadening the availability of adequate home- and community-based LTC.

ANNEXES

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ANNEX 1: FISCAL SURVEILLANCE AND DEBT SUSTAINABILITY

This Annex contains a series of tables relevant for the assessment of the fiscal situation in Croatia, including how Croatia is responding to Council recommendations issued under the reformed Economic Governance Framework.

The reformed framework, which entered into force on 30 April 2024 ([27]), aims to strengthen debt sustainability and promote sustainable and inclusive growth through growth-enhancing reforms and priority investments. The medium-term fiscal-structural plans (hereinafter, MTPs or plans) constitute the cornerstone of the framework, setting the budgetary commitment of Member States over the medium term. The latter is defined in terms of net expenditure growth, which is the single operational indicator for fiscal surveillance.

The assessment of the implementation of the Council Recommendation endorsing the Croatia's plan is carried out on the basis of outturn data from Eurostat and the Commission's Spring 2025 Forecast and taking into account the Annual Progress Report (APR), that Croatia submitted on 22 May 2025. Furthermore, given Croatia's request to activate the National Escape Clause ([28]) following the Commission Communication of 19 March 2025 ([29]), the assessment also considers, as appropriate, the projected increase in defence expenditure based on the Commission Spring 2025 Forecast.

The Annex is organised as follows. First, developments in **government deficit and debt** are presented based on the figures reported in Table A1.1. Then, the assessment of the **implementation of the Council Recommendation endorsing the plan** follows, based on the relevant figures presented in Tables A1.2 to A1.9, including data on defence expenditure. The Annex also provides information on the **cost of ageing** and the **national fiscal framework**. Fiscal sustainability risks are discussed in the Debt Sustainability Monitor 2024. ([30])

Developments in government deficit and debt

Croatia's government deficit amounted to 2.4% of GDP in 2024. Based on the Commission Spring 2025 Forecast, it is projected to increase to 2.7% of GDP in 2025. The government debt-to-GDP ratio has declined by more than ten percentage points since 2022, amounting to 57.6% at the end of 2024. According to the Commission, it is projected to stabilise at above 56% at the end of 2025 and 2026.

([27]) Regulation (EU) 2024/1263 of the European Parliament and of the Council (EU) on the effective coordination of economic policies and on multilateral budgetary surveillance, together with the amended Regulation (EC) No 1467/97 on the implementation of the excessive deficit procedure, and the amended Council Directive 2011/85/EU on the budgetary frameworks of Member States are the core elements of the reformed EU economic governance framework.

([28]) On 27 May 2025, Croatia requested to the Commission and to the Council the activation of the National Escape Clause. On this basis, the Commission adopted a Recommendation for a Council Recommendation allowing Croatia to deviate from, and exceed, the net expenditure path set by the Council COM/2025/607.

([29]) Communication from the Commission accommodating increased defence expenditure within the Stability and Growth Pact of 19 March 2025, C(2025) 2000 final.

([30]) European Commission (2025) 'Debt Sustainability Monitor 2024,' *European Economy-Institutional Papers* 306.

Table A1.1: **General government balance and debt**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1	General government balance	% GDP	-2.4	-2.9	-2.7	n.a.	-2.6
2	General government gross debt	% GDP	57.6	56.9	56.3	n.a.	56.4

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR)

Developments in net expenditure

The net expenditure ([31]) growth of Croatia in 2025 is forecast by the Commission ([32]) to be above the recommended maximum, corresponding to a deviation of 0.6% of GDP. Considering 2024 and 2025 together, the cumulative growth rate of net expenditure is also projected above the recommended maximum cumulative growth rate, corresponding to a deviation of 0.2% of GDP. The Commission forecast differs from the forecast in Croatia's Annual Progress Report mainly due to different total expenditure growth and EU funded expenditure, but also minor differences in estimates related to the budgetary impact of discretionary revenue measures and national expenditure on co-financing of programmes funded by the Union.

Table A1.2: **Net expenditure growth**

	Annual			Cumulative*		
	REC	APR	COM	REC	APR	COM
	Growth rates					
2024	n.a.	17.5%	17.4%	n.a.	n.a.	n.a.
2025	6.4%	7.6%	7.9%	26.2%	26.5%	26.6%
2026	4.9%	n.a.	4.9%	32.3%	n.a.	32.8%

* The cumulative growth rates are calculated by reference to the base year of 2023.
Source: Council Recommendation endorsing the national medium-term fiscal-structural plan of Croatia (Rec.), Annual Progress Report (APR) and Commission's calculation based on Commission Spring 2025 Forecast (COM).
Source:

The assessment of the net expenditure growth and in particular the comparison with the recommended net expenditure path considers that Croatia has requested the activation of the national escape clause to facilitate transitioning to a higher level of defence expenditure. General government defence expenditure in Croatia amounted to 1.0% of GDP in 2021, 1.0% of GDP in 2022 and 1.3% of GDP in 2023. ([33]) According to the Commission 2025 Spring Forecast, expenditure on defence is projected at 1.4% of GDP in 2024 and 1.5% of GDP in 2025. Based on current projections for defence spending, the deviation that is projected for Croatia is within the flexibility provided by the national escape clause.

([31]) Net expenditure is defined in Article 2(2) of Regulation (EU) 2024/1263 as government expenditure net of (i) interest expenditure, (ii) discretionary revenue measures, (iii) expenditure on programmes of the Union fully matched by revenue from Union funds, (iv) national expenditure on co-financing of programmes funded by the Union, (v) cyclical elements of unemployment benefit expenditure, and (vi) one-off and other temporary measures.

([32]) Commission Spring 2025 Forecast, *European Economy-Institutional paper 318*, May 2025.

([33]) Eurostat, government expenditure by classification of functions of government (COFOG).

Table A1.3: **Net expenditure (outturn and forecasts), annual and cumulated deviations vis-à-vis the recommendation**

	Variables		2023	2024	2025	2026
			Outturn	Outturn	COM	COM
1	Total expenditure	bn NAC	36.5	41.1	45.2	47.9
2	Interest expenditure	bn NAC	1.3	1.3	1.4	1.4
3	Cyclical unemployment expenditure	bn NAC	0.0	0.0	0.0	0.0
4	Expenditure funded by transfers from the EU	bn NAC	2.5	1.8	2.6	3.0
5	National co-financing of EU programmes	bn NAC	0.4	0.2	0.2	0.3
6	One-off expenditure (levels, excl. EU funded)	bn NAC	0.0	0.0	0.0	0.0
7=1-2-3-4-5-6	**Net nationally financed primary expenditure (before discretionary revenue measures, DRM)**	**bn NAC**	**32.3**	**37.8**	**41.1**	**43.3**
8	Change in net nationally financed primary expenditure (before DRM)	bn NAC		5.5	3.3	2.2
9	DRM (excl. one-off revenue, incremental impact)	bn NAC		-0.1	0.3	0.2
10=8-9	**Change in net nationally financed primary expenditure (after DRM)**	**bn NAC**		**5.6**	**3.0**	**2.0**
11	Outturn / forecast net expenditure growth	% change		17.36%	7.9%	4.9%
12	Recommended net expenditure growth*	% change		18.6%	6.4%	4.9%
13=(11-12) x 7	Annual deviation	bn NAC		-0.4	0.6	0.0
14 (cumulated from 13)	Cumulated deviation	bn NAC		-0.4	0.2	0.2
15=13/17	**Annual balance**	**% GDP**		**-0.5**	**0.6**	**0.0**
16=14/17	**Cumulated balance**	**% GDP**		**-0.5**	**0.2**	**0.2**
17	p.m. Nominal GDP	bn NAC	78.1	85.6	92.2	97.4

* The growth rate for 2024 is not a recommendation but serves to anchor the base, as the latest year with outturn data when setting the net expenditure path is year 2023.

Source: Commission Spring 2025 Forecast and Commission's calculation.

Table A1.4: **Defence expenditure and the national escape clause**

1	Total defence expenditure	% GDP	1.0	1.0	1.3	1.4	1.5	1.2
2	*of which: gross fixed capital formation*	% GDP	0.1	0.1	0.4	0.5	0.6	0.3
3	Flexibility from increases in defence expenditure	% GDP					0.5	0.2
4	**Cumulated balance after flexibility**	**% GDP**					**-0.3**	**-0.1**

Source: Eurostat (COFOG), Commission Spring 2025 Forecast and Commission's calculation.

Table A1.5: **Macroeconomic developments and forecasts**

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1=7+8+9	**Real GDP**	**% change**	**3.9**	**3.3**	**3.2**	**n.a.**	**2.9**
2	Private consumption	% change	5.6	3.9	3.8	n.a.	3.4
3	Government consumption expenditure	% change	7.0	4.1	3.9	n.a.	2.9
4	Gross fixed capital formation	% change	9.9	5.2	4.3	n.a.	3.2
5	Exports of goods and services	% change	0.9	2.3	2.3	n.a.	2.6
6	Imports of goods and services	% change	5.3	4.6	3.8	n.a.	3.3
	Contributions to real GDP growth						
7	- Final domestic demand	pps	6.9	4.4	4.1	n.a.	3.4
8	- Change in inventories	pps	-0.5	0.1	0.0	n.a.	0.0
9	- Net exports	pps	-2.5	-1.3	-0.9	n.a.	-0.5
10	Output gap	% pot GDP	2.2	1.5	1.4	n.a.	0.7
11	Employment	% change	6.1	3.3	2.6	n.a.	1.1
12	Unemployment rate	%	5.0	4.7	4.6	n.a.	4.5
13	Labour productivity	% change	-2.0	n.a.	0.6	n.a.	1.8
14	HICP	% change	4.0	2.9	3.4	n.a.	2.0
15	GDP deflator	% change	5.5	3.2	4.3	n.a.	2.6
16	Compensation of employees per head	% change	11.2	7.7	8.8	n.a.	5.3
17	Net lending/borrowing vis-à-vis the rest of the world	% GDP	0.7	n.a.	1.4	n.a.	1.6

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR).
Note: APR numbers reflect forecasts of inflation measured by the national consumer price index (CPI).

Table A1.6: **General government budgetary position**

	Variables (% GDP)	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1=2+3+4+5	**Revenue**	**45.6**	**46.3**	**46.4**	**n.a.**	**46.6**
	of which:					
2	- Taxes on production and imports	19.2	19.1	19.1	n.a.	19.1
3	- Current taxes on income, wealth, etc.	7.5	7.4	7.5	n.a.	7.5
4	- Social contributions	11.5	12.0	11.9	n.a.	12.1
5	- Other (residual)	7.4	7.8	7.8	n.a.	7.9
8=9+16	**Expenditure**	**48.0**	**49.2**	**49.1**	**n.a.**	**49.2**
	of which:					
9	- Primary expenditure	46.5	47.8	47.6	n.a.	47.7
	of which:					
10	- Compensation of employees	13.0	13.5	13.3	n.a.	13.3
11	- Intermediate consumption	7.6	7.5	7.5	n.a.	7.5
12	- Social payments	15.0	15.9	15.5	n.a.	15.8
13	- Subsidies	1.6	1.4	1.4	n.a.	1.3
14	- Gross fixed capital formation	5.1	5.4	5.4	n.a.	5.2
15	- Other	4.2	4.1	4.5	n.a.	4.6
16	- Interest expenditure	1.5	1.4	1.5	n.a.	1.5
18=1-8	**General government balance**	**-2.4**	**-2.9**	**-2.7**	**n.a.**	**-2.6**
19=1-9	**Primary balance**	**-0.8**	**-1.5**	**-1.2**	**n.a.**	**-1.1**
20	Cyclically adjusted balance	-3.3	n.a.	-3.3	n.a.	-2.9
21	One-offs	0.0	0.0	0.0	n.a.	0.0
22=20-21	**Structural balance**	**-3.3**	**-3.6**	**-3.3**	**n.a.**	**-2.9**
23=22+16	Structural primary balance	-1.8	-2.2	-1.8	n.a.	-1.4

Source: Commission Spring 2025 Forecast (COM), Annual Progress Report (APR).

Table A1.7: **Debt developments**

	Variables	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1	**Gross debt ratio* (% of GDP)**	**57.6**	**56.9**	**56.3**	**n.a.**	**56.4**
2=3+4+8	Change in the ratio (pps. of GDP)	-4.3	-0.7	-1.3	n.a.	0.1
	Contributions**					
3	**Primary balance**	**0.8**	**1.5**	**1.2**	**n.a.**	**1.1**
4≈5+6+7	**'Snow-ball' effect**	**-3.9**	**-2.2**	**-2.6**	**n.a.**	**-1.5**
	of which:					
5	- Interest expenditure	1.5	1.4	1.5	n.a.	1.5
6	- Real growth effect	-2.2	-1.8	-1.7	n.a.	-1.5
7	- Inflation effect	-3.2	-1.8	-2.4	n.a.	-1.4
8	**'Stock-flow' adjustment**	**-1.2**	**0.0**	**0.2**	**n.a.**	**0.5**

* End of period.

** The 'snow-ball' effect captures the impact of interest expenditure on accumulated general government debt, as well as the impact of real GDP growth and inflation on the general government debt-to-GDP ratio (through the denominator). The stock-flow adjustment includes differences in cash and accrual accounting (including leads and lags in Recovery and Resilience Facility grant disbursements), accumulation of financial assets, and valuation and other residual effects.

Source: Commission Spring 2025 Forecast and Commission's calculation (COM), Annual Progress Report (APR).

Table A1.8: **RRF – Grants**

	Revenue from RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	RRF grants as included in the revenue projections	n.a.	0.0	0.3	0.7	0.9	1.6	1.6
2	Cash disbursements of RRF grants from EU	n.a.	1.4	2.1	0.9	0.9	1.1	1.2

	Expenditure financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.1	0.1	0.3	0.3	0.3
4	Gross fixed capital formation	0.0	0.0	0.0	0.3	0.3	0.7	0.7
5	Capital transfers	0.0	0.0	0.2	0.3	0.4	0.7	0.6
6=4+5	Total capital expenditure	0.0	0.0	0.2	0.5	0.6	1.4	1.3

	Other costs financed by RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Other costs with impact on revenue	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Financial transactions	0.0	0.0	0.0	0.1	0.0	0.1	0.0

Source: Annual Progress Report

Table A1.9: **RRF - Loans**

	Cash flow from RRF loans projected in the Plan (% of GDP)	2020	2021	2022	2023	2024	2025	2026
1	Disbursements of RRF loans from EU	n.a.	0.0	0.0	0.0	0.9	0.9	2.7
2	Repayments of RRF loans to EU	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

	Expenditure financed by RRF loans (% of GDP)	2020	2021	2022	2023	2024	2025	2026
3	Total current expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Gross fixed capital formation	0.0	0.0	0.0	0.1	0.4	0.6	0.9
5	Capital transfers	0.0	0.0	0.0	0.0	0.2	0.6	0.6
6=4+5	Total capital expenditure	0.0	0.0	0.0	0.1	0.6	1.2	1.4

	Other costs financed by RRF loans (% of GDP)	2020	2021	2022	2023	2024	2025	2026
7	Reduction in tax revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
8	Other costs with impact on revenue	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9	Financial transactions	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Annual Progress Report

Cost of ageing

Total age-related spending in Croatia is projected to decrease from about 20% of GDP in 2024 to around 19% by 2070 (see Table A1.10**).** The overall decrease by 2070 is driven by pension and education spending, which together more than offset the expected increase in healthcare spending. The pension expenditure-to-GDP ratio would fall by 1.5 pps, of which 0.7 pps by 2040, from 10.3% of GDP in 2024 to 8.8% as of 2060. As a result, age-related spending would be 7 pps of GDP lower than the EU average in 2070.

Public healthcare expenditure is projected at 5.7% of GDP in 2024 (below the EU average of 6.6%) and is expected to increase by 0.4 pps by 2040 and by a further 0.3 pps by 2070 ([34]). Public expenditure on long-term care is projected at 0.5% of GDP in 2024 (well below the EU average of 1.7%) and is expected to increase by 0.1 pp of GDP by 2040 and by a further 0.1 pp of GDP by 2070. The projected increase is due to an ageing population but is relatively low due to underdeveloped long-term care services ([35]).

Table A1.10:**Projected change in age-related expenditure in 2024-2040 and 2024-2070**

	age-related expenditure 2024 (% GDP)	change in 2024-2040 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2040 (%GDP)	
HR	19.8	-0.7	0.4	0.1	-0.4	**-0.6**	19.2	HR
EU	24.3	0.5	0.3	0.4	-0.3	**0.9**	25.2	EU

	age-related expenditure 2024 (% GDP)	change in 2024-2070 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2070 (%GDP)	
HR	19.8	-1.5	0.8	0.1	-0.5	**-1.1**	18.7	HR
EU	24.3	0.2	0.6	0.8	-0.4	**1.3**	25.6	EU

Source: 2024 Ageing Report (EC/EPC).

([34]) Key performance characteristics, recent reforms and investments of the Croatian healthcare system are discussed in Annex 14 'Health and health systems'.

([35]) The adequacy and quality of the Croatian long-term care system are covered in Annex 11 'Social policies'.

National fiscal framework

The Croatian Independent Fiscal Institution (IFI), the Fiscal Policy Committee (FPC), has a narrow mandate and still has room to improve its capacity and independence. Currently, FPC members are faced with a significant challenge in balancing their dual roles as they simultaneously work full-time for their mother institutions. Due to significant legal obstacles, the FPC finds it difficult to attract staff with an appropriate profile to its Secretariat: The FPC can only hire civil servants of Croatian nationality recruited via a civil service exam and the pay level is not competitive. On this basis, the FPC has yet to develop any significant outreach activities, as underlined by the lack of reference to external communication in the tasks of the President. The FPC is too recent to have undergone any external reviews. Some interaction with the parliament has taken place but the policy dialogue with the government needs to be developed.

Wide-ranging reforms, accelerated through the recovery and resilience plan, have the potential to improve the public investment management system. A new long-term strategy, the national development strategy to 2030 "Croatia 2030", was launched in 2017 and accompanied by a clear monitoring process ([36]). In January 2024, a new standardised methodology for project assessments for all budgetary and extrabudgetary users entered into force and is monitored centrally by the Ministry of Finance. Implementation has also been strengthened by new reporting guidelines for line ministries and a digital monitoring system shared by all line ministries.

Table A1.11:**Fiscal Governance Database Indicators**

2023	Croatia	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	13.46	14.52
Medium-Term Budgetary Framework Index (MTBFI)	0.72	0.73

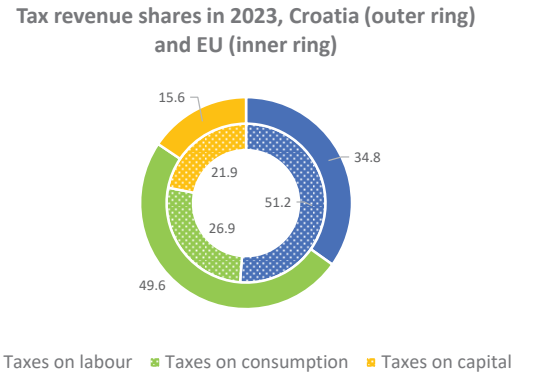
The Country Fiscal Rule Strength Index (C-FRSI) shows the strength of national fiscal rules aggregated at the country level based on i) the legal base, ii) how binding the rule is, iii) monitoring bodies, iv) correction mechanisms, and v) resilience to shocks. The Medium-Term Budgetary Framework Index (MTBFI) shows the strength of the national MTBF based on i) coverage of the targets/ceilings included in the national medium-term fiscal plans; ii) connectedness between these targets/ceilings and the annual budgets; iii) involvement of the national parliament in the preparation of the plans; iv) involvement of independent fiscal institutions in their preparation; and v) their level of detail. A higher score is associated with higher rule and MTBF strength.
Source: Fiscal Governance Database

([36]) Belu Manescu, C. (2024) "The Planning of Public Investments in the EU Member States: Long-Term Strategy, Selection and Budgeting Issues", ECFIN Discussion Paper no 2013.

This annex provides an indicator-based overview of Croatia's tax system. It includes information on: (i) the tax mix; (ii) competitiveness and fairness aspects of the tax system; and (iii) tax collection and compliance.

Croatia's recent personal-income-tax reform will further lower the already-relatively-moderate tax burden on labour. Overall, tax revenues were equivalent to 37.2% of Croatian gross domestic product (GDP) in 2023, slightly below the EU average of 39% (see Table A2.1). Croatia's tax mix already relies strongly on consumption taxes, which accounted for 49.6% of total tax revenues in 2023, far above the 26.9% EU average (see Graph A2.1). Taxes on labour accounted for only 34.8% of total tax revenues, well below the EU average of 51.2%. These taxes on labour were primarily derived from social-security contributions. Following the personal-income-tax reform, which took effect on 1 January 2025, the maximum tax rate that municipalities and cities can impose on personal incomes will be reduced to 20-23% for the lower tax bracket and 30-33% for the higher tax bracket. The higher tax bracket will also start at higher incomes than before. Moreover, the basic personal allowance and the allowance for dependent family members are being increased. However, EUROMOD simulations show that the reforms will not reduce inequality as measured by the Gini coefficient. ([37])

Graph A2.1: **Tax revenue shares in 2023, Croatia and EU**



Source: Data on Taxation Trends, Directorate-General for Taxation and Customs Union

To incentivise return migration, Croatia has also introduced a preferential tax regime. The new regime, effective starting in 2025, exempts taxpayers from personal income tax for five years if they have previously resided abroad for a continuous period of at least two years. Population ageing and emigration are both putting pressure on labour-supply and dependency ratios in Croatia (see also Annex 7).

Croatia reformed its property-tax system to improve fairness while strengthening revenues. Property taxes accounted for only 0.9% of GDP in 2023, compared with an EU average of 1.9%. Recurrent property taxes, which are considered among the taxes least detrimental to growth, made up only 0.5% of GDP in 2023 (EU: 0.9%). Effective starting in 2025, the reform aims to rein in rising house prices fuelled by buoyant growth in short-term rentals for tourists, which weigh on housing affordability (see also Annex 8). Therefore, owner-occupied housing and housing under long-term leases are exempted from the property tax. The reform also gives municipalities discretion to set rates at between EUR 0.60 and EUR 8.00 per square metre per year. In addition, the flat tax per bed in short-term tourist rentals was significantly increased, with the specific range depending on the respective region's score in the tourism-development index.

Croatia has scope to reduce tax expenditures to improve environmental sustainability. Environmental taxation revenues in Croatia are above the EU average, and were equivalent to 3.3% of GDP 2023 (EU average: 2% of GDP). However, Croatia's effective carbon rate, which indicates how emissions are priced across the economy ([38]), stood at EUR 62.30 per tonne of CO2 equivalent in 2023, below the EU average of EUR 84.80 per tonne of CO2 equivalent (see Graph A2.2). Croatia's energy excise duties are among the lowest in the EU in certain areas, including for diesel for commercial road transport. Diesel for agricultural use is fully exempted from excise duties. In addition, vehicle-circulation taxes are not linked to emissions, and not due for owners of vehicles older than 10 years, despite older vehicles typically emitting more CO2 and other pollutants.

([37]) Estimations were performed by the European Commission, Joint Research Centre, with the EUROMOD tax-benefit microsimulation model

([38]) The effective carbon rate is the sum of fuel excise taxes, carbon taxes and ETS permit prices. Electricity excise taxes are not included as they do not distinguish between energy sources and their carbon content.

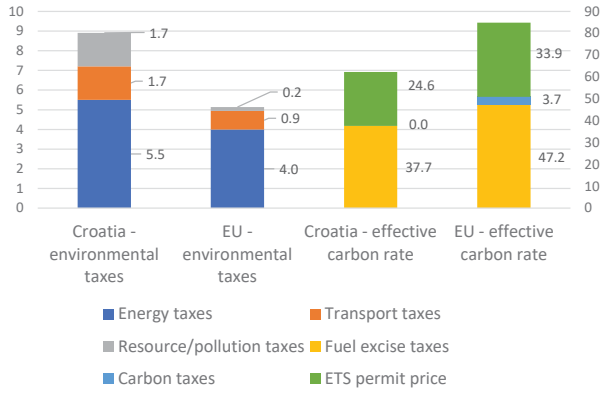
Table A2.1: **Taxation indicators**

		Croatia					EU-27				
		2010	2021	2022	2023	2024	2010	2021	2022	2023	2024
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	36.3	36.7	37.2	37.2		37.8	40.2	39.7	39.0	
By tax base	Taxes on labour (% of GDP)	15.0	12.8	12.7	13.0		19.8	20.5	20.1	20.0	
	of which, social security contributions (SSC, % of GDP)	11.7	10.9	10.7	10.6		12.9	13.0	12.7	12.7	
	Taxes on consumption (% of GDP)	17.0	18.8	18.4	18.4		10.9	11.2	10.9	10.5	
	of which, value added taxes (VAT, % of GDP)	11.2	13.1	13.2	13.4		6.8	7.3	7.4	7.1	
	Taxes on capital (% of GDP)	4.3	5.1	6.1	5.8		7.1	8.5	8.7	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	3.4	3.0	3.2	3.5		8.6	9.6	9.4	9.3	
	Corporate income taxes (CIT, % of GDP)	1.9	2.2	3.2	2.9		2.2	2.9	3.2	3.2	
	Total property taxes (% of GDP)	1.0	1.0	0.9	0.9		1.9	2.2	2.1	1.9	
	Recurrent taxes on immovable property (% of GDP)	0.6	0.6	0.6	0.5		1.1	1.1	1.0	0.9	
	Environmental taxes (% of GDP)	3.8	3.9	3.4	3.3		2.5	2.4	2.1	2.0	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	NA	NA	NA	62.3		NA	86.0	NA	84.8	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	na	31.3	31.3	33.3	31.2	33.9	31.8	31.5	31.5	31.8
	Tax wedge at 100% of average wage (single person) (*)	na	38.7	39.4	40.4	40.7	40.9	39.9	39.9	40.2	40.3
	Corporate income tax - effective average tax rates (1) (*)	16.5	14.8	14.8	14.8		21.3	19.3	19.1	18.9	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	9.2	6.8	6.2	6.3		8.6	8.2	7.9	7.7	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		11.8	9.4				35.5	32.6		
	VAT gap (% of VAT total tax liability, VTTL) (**)		10.9	12.0				6.6	7.0		

(1) Forward-looking effective tax rate (KPMG).
(2) A higher value indicates a stronger redistributive impact of taxation.
(3) The effective carbon rate is the sum of fuel excise taxes, carbon taxes and emissions trading system (ETS) permit prices. Electricity excise taxes are not included as they do not distinguish between energy sources and their carbon content.
(*) EU-27 simple average.
(**) For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2024 report, https://data.europa.eu/doi/10.2778/2476549.
For more data on tax revenues as well as the methodology applied, see the Data on Taxation webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
Source: European Commission, OECD

Moreover, company-car expenses, including for cars with internal combustion engines, are deductible up to 100% if they are deemed to be a salary component.

Graph A2.2: **Environmental taxes in % of total tax revenues (left) and effective carbon rate in tonnes of CO2 equivalent (right), Croatia and the EU, 2023**



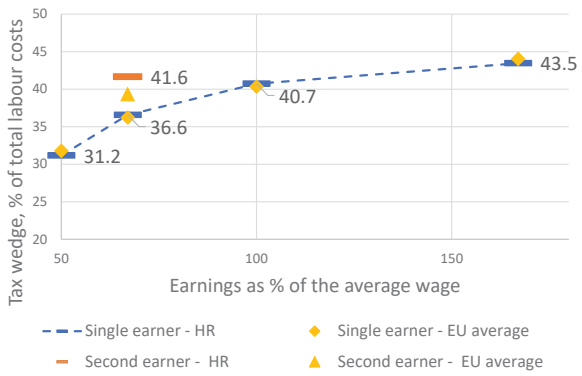
Source: Taxation Trends Data, DG TAXUD; OECD

Croatia's recovery and resilience plan (RRP) addresses challenges in waste management, including by introducing a landfilling tax. Only 36% of municipal waste was recycled in 2023, and Croatia is not on track to meet the 2025 recycling and the 2035 landfilling targets (see Annex 7). Croatia's RRP includes measures to invest in wastewater infrastructure and reduce landfilling, including by: (i) improving waste sorting and recycling; and (ii) introducing a landfill fee. The landfill fee was adopted at the end of 2024, with the amount of the fee set to gradually rise between 2025 and 2029.

The redistributive effect of Croatia's tax-benefit system is limited, and the relatively high tax wedge for second earners may discourage them from working or looking for a job. In 2023, Croatia's tax-benefit system reduced income inequality less than the EU average. The reduction in income inequality as measured by the Gini coefficient was 6.3 points, which was below the EU average of 7.7 points. The progressivity of labour taxes in Croatia was similar

to the EU average. In 2024, the labour tax wedge ([39]) was similar to the EU average for both single people at various income levels and only slightly higher than the EU average for second earners at 67% of the average wage whose spouses earn the average wage (see Graph A2.3). However, the tax wedge for second earners was higher than the tax wedge for single people at the same wage level and this difference was more pronounced than for the EU average. This indicates inferior work incentives for second earners, often women. The general tax allowance for dependent family members contributes to this effect.

Graph A2.3: **Tax wedge for single and second earners, % of total labour costs, 2024**



The tax wedge for second earners assumes a first earner at 100% of the average wage and no children. For the full methodology, see OECD, 2016, Taxing Wages 2014-2015.
Source: European Commission

Even though the corporate-tax burden in Croatia is relatively low, the tax framework is not fully conducive to innovation and sustainable growth. The forward-looking average effective corporate-tax rate, which indicates the expected tax burden for investment ([40]), was 14.8% in 2023, below the EU average of 18.9%. The top statutory tax rate stood at 18%, below the EU average. Small firms (with up to EUR 1 million in annual revenues) make up around 90% of corporate income taxpayers, and pay a reduced 10% rate. A range of tax incentives are available, with corporate income-tax-rate reductions up to 100%, depending on the type of investment, the number of jobs the investment creates, and the size of the company. The take-up of tax incentives for R&D, which are governed by a specific regime, is low, which may be partly linked to the complex procedures required to claim the incentive (see also Annex 1). This regime is being reformed under Croatia's RRP to make it more attractive, including by increasing deductible amounts and simplifying procedures.

To reduce the high perceived administrative burden, Croatia is taking steps under its RRP to simplify tax-compliance processes. Total enterprise compliance costs for small to medium-sized enterprises in Croatia are estimated to be above the EU average. However, outstanding tax arrears are relatively low and declining (at 9.4% in 2022, only 5.6% of which is considered collectable). The value added tax (VAT) compliance gap stood at 12.0% in 2022, above the EU average of 7%, an increase of 1.1 pps compared to 2021. Croatia has not yet put in place pre-filled tax returns, and the rate of personal-income-tax returns filed online (77.6% in 2022) lags behind the EU average (82.3%). Croatia's RRP includes setting up a new IT system and digitalising tax-collection procedures, which should help make tax collection more efficient, while rolling out e-invoicing for non-cash payments could also help reduce tax evasion. Moreover, the implementation of RRP measures to reduce administrative burdens is progressing, including by streamlining charges and digitalising various procedures.

([39]) The tax wedge is defined as the sum of personal income taxes and employee and employer social-security contributions net of family allowances, expressed as a percentage of total labour costs (the sum of the gross wage and social-security contributions paid by the employer).

([40]) Effective average tax rates measure the effect of taxation on investment projects earning economic rents. This indicator is based on a comparison of the net present value of pre-tax and post-tax cash flows. It is used to analyse investment decisions at the extensive margin, e.g. when a multinational enterprise decides to locate a plant in one of many jurisdictions (for the first time) or to make one of a number of technology choices.

Croatia is emerging as an innovator with rising R&D investment, but its fragmented research landscape continues to hinder the functioning and quality of its public science base. The 2024 European Innovation Scoreboard ([41]) notes that Croatia's innovation performance has grown faster than the EU average since 2017. Croatia's R&D intensity ([42]) has increased rapidly (1.39% in 2023 vs 0.95% in 2018) thanks to major investments from both the recovery and resilience plan (RRP) and cohesion policy but remains below the EU average (2.24%). Further improvements hinge on continuous growth of R&D investment particularly beyond the lifespan of the RRP, strengthened research and innovation (R&I) governance and most importantly, a reduction in fragmentation of R&I performing institutions. Croatia has made progress in business digitalisation but certain areas, particularly the digitalisation of small and medium-sized enterprises (SMEs), still need attention to fully align with the EU Digital Decade targets ([43]).

Science and innovative ecosystems

Further increases in public R&D expenditure are needed to reach the EU average. Public R&D expenditure as % of GDP has grown substantially between 2017 and 2020 (0.44% vs 0.65%). However, since then the level has stagnated, slightly below the EU average (0.63% vs 0.72% in 2023). Investments from the RRP and cohesion policy are contributing significantly to publicly funded R&I programmes. Going forward, it will be crucial to ensure that the higher investment levels in R&I are sustained and further expanded, particularly with the RRP ending in 2026.

While R&D expenditure has improved, scientific outputs are still modest. Scientific excellence is low, as illustrated by the share of the country's scientific publications within the top 10% most cited scientific publications worldwide as a percentage of total scientific publications of the country. The share has increased but is well below the EU average (4.6% vs 9.6%), pointing to remaining weaknesses in the R&I system. One contributing factor is the significant fragmentation of public research bodies and faculties operating with substantial autonomy from their universities. Croatia currently has 25 public research institutions and 8 universities, the latter consisting of around 110 faculties, underlining the need for consolidation. The performance-based funding model allocates a share of public R&D funding based on institutional achievements but has yet to prove sufficient in addressing fragmentation ([44]). The model should be adjusted to incentivise the consolidation of institutions in order to improve the impact of public R&D expenditure ([45]) (see Graph A3.1), potentially based also on a comprehensive expert assessment of the fragmentation underpinning concrete recommendations, to be implemented in the short to medium term.

([41]) 2024 European Innovation Scoreboard, country profile: Croatia https://ec.europa.eu/assets/rtd/eis/2024/ec_rtd_eis-country-profile-hr.pdf. The scoreboard provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

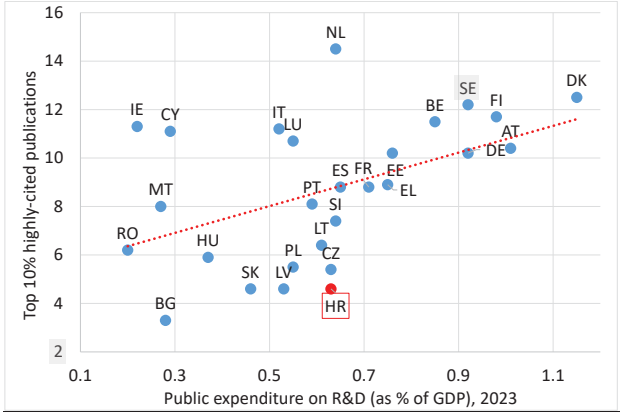
([42]) Defined as gross domestic expenditure on R&D as percentage of GDP.

([43]) The Digital Decade policy programme sets out a pathway for the EU's digital transformation, including concrete commitments from Member States to commonly achieve objectives (e.g. competitiveness, resilience, sovereignty) and digital targets by 2030.

([44]) European Commission (2023): Policy Support Facility (PSF) to support early stages of innovation and science-business linkages in Croatia.

([45]) See also World Bank (2019): Analysis of the quality and coherence of the policy mix – Croatia Public Expenditure Review in STI.

Graph A3.1: **Top 10% most cited publications in relation to public R&D expenditure**



Source: Based on Eurostat / Science Metrix

Further improvements in R&I performance will require close collaboration between relevant government bodies and strengthened administrative capacities. With its new smart specialisation strategy (S3) from 2023, Croatia has streamlined R&I governance compared to the previous programming period. Nevertheless, implementation of the new R&I governance has been significantly delayed, with the governmental decrees for establishing the National Innovation Council, the intergovernmental working group and the S3 delivery unit to be adopted only in early 2025. It is of key importance to rigorously implement the governance model in order to improve collaboration between the relevant ministries and agencies ([46]), as recommended in external reports ([47]). Also, to deal with the multitude of ongoing R&I initiatives and ensure collaboration, ministries and funding agencies require the necessary human resources to implement reforms and investments in a timely and proper fashion ([48]).

Business innovation

Croatia's innovation performance is supported by growing private R&D investment, but innovation outputs remain weak overall. Business enterprise expenditure on R&D as a percentage of GDP has almost doubled since 2015 but remains well below the EU average (0.76% vs 1.49% in 2023). Croatia's private R&D investment is historically concentrated in mid-tech sectors such as automotive and engineering. Although there are some positive examples of growing high-tech companies, Croatia's research capacity in the private sector remains weak overall ([49]). This is visible in the low number of researchers employed by business per thousand of the active population (1.5 in Croatia vs EU average of 5.7 in 2023) ([50]). It is also reflected in the weak innovation outputs, with the number of patent applications filed under the Patent Cooperation Treaty per billion of GDP (0.5 vs EU average of 2.8 in 2022, see also Graph A3.2) at a very low level. Croatia is revising its R&D tax incentive scheme based on an evaluation conducted as part of the RRP. It aims to double the current tax base reduction for R&D project costs ([51]), with the objective of increasing R&D expenditure and innovation activity in the private sector. To align with the evaluation's recommendations, the scheme's administrative burden must be reduced, while better accommodating the specific needs of start-ups. Additionally, Croatia would benefit from participating in the unitary patent system as it offers key advantages in promoting innovation and boosting competitiveness ([52]), and offering support to young companies through more innovation-friendly regulation, e.g. by developing a framework for regulatory sandboxes.

([46]) Ministry of Science, Education, and Youth; Ministry of Regional Development and European Union Funds; Ministry of Economy; HAMAG-BICRO, Croatian Science Foundation.

([47]) See among others European Commission (2023): Policy Support Facility (PSF) to support early stages of innovation and science-business linkages in Croatia.

([48]) Programmes to support these capacities such as the World Bank's DIGIT project can be used in this regard.

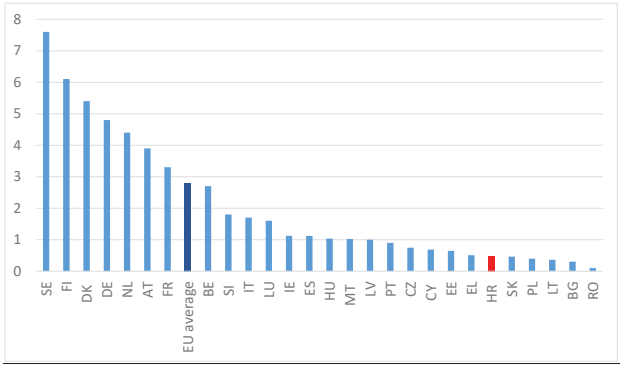
([49]) The size of the ICT sector is around the EU average (5.26% vs 5.5% in gross value added in 2021), and its R&D business expenditure amounts to 34.27% of total R&D expenditure. See Eurostat, ICT sector size and R&D in ICT sector, all data from 2021.

([50]) Eurostat.

([51]) Basic research from 200% to 400%, industrial research from 150% to 300%, experimental development from 125% to 250% and feasibility study from 150% to 300%.

([52]) Croatia is expected to sign the Unified Patent Court Agreement, or, as a first step, join the enhanced cooperation framework.

Graph A3.2: **Patent applications filed under the Patent Cooperation Treaty per billion of GDP (in purchasing power standards/PPS €) in 2022**



Source: Patstat

The adoption of digital technologies by firms in Croatia is steadily improving, with progress supported by national measures and EU funding. In 2023, Croatia outperformed the EU average in cloud computing adoption (40.7% vs 38.9%) and achieved the EU's second-highest adoption of data analytics (51.7% vs 33.2%). However, according to 2024 data, the country remains well below the EU average on basic digital intensity for SMEs (63.5% vs 72.9%) and just below the EU average in advanced digital technologies like artificial intelligence (11.3% vs 12.6%). To further drive digital transformation, Croatia is making use of its RRP. Key measures include EUR 27.3 million in grants for SME digitalisation and EUR 9.95 million for innovation through digitalisation vouchers. Four European Digital Innovation Hubs were also established in 2023 to help businesses adopt advanced technologies and implement technological innovations. Croatia is improving its digital infrastructure and interoperability through EU initiatives like the Connecting Europe Facility Digital programme and the European Digital Infrastructure Consortia. These efforts support cross-border data sharing, 5G deployment and cloud services.

Business-science linkages are improving, but consistency in dedicated support measures is pivotal. These linkages have been hampered by an underdeveloped research base and insufficiently targeted programmes that promote applied research and academic-private collaboration. However, there are some positive signals that indicate improvement. The number of public-private co-publications as a share of total publications is above the EU average (9.1% vs 7.7%), with collaboration between businesses and academia benefiting from a range of dedicated RRP and European Regional Development Fund programmes ([53]). These not only target collaborative research but also aim to promote entrepreneurship, e.g. with the programme 'Start-up/spin off companies of young researchers'. Additionally, the national guidelines for technology and knowledge transfer were published in 2023 ([54]) and, combined with more available funding for technology transfer offices, provide better guidance and financial means for commercialising research. It will be vital to rigorously assess the effectiveness of the new policy mix in place, while ensuring funding stability and consistency in support ([55]). Soft support measures such as conferences and training courses have also proven to be successful in connecting relevant stakeholders and should be continued ([56]).

Financing innovation

Venture capital availability in Croatia is improving but is still below the EU average. The availability of venture capital (as a percentage of GDP) is increasing ([57]) but remains below the EU average (0.028% vs 0.078%). The value of annual private equity relative to nominal GDP dropped from 0.65% in 2022 to 0.03% in 2023 (EU average in 2023: 0.41%) ([58]). Recent reports show that Croatia's financing for innovation remains too limited, and young companies in particular find it difficult to obtain funding ([59]). This is also reflected

([53]) For example targeted scientific research programmes with the aim of supporting collaborative industrial research projects.

([54]) The guidelines contain among other points information on intellectual property protection and provide support with licensing: https://mzom.gov.hr/vijesti/predlosci-za-transfer-tehnologije/5975.

([55]) JRC (2023): Strategic evaluation of the technology transfer and IPR protection systems of Bulgaria, Croatia and Romania.

([56]) European Commission (2023): Policy Support Facility (PSF) to support early stages of innovation and science-business linkages in Croatia.

([57]) Croatian start-ups are also supported through the EIF/ERDF 'Croatian Venture Capital Initiative 2': Link and Vesna Venture Capital, providing EUR 50 million in venture capital backed by the European Investment Fund.

([58]) European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 11

([59]) OECD (2023): OECD Economic Surveys: Croatia.

in the low number of start-ups and unicorns backed by venture capital overall ([60]). Since 2023, start-ups have also been supported by the European Investment Fund 'Croatian Venture Capital Initiative 2' ([61]) and more specifically the Vesna Deep Tech Venture Fund, providing around EUR 40 million to deep tech start-ups ([62]). The Croatian RRP also includes measures to support the financing of start-ups ([63]). While this is a promising signal, more work is needed to bring venture capital funding closer to the EU average.

Innovative talent

The growing number of STEM graduates is encouraging, but continuous effort is needed to build the talent pool in R&I. While Croatia continues to face significant demographic challenges, including population decline and labour shortages, the number of STEM graduates is encouraging (see Annex 12). The number of new graduates in science and engineering per thousand of the population aged 25-34 and those in the field of computing are close to the EU average and increased between 2017 and 2023. Further improvements might follow the reforms and investments included in the RRP. These aim to improve the quality of R&D careers in STEM and ICT fields and investments that support the career development of young researchers, boost the mobility of talent abroad and encourage experiences in the private sector. While all this will further help build a stronger pool of innovative talent, continuous support is required in light of demographic challenges.

Despite increasing efforts, there is room to improve and mainstream entrepreneurship education and increase students' entrepreneurial spirit. According to the OECD Programme for International Student Assessment (PISA) 2022, Croatian students scored below the OECD average in creative thinking, and only 2.1% of students from grades 4-8 exhibit an 'entrepreneurial profile' ([64]). Croatia increased its efforts to improve entrepreneurship education by introducing the cross-curricular topic of entrepreneurship in the school education curricula in 2019. It also issued further guidance on implementation in 2024. However, challenges remain due to the lack of teacher preparedness, professional development programmes and practical activities.

([60]) The World Bank (2023): Croatia – Digital Diagnostic.

([61]) €80 million for Croatian start-ups through new EIF-managed investment programme.

([62]) https://www.eif.org/what_we_do/equity/news/2024/croatian-and-slovenian-researchers-gain-innovation-support-with-49-million-in-eif-led-financing.htm.

([63]) HR-C[C111]-I[R5-I1] Investment in equity and quasi-equity financial instruments.

([64]) Ristić Dedić, Z., Jokić, B., Matić, J., Košutić, I. i Šabić, J. (2017). Kakve su navike učenja, obrasci pisanja (prepisivanja) domaćih zadaća i percepcija meritokracije? - Populacijska perspektiva: Krapinsko-zagorska, Međimurska, Varaždinska i Zagrebačka županija; Serija „0 učenju 2015./2016." Zagreb: Institut za društvena istraživanja u Zagrebu.

Table A3.1: **Key innovation indicators**

Croatia	2012	2017	2020	2021	2022	2023	2024	EU average (1)	USA
Headline indicator									
R&D intensity (gross domestic expenditure on R&D as % of GDP)	0.74	0.84	1.24	1.24	1.42	1.39	:	2.24	3.45
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.4	0.44	0.65	0.66	0.65	0.63	:	0.72	0.64
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	2.9	3.4	4.6	4.6	:	:	:	9.6	12.3
Researchers (FTE) employed by public sector (Gov+HEI) per thousand active population	3	3.5	4.1	4.1	4	4.3	:	4.2	:
International co-publications as % of total number of publications	32.8	40	43.9	43.6	44.1	43.2	:	55.9	39.3
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	0.34	0.41	0.59	0.58	0.77	0.76	:	1.49	2.70
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.13	0.16	0.23	0.26	0.3	:	:	0.4	0.3
Researchers employed by business per thousand active population	0.7	1	1.3	1.5	1.8	1.5	:	5.7	:
Innovation outputs									
Patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €)	0.7	0.5	0.5	0.4	0.5	:	:	2.8	:
Employment share of high-growth enterprises measured in employment (%)	10.9	15.25	12.3	:	:	:	:	12.51	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	57.79	:	63.45	72.91	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	:	51.68	:	33.17	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	34.57	:	40.73	38.55	38.86	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	8.74	:	7.89	11.76	13.48	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	6.6	8.5	8.8	8.6	8.3	9.1	:	7.7	8.9
Public expenditure on R&D financed by business enterprises (national) as % of GDP	0.027	0.008	0.03	0.026	0.017	:	:	0.05	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.035	0.01	0.053	0.066	0.073	:	:	0.204	0.251
R&D tax incentives: foregone revenues as % of GDP	0.03	0	0.013	0.004	0.003	0.001	:	0.102	0.141
BERD financed by the public sector (national and abroad) as % of GDP	0.005	0.01	0.039	0.063	0.07	:	:	0.100	0.110
Financing innovation									
Venture capital (market statistics) as % of GDP, total (calculated as a 3-year moving average)	0.02	0.005	0.010	0.03	0.04	0.03	:	0.08	:
Seed stage funding share (% of total venture capital)	0.00	0	23.664	14.90	19.91	21.58	:	7.29	:
Start-up stage funding share (% of total venture capital)	85.99	100	67.220	36.98	33.89	27.79	:	44.02	:
Later stage funding share (% of total venture capital)	14.01	0	9.114	48.12	46.21	50.63	:	48.69	:
Innovative talent									
New graduates in science and engineering per thousand population aged 25-34	16.3	14.3	18	18	17.1	:	:	17.6	:
Graduates in the field of computing per thousand population aged 25-34	2.6	3.7	3.5	3.8	3.8	:	:	3.6	:

(1) EU average for the last available year or the year with the largest number of country data.

Source: Eurostat, DG JRC, OECD, Science-Metrix (Scopus database), Invest Europe, European Innovation Scoreboard

The business environment in Croatia has shown signs of improvement, yet several challenges persist. Labour shortages are a primary concern, affecting investment and business growth. Regulatory and administrative burdens continue to constrain businesses more often than in other Member States, including a number of regulated professions, yet some progress has been made. Integration into the single market is slightly below the EU average. Simultaneously, Croatia has fostered a promising entrepreneurial environment and continues to address its challenges, including by digitising the business registration system or initiatives for innovation procurement.

Economic framework conditions

There are several obstacles facing the business environment, with workforce shortage ranking top. When asked about the main obstacles to investment, Croatian firms most often point to availability of skilled staff (91% vs EU 77%, see Annex 10), uncertainty about the future (82% vs EU 79%) and energy costs (75% vs EU 77%, see Annex 8) ([65]). Labour shortages are increasingly affecting Croatian industry, with 42.6% of surveyed firms reporting that these constraints limited their production activity in 2024, compared to 38.3% in 2023 (see Table A4.1). By contrast, at the EU level, the trend is decreasing, with 20.2% in 2024 and 23.3% in 2023 (see Table A4.1). Firms operating in the service sector, which generates 75% of gross value added, faced a labour force scarcity, with 33% of businesses reporting that labour shortages limit their business activities in the short term. Croatia has taken several measures to integrate the inactive working age population into the labour force, such as expanding its network of Lifelong Career Guidance Centres (CISOK) and introducing greater salary co-financing through the Posao+ programme. To enhance investment, Croatia adopted a national strategy and an action plan in December 2024 under its Recovery and Resilience Plan (RRP).

Infrastructure holds business investment back in Croatia slightly more than the EU overall. According to the EIB Investment Survey ([65]), 43% of firms in Croatia reported digital infrastructure as an obstacle to investment (EU 41%), with 8.8% considering it a major obstacle (EU 13.4%). The Digital Decade report emphasised an increase in very high-capacity network (VHCN) connectivity between 2022 and 2023 in Croatia from 61% to 67.8%, though it is still below the 2023 EU level (78.8%, see Table A4.1) ([66]). The VHCN connectivity in rural areas is particularly low (at 25.5% in 2023 vs 55.6%, EU average). Fibre to the premises (FTTP) coverage improved significantly, rising from 54% in 2022 to 62.1% in 2023, closing in on the EU average of 64% (see Table A4.1). Connectivity infrastructure for 5G was much higher, at 83.4%, though with more modest year-on-year growth and still below the EU average (89.3%, see Table A4.1), while approximately 40% of the 3.4-3.8 GHz spectrum band has been made available for use, well below the EU average of 50.6%. As a part of its recovery and resilience plan (RRP), Croatia has allocated EUR 207.5 million to VHCN connectivity, alongside measures targeting under-served areas.

The resilience of digital infrastructures and cybersecurity awareness in enterprises in Croatia remain a challenge. The number of businesses that experienced ICT security incidents leading to unavailability of ICT services due to attack from outside (e.g. ransomware attacks, denial of service attacks) significantly increased in Croatia, up from 1.3% in 2022 to 3.3% in 2024, approaching the EU average of 3.4% ([67]). While 88.3% of enterprises deployed some ICT security measures (below the EU average of 92.8%), only 39% of enterprises made their employees aware of their obligations in ICT security-related issues, significantly below the EU average (60%) ([68]).

Although payment delays in Croatia are shorter than for the EU overall, they are more common for SMEs than in other Member States. The average business-to-business payment delay in Croatia in 2024 was slightly below the EU average (see Table A4.1). In the public sector, it was the lowest in the EU (9.1

([65]) European Investment Bank, 2024, EIB Investment Survey – EU Overview.

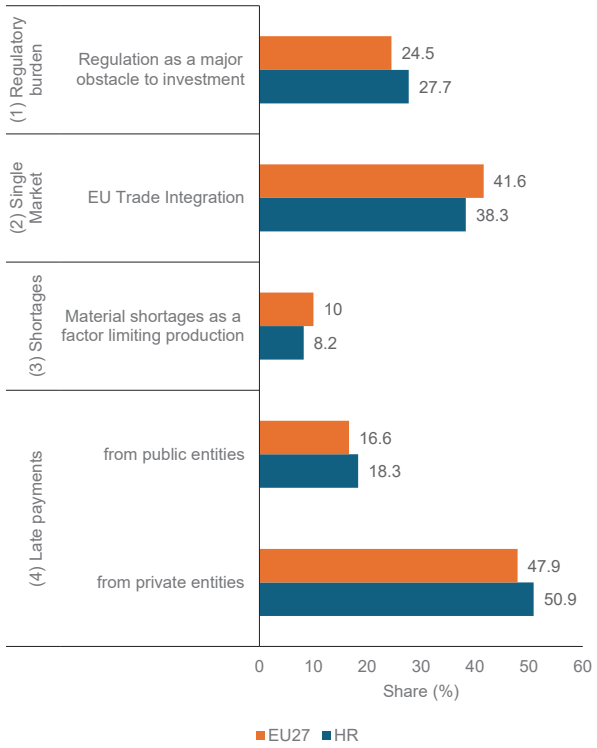
([66]) European Commission, 2024, Digital Decade Country Report - Croatia.

([67]) Eurostat, 2024, isoc_cisce_ic (ICT security in enterprises)

([68]) Eurostat, 2024, isoc_cisce_ra

vs 15.2 days, see Table A4.1). However, in 2024 slightly more Croatian SMEs experienced late payments than the EU average, both from private (50.9% vs EU 47.9%, see Graph A4.1) and public entities (18.3% vs EU 16.6%, see Graph A4.1). According to the EU Payment Observatory, there is no relationship between company size and proportion of late payments in Croatia, contrary to the usual positive correlation between the two ([69]). Despite limited access to equity, Croatian businesses reported fewer funding difficulties (see Annex 5).

Graph A4.1: **Making Business Easier: selected indicators.**



Share of (1) enterprises, (2) average intra-EU exports and imports in GDP, (3) firms, (4) SMEs.
Sources: (1) EIB IS, (2) Eurostat, (3) ECFIN BCS, (4) SAFE survey.

Regulatory and administrative barriers

The administrative and regulatory burden has been lowered during the last five years but still puts a strain on Croatian firms. The OECD Product Market Regulation indicators on administrative and regulatory burden in Croatia improved between 2018 and 2023 ([70]). The administrative burden appeared to be closing in on the EU average, although still above it. In 2024, surveyed companies in Croatia reported that they perceived the labour market (65% vs EU 62%) and business regulation (68% vs EU 66%) as obstacles to investment, slightly over the EU average ([71]). For business regulation, 27.7% consider it a major obstacle (vs EU 24.5%, see Graph A4.1). Under its RRP, Croatia adopted a fifth action plan for administrative burden in March 2024, that is expected to save EUR 364 million in key areas such as taxation, tourism, pension system, agriculture and transportation.

Croatia offers a promising environment for entrepreneurship. Entrepreneurship conditions in Croatia are on a par with the rest of the EU ([72]). The proportion of people starting and managing new businesses in 2018-2022 exceeded the EU average (12% vs EU 7%). Over 70% of surveyed adults in Croatia self-assessed that they had the knowledge, expertise, and skills necessary to start a business ([73]). Croatia contributes to an attractive business environment for entrepreneurs by measures such as implementing a digitalised business registration system called START, as part of the RRP ([72]). Public policies under the 2030 national development strategy aim to support entrepreneurship, covering measures like grants, loans and guarantees to SMEs and startups, as well as strengthening digital hubs. The RRP also includes measures to provide further training, consultancy, and other support for entrepreneurs (see Annex 3).

Single market

The integration of Croatian firms into the single market lags slightly behind the EU average. Croatia's integration into the single market was measured at 38.3% of GDP in 2023

([69]) European Commission, 2024, EU Payment Observatory – Annual Report 2024

([70]) OECD, 2024, *Product Market Regulation Indicators*

([71]) European Investment Bank, 2024, EIB Investment Survey – EU Overview.

([72]) OECD, 2023, The Missing Entrepreneurs

([73]) Global Entrepreneurship Monitor, 2024, GEM 2023/2024 Global Report

(vs 41.6% EU average, see Table A4.1). The integration of goods was right on par with the EU, at 28%. For services, Croatia was in eighth place out of 27 Member States, reflecting the importance of its tourism sector. The figure was slightly below average at 13.2% (EU 15%), since there is a number of Member States that export services at an exceptionally high level. As for other EU Member States, Croatia's barriers to trade were lower than the OECD average ([74]).

The average time to transpose directives into national law has lengthened but the performance of Croatia's SOLVIT centre remains strong. The average delay in transposing directives in Croatia was 19.3 months in 2024 ([75]). This is higher than in 2023 (16.8 months) and above the current EU average (11.9 months). The percentage of directives not transposed has increased and is now slightly above the EU average, while the percentage of directives incorrectly transposed has decreased and remains in line with the EU average (see Table A4.1). Croatia is performing well on infringements, with a below-average number of pending single market cases (see Table A4.1) and the sixth shortest duration of infringement proceedings in the EU in 2024 ([75]), though down from the shortest duration in 2023. Croatia handled 27 EU rights resolution cases within the SOLVIT rights resolution system in 2024, almost double the 15 of the previous year ([74]). The resolution rate has decreased but stayed above EU average (see Table A4.1).

Croatia is making progress in addressing regulatory restrictions on professions, but some require further action. According to an OECD report ([76]), restrictions on regulated professions in Croatia were below both the EU and OECD average, except for notaries and real estate agents. Notaries in Croatia face the highest restrictions in the EU. The fees and charges applicable to this profession, as well as the regulation imposing the legal form of their business, are particularly stringent. For lawyers, architects, tax advisers, engineers and tourist guides, several restrictions still appear disproportionate. Croatia is, however, undertaking reforms to lift regulatory barriers in services. Under the RRP, Croatia has committed to simplifying or removing at least 50 regulatory requirements for professional services. According to Croatia, the Third Action Plan will be adopted by mid-May 2025.

Regulatory barriers are high in the retail sector. A widening gap between the consumer price index and the producer price indexes ([77]) for food products has been observed over the past years. Consumers are reacting to price increases through supermarket boycotts. As a response to the price increase of food products, the government has implemented a price cap on 70 essential goods ([78]). Such measures are susceptible to undermine free access by traders to the market in conditions of effective competition and disturb the entire supply chain ([79]). In addition, the OECD Product Market Regulation ([80]) reports high regulatory barriers to entry and competition in retail in Croatia.

Public procurement

Public procurement in Croatia is relatively competitive. Direct awards represented 6% of the awards in 2024, slightly less than the EU-27 average of 7% (see Table A4.1). The share of single bids is also below the EU-27 average with 27% against 32% (see Table A4.1). According to the OECD PMR, Croatia has one of the most competition-friendly public procurement frameworks ([76]). Nevertheless, there is room for improvement. Indeed, the World Bank reported a lack of mechanisms to promote SME participation in bidding for public contracts ([81]). Additionally, one of the key challenges in advancing green, socially responsible, and innovative procurement is the need for greater professionalisation of public procurement staff ([82]). Croatia reported a number

([74]) OECD, 2024, Product Market Regulation Indicators

([75]) European Commission, 2024, Single Market Scoreboard – Croatia

([76]) OECD, 2024, Product Market Regulation Indicators

([77]) Eurostat, Harmonised Index of consumer prices and domestic market- producer price index

([78]) Government of the Republic of Croatia, 2025, *List of 70 products with capped prices.*

([79]) CJEU, case C-557/23, *SPAR v Hungary*, paragraph 47.

([80]) OECD, 2024, Product Market Regulation Country note - Croatia.

([81]) World Bank, 2024, Business Ready economy profile: Croatia.

of measures to address limitations that SMEs might face, published SME-specific guidelines on their Public Procurement Portal, and organised targeted workshops ([82]). Croatia also requires contracting authorities to pay subcontractors, which is likely to encourage SME participation, at least as subcontractors, in public procurement procedures. SME participation in public procurement procedures has been increasing. Croatia is also currently developing the 2026-2030 national strategic framework for the development of public procurement in the Republic of Croatia 2026-2030. The compulsory reporting of data on strategic public procurement as from 2025 might enhance both monitoring and further development of the strategic public procurement.

Croatia is working to advance innovation procurement. Croatian authorities highlighted several challenges to making progress on innovation procurement, including insufficient staff capacity and training ([82]). As part of the RRP, in 2023 Croatia initiated a project entitled 'Supporting Implementation of Innovation Procurement in Croatia', which had the primary goal of improving contracting authorities' capabilities in managing public procurement processes involving innovative solutions. Further improvements could come from additional solutions, such as a national strategy, action plan and targets for procurement of innovation.

Croatia would benefit from a more systematic approach to socially responsible public procurement. Socially responsible public procurement in Croatia tends to be linked to green public procurement. For 17 procurement categories, Croatia has implemented specific green public procurement criteria and targets that are to be included in the documentation and procedures ([83]). Some social clauses seem to be well-known and used to a certain extent, such as the possibility of reserving contracts for specific economic operators. Croatia would benefit from adopting a more systematic approach to socially responsible public procurement, through the creation of specific guidelines, sharing of best practice, targeted training, and broader data collection efforts.

([82]) European Commission, 2024, Article 83 – Public Procurement monitoring reporting.

([83]) Croatia, Official Gazette No 137/2024.

Table A4.1: **Making Business Easier: indicators.**

Croatia							
POLICY AREA	**INDICATOR NAME**	**2020**	**2021**	**2022**	**2023**	**2024**	**EU-27 average**
Investment climate							
Shortages	Material shortage, firms facing constraints, %[1]	8.4	13.3	24.8	12.2	8.2	10.0
	Labour shortage, firms facing constraints, %[1]	14.2	17.8	34.3	38.3	42.6	20.2
	Vacancy rate, vacant posts as a % of all available ones (vacant + occupied)[2]	1.0	1.5	1.6	1.5	1.4	2.3
Infrastructure	Transport infrastructure as an obstacle to investment, % of firms reporting it as a major obstacle[3]	10.7	9.0	10.1	7.1	8.8	13.4
	VHCN coverage, %[4]	-	52.3	61.5	67.8	-	78.8
	FTTP coverage, %[4]	-	38.7	53.9	62.1	-	64.0
	5G coverage, %[4]	-	33.8	82.5	83.4	-	89.3
Reduction of regulatory and administrative barriers							
Regulatory environment	Impact of regulation on long-term investment, % firms reporting business regulation as a major obstacle[3]	38.8	38.7	27.8	29.2	27.7	24.5
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[5]	16.1	11.6	13.4	12.9	14.3	15.6
	Payment gap - public sector, difference in days between offered and actual payment[5]	24.4	10.0	15.2	17.4	9.1	15.1
	Share of SMEs experiencing late payments, %*[6] — from public or private entities in the last 6 months	50.7	48.0	39.5	32.6	-	-
	Share of SMEs experiencing late payments, %*[6] — from private entities in the previous or current quarter	-	-	-	-	50.9	47.9
	Share of SMEs experiencing late payments, %*[6] — from public entities in the previous or current quarter	-	-	-	-	18.3	16.6
Single Market							
Integration	EU trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]	34.4	38.6	45.1	40.9	38.3	41.6
	EEA Services Trade Restrictiveness Index[7]	-	-	-	-	-	0.050
Compliance	Transposition deficit, % of all directives not transposed[8]	1.2	1.4	1.1	0.6	0.9	0.8
	Conformity deficit, % of all directives transposed incorrectly[8]	1.8	1.4	1.2	1.1	0.9	0.9
	SOLVIT, % resolution rate per country[8]	100	100	92.9	93.0	88.9	84.9
	Number of pending infringement proceedings[8]	26.0	22.0	20.0	22.0	19.0	24.4
Public procurement							
Competition and transparency in public procurement	Single bids, % of total contractors**[8]	25	21	23	23	27	-
	Direct awards, %**[8]	7	6	5	5	6	7.0

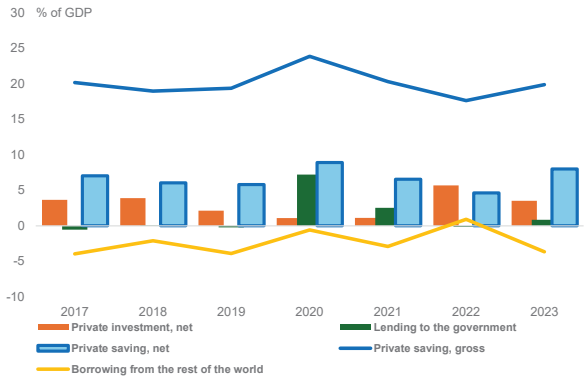
*Change in methodology in 2024: reporting late payments from public and private entities separately.
**The 2024 data on single bids is provisional and subject to revision. Due to missing data, the EU average of direct awards data is calculated without Romania.
Sources: (1) ECFIN BCS, (2) Eurostat, (3) EIB IS, (4) Digital Decade Country reports, (5) Intrum Payment Report, (6) SAFE survey, (7) OECD, (8) up to 2023: Single Market and Competitiveness Scoreboard, 2024: Public procurement data space (PPDS).

Against the backdrop of investing a significant part of its domestic savings abroad, the Croatian economy has a dominant banking sector, and a rather small capital market. Croatian firms have little access to the savings of households, because direct retail participation in capital markets is low, despite some progress in the level of both direct and indirect household investment. At the same time, the investment policies of domestic institutional investors are quite conservative. Government bonds account for the bulk of the institutional investor's portfolio, despite a noticeable several-year trend of diversification through an increase in stock and investment fund investments (in particular for pension funds, where amendments to pension acts allow for greater investment diversification). The undeveloped capital markets reduce the exit options for private equity and venture capital investors and hamper the development of a local venture and growth capital market, further compounding the lack of funding sources for innovation, a key element for competitiveness.

Availability and use of domestic savings

The Croatian economy invests a significant part of its net savings abroad. In the last decade, the private savings ratio, net of fixed capital consumption, fluctuated around its ten-year average of 6.6% of GDP, reaching a maximum of 8.9% in 2020 (see Graph A5.1). The net private investment ratio, which measures the net contribution of the private sector to capital accumulation in the country, exhibited a ten-year average of 2.4% of GDP and reached a maximum of 5.7% in 2022. During the same period the government budget, whose balance was somewhat volatile, showed an average deficit equivalent to 1.9% of GDP. Thus, the moderate positive balance between net domestic savings and net investment, together with the rather limited government deficit, resulted in structurally positive net lending by Croatia to foreigners that averaged 2.3% of GDP, with a peak of 3.9% in 2019. Hence, a significant portion of Croatian net savings, i.e. after accounting for the investments that are necessary to merely maintain the existing capital structure of the economy, is used to finance projects abroad.

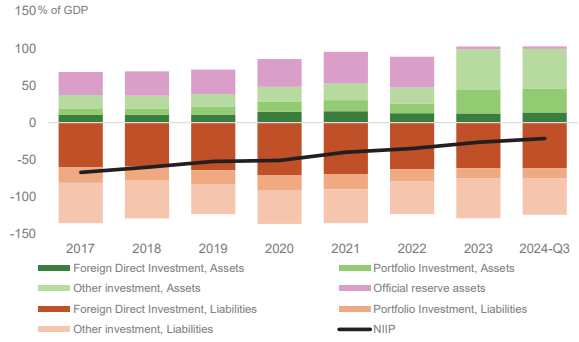
Graph A5.1: **Net savings-investment balance in Croatia**



Source: AMECO

Consistent with its annual net lending to the rest of the world, the net international investment position (NIIP) of Croatia has been increasing. As of Q3 2024, total assets on foreigners reached 103% of GDP, up from 68% at end-2017, while liabilities to foreigners stood at 124% of GDP, resulting in a negative net international investment position (NIIP) equivalent to -22% of GDP (see Graph A5.2). The net stock of foreign direct investment, which has been broadly stable, stood at -48.3% of GDP as of Q3 2024. This stability confirms the status of Croatia as a destination country for long-term capital investments. Hence, the increase in the NIIP has been driven by the growing net stocks of portfolio investment, which reached 19% of GDP as of Q3 2024, and of other investments, which stood at 4% of GDP. Part of the latter's increase is due to the structural change in the stock of official foreign exchanges reserves, which declined from above 40% of GDP prior to euro adoption to 3% as of Q3 2024. Thus, the Croatian economy appears to be well integrated in international capital flows, notably as a stable recipient of foreign direct investments.

Graph A5.2: **International investment position of Croatia**

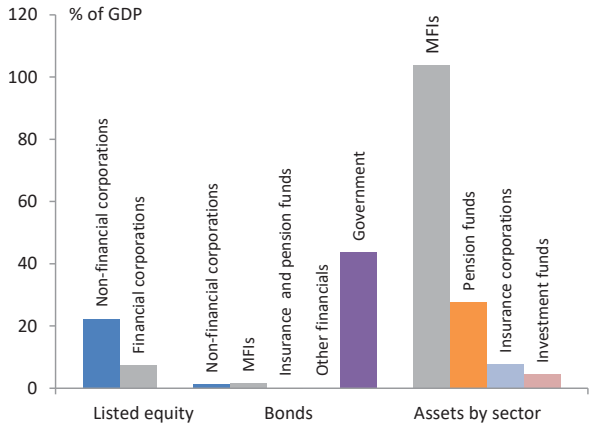


Source: ECB

Structure of the capital markets and size of the financial sector

The Croatian economy has a small domestic capital market. The market capitalisation of listed equity reached 29.6% of GDP at end-2023 (EU average: 67%) (see Graph A5.3). Characteristically, non-financial corporations (NFCs) accounted for 75% of that capitalisation, while financial corporations accounted for 25% of that capitalisation. The outstanding volume of debt securities reached 46.5% of GDP at end-2023. Bonds issued by the government accounted for almost 94% of the total bonds at end-2023.

Graph A5.3: **Capital markets and financial intermediaries in Croatia**



Source: ECB, EIOPA, AMECO.

Even though the financial sector in Croatia remains dominated by banks, non-bank financial intermediaries are growing as well. The banking sector is the largest segment of the financial services, accounting for 103.7% of GDP in 2023, which remains significantly below the EU average of 253.4%. The foreign-owned banks accounted for 87.5% of total banking sector assets in 2023. The banking sector also has a very high level of concentration with the top five MFIs representing 82.1% of the sector in 2023 (EU average: 51.1%). The pension fund assets accounted for 27.6% of GDP at end-2023, which makes pension funds the second largest segment of the financial system after the banking sector ([84]). The insurance sector assets accounted for only 7.8% of GDP at end-2023 (EU average: 54.8%). The total assets of investment funds accounted for 4.4% of GDP in 2023 (see section on institutional investors).

Resilience of the banking sector

Croatian banking sector remains well capitalised and profitable. The total capital adequacy ratio was 21.2% in Q3-2024 (EU average: 20.1%), underlining the robustness of the banking sector, with a common equity tier 1 ratio of 20.4% in Q3-2024 (EU average: 16.6%). Banking-sector profitability remained high in Q3-2024, with return on equity of 17% (EU average: 10%), mainly due to growth in interest income (see Table A5.1). To further strengthen the resilience of the banking sector the Croatian National Bank (HNB) held the countercyclical capital buffer rate of 1.5% as of 30 June 2024. In December 2024, HNB has also reset an existing Systemic Risk Buffer of 1.5% on all institutions as of 1 January 2025. Croatian banks' aggregate Minimum Requirement for Own Funds and Eligible Liabilities (MREL) rate stood at 33.9% of risk weighted assets at end-2023. As of 1 January 2024, all banks in Croatia meet their final MREL targets against an average MREL binding target (including CBR) of 30.5% TREA (including CBR) ([85]). Croatia has published information on its national bail-in mechanic in line with EBA guidelines ([86]).

([84]) HANFA, 2023, Financial Stability, December 2023, p.27. HANFA reported that total assets of pension funds reached 30.7% of GDP at the end of September 2023.

([85]) EBA MREL Dashboard - Q4 2023, p.13. CBR (Combined Buffer Requirement) and TREA (Total Risk Exposure Amount).

([86])) EBA, Guidelines to resolution authorities on the publication of their approach to implementing the bail-in tool.

Croatian banks have continued to reduce their non-performing loans (NPLs). The NPL ratio decreased further to 2.4% in Q3-2024, the lowest level since 2015 (EU average: 1.9%). Asset quality has improved for both corporates and households: the share of NPLs of NFCs went down from 4.5% in 2023 to 4.2% in Q3-2024, and for households from 4.1% in 2023 to 3.8% in Q3-2024. Similarly, the NPL coverage ratio was 68.6% in Q3-2024 (EU average: 42.1%), which reflects banks' ability to absorb any future losses.

The liquidity of the banking system is stable and high. The liquidity of credit institutions, measured by the liquidity coverage ratio (LCR), stood at 224% at the end of July 2024, and the net stable funds ratio (NSFR) was 169% at the end of June 2024 ([87]). Both indicators are at exceptionally high levels, which indicates stable funding sources and significant amounts of liquid assets.

Resilience of the non-bank financial intermediaries

Croatia's insurance sector is solvent, highly concentrated, and non-life insurance focused (due to motor vehicle liability insurance). The sectoral solvency ratio was 229% in 2024 ([88]). The TOP5 market participants hold around 67% of the insurance market based on gross written premium. In 2024, there were 14 insurance companies operating on the market, out which two provide only life insurance, four provide only non-life insurance, while eight provide both life and non-life insurance ([89]). The total premium collected in 2024 amount to EUR 1.9 billion, of which EUR 1.6 billion (82.6%) is related to non-life insurance ([90]) premium, and EUR 335.1 million (17.4%) to life insurance premium ([91]). On an annual basis, total premium collected in 2024 rose by 9.9%, with the increase in non-life insurance premium totalling 11.2%, and the rise in life-insurance premium reaching 4.2% ([92]). According to EIOPA's 2024 dashboard, Croatia is the European country with the fourth-highest aggregated insurance protection gap score for natural catastrophes (in particular, for floods, earthquakes, and wildfires) ([93]).

The pension fund market (the second and third pillar) is highly concentrated. At the end of December 2024, net assets of mandatory pension funds (MPFs) amounted to EUR 23.2 billion (14.8% increase y-o-y) and voluntary pension funds (VPFs) EUR 1.4 billion (14.8% increase y-o-y) ([94]). At the end of 2024, the total assets of the 12 mandatory pension funds operating under the second pillar and 29 voluntary pension funds operating under the third pillar were managed by only five pension companies, which exposes the overall pension system based on capitalised savings to a high concentration risk ([95]). At the end of 2024 the number of pension fund members reached 2.8 million, with 2.3 million second pillar members and 466,766 third pillar members ([96]).

Sources of business funding and the role of banks

Firms in Croatia rely more than the EU average on funding from banks and less than the EU average on capital markets. More specifically, at the end of 2023, bank finance through loans constituted 31.6% of all funding sources for Croatian non-financial corporations (NFCs), which was above the EU average of 27.2%. Listed shares and bonds represented only 16.9% of firms' funding sources, which was a much smaller share than the EU average of 23.8%. The overall level of NFC funding in Croatia was equivalent to 127.6% of GDP, which is

([87]) NBS, 2024. Macroprudential Diagnostics, Oct. 2024, p.10

([88]) HANFA, 2024, Monthly Market Review, Dec. 2024, p.34

([89]) HANFA, 2024, Monthly Market Review, Dec. 2024, p.30

([90]) Non-life insurance is dominated by motor vehicle liability insurance (36.1%), followed by insurance of road vehicles (18.7%), other property insurance lines (9.3%), and insurance against fire and natural disasters (9.2%). Source: HANFA, 2024. December 2024 Monthly Report.

([91]) HANFA, 2024. December 2024 Monthly Report.

([92]) HANFA, 2024. December 2024 Monthly Report.

([93]) EIOPA, 2024. Dashboard on Insurance Protection for Natural Catastrophes in a Nutshell.

([94]) HANFA, 2024. December 2024 Monthly Report.

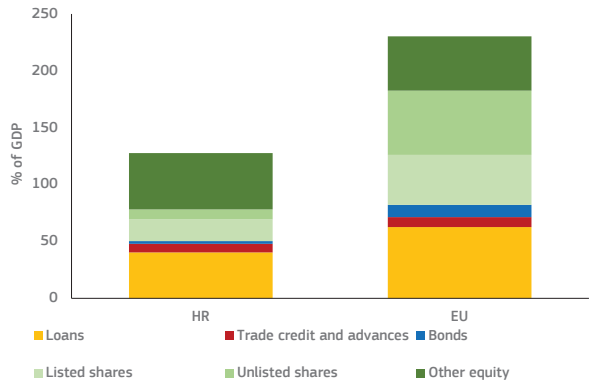
([95]) HANFA, 2024, Monthly Market Review, Dec. 2024, p.11

([96]) HANFA, 2024. December 2024 Monthly Report.

substantially lower than the EU average of 230.3% of GDP (see Graph A5.4).

Croatian businesses depend more on internal financing than their European peers. According to the 2024 EIB Investment Survey, the investment needs of 70% of Croatian firms re-covered by internal funding, compared to an EU average of 66% ([97]). At the same time, 78% of Croatian firms believe that their investment activities over the last three years were about the right amount (close to the EU average of 80%), while 18% of Croatian firms believe that their investment activities were too little (above the EU average of 14%). This suggests that there is no material financing gap relative to investment demand ([98]).

Graph A5.4: **Composition of NFC funding as % of GDP**



(1) Reference period 2023
Source: Eurostat

Lending to households picked up while for corporates it slowed down. For households, the annual credit growth rate for adjusted loans has gradually edged up from 9.5% in 2023 to 10.7% in Q3-2024 (EA average: 0.7%), due to growth in employment and wages coupled with consumer optimism. For NFCs, the annual credit growth rate fell from 20.8% in 2022 to 6.3% in 2023 and to 3.9% in Q3-2024 (EA average: 0.8%), due to reduced needs for financing investments as the drop in interest rates remained moderate ([99]). A significant proportion of investments is likely financed from own funds, facilitated by favourable corporate business performance.

([97]) EIB, 2024, 2024 EIB Investment Survey, p. 29.

([98]) Ibid. p. 7.

([99]) HNB, 2024, Macroprudential diagnostics (Oct. 2024), p. 7.

Corporate borrowing is expected to pick up slightly. The October 2024 bank lending survey conducted by the Croatian National Bank (HNB) found that, during Q3-2024, corporate demand for loans remained unchanged for large corporations and for long-term loans (and somewhat increased for small and medium-sized enterprises (SMEs)). According to the same lending survey, banks expected demand to slightly increase for large corporations and long-term loans in Q4-2024 ([100]).

Capital markets and the participation of retail investors

Croatia's capital market is evolving but requires further development to broaden access to finance. . The main stock exchange in Croatia is the Zagreb Stock Exchange (ZSE). Its total market capitalisation stood at EUR 50.3 billion as of December 2024, of which stocks accounted for 57.5%, bonds 37%, money market instruments 5.3%, and exchange-traded funds (ETFs) 0.1% ([101]). Moreover, the number of listed stocks dropped from 87 in 2023 to 78 in 2024 ([102]). Recognising the importance of cross-border trading, the ZSE fully acquired the Ljubljana Stock Exchange in 2015, and partially acquired the North Macedonian Stock Exchange (in 2019 and in 2022).

The use of equity by Croatian SMEs is quite high. In the 2023 SAFE survey, 19.6% of SMEs indicated that equity was relevant for them, compared to an EU average of 10.1% ([103]). In 2019, the ZSE launched the Progress Market multilateral trading platform, which aimed to encourage SMEs to issue securities with less restrictive listing and reporting requirements. Although it started with market capitalisation of EUR 145.3 million in 2019, this figure had dropped to EUR 65.3 million by 2024 ([104]).

([100])HNB, 2024, Euro-area Bank Lending Survey-HR (Oct.2024), Questions 6 & 9.

([101])ZSE, 2024, Market Data, 2024.

([102])ZSE, 2024, Market Data, 2024.

([103])European Commission, 2023, Data and Surveys-SAFE, Results by country, T27.

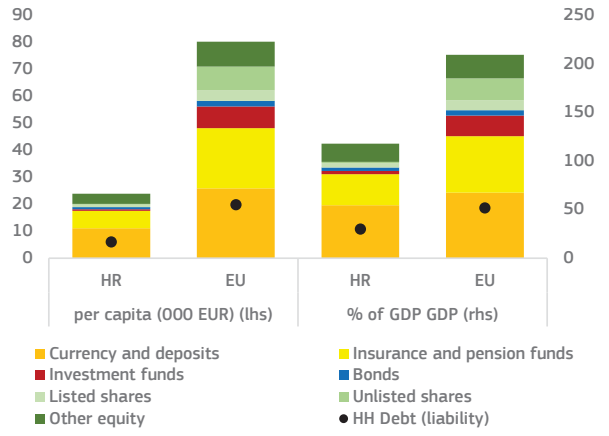
([104])Progress Market, 2024, Market Capitalisation.

Croatia is in the process of adopting a national strategy for the development of capital markets. In 2023, CFA Society Croatia, in partnership with the Ministry of Finance, and relevant parties implemented a project aimed at preparing the basis for the Croatian capital market development strategy (published in January 2024***).***) ([105]). Based on this report, the Croatian Ministry of Finance prepared the Strategic framework for the development of capital market in the Republic of Croatia (2025- 2030), and the first action plan (2025-2026), in the cooperation with the Croatian Financial Services Supervisory Agency and other relevant stakeholders (including pension and investment funds, investment firms, banks, Zagreb Stock Exchange, the Central Depository and Clearing Company, CFA Society Croatia and others) with the technical support from the European Bank for Reconstruction and Development. Additionally, the second Action plan is envisaged for 2026 and will cover the period until the end of 2030. The framework sets out five key strategic directions: (i) regional integration and positioning Croatia as a financial hub; (ii) digitalisation of capital markets; (iii) strengthening corporate governance; (iv) boosting market liquidity; and (v) creating new investment products and financing options. In addition to the aforementioned five key strategic directions, a horizontal initiative has also been launched, aimed at continuously caring out legislative adjustments to be carried out in order to reduce excessive regulation (gold-plating) and to ensure that the legal framework of Croatia remains competitive, simple, and aligned with the European Union acquis and relevant EU standards.

Croatia has increasingly supported efforts to develop the Capital Markets Union (CMU) in the EU. At a meeting in May 2024, the finance ministers of Austria, Croatia and Slovenia issued a joint statement calling for further progress on CMU ([106]). The statement identified a number of common CMU priorities, including: (i) the need to consider the priorities of all Member States; (ii) debating centralised supervision at a later stage; (iii) a pragmatic approach to the securitisation framework; (iv) harmonising the requirements for companies to be listed on exchanges; (v) eliminating national barriers for institutional investors; (vi) making tax systems more supportive of investments in capital markets; and (vii) expanding financial literacy and market participation among the EU population.

Croatian households have a high share of cash and deposits in households' assets, which implies that there is scope to further increase the level of direct or indirect retail investments. Further encouraging the build-up of universal funded supplementary pension schemes would positively contribute to (i) the sustainability and adequacy of pension benefits; (ii) investment in equity; (iii) access to finance; (iv) growth; and (v) innovation. Croatian households have a higher-than-average holding of cash and deposits, which represent nearly half (46.4%) of household assets compared to the EU average of 32.3%. In 2023, 36.7% of household financial assets were held in three assets categories: (i) pension funds; (ii) investment funds; and (iii) directly held financial investment instruments. This falls short of the EU average of 45.4% (see Graph A5.5). In Croatia, direct and intermediated retail investment by households was 44% in 2023 (EU average: 56.2%).

Graph A5.5: **Composition of household financial assets per capita and as % of GDP**



(1) Reference period 2023
Source: Eurostat

Recent policy initiatives are aimed at boosting the level of retail participation. In 2023, the Croatian government issued its first national bonds and treasury bills aimed primarily at retail investors, in which Croatians invested a

([105]) CFA Society Croatia, 2024, Basis for the capital markets development strategy in Croatia.

([106]) Common Statement by the Finance Ministers from Slovenia, Croatia and Austria - Unlocking the EU's productivity: a finance ministers' perspective, 28 May 2024.

total of EUR 2.3 billion ([107]). In 2024, the Ministry of Finance continued to turn to households for government financing by issuing national treasury bills ([108]). A wider review of the incentives in place to promote retail participation in financial markets may also be warranted. In March 2025, Croatia adopted the Strategic framework for the development of capital market in the Republic of Croatia 2025- 2030, marking an important step towards strengthening market infrastructure and broadening access to finance.

The role of domestic institutional investors

The Croatian fund management industry is quite small, with rather conservative investment strategies. The largest proportion of assets of the Croatian fund management industry was allocated to bonds (52.6%), followed by shares and other equity (28.9%), deposits (13.2%), and investment funds (including money market fund shares) (5.3%) ([109]). In 2023, Croatian asset managers allocated about 75% of their equity and 52% of their bond holdings to domestic bonds and equities, a substantially higher home bias than the EU average ([110]).

The Croatian insurance sector is rather small, and its investment portfolio is mostly composed of bond holdings. The Croatian insurance sector mainly invests in government bonds (mostly domestic), which accounted for 46.8% of total assets by mid-2024 (compared to 19% for the European Economic Area as a whole) ([111]), with another 6.1% held in cash and deposits. Property represented 13.7%, equities 12.7%, corporate bonds 6.1%, while investment funds accounted for only 9.8% of insurers' investment portfolio, of which 6.8% was in equity funds and 3.9% in private equity funds ([112]).

The domestic pension fund industry has a conservative investment profile, placing a greater focus on bonds with a moderate growth in equity investments. In November 2024, mandatory pension funds (pillar II: mandatory capitalised savings) accounted for 94.3% of the net assets, while voluntary pension funds (pillar III: voluntary capitalised savings) accounted for only 5.7% of the net assets of these two pillars. Debt securities accounted for 63.2% of the total assets held by pension funds as of Q3-2024. Equities were the second largest investment asset held by pension funds, at 22.6%, while investment funds accounted for 9.6%, and bank deposits for 4.1% of their total assets ([113]). The high exposure to bonds (especially government bonds) reflects the perceived lower risk level compared with other investment instruments, and more likely the lack of alternative investment options ([114]). Overall, this sector could be important for the development of domestic capital markets.

The participation of domestic institutional investors in providing funding for start-ups and venture capital investors is low. A 2024 paper by the think tank CEPS showed that pension fund commitments in some central and eastern European countries (Croatia, Slovakia and Slovenia) accounted for only 6% of private equity and venture capital funds raised annually between 2007-2023. This figure falls substantially short of the 19% for the Baltic states or 20% shares for Nordic Member States ([115]).

Recent policy action may facilitate a shift towards more dynamic investment strategies. These measures include:

- in 2019, the amended Mandatory Pension Funds Act entered into force, under which any mandatory pension fund members who fail to select their mandatory fund category themselves, when selecting a fund for the first time, are allocated to one of the higher risk category A funds ([116]);

- in 2023, a package of amendments to the pension laws was adopted to advance the system

([107])HANFA, 2024, Annual Report 2023, p. 2

([108])HANFA, 2024, Macroprudential Risk Scanner, p. 10.

([109])ECB, 2024, Euro-Area Investment Funds, Q3-2024.

([110])EFAMA, 2024, Asset Management in Europe, Exhibit 4.4 to 4.5, p. 46.

([111])EIOPA, 2024, Insurance Statistics.

([112])EIOPA, 2024, Insurance Statistics.

([113])ECB, 2024, Euro-Area Pension Funds, Q3-2024.

([114])HANFA, 2024, Macroprudential Risk Scanner, p. 24.

([115])CEPS, 2024, Closing the gaping hole in the capital market for EU start-ups – the role of pension funds, p. 2.

([116])HANFA, 2024, Annual Report 2023, p. 25.

Table A5.1: **Financial indicators**

		2017	2018	2019	2020	2021	2022	2023	2024-Q3	EU
Banking sector	Total assets of MFIs (% of GDP)	114,8	111,7	107,4	126,7	118,5	116,1	103,7	98,1	248,4
	Common Equity Tier 1 ratio	20,2	20,2	21,7	22,7	23,8	22,1	21,5	20,4	16,6
	Total capital adequacy ratio	21,4	21,1	22,5	23,2	24,4	22,8	22,2	21,2	20,1
	Overall NPL ratio (% of all loans)	8,8	7,3	5,2	5,3	4,2	3,0	2,5	2,4	1,9
	NPL (% loans to NFC-Non financial corporations)	21,2	18,5	12,0	11,4	8,9	5,8	4,5	4,2	3,5
	NPL (% loans to HH-Households)	7,7	6,5	5,5	6,8	6,2	4,8	4,1	3,8	2,2
	NPL-Non performing loans coverage ratio	62,6	60,9	66,2	62,3	62,4	66,1	68,9	68,6	42,1
	Return on Equity[1]	5,9	8,8	9,1	4,7	7,7	9,4	15,7	17,0	10,0
	Loans to NFCs (% of GDP)	22,1	20,7	19,5	22,6	19,6	20,4	18,7	17,4	30,0
	Loans to HHs (% of GDP)	31,7	31,3	31,8	35,8	32,3	29,4	27,9	27,3	44,5
	NFC credit annual % growth	3,7	2,0	4,6	6,6	1,8	20,8	6,3	3,9	0,8
	HH credit annual % growth	3,7	5,6	7,7	2,6	4,6	5,7	9,5	10,7	0,7
Non-banks sector	Stock market capitalisation (% of GDP)	-	-	-	36,4	32,0	27,0	29,6	29,7	69,3
	Initial public offerings (% of GDP)	0,00	0,11	0,00	0,00	0,09	0,00	0,00	-	0,05
	Market funding ratio	52,9	53,2	53,8	52,1	53,0	47,4	46,3	-	49,6
	Private equity (% of GDP)	0,01	0,19	0,17	0,27	0,55	0,65	0,03	-	0,41
	Venture capital (% of GDP)	0,01	0,00	0,01	0,02	0,06	0,02	0,01	-	0,05
	Financial literacy (composite)	-	-	-	-	-	-	47,5	-	45,5
	Bonds (as % of HH financial assets)	0,4	0,4	0,4	0,4	0,3	0,5	3,2	-	2,7
	Listed shares (as % of HH financial assets)	5,6	4,7	4,9	3,8	3,8	3,5	3,8	-	4,8
	Investment funds (as % of HH financial assets)	2,6	2,8	3,4	2,6	2,9	2,4	2,8	-	10,0
	Insurance/pension funds (as % of HH financial assets)	25,4	25,8	27,4	27,2	27,4	26,5	27,0	-	27,8
	Total assets of all insurers (% of GDP)	10,8	10,4	10,7	12,1	10,6	8,6	7,8	7,1	54,8
	Pension funds assets (% of GDP)	-	-	-	33,1	32,1	27,5	27,6	28,3	23,4

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

(1) Annualised data.
Credit growth and pension funds EU data refers to the EA average
Source: ECB, ESTAT, EIOPA, DG FISMA CMU Dashboard, AMECO.

of individual capitalised pension savings: liberalising pension fund investments to enable greater investment diversification, providing flexibility for membership and the possibility to switch between pension funds, and reducing costs for members ([117]).

The depth of available venture and growth capital

The domestic venture and growth capital market is not developed enough to meet the financing needs of innovative firms. The value of annual private equity (PE) relative to nominal GDP dropped from 0.65% in 2022 to 0.03% in 2023 (EU average in 2023: 0.41%) ([118]). The value of annual venture capital (VC) investment relative to nominal GDP dropped from 0.02% in 2022 to 0.01% in 2023 (EU average: 0.05%) ([119]). Given the limited VC and PE activity in Croatia, there is a financing gap for early-stage innovative firms in need of capital (See the Innovation to business Annex).

There are some initiatives in place to promote start-up funding. The European Investment Fund and the Croatian Ministry of Regional Development and EU Funds launched a new EUR 80 million programme, the Croatian venture capital initiative 2 (CVCi 2), to support Croatian start-ups. These funds will be used for investments in promising early-stage Croatian companies with strong growth prospects. The Croatian recovery and resilience plan (RRP) also includes measures to support the financing of start-ups ([120]). The Croatian Financial Services Supervisory Authority (HANFA) has also set up a regulatory innovation hub to promote innovation in the field of financial services. Further measures to promote and facilitate initial public offering (IPO) activity could also improve the ability of successful start-ups to scale-up, while offering an attractive exit option to VC and PE investors.

([117])HANFA, 2024, Annual Report 2023, p. 24.

([118])European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 11.

([119])European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 16.

([120])HR Recovery and Resilience Plan - C1.1.1.R5-I1: Investment in equity and quasi-equity financial instruments.

Financing the green transition

The financing needs of Croatia's green transition are considerable. Croatia's draft updated national energy and climate plan has only partial information on the investment needed to achieve the country's 2030 climate and energy targets. It is therefore not possible to estimate the investment gap ([121]). However, the issuance of bonds with environmental, social, and governance objectives as a share of total bond issuance was higher in H1 2024, at around 21% of total bond issuance, than its three-year average of around 8%, and is rather high compared to most of Croatia's EU peers ([122]). Croatia taken some steps towards prioritising the green transition in its National Development Strategy 2030 (Official Gazette No. 13/21). On 21 December 2023, it established the Forum for Sustainable Finance Support to promote information exchange and boost the financial sector's role in achieving the European Green Deal goals. Coordinated by the Ministry of Finance and included in the National RRP, the Forum aims to help the financial sector adapt to regulatory requirements and advance sustainable finance through analysis, stakeholder engagement, and potential regulatory reforms. In March 2025, the Government adopted the Forum's first Action Plan (2025–2026), emphasizing stakeholder collaboration, best practice sharing, and capacity building to enhance Croatia's competitiveness in sustainable finance.

Financial literacy

Although financial literacy in Croatia is higher than the EU average, more can be done to deepen the knowledge of retail investors and SMEs. Financial literacy is an important factor in enhancing the participation of retail investors in capital markets, as well as in informing small and medium-sized enterprises about alternative sources of financing beyond the banking system. The July 2023 Eurobarometer survey shows that only 20% of Croatians have a high level of financial literacy, 65% a medium level, and the remaining 16% a low level, compared with the EU average of 18% for high literacy, 64% for medium, and 18% for low ([123]). This leads to an overall financial literacy indicator (the average of the financial knowledge and financial behaviour indicators) of 47.5% vs an EU average score of 45.5% ([124]). In Croatia, a national strategic framework for consumer financial literacy was implemented for the period 2015-2020, and updated for the period 2021-2026, focusing on key topics such as the basics of personal finances, debt management, savings and investments, and consumer protection in the financial sector ([125]). Financial education has also been included in primary and secondary schools. Moreover, one of the key activities in the Strategic Framework for the development of the capital market in Republic of Croatia 2025-2030 is further development and improvement of financial literacy for citizens, including investors campaigns to strengthen confidence in the capital market.

([121])European Commission, 2024, Country report -Croatia, p. 39.

([122])AFME, 2024, CMU Key Performance Indicators, p. 23.

([123])European Commission, 2023, Flash Eurobarometer Survey - Monitoring the level of financial literacy in the EU - July 2023, p. 17.

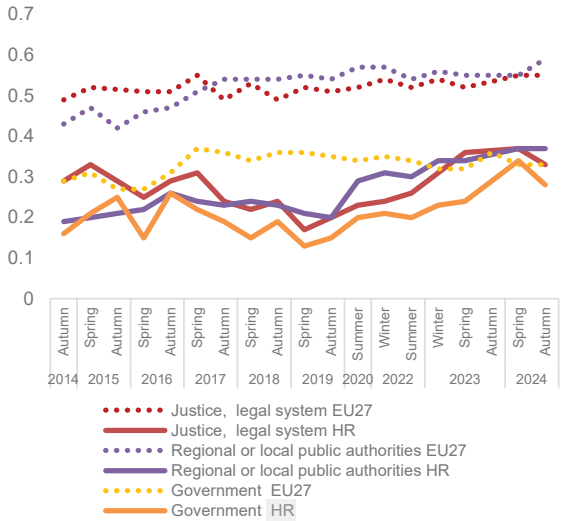
([124])European Commission, 2024, Overview of CMU Indicators – 2024 Update, Indicator 27.

([125])Croatian Ministry of Finance 2024, Financial Literacy.

Croatia's institutional framework influences its competitiveness. Croatia has taken steps to improve legislative quality and regulatory governance, decrease administrative burden and develop skills in its public administration. However, there is scope to further strengthen its mechanisms for evaluating regulation and cutting administrative burdens. Moreover, challenges persist in terms of rolling-out digital public services and the efficiency of the justice system.

Public perceptions

Graph A6.1: **Trust in justice, regional / local authorities and in government**



(1) EU27 from 2019; EU28 before.
Source: Standard Eurobarometer surveys.

Trust in public institutions remains below the EU average despite an upward trend. Trust in government, justice and regional or local public authorities remain at broadly comparable levels (Graph A6.1). When asked about ways to boost trust in Croatia's public administration, 51% of citizens suggested reducing bureaucracy (EU average: 52%), 34% called for more communication with citizens (EU average: 31%) ([126]). The perceived quality of government has risen in most regions, although on the whole, it remains below the EU average ([127]).

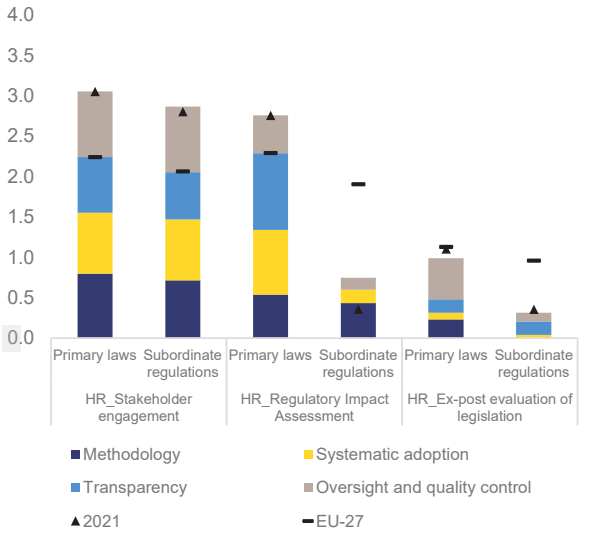
([126]) Understanding Europeans' views on reform needs - April 2023 - Eurobarometer survey. Country Fact Sheet.

([127]) Inforegio - European Quality of Government Index.

Quality of legislation and regulatory simplification

Performance in developing and evaluating legislation is close to the EU average. It is generally stronger for stakeholder engagement than for ex ante and ex post evaluation of legislation. Croatia can strengthen the rules and practices for ex post evaluation of legislation and regulatory impact assessments, especially for subordinate regulations (Graph A6.2). The reforms to the regulatory framework adopted in 2024 aim to simplify regulatory impact assessments while making them mandatory for most primary and secondary legislation, promote assessments of existing legislation and strengthen legal drafting capacity ([128]). The updated legal framework is complemented by new methodological guidelines for the implementation of better regulation instruments.

Graph A6.2: **Indicators of Regulatory Policy and Governance (iREG)**



Source: OECD (2025), Regulatory Policy Outlook 2025 and Better Regulation across the European Union 2025 (forthcoming).

([128]) Government Legislation Office, *The government adopted a decree for the implementation of the Act on Policy Instruments of Better Regulation*, link

Table A6.1: **Croatia. Selected indicators on administrative burden reduction and simplification**

	Ex ante impact assessment of legislation		Ex post evaluation of legislation	
When developing new legislation, regulators are required to …	Identify and assess the impacts of the baseline or 'do nothing' option.	○	Is required to consider the consistency of regulations and address areas of duplication.	○
	Identify and assess the impacts of alternative non-regulatory options.	○	Is required to contain an assessment of administrative burdens.	○
	Quantify administrative burdens of new regulations.	○	Is required to contain an assessment of substantive compliance costs.	○
	Quantify substantial costs of compliance of new regulations.	○	Compares the impact of the existing regulation to alternative options.	○
	Assess macroeconomic costs of new regulations.	○	Periodic ex post evaluation of existing regulations is mandatory.	○
	Assess the level of compliance.	○	Government uses stock-flow linkage rules when introducing new regulations (e.g., one-in one-out).	○
	Identify and assess potential enforcement mechanisms.	○	A standing body has published an in-depth review of specific regulatory areas in the last 3 years.	●
			In the last 5 years, public stocktakes have invited businesses and citizens to assess the effectiveness, efficiency, and burdens of legislation.	○

● Yes / For all primary laws ◕ For major primary laws ◑ For some primary laws ○ No / Never

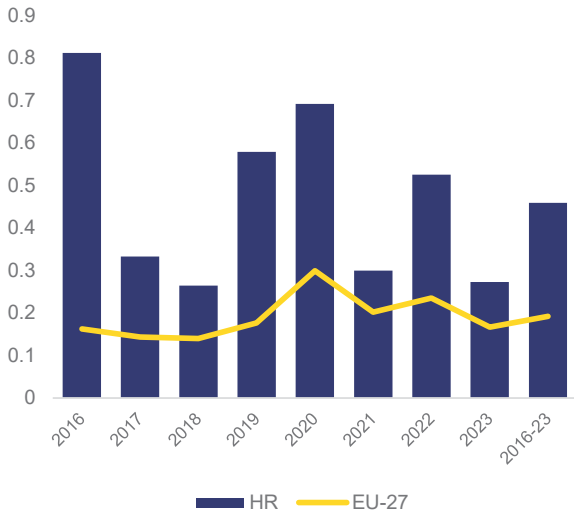
(1) This table presents a subset of iREG indicators focusing on regulatory costs. The indicators refer to primary legislation.
Source: OECD (2025), Regulatory Policy Outlook 2025 [https://doi.org/10.1787/56b60e39-en] and Better Regulation across the European Union 2025 (forthcoming).

Croatia has made visible progress in reducing the proportion of laws adopted by fast-track procedure. The proportion of legislation approved by fast-track procedure dropped from 53% in 2022 to 26% in 2023, with an average for the 2016-2023 period of 46%. Nevertheless, it remains above the EU average ([129]) (Graph A6.3).

Croatia has taken targeted steps to reduce administrative burdens for businesses. It has put in place a plan for 2024-2025 which is aimed at optimising and digitising 103 administrative procedures, focusing on areas such as taxation, tourism, agriculture, pensions and transport. The government expects the plan to reduce administrative costs for the economy by EUR 364 million ([130]).

There is scope to further strengthen its mechanisms for simplifying regulation. For example, when preparing primary legislation, regulators are not mandated to evaluate the level of compliance. While regulatory impact assessments and ex post evaluation of legislation are required to evaluate administrative burdens and substantive compliance costs, this requirement applies to some (and not all) primary laws (Table A6.1).

Graph A6.3: **Proportion of laws adopted within 30 days**



Source: European Commission based on national parliament websites

([129])See 2024 country-specific chapter for Croatia in the Rule of Law Report (pp. 27-28)

([130])Action Plan to Reduce Administrative Burden for Economy: link

Table A6.2: **Key Digital Decade targets monitored through the Digital Economy and Society Index**

		Croatia			EU-27	Digital Decade target by 2030
		2022	2023	2024	2024	EU-27
Digitalisation of public services						
1	**Digital public services for citizens**	**69**	**71**	**67**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
2	**Digital public services for businesses**	**68**	**67**	**66**	**85**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
3	**Access to e-health records**	**na**	**86**	**86**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030

Source: State of the Digital Decade report 2024.

Social dialogue

Tripartite cooperation is well established at the national level ([131]). Croatia has established an effective institutional framework for promoting social dialogue, comprising the tripartite Economic Social Council (ESC) and its working bodies, which serves as an advisory body to the Croatian Government. The Croatian ESC consists of an equal number of representatives of the government, trade union confederations and employer's associations. The ESC committees deal with the issues of wage policy, tax system, social policy, employment, education and legislation pertinent to the issues of labour, employment and industry. The tripartite social dialogue that began at national level has since progressed to be developed at regional level by the establishment of regional ESCs at each county level. At the level of companies, institutions and particular branches and industries, bipartite social dialogue is developed through the activities of the trade unions and employers' associations who conclude collective agreements and facilitate trade union activities in companies, works councils and supervisory boards.

However, there are challenges at the sub-national level. Social partners are represented in working bodies within the Croatian Parliament, National Council for protection at work, National Council for Competitiveness, National committee for monitoring the negotiations with EU, governing boards of the Social Insurance Fund and other public institutions. However, there are gaps and room for improvement, especially regarding the involvement of local and regional social partners in the social dialogue. Whereas social dialogue institutions exist, the social partners are not fully satisfied with their involvement in policymaking.

Efficiency of selected administrative procedures

The OECD product market regulation indicators show that Croatia's licensing system is aligned with most best practices. Although the government keeps an up-to-date inventory of all permits and licences required/issued to businesses by public bodies, the inventory is not available online for consultation. Furthermore, there is no requirement for the government to regularly review it and assess whether such licences and permits are still required or should be withdrawn (see also Annex 4). Moreover, selected indicators point to Croatia's public administration taking longer to complete procedures. For example, the B-READY indicators ([132]) show considerable potential for cutting the time it takes to obtain building permits, to prepare, file and pay taxes, and to complete a generic tax audit.

([131])For an analysis of the involvement of Croatia's social partners at national level in the European Semester and the Recovery and Resilience Facility, see Eurofound (2025), National-level social governance of the European Semester and the Recovery and Resilience Facility.

([132])World Bank. 2024. Business Ready 2024. Washington, DC: World Bank. doi:10.1596/978-1-4648-2021-2

Digital public services

Digitalisation of public services in Croatia scores below the EU average (67.2 compared to an EU average of 79.4 in relation to services for citizens and 66.2 compared to an EU average of 85.4 in relation to services for businesses) (Table A6.2). However, access to e-health records is a particular strength for Croatia which scored 85.6 compared to an EU average of 79.1.

The proportion of e-government users surged from 68% in 2022 to 88.5% in 2023, surpassing the EU average of 75%. Nevertheless, use of e-ID to access public and private services remains low (36.7% compared to an EU average of 41.1%) ([133]).

Croatia is making good progress towards seamless, automated exchange of authentic documents and data across the EU. It has already successfully tested its first transactions through the Once-Only Technical System ([134]), which is part of the European Union's Single Digital Gateway ([135]). Croatia is in the process of connecting the first authorities.

Civil service

Croatia has introduced various measures to increase the attractiveness and improve skills in its civil service. A new Civil Service Act and secondary legislation are aimed at modernising the job structure and pay scale. A new council will monitor the implementation of the new pay system, analyse the competitiveness of public employment and overview the financial sustainability of the wage bill. A new online platform linked to Croatia's e-citizens portal will provide information on the current needs of the public administration. Public calls for expression of interest for jobs in the civil service will enable better talent screening. Moreover, merit-based requirements have been stepped up, vacancies are now published centrally, and candidate pools are being created. A new appraisal system is expected to improve the performance and productivity of civil servants.

Participation of civil servants in adult learning has improved in recent years but remains below the EU average. In 2024, Croatia achieved a participation rate of 10.3%, as compared to an EU average of 18.9% ([136]). The National School of Public Administration had been developing new training programmes to underpin Croatia's recently adopted competency framework, developed under a project financed by the European Social Fund in 2023. Under the recovery and resilience plan, efforts were made by Croatia promoted SmartWorking model which enables civil servants to work from home ([137]). Its aim is to make the administration a more attractive employer.

Integrity

A far higher percentage of companies than the EU average consider corruption to be widespread and a problem when doing business, and court cases related to corruption take a long time. In Croatia, 85% of companies consider that corruption is widespread (EU average 64%), while 61% consider that corruption is a problem when doing business (EU average 36%) ([138]). Moreover, only 18% of companies believe that people and businesses caught for bribing a senior official are appropriately punished (EU average 31%) ([139]). High-level corruption cases continued to be well represented among investigated and finalised corruption court cases against individuals ([140]).

([133])European Commission. Digital Decade 2024: Country reports

([134])European Commission, The Once Only Principle System: A breakthrough for the EU's Digital Single Market

([135])European Commission, Once-Only Technical System Acceleratormeter

([136])Eurostat, 2025, European Union Labour Force Survey.

([137])European Commission, Positive preliminary assessment of the satisfactory fulfilment of milestones and targets related to the fifth payment request submitted by Croatia on 15 April 2024, transmitted to the Economic and Financial Committee 76aa9215-bf28-4aa0-8e26-f1318e236ee0_en, (p.57-65).

([138])Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([139])Ibid.

([140])See the 2024 country-specific chapter for Croatia of the Rule of Law Report, pp. 13-14.

However, proceedings continue to take a long time and there have not yet been any convictions for foreign bribery cases. The efficiency of Croatia's criminal courts continues to pose a challenge, with length of trials at first instance among the longest in the EU, among the longest for bribery cases (decreasing from an average of 531 days in 2022 to 478 days in 2023) and for money laundering cases (increasing from an average of 597 days in 2022 to 771 days in 2023) ([141]). Legislation has been improved to allow corruption cases to be investigated and prosecuted more efficiently, while a draft law to further amending the Criminal Procedure Code and the Law on a specialised anti-corruption prosecution service is planned for late 2025. Furthermore, public procurement continues to be an area at high risk of corruption in Croatia. 21% of companies (EU average 27%) think that corruption has prevented them from winning a public tender or a public procurement contract in practice in the last three years ([142]). The energy sector and regional and local government authorities also appear as sectors with a high-risk of corruption ([143]).

Croatia is implementing a new public register for lobbyists. Whereas most Member States already have a register for lobbyists, in Croatia legislation to regulate lobbying only entered into force in October 2024. It regulates the organisation, content and manner of keeping a lobby register, restrictions on lobbying activities and rules on the verification, enforcement and penalties for violations of the law ([144]). This legislation can help increase transparency regarding corporate lobbying of decision-makers.

Justice

Significant efficiency issues persist in the justice system. The backlog of cases and length of proceedings in Croatia continue to be among the highest in the EU, with the disposition time in civil and commercial cases at first instance increasing from 410 days in 2022 to 533 days in 2023. The average disposition time for administrative cases at first instance increased from 143 days in 2022 to 221 days in 2023. The quality of the justice system is gradually improving. Electronic communication between courts and parties to proceedings has increased and further initiatives are being taken to close the digitalisation gap in the justice system. As regards judicial independence, no systemic deficiencies have been reported ([145]).

([141])See the upcoming 2025 EU Justice Scoreboard.

([142])Flash Eurobarometer 543 on businesses' attitudes towards corruption in the EU (2024).

([143])See the 2024 country-specific chapter for Croatia of the Rule of Law Report, p. 20.

([144])Ibid., pp. 17-18.

([145])For more detailed analysis of the performance of the justice system in Croatia, see the upcoming 2025 EU Justice Scoreboard and the 2024 Rule of Law Report.

Croatia is faced with several challenges regarding clean industry and climate mitigation. A faster shift to renewables and further modernisation investments are needed to decarbonise the manufacturing industry. To tackle growing transport emissions, it will be crucial to adopt a more comprehensive approach with both sectorial measures and the phase-out of fossil fuels subsidies. Clean-tech manufacturing growth is hindered by lengthy industrial permitting, the absence of a comprehensive policy framework, limited incentives for private investment, and a shortage of skilled workers. Croatia could reduce its dependency on critical raw materials and become less vulnerable to geo-political instability by making its economy more circular. This would also help increase secondary raw material use in the economy, improve competitiveness and innovation, and reduce the environmental impact of economic activity. This annex reviews the areas in need of urgent attention in Croatia's 's clean industry transition and climate mitigation, looking at different dimensions.

Strategic autonomy and technology for the green transition

Net zero industry

Croatia is home to a limited set of clean technology manufacturing capacities ([146]). These include makers of heat pumps, solar panels, storage and batteries, grid components and hydro power equipment. Regarding solar, Croatia's main production facilities include the Solvis factory in Varaždin Hrvatska which produces solar photovoltaics (PV) modules and has an estimated capacity of 300-350 MW. In the field of grid, in addition to Eur0Cable Group and Elka, two existing manufacturing facilities, a EUR 100 million investment is planned by TTCables for the construction of a new cable factory for medium and high voltage cables ([147]). Croatia's electric vehicle sector is also growing, and several companies are involved in the production of batteries. The company FRIŠ produces lithium-ion batteries, and Rimac Technology, a producer of battery management systems, has announced that it will open an additional facility producing 300 MW/y stationary energy-storage systems in 2025 ([148]).

Croatia's clean tech is already somewhat integrated in global value chains, but there is ample room to increase participation. Croatia's exports in clean tech ([149]) represent less than 0.2% of its GDP, much less than in Bulgaria, Poland and Romania. Simulations conducted by the World Bank ([150]) suggest that due to its low initial export levels and high potential, Croatia could increase its clean energy technology-related exports to other EU countries several times over the 2022 level.

Despite some progress, Croatia could do more to support the development of the net zero industry. Croatia has done some progress by adopting a smart specialisation strategy, which steers investment towards technologies that support its climate goals. In addition, Croatia has a dedicated strategy for hydrogen. Nevertheless, it could do more to support the development of the net zero industry. It does not have a robust policy framework to support its development, nor incentives to encourage private investment in clean tech, such as resilience criteria in auctions. Long industrial permit procedures and the absence of one-stop shop ([151]) for industrial permitting complicate and slow down the development of additional manufacturing capacity. In addition, Croatia faces a significant challenge in securing a skilled workforce that meets the demand from its companies, notably in renewable energy engineering.

([146]) EC, The net-zero manufacturing industry landscape across the Member States, 1/2025; Bruegel, European clean tech tracker, update: 7/2024, EC, Net zero technologies' monitoring dashboard.

([147]) TTCables, 1 August 2024, 'Our new cable factory for medium and high voltage in Bedekovcina/Croatia', available here.

([148]) The SineStack battery system helps reduce losses and energy usage but also improves safety. See D. Sito-sucic, 31 January 2024, 'Electric carmaker Rimac to produce stationary energy-storage batteries', available here.

([149]) Electrolysers, electric vehicles batteries, heat pumps, solar, wind.

([150]) World Bank, Clean tech value chains, zooming in Croatia, 12/2024.

([151]) EC, The net-zero manufacturing industry landscape across the Member States, 1/2025

Critical raw materials

Croatia depends heavily on imports for critical raw materials needed for the development of net zero industry. In 2023, the main critical raw materials imported by Croatia from non-EU countries, in terms of trade values, were aluminium (mainly from Russia and Bosnia-Herzegovina), coking coal (primarily from Kazakhstan, Colombia and Indonesia), and silicon metal (from Bosnia-Herzegovina) ([152]). Imports from some countries could be affected by geo-political instability. At the same time, Croatia's score on the import concentration index is the lowest in the EU ([153]), which suggests a good diversification of its supply sources.

Croatia has wide scope to implement measures strengthening supply chains and improving the uptake of circular solutions for critical raw materials. Key circular economy and waste management indicators are below the EU average (see below). However, initiatives with a potential to reduce Croatia's reliance on critical raw material and some best practices exist. Under its recovery and resilience plan, Croatia finances companies that invest in green technologies in sectors such as metalworking, textile, food, chemical, construction and wood working. These and other measures promote the circular economy and the sustainable supply of primary and secondary raw materials. Between the end of 2024 and the beginning of 2025 Croatia adopted two important decisions to establish the National Circular Economy Council and to prepare a National Plan for the development of the Circular Economy for the period 2026-2032. Once implemented these measures will positively impact on Croatia's competitiveness and reduce its economy's environmental impact. The recycling rate for e-waste, a key source of critical raw materials, is above the EU average, at 90% in 2021. The reuse and recycling rate for end-of-life vehicles is also above the EU average (96% vs 89% in 2022). This positive element of Croatian waste management could support the car industry's shift to battery-electric vehicles.

([152]) EC, Raw material Information System, country profile Croatia.

([153]) The import concentration measures how much a country relies on a limited number of sources for a basket of critical raw materials. Source: COMEXT.

Climate mitigation

Industry decarbonisation

Croatia's manufacturing sector provides less than a fifth of its greenhouse gas emissions, but the emissions intensity of its manufacturing production is high, dominated by process emissions ([154]). At 18%, the share of manufacturing industry in Croatia's total greenhouse gas emissions is below the EU average of 21% ([155]). Between 2017 and 2022, the emissions intensity of manufacturing declined more than in the EU on average (by 28%, against 20% in the EU). However, with 540 g CO2eq of greenhouse gases per euro of gross value added (GVA) in 2022, it was still among the highest in the EU and twice the EU average. Greenhouse emissions from manufacturing in Croatia are dominated by industry process and product use, which account for 59% of the sector's emissions, the rest being related to energy use. In the EU overall, industry processes and product use account for 43%.

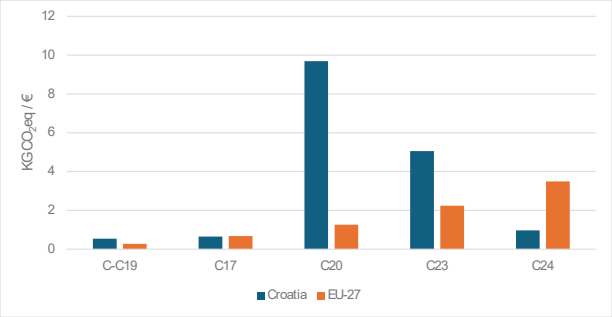
Manufacturing in Croatia has started to reduce emissions from industrial processes, but cleaner energy supply has yet to materialise. Between 2017 and 2022, both process and product use-related and energy use-related greenhouse emissions intensity of manufacturing production in Croatia declined by

([154]) For the GHG emissions intensity of GVA related to energy use and industrial processes and product use respectively, GHG emissions are from inventory data in line with the UNFCCC Common Reporting Format (CRF), notably referring to the source sectors CRF.1.A.2 – fuel combustion in manufacturing industries and construction and CRF.2 – industrial processes and product use. The CRF.1.A.2 data broadly correspond to the NACE C and E sectors, excluding C-19. GVA data (in the denominator for both intensities) are aligned with this sectoral coverage. Therefore, they are not fully consistent with the data referred to in other part of this section.

([155]) In 2023. Manufacturing includes all divisions of the "C" section of the NACE Rev. 2 statistical classification of economic activities. In the remainder of this section, unless indicated otherwise, data on manufacturing refer to the divisions of the NACE section C excluding division C19 (manufacture of coke and refined petroleum products), and the year 2022. The source of all data in this section is Eurostat; data following the UNFCCC Common Reporting Framework (CRF) are from the European Environment Agency (EEA), republished by Eurostat.

23% ([156]). For energy use, the decline was steeper than in the EU overall, which saw a 16% decrease. In the same period, the share of electricity and renewables in final energy consumption in manufacturing remained static at around 31%. The energy intensity of manufacturing experienced a decline, however, of 23%, or from 2.2 GWh per euro of GVA produced to 1.7 GWh. This suggests that the improvements in energy-related emissions intensity were due to efficiency improvements, or product improvements reflected in the value added, while the shift to green energy is yet to come.

Graph A7.1: **GHG emission intensity of manufacturing and energy-intensive sectors, 2022**



Source: Eurostat.

Some energy-intensive sectors in Croatia operate with high greenhouse gas emission intensities of production. Energy-intensive industries ([157]) account for 11% of Croatia's manufacturing GVA (2021). The manufacturing of chemicals and non-metallic mineral products such as cement recorded emission intensities of production (9.7 kg CO2eq/€ and 5.1 kg CO2eq/€) significantly above the EU total. High energy prices([158]), and global competition more broadly, put pressure on energy-intensive industries.

Croatia is rolling out some innovative projects to modernise its industry, but further efforts are needed. To support the deployment of renewables and improve energy efficiency in manufacturing, Croatia is increasingly using the Modernisation Fund. In addition, in 2024 the cement industry started to roll out a carbon capture and storage project co-financed by the Innovation Fund, which aims to capture around 360 000 tonnes of CO_2 annually. As Croatia aims to become a regional leader in carbon capture and storage, it is currently conducting feasibility studies to identify potential storage sites. Croatia started cooperation with neighbouring countries on the development of hydrogen infrastructure and on building the value chain for production of green hydrogen. By end of 2026, Croatia plans to build a capacity of at least 30 MW in electrolysers and to launch biomethane production. However, further modernisation measures are needed to support the decarbonisation of manufacturing production processes, particularly in the energy-intensive sectors, and a faster shift to renewable sources of energy, including via on-site generation.

Reduction of emissions in the effort sharing sectors

Croatia is projected to reach its 2030 target for the effort sharing sectors if it adopts and implements the planned additional climate mitigation measures ([159]). GHG emissions from Croatia's effort sharing sectors in 2023 are expected to have been 9.9% below the level of 2005. By 2030, current policies are projected to reduce them by 8.2% relative to 2005 levels; additional policies under Croatia's final national energy and climate plan are projected to achieve further reductions of 13.1 percentage points. Hence, Croatia is projected to overachieve its effort sharing target of a 16.7% reduction, by 4.6

([156]) For the GHG emissions intensity of GVA related to energy use and industrial processes and product use respectively, GHG emissions are from inventory data in line with the UNFCCC Common Reporting Format (CRF), notably referring to the source sectors CRF1.A.2 – fuel combustion in manufacturing industries and construction and CRF2 – industrial processes and product use. The CRF1A.2 data broadly correspond to the NACE C and E sectors, excluding C-19. GVA data (in the denominator for both intensities) are aligned with this sectoral coverage. Therefore, they are not fully consistent with the data referred to in other part of this section.

([157]) Notably, the manufacture of paper and paper products (NACE division C17), of chemicals and chemical products (C20), "other" non-metallic mineral products (C23; this division includes manufacturing activities related to a single substance of mineral origin, such as glass, ceramic products, tiles, and cement and plaster), and basic metals (C24). To date, these industries are energy-intensive – i.e. consuming much energy both on site and/or in the form of purchased electricity – and greenhouse gas emissions intensive, in various combinations.

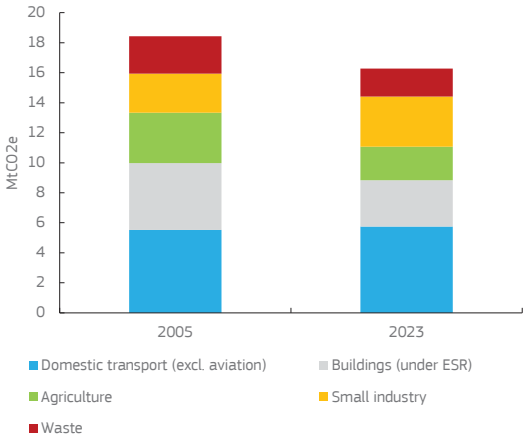
([158]) For a detailed analysis of energy prices, see Annex 8 on the affordable energy transition.

([159]) The national greenhouse gas emission reduction target is set out in Regulation (EU) 2023/857 (the Effort Sharing Regulation). It applies jointly to buildings (heating and cooling); road transport, agriculture; waste; and small industry (known as the effort sharing sectors).

percentage points ([160]), if it adopts and implements those measures. Croatia has recently amended its climate legislation to include the climate neutrality target and its 2030 effort sharing target. Furthermore, sectoral targets will be adopted for the effort sharing sectors.

Specific investments are planned to tackle the growing GHG emissions from domestic road transport in the next two years aimed at boosting the very low uptake of zero-emission vehicles ([161])([162]) and improving the energy-efficiency of the rail transport. This will be supported by the Recovery and Resilience Fund, Cohesion Funds and the Modernisation Fund, amongst others. However, to address the challenge more comprehensively, it will be crucial to also address the low and decreasing share of renewables (in 2023 0.9% vs 10.8% EU average) and to speed up the shift to more sustainable transport options while reviewing the existing fossil fuels subsidies.

Graph A7.2: **Greenhouse gas emissions in the effort sharing sectors, 2005 and 2023**



Source: European Environment Agency

([160])The emissions from effort sharing sectors for 2023 are based on approximated inventory data. The final data will be established in 2027 after a comprehensive review. Projections on the impact of current policies ('with existing measures', WEM) and additional policies ('with additional measures', WAM) as per Croatia's final national energy and climate plan.

([161])The share of newly registered electric cars was lower than 5% in 2023. EEA,2024.

([162])Investments will focus on purchase of zero-emission cars/vehicles and electric and hydrogen charging infrastructure.

Sustainable industry

Circular economy transition

Despite positive trends, Croatia is still lagging behind in the circular transition. Standing at 6.2% in 2023, Croatia's circular material use is below the EU average but with the current increase rate, the gap is likely to persist. Resource productivity too, was below the EU average in 2023, with EUR 1.23 generated per kg of material consumed. Even if improving slowly over the past decade Croatia's low resource productivity keeps the country vulnerable to supply chain disruptions and to the volatile raw material markets.

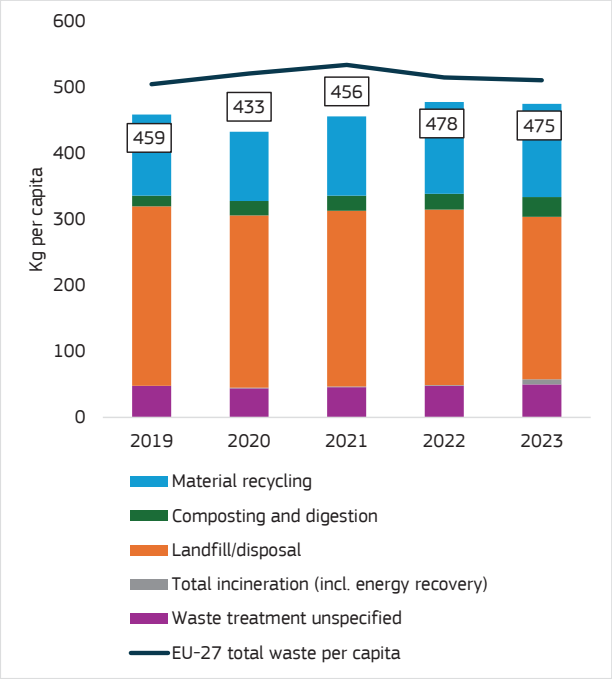
There is scope for Croatia to implement additional policies to increase circularity. Croatia has not yet adopted a comprehensive national circular economy strategy. The country's circular economy policy is linked more to waste management and less to the life cycle of products from the design phase to the end-of-life. Some of the positive reforms introduced lately, like the 'Regulation on waste management and deposit fees' that include a coefficient of eco-modulation, the introduction of a National Circular Economy Council and the decision to establish a National Plan for the development of the Circular Economy have yet to produce their impact. The transition to circular economy is however addressed by several government documents ([163]). The Croatian recovery and resilience plan includes reforms and investments to make the economy more circular in the areas of sustainable tourism; skills; biowaste; and building development and construction waste. Support is also provided under cohesion policy programmes to small and medium-sized enterprises and innovative solutions and training. Croatia's new rules for green public procurement, in force since January 2025, apply to tender procedures relating to specific product groups ([164]) such as electric energy; computers and computers equipment; air conditioners; road transport vehicles; and food and catering.

([163])Ministry of Economy and Sustainable Development, 2021, Low-carbon Development Strategy, Link.

([164])Zelena javna nabava, 2024, Hrvatska predvodnica zelene tranzicije: Vlada RH donijela Odluku o provedbi zelene javne nabave!, Link.

Croatia lags behind in waste management. Despite producing less waste than the EU average (475 kg vs 511 kg per capita, see Graph A7.3), Croatia is the EU country with the highest increase in waste generation since 1995. Furthermore, with a recycling rate of 36%, it is ranked among the low performers in the EU for municipal waste recycling in 2023 and is not on track to meet the 2025 recycling and the 2035 landfilling targets. Croatia is also at risk of missing both the 55% preparing for reuse and recycling target for municipal waste, and the 65% packaging waste recycling target. In 2021, at 35%, its recycling rate for plastic packaging was below the EU average with no improvement since 2017. In 2022, 81.8% of construction and demolition waste was recycled, excluding backfilling, above the EU average of 79.8%. At about 15 tonnes per person, the country's material footprint is however on par with the EU average.

Graph A7.3: **Municipal waste treatment**



Source: Eurostat

Current investment in the circular transition is insufficient and projects are implemented at a slow pace. The swift establishment of waste management centres under cohesion policy would help Croatia progress towards meeting recycling targets. Croatia is estimated to need total additional investments of at least EUR 118 million per year for the circular economy transition, including for waste management. To close the circular economy investment gap to attain policy targets that are not yet budgeted, EUR 26 million is needed for recent initiatives on the circular economy such as eco-design for sustainable products; packaging and packaging waste; labelling and digital tools; critical raw materials recycling; and measures proposed under the amendment of the Waste Framework Directive. An additional EUR 74 million is needed to unlock the circular economy potential ([165]).

Zero pollution industry

Croatia has made some progress in reducing air pollution, which is now decoupled from GDP growth. The 2020-2029 emission reduction commitments under the national air pollution control programme are met, and the country is on track to meet the commitments for the 2030s, except for nitrogen oxide (NO_x). In 2023, limits set by the Ambient Air Quality Directive for PM_{10} were breached in one air quality zone and target values for ozone concentration were not met for two quality air zones. Between 2010 and 2022, nitrogen oxide (NO_x) emissions decreased by 45%. The main reason for the failure to meet NO_x limit values is road transport.

Croatia is one of the EU's lowest emitters of industry pollutants to water, but levels of releases to air are high. With EUR 33.8 per thousand EUR of GVA, damage to health and environment due to the main industrial air pollutants in Croatia is higher than the EU average (EUR 27.5). Most emissions to air come from the energy sector (dust emissions) and the mineral industry (NO_X emissions). Both sectors also contribute to emissions of sulfur dioxide and heavy metals. On water pollution, Croatia has the 5th lowest absolute amount of emissions of heavy metals to water in the EU, and EUR 0.14 in damage to health and the environment per billion EUR of GVA. Its emission intensity for water pollutants is below the EU average. The key emitter of heavy metals and nitrogen to water is the refining sector.

The costs of pollution remain higher than the investment in pollution prevention and control. For 2022, about 3 800 deaths were attributed to fine particulate matter ($PM_{2.5}$) pollution; 450 deaths were attributed to nitrogen

([165])European Commission, DG Environment, *Environmental investment needs & gaps assessment programme*, 2025 update. Expressed in 2022 prices.

dioxide, and 980 to ozone ([166]). The costs from all pollutants are estimated at EUR 1.7 billion ([167]). In contrast, to meet its objectives for pollution prevention and control and address the health and economic costs of pollution, Croatia needs an additional EUR 226 million per year (0,34% of GDP), mostly for measures on clean air ([168]).

([166])Latest available annual estimates by the European Environment Agency [Harm to human health from air pollution in Europe: burden of disease status, 2024 | European Environment Agency's home page]. In terms of years of life lost, this implies 34 200 years for PM2.5, 4 100 for NO_2, and 8 900 for O_3.

([167])For 2021, value of statistical life method. Source: EEA, 2024, The costs to health and the environment from industrial air pollution in Europe – 2024 update, Link.

([168])European Commission, DG Environment, *Environmental investment needs & gaps assessment programme*, 2025 update. Expressed in 2022 prices.

Table A7.1: **Key clean industry and climate mitigation indicators: Croatia**

Strategic autonomy and technology for the green transition				Croatia						EU-27	
Net zero industry											
Operational manufacturing capacity 2023											
- Solar PV (c: cell, w: wafer, m: module), MW	300-350 (m)				- Electrolyzer, MW		-				
- Wind (b: blade, t: turbine, n: nacelle), MW	-				- battery, MWh		-				
Automotive industry transformation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Motorisation rate (passenger cars per 1000 inhabitants), %	398	420	439	449	465	478	495	↗		539	561
New zero-emission vehicles, electricity motor, %	0.11	0.30	0.44	1.77	3.18	2.87	2.56	↘		1.03	8.96
Critical raw materials	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Material import dependency, %		31.4	32.7	33.8	35.5	36.8	36.9	↗		24.2	22.6
Climate mitigation				Croatia				Trend		EU-27	
Industry decarbonisation	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2017**	**2022**
GHG emissions intensity of manufacturing production, kg/€	0.75	0.71	0.7	0.68	0.61	0.54	0.51	↘		0.34	0.27
Share of energy-related emissions in industrial GHG emissions	57.7	58.5	58.5	59.6	60.2	59.6	58.5	↗		44.8	42.5
Energy-related GHG emissions intensity of manufacturing and construction, kg/€	287.9	279.6	266.8	275.6	249.3	222.8	-	↘		158.4	132.9
Share of electricity and renewables in final energy consumption in manufacturing, %	31.7	32.4	31.5	31.6	32.8	31.7	32.3	↘		43.3	44.2
Energy intensity of manufacturing, GWh/€	2.20	2.14	2.10	2.05	1.87	1.71	1.76	↘		1.29	1.09
Share of energy-intensive industries in manufacturing production						11.1					7.3
GHG emissions intensity of production in sector [...], kg/€											
- paper and paper products (NACE C-17)	0.41	0.39	0.34	0.30	0.22	0.65	0.63	-		0.73	0.68
- chemicals and chemical products (NACE C20)	4.42	4.74	3.53	2.92	14.59	9.69	12.17	-		1.25	1.26
- other non-metallic mineral products (NACE C23)	7.54	6.99	7.76	6.18	4.28	5.06	5.06	-		2.53	2.24
- basic metals (NACE C24)	1.30	1.61	0.77	1.73	1.61	0.97	0.90	-		2.79	3.49
Reduction of effort sharing emissions		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2023**
GHG emission reductions relative to base year, %					3.4	6.4	-9.9				
- domestic road transport		15.4	18.6	4.5	12.9	21.4	4.0	↘		1.4	5.2
- buildings		-27.4	-29.6	-27.9	-24.2	-28.1	-30.7	↘		21.4	32.9
	2005				**2021**	**2022**	**2023**	**Target**		**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %	18.1				18.7	19.2	16.3	-16.7		-8.5	4.6
Sustainable industry				Croatia				Trend		EU-27	
Circular economy transition		**2018**	**2019**	**2020**	**2021**	**2022**	**2023**			**2018**	**2021**
Material footprint, tonnes per person		13.7	14.3	13.6	14.4	14.5	15.2	↗		14.7	15.0
Circular material use rate, %		5.0	5.4	5.5	6.1	6.8	6.2	↗		11.6	11.1
Resource productivity, €/kg		1.2	1.3	1.1	1.3	1.5	1.6	↗		2.1	2.3
Zero pollution industry											
Years of life lost due to PM2.5, per 100,000 inhabitants		1,207	920	1,014	1,001	1,267	-	↗		702	571
Air pollution damage cost intensity, per thousand € of GVA					33.8						27.5
Water pollution intensity, kg weighted by human factors per bn € GVA						0.1					0.9

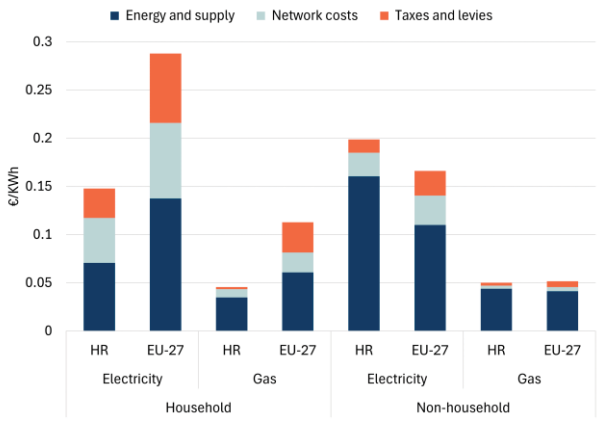
Source: **Net zero industry:** European Commission: The net-zero manufacturing industry landscape across Member States: final report, 2025. **Automotive industry transformation:** Eurostat. **Critical raw materials:** Eurostat. **Climate mitigation:** See footnotes in the "climate mitigation" section; reduction of effort sharing emissions: EEA greenhouse gases data viewer; European Commission, Climate Action Progress Report, 2024. **Sustainable industry:** Years of life lost due to PM2.5: Eurostat and EEA, Harm to human health from air pollution in Europe: burden of disease status, 2024. Air pollution damage: EEA, EU large industry air pollution damage costs intensity, 2024. Emissions covered: As, benzene, Cd, Cr, Hg, NH3, Ni, NMVOC, NOX, Pb, dioxins, PM10, PAH, SOX. Water pollution intensity: EEA, EU large industry water pollution intensity, 2024. Releases into water covered from cadmium, lead, mercury, nickel. Other indicators: Eurostat.

This annex outlines the progress made and the ongoing challenges faced in enhancing energy competitiveness and affordability, while advancing the transition to net zero in Croatia. It examines the measures and targets proposed in the final (draft) updates to the national energy and climate plans (NECPs) for 2030.

In 2024, Croatia's energy system was strained by extreme seasonal temperatures, leading to higher electricity consumption, depleted hydro reserves and increased reliance on costly imported fossil fuel-generated electricity, driving up prices and highlighting the vulnerabilities of Croatia's energy system. While the uptake in rooftop photovoltaics increased solar production in 2024, grid-scale solar and wind projects stalled due to delays in new grid fee setting and pending high-voltage reinforcement, limiting overall deployment of cheap renewables. Further structural challenges such as limited system flexibility, low consumer empowerment, weak demand-side response, and stagnating energy efficiency gains - leaves Croatia exposed to sustained pressure on electricity prices.

Energy prices and costs

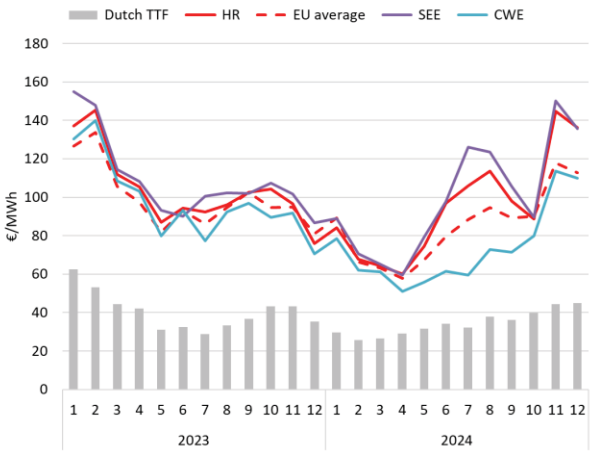
Graph A8.1: **Retail energy price components for household and non-household consumers, 2024**



(i) For household consumers, consumption band is DC for electricity and D2 for gas. Taxes and levies are shown including VAT.
(ii) For non-household consumers, consumption band is ID for electricity and I4 for gas. Taxes and levies are shown excluding VAT and recoverable charges, as these are typically recovered by businesses.
Source: Eurostat

Croatian energy prices remained stable in 2024 compared to 2023. Household electricity and gas prices remained significantly below EU-averages, while non-household consumers prices for electricity hovered above EU-averages for electricity. For both household and non-household consumers, the energy and supply price component represent a higher share than EU-average, while network costs and taxes and levies components are notably lower. For gas, taxes and levies account for only 4.8% of the total price for household consumers, significantly below the EU average of 27.8%. For non-household consumers, the share is 6.4%, also lower than the EU average of 11.6%.

Graph A8.2: **Monthly average day-ahead wholesale electricity prices and European benchmark natural gas prices (Dutch TTF)**



(i) the Title Transfer Facility (TTF) is a virtual trading point for natural gas in the Netherlands. It serves as the primary benchmark for European natural gas prices.
(ii) CWE and SEE respectively provide average prices in the central-western European (Belgium, France, Germany, Luxembourg, the Netherlands and Austria) and south-eastern European (Bulgaria, Greece and Croatia) markets.
Source: S&P Platts and ENTSO-E

Croatia's wholesale electricity prices averaged 94.6 €/MWh in 2024 ([169]) (the ninth highest in the EU); and, while they declined early in the year amid falling natural gas costs, they surged during the spring/summer and again in the winter (diverging from central-western European (CWE) markets). This price increase was driven by factors that affected both consumption and generation. Prolonged summer heatwaves and a colder winter in the region led to higher consumption (+3% in

([169]) Fraunhofer (ENTSO-E data).

2024). Reduced hydropower reserves (-15% in 2024 ([170]) and limited non-fossil flexibility exacerbated the supply-demand gap. This gap was mainly filled with higher imports, particularly from Slovenia (where costly natural gas and coal-fired generation was ramped up by 20% and 10% respectively in 2024), especially during peak demand hours. Consequently, and more than in 2023, these conditions drove concentrated price spikes in evening hours when demand remained high. However, average daytime hourly prices were lower than in 2023, probably due to the uptake of solar output in both Croatia (+110% in 2024) and Slovenia (+51% in 2024) ([171]).

Flexibility and electricity grids

To strengthen its compliance with the EU's 70% minimum threshold of capacity made available for cross-zonal electricity trading ([172]), Croatia has established an action plan for 2022–2025 ([173]). It focuses on increasing capacity with Hungary and Slovenia via network development and optimisation, and on improved congestion management. Croatia is part of the Core capacity calculation region (CCR) ([174]) where increased collective efforts are needed to reach the 70% threshold.

Croatia is well interconnected with neighbouring markets, but additional investments in its national grid are necessary in order to improve the integration and uptake of renewables. Croatia's electricity interconnection target is well above the minimum required level, reaching 49% for 2025. Two key projects of common interest (PCIs) have contributed to this: the Croatia-Hungary-Slovenia transmission grid connection project and the SINCRO.GRID smart electricity grid project. Croatia is also investing in its national grid under its recovery and resilience plan (RRP) in the ongoing upgrade of 550 km of the country's high voltage network (220/110 kV) and the underground cables that connect the six islands to the mainland network. However, internal grid constraints are still limiting renewables deployment. In 2023, 45 GWh of renewables were curtailed (1.2% of total renewable energy sources [RES] production) ([175]), while negative price hours doubled in 2024 to 184 hours ([176]). Expanding Dalmatia's transmission capacity (e.g. the 400 kV Konjsko-Melina line) towards northern consumption and interconnection hubs is essential in order to fully unlock Croatia's strong wind and solar potential.

In Croatia, connection to the grid is one of the major obstacles to the development of renewables. Delay on the part of the Croatian Energy Regulatory Agency (HERA) in setting a new grid connection fee has halted numerous renewable projects and led to divestment by some international renewable developers from Croatia. Croatia has not yet fully transposed the Renewable Energy Directive III into national law. There are no specific acceleration measures for renewable energy grid projects. The permitting procedures are similar for cross-border and internal projects. However, PCIs automatically qualify for 'strategic investment project' status under the Strategic Project Investments (SPI) Act, which allows procedural advantages (e.g. urgent handling of applications).

Croatia is expanding its non-fossil flexible power capacity, but demand-side response (DSR) and consumer empowerment need to be lifted. In addition to the 270 MW Velebit facility that is currently in operation, Croatia is developing a new hydro pumped storage plant (Vrdovo 450 MW project) along with its first grid-scale battery and virtual power plant (VPP) system with a 60 MW/120 MWh capacity near Šibenik. In theory, Croatia's regulatory framework allows all new actors and distributed energy resources (DERs) to access day-ahead and intra-day markets as well as to participate in ancillary services and provide congestion management services to TSOs (except energy communities) ([177]). In practice,

([170]) ENTSO-E.
([171]) Yearly electricity data, Ember (generation and consumption data throughout the paragraph).
([172]) TSOs are required under EU law to make 70% of transmission capacity available for electricity trading with neighbours by the end of 2025.
([173]) Action plan in line with Article 15 of Regulation (EU) 2019 943.pdf.
([174]) A CCR is a group of countries that calculate the cross-border electricity trade flows together. Core is the CCR which covers Belgium, Czechia, Germany, France, Croatia, Hungary, the Netherlands, Austria, Poland, Romania, Slovenia and Slovakia (and, once connected, Ireland).
([175]) ACER.
([176]) ENTSO-E.
([177]) 2023 Market Monitoring Report, ACER.

however, the absence of a dedicated independent aggregator framework limits DERs' access to wholesale markets. This has resulted in Croatia having the second lowest number of active nationwide electricity suppliers in the EU and one of the highest market concentrations in the EU ([178]). On consumer empowerment, the switching rate is still very low (less than 2%) which indicates a lack of participation by consumers in the market. 24% of final household consumers had smart meters in 2023 ([179]). This is an improvement on the 19% in 2022, but it is still far below the EU target of 80% of final customers and is preventing an uptake in subscription to dynamic contracts. According to the local energy communities' citizen association, only three energy communities have completed the necessary administrative steps to establish themselves as legal entities in Croatia, though they have not yet started producing electricity - lagging significantly behind the rest of the EU in development.

Electricity accounted for 20.3% of Croatia's final energy consumption (FEC) in 2023 (slightly below the EU average of 22.9%) but this share has remained largely stagnant in the last decade ([180]), partly due to an unfavourable electricity-to-gas price ratio that disincentivizes electrification and cost-effective decarbonization. Electricity accounts for 24.8% and 26.6% of households' and industry's FEC respectively (see also Annex 7). For the transport sector, this share remains negligible at 1.0%. Further progress in electrification across sectors is required to cost-effectively decarbonise the economy and bring the benefits of affordable renewable generation to consumers. In 2024's second semester, Croatia had some of the lowest household energy prices in the EU due to government support, but its electricity-to-gas price ratio was the fifth highest. Before taxes and levies, electricity cost 2.7 times more per unit than gas, rising to 3.3 after. Taxes and levies made up 17.7% of electricity costs but only 5.9% for gas, discouraging household electrification. For energy-intensive industries, electricity prices were among the highest in the EU (seventh highest), with higher taxes on electricity than gas for this consumer segment, there is also room for fiscal adjustments. Before taxes and levies, electricity cost 3.7 times more per unit than gas, rising to 3.9 after ([181]).

Renewables and long-term contracts

Croatia's renewable sources benefit from historically strong hydro capacity and growing rooftop solar penetration which altogether represented 73% of electricity generation in 2024 (the EU's overall RES share was 47%). Hydropower remains the key renewable source, representing close to 44% of the mix (one third of which is run-of-river hydro). It is a cheap and renewable source of electricity but is also highly sensitive to the shifting climate, as shown in 2024, which is expected to bring more frequent and intense droughts, along with reduced snowmelt. Wind generation is slowly growing and represented 16% of all generation in 2024 (vs 14% in 2023). Solar generation is also growing but remains limited (less than 6%) ([182]). Croatia added a record 397 MW ([183]) of solar capacity (almost exclusively rooftop) in 2024, but wind capacity stagnated (+31 MW in 2024 vs +173 MW in 2023). Overall, Croatia's solar and wind potential is still untapped, at both rooftop and utility-scale levels. In terms of gross final energy consumption (based on the Renewable Energy Directive methodology), the share of renewable energy sources remained stagnant at 28% in 2023 (EU average at 24.5%) ([184]).

([178]) 2024 Market Monitoring Report on Energy Retail and Consumer Protection, ACER-CEER.

([179]) This improvement is supported by the ongoing nationwide roll-out of 100 000 smart meters by 2026, co-financed via the Croatian RRP.

([180]) The CAGR (compound annual growth rate) was 0.1% between 2013 and 2023. The minimum/maximum shares were 20% and 20.8% respectively. Source: Final energy balances, Eurostat.

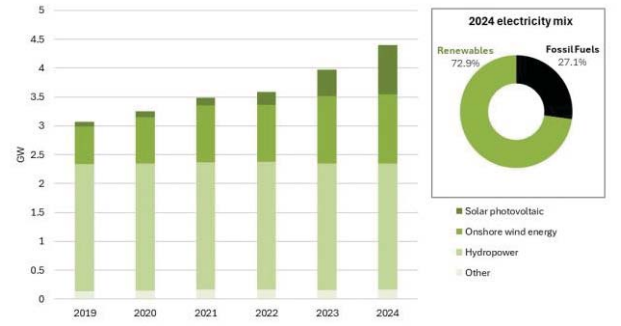
([181]) Source: Eurostat. For household consumers, consumption band is DC for electricity and D2 for gas, which refer to medium-sized consumers and provide an insight into affordability. For non-household consumers, consumption band is ID for electricity and I4 for gas, referring to large-sized consumers, providing an insight into international competitiveness (price used for the calculation excludes VAT and other recoverable taxes/levies/fees as non-household consumers are usually able to recover VAT and some other taxes).

([182]) Yearly electricity data, Ember.

([183]) Renewable capacity statistics 2025, IRENA.

([184]) Eurostat.

Graph A8.3: **Croatia's installed renewable capacity (left) and electricity generation mix (right)**



"Other" includes renewable municipal waste, solid biofuels, liquid biofuels, and biogas.
Source: IRENA, Ember

Croatia has made progress on permitting procedures for renewable energy. This includes the use of positive administrative silence for small installations, transparency, etc. However, delays in the implementation of legal reforms in the electricity sector and the absence of a one-stop-shop have created bottlenecks in connecting projects.

Croatia held a new renewable energy auction in 2024, allocating support to more than 400 MW of solar PV. No new schedule on the expected allocation of support for renewables had been released in the Union Renewables Development Plans platform by the end of 2024.

Croatia does not have a market for power purchase agreements (PPAs). Apart from possible regulatory barriers, the pipeline of renewable energy projects is too constrained to allow sufficient supply to feed a PPA market. In these circumstances, electricity consumers can only have direct access to renewable electricity through on-site generation.

Energy efficiency

Croatia's energy efficiency gains have slowed down overall, although energy efficiency efforts in residential and services are continuing to deliver energy savings. Primary energy consumption (PEC) increased by 2.9% in 2023 to 8.54 Mtoe compared with 2022. Final energy consumption (FEC) increased by 3.2% to 7.10 Mtoe. Compared with 2022, FEC increased in industry and transport by 4.0% and 11.0% respectively. FEC decreased in residential and services by 2.7% and 3.5% respectively, showing that energy efficiency efforts in buildings continue to deliver savings. Additional energy efficiency efforts to address the energy savings potential in industry and tertiary sectors could boost Croatia's competitiveness and lower energy costs. The recast Energy Efficiency Directive (EED) requires Croatia to reach 6.80 Mtoe in PEC and 5.88 Mtoe in FEC by 2030.

No significant measures are being taken in Croatia to phase out the use of fossil fuels, to lower gas consumption for heating and cooling purposes, or to significantly modernise and electrify heating and cooling systems. Croatia relies on a large net renewables butt heating and cooling systems, but these are often not efficient (as per the efficient district heating and cooling definition in the Energy Efficiency Directive) and need to be modernised in order to accommodate low-temperature heat supply. That is why Croatia through RRP and ERDF allocated more than EUR 76 million for research for geothermal potential for district heating systems. Croatia still has to enable citizens to access to their real heating consumption and individual submetering in multiapartment buildings. Croatia has not provided the Commission with a comprehensive heating and cooling assessment in which it identifies the potential for the application of high-efficiency cogeneration and efficient district heating and cooling (in line with Article 25(1) of the EED) and has given no indication of when it will do so.

Croatia needs to step up its efforts in the residential building sector in order to achieve its 2030 energy consumption target for buildings. Residential FEC decreased in 2023 compared with 2022 but has remained almost constant since 2018 (when one applies a climate correction). Croatia is therefore invited to renovate its building stock. Encouraging progress has been made on this point during the post-earthquake reconstruction process.

Heating and cooling represented almost 80% of Croatia's residential final energy consumption in 2022. Croatia has around 275 000 individual gas boilers installed in residential buildings. Financial support for installation of heat pumps is available, amounting to EUR 4 250 or 40% of the total cost for a typical family. Electricity in Croatia was 3.3 times more

expensive than gas in 2023. This means that end users who switch to heat pumps may not get any economic benefit from any energy saving.

Croatia has a national financing framework that mobilises investment in energy efficiency based mainly on grant-support programmes for energy renovations, as well as some dedicated financial instruments. The main programmes supporting energy efficiency investment in Croatia are the Ministry of Construction's energy renovation programmes for the different segments of the building stock. These rely entirely on grants and there is limited scope to mobilise further investment. Croatia also has some financial instruments for energy efficiency (e.g. the Environmental Protection and Energy Efficiency Fund, and the Croatian Bank for Reconstruction and Development).

Security of supply and diversification

Croatia has significantly invested in gas infrastructures in order to enhance supply diversification and regional energy security. The CESEC action plan on gases, which was endorsed in 2024, identifies four REPowerEU projects in Croatia, whose timely completion in 2025 will be critical: (i) the Krk LNG terminal expansion (scheduled for Q3 2025); (ii) increasing the capacity of the Zlobin-Bosiljevo pipeline (scheduled for Q1 2025); (iii) the Bosiljevo-Sisak-Kozarac pipeline (scheduled for December 2025); and (iv) the Lucko (Croatia) – Zabok (Slovakia) interconnection (scheduled for December 2025). On renewable gases, Croatia still has to further define its hydrogen and biomethane needs and to plan the relevant infrastructure it needs in line with its hydrogen and gas package requirements.

Croatia has made progress on renewables, but remained as heavily reliant on fossil fuels in 2023 as it had in 2022. Oil accounted for 41.4% of gross inland consumption, natural gas for 26.3% and coal for 4% ([185]). Renewables (and biofuels) contributed 27.8% ([186]).

([185]) Electricity and heat are excluded in order to avoid double-counting. The focus is on primary energy sources.

([186]) Gross inland consumption (Eurostat).

Fossil fuel subsidies

In 2023, environmentally harmful ([187]) fossil fuel subsidies without a planned phase-out before 2030 represented 0.65% ([188]) of Croatia's GDP ([189]), above the EU weighted average of 0.49%. Income/price support accounted for 81% of this volume, while tax measures represented 19%. Fossil fuel subsidies without a planned phase-out before 2030 and which do not specifically address, in a targeted way, energy poverty nor genuine energy security concerns included the ongoing emergency price cap on petroleum products, partial refunds of excise duties for diesel in commercial transport, and exemption of excise duty rates on gasoil for agriculture, fish growing, and aquaculture. Additionally, Croatia's 2023 Effective Carbon Rate ([190]) averaged EUR 62.3 per tonne of CO_2, below the EU weighted mean of EUR 84.80 ([191]).

([187]) Direct fossil fuel subsidies that incentivise maintaining or increasing in the availability of fossil fuels and/or use of fossil fuels.

([188]) Numerator is based on volumes cross-checked with the Croatian authorities. For all Member States, it includes public R&D expenditures for fossil fuels as reported by the IEA (Energy Technology RD&D Budgets) and excludes, for methodological consistency, excise tax exemption on kerosene consumed in intra-EU27 air traffic.

([189]) 2023 Gross Domestic Product at market prices, Eurostat.

([190]) The Effective Carbon Rate is the sum of carbon taxes, ETS permit prices and fuel excise taxes, representing the aggregate effective carbon rate paid on emissions.

([191]) OECD (2024), Pricing Greenhouse Gas Emissions 2024

Table A8.1: **Key Energy Indicators**

	Croatia				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1306**	**0.1416**	**0.1481**	**0.1478**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	44.3%	46.3%	47.5%	47.8%	36.6%	54.3%	55.6%	47.8%
Network costs	33.5%	32.6%	31.6%	31.6%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	22.2%	21.2%	20.9%	20.6%	36.7%	20.3%	19.6%	25.0%
VAT	11.5%	11.4%	11.5%	11.5%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.0386**	**0.0428**	**0.0448**	**0.0456**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	58.0%	69.2%	76.6%	76.3%	43.7%	61.0%	64.5%	53.9%
Network costs	22.0%	19.4%	18.8%	18.9%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	19.9%	11.4%	4.7%	4.8%	33.8%	21.7%	18.4%	27.8%
VAT	19.9%	11.4%	4.7%	4.8%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.0977**	**0.1635**	**0.2176**	**0.1988**	**0.1242**	**0.1895**	**0.1971**	**0.1661**
Energy & supply	54.4%	67.7%	72.8%	71.4%	43.0%	66.5%	63.0%	55.8%
Network costs	22.3%	13.5%	10.0%	10.9%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	13.3%	8.1%	6.4%	6.9%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0377**	**0.0632**	**0.0514**	**0.0502**	**0.0328**	**0.0722**	**0.0672**	**0.0517**
Energy & supply	70.7%	85.1%	87.8%	83.1%	66.2%	77.3%	77.3%	68.7%
Network costs	6.4%	5.0%	5.9%	6.3%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	3.7%	0.8%	1.6%	6.2%	12.5%	6.1%	7.3%	11.6%
Wholesale electricity price (EUR/MWh)	114.3	271.7	104.0	94.6	111.0	233.2	99.1	84.7
Dutch TTF (EUR/MWh)	*n/a*	*n/a*	*n/a*	*n/a*	46.9	123.1	40.5	34.4

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Gross Electricity Production (GWh)	**11 984**	**13 632**	**12 760**	**13 385**	**15 210**	**14 221**	**17 541**	-
Combustible Fuels	5 193	4 435	5 185	5 665	5 681	6 284	6 273	-
Nuclear	-	-	-	-	-	-	-	-
Hydro	5 508	7 785	5 933	5 810	7 229	5 574	8 248	-
Wind	1 204	1 335	1 467	1 721	2 062	2 138	2 587	-
Solar	79	75	83	96	149	152	413	-
Geothermal	-	2	92	94	90	73	21	-
Other Sources	-	-	-	-	-	-	-	
Gross Electricity Production [%]								
Combustible Fuels	43.3%	32.5%	40.6%	42.3%	37.4%	44.2%	35.8%	-
Nuclear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Hydro	46.0%	57.1%	46.5%	43.4%	47.5%	39.2%	47.0%	-
Wind	10.0%	9.8%	11.5%	12.9%	13.6%	15.0%	14.7%	-
Solar	0.7%	0.5%	0.7%	0.7%	1.0%	1.1%	2.4%	-
Geothermal	0.0%	0.0%	0.7%	0.7%	0.6%	0.5%	0.1%	-
Other Sources	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Net Imports of Electricity (GWh)	**6 954**	**5 388**	**6 133**	**4 639**	**3 961**	**4 695**	**1 578**	-
As a % of electricity available for final consumption	42.3%	32.4%	37.0%	29.8%	23.5%	28.3%	9.5%	-
Electricity Interconnection [%]	**52.0%**	**53.2%**	**50.0%**	**52.0%**	**45.6%**	**60.0%**	**29.5%**	**36.7%**
Share of renewable energy consumption - by sector [%]								
Electricity	46.4%	48.1%	49.8%	53.8%	53.5%	56.2%	58.8%	-
Heating and cooling	36.6%	36.7%	36.8%	36.9%	38.0%	37.2%	36.2%	-
Transport	1.2%	2.6%	5.9%	6.6%	7.0%	2.4%	0.9%	-
Overall	27.3%	28.0%	28.5%	31.0%	31.3%	28.1%	28.1%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**53.6%**	**54.5%**	**60.3%**	**55.7%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	106.0%	100.7%	100.9%	109.2%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	73.7%	78.4%	86.8%	82.8%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	68.8%	74.5%	77.5%	68.7%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	0.0%	0.0%	0.0%	0.0%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	0.0%	0.0%	0.0%	0.0%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	76.0%	78.7%	53.1%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**3.0**	**2.8**	**2.9**	**3.0**	**2.9**	**2.5**	**2.6**
Gas Consumption year-on-year change [%]	15.2%	-7.9%	5.0%	4.6%	-4.4%	-12.9%	2.4%
Gas Imports - by type (in bcm)	**1.8**	**1.6**	**2.0**	**2.1**	**2.3**	**3.0**	**2.9**
Gas imports - pipeline	1.8	1.6	2.0	2.1	0.6	0.5	0.3
Gas imports - LNG	0.0	0.0	0.0	0.0	1.7	2.5	2.6
Gas Imports - by main source supplier [%]							
United States	0.0%	0.0%	0.0%	0.0%	42.0%	70.2%	49.9%
Trinidad and Tobago	0.0%	0.0%	0.0%	0.0%	3.6%	0.4%	16.5%
Oman	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.0%
Slovenia	12.5%	19.0%	24.0%	27.1%	9.3%	12.8%	7.3%

Source: Eurostat, ENTSO-E, S&P Platts

Croatia is exposed to several climate risks, meriting urgent action to tackle resilience and environmental degradation. Action to reduce climate risks and protect the environment is key to country's economic stability and competitiveness. The economy is particularly vulnerable to flood damages given the very low rate of insurance coverage while sectors such as agriculture, energy and tourism are increasingly exposed to the various negative impacts of climate change. While the identified investment needs are substantial, the implementation of adaptation policies and measures is lagging behind due to lacking action plans and comprehensive monitoring, reporting and evaluation systems, both at national and subnational levels. Nature-based solutions and climate proofing are not yet systematically applied across sectors. While improvements have been made following important reforms carried out under the recovery and resilience plan (RRP), there is scope to improve sustainable water management in terms of water governance, wastewater treatment and flood management. To meet its 2030 target, Croatia needs additional investments in the land use, land-use change and forestry sector. It also needs immediate and additional action to tackle the poor status of ecosystems and the degradation of soils.

Climate adaptation and preparedness

Croatia is particularly exposed to heatwaves, droughts, floods and wildfires with significant implications for key sectors. It is in two of the three regions identified as hotspots of climate risks most affected by climate change – southern Europe and low-lying coastal regions ([192]). Agriculture and water management are the two sectors affected the most by droughts, but hydro and thermal power production also face risks, as does tourism. Increasingly frequent and more severe droughts and heatwaves are having significant effects on ecosystems. In 2022, a third of the country suffered from drought leading to reduction in crop yields ([193]) and wildfires affecting forests, especially in the coastal area. Between 2006 and 2023, wildfires burned an average of more than 13 600 hectares and in 2024 alone, 15 800 hectares (28% of all land – one of the highest rates in the EU). In 2024 Croatia adopted a new disaster risk assessment ([194]) which is based on improved methodologies to analyse climate change impact. The future river basin management plan for 2028-2033 aims to include the results of the 'Study on marine flooding risk management' and of the drought management plan that is currently being developed. Several measures related to forest fire prevention are in place or are being rolled out, such as a centre for coordination, monitoring and communication, surveillance equipment, access corridors, seasonal reallocation of resources, training programmes, and awareness-raising campaigns.

Climate risks have a direct effect on Croatia's economy while insurance coverage remains very low. Between 1980 and 2023, Croatia recorded EUR 4.2 billion in economic losses caused by weather and climate-related extreme events. At the same time, only 2% of the economic damages over this period were insured ([195]), making Croatia one of the EU Member States with the lowest rate of insurance coverage against extreme events ([196]). Floods are a risk both in terms of expected annual damage, including to the infrastructure needed to decarbonise the transport sector such as railways and ports, and in terms of population exposed. At present, flood damages are covered by the state budget but Croatia has started examining the potential role of insurance companies and has initiated some awareness-raising campaigns to encourage farmers to take out insurance.

Croatia has been strengthening its national policy framework on climate adaptation and preparedness but actual implementation remains an issue. Since 2019, it adopted a basic

([192])EEA, 2024, *European Climate Risk Assessment*.

([193])In 2022, the drought caused EUR 300 million in damage to agriculture, see EEA, 2021, *Drought impact on ecosystems in Europe, 2000-2023*, Link.

([194])The assessment has been made for 10 sectors and the results have been integrated in the national climate adaptation strategy.

([195])EEA, 2024, *Economic losses from weather- and climate-related extremes in Europe*, Link.

([196])The overall climate protection gap score is 1.75 (medium) and has been stable. Insurance coverage is limited (below 50% for all perils), resulting in a high gap of 3 for floods and 2.5 for wildfires respectively, with insurance coverage below 25%.

legal act ([197]) and a national climate adaptation strategy. As per statutory requirements, climate adaptation must be taken into account when drafting new legislation, new national and subnational development documents and strategic sectoral documents, and in environmental impact assessment procedures, amongst others. Nevertheless, the national action plan and a comprehensive monitoring, reporting and evaluation system have not been set up to date, although this is planned in 2025. This makes it difficult to assess progress on the ground. Croatia is also planning to set up a National Centre for Climate Adaptation and is strengthening administrative capacities which should help improve governance and coordination. The disaster risk management strategy up to 2030 is in place since 2022 with the action plan for 2025-2027 currently in the process of being adopted.

Implementation at subnational level is largely stalling. In 2023, 62% of the population (EU average: 46%) lived in municipalities that have signed the EU Covenant of Mayors for Climate and Energy. However, to date only a few Croatian cities and counties have signed the EU Mission on Adaptation to Climate Change charter. Also, in 2024 only Slavonski Brod and three smaller cities adopted climate mitigation and adaptation action plans while the vast majority of counties and large cities are lagging behind (only 8 out 37 have adopted a plan). To encourage cities and counties to develop and implement subnational adaptation strategies and action plans, Croatia launched public calls in 2024 with the support of the Environmental Protection and Energy Efficiency Fund. In addition, Croatia is planning to set up a network of climate officers to improve local capacities.

Nature-based solutions and climate proofing are not yet systematically applied across sectors. In Croatia, nature-based solutions and guidelines are still mainly used with regards to fluvial floods and actions are usually implemented in the context of disaster risk management (e.g. flood protection, fire protection). While in 2025-2026 Croatia plans to carry out some further flood protection measures and pilots on green urban infrastructure, it does not yet deploy nature-based solutions and ecosystem-based adaptation at a large scale and across sectors. Trainings on climate proofing are increasingly taking place, including on the local and regional level, but systematic measures to build resilience and ensure climate proofing across different sectors and key infrastructure, including the future gas pipelines ([198]) or management of water scarcity in the energy sector, are not yet applied.

Croatia draws on several EU funds to improve its preparedness, but the investment needs are significant. Flood prevention and fire protection are tackled under cohesion policy, including cross-border programmes, with EUR 325 million for flood and saline intrusion prevention investments. Cohesion policy funds also allocate EUR 61 million to firefighting measures under the 2021-2027 Croatian programme for competitiveness and cohesion. Cohesion policy provides support for climate adaptation measures under calls for proposals that allocate an additional EUR 54.5 million for 2021-2027. However, under the national climate adaptation strategy, the cost of implementing 83 measures, including measures to support disaster risk reduction for the period up to 2040, was estimated at around EUR 3.6 billion. Establishing proper monitoring and evaluation systems will be key for channelling investments in the future.

Water resilience

Croatia has abundant renewable water resources but climate change and rising demand from water-dependent sectors such as tourism, energy and agriculture put resources under stress. Croatia's water productivity is EUR 82 per m^3 of abstracted water in 2022, on an upward trend over a five-year period ([199]). The Water Exploitation Index Plus (WEI+) is one of the lowest in the EU but it is increasing slightly and reached 0.3 in 2022. The main consumer of water is the public water supply. Between 2017 and 2022, water abstraction in the public water supply sector fell by about 12% but the sector still accounts for the highest share of

([197]) Parliament of Croatia, 2019, *The Climate Change and Ozone Layer Protection Act*, Link.

([198]) Wildfires can be particularly problematic for the gas pipelines.

([199]) Measured as GDP in 2010 chain linked volumes over total fresh surface water abstracted in cubic metres.

water consumption at 110 million m^3, i.e. over 50% of total consumption in 2022, putting a strain on the country's water resources. The old water infrastructure is one of the most serious causes of significant water loss in Croatia. The share of non-revenue water ([200]) in 2021 was around 49% ([201]). The Croatian government is implementing measures to reduce water loss, both under cohesion policy and under the recovery and resilience plan. This includes the adoption of a national plan on reducing water loss in public water supply systems, the construction, remediation and extension of water supply networks and the installation of metering devices.

Surface water quality in Croatia has deteriorated but the quality of groundwater bodies has remained stable. Croatia's third river basin management plan (2022-2027) under the Water Framework Directive shows that, as a result of better knowledge and monitoring, the ecological status and potential of surface water bodies has significantly decreased since the second plan. Only 33% of surface water bodies are classified as having good ecological status/potential, a significant decrease from 42.1% in the second plan. As a result of better knowledge and monitoring, Croatia has also downgraded the chemical status for surface water bodies, with 80% having a good chemical status down from 92% under the second plan. The source of significant pressure is wastewater discharges from unconnected dwellings that impair water quality in 65% of rivers and 62% of lakes. The quantitative status of groundwater bodies has slightly deteriorated since the second plan, with 90% reported as having good quantitative status. Their chemical status has slightly improved, with at least 92% now reported as having good chemical status.

Croatia's wastewater treatment is a particular cause for concern and a major source of water pollution. Despite minor improvements in compliance over the years, in particular thanks to EU cohesion funding, Croatia has experienced serious difficulties in implementing the Urban Wastewater Treatment Directive. The compliance rate was only 7% in 2020, with 68 agglomerations not meeting all the requirements of the Directive. Therefore, Croatia should swiftly implement the projects planned under the cohesion policy funds and the Recovery and Resilience Facility (RRF) to meet the requirements of the Directive. The investment needs shown in Graph A9.2 for water protection and water management are substantial. Croatia has a financing gap of EUR 272 million per year up to 2027. Of the total financing, 27.7% is provided by the EU multiannual financial framework (mostly through cohesion policy), and 13.3% from the RRF. Most funding comes from national resources (59%). Further infrastructure development would help improve water management, e.g. wastewater collection and treatment, water reuse, reduce leaks in the networks and the general water supply. Additional investments are needed to improve monitoring (quality and quantity) and to support nature-based solutions, flood prevention and river restoration.

Biodiversity and ecosystems

The state of nature and ecosystems continues to deteriorate in Croatia, reducing the country's climate resilience. Croatia has a very high level of biological diversity, home to about 40 000 species endemic to Europe. According to the last available data, only 39.2% of the country's habitats have a good status, higher than the EU average of 14.7%, but still suboptimal. By contrast, the conservation status of species is concerning, with only 7% reported as having a good status, lower than the EU average of 27%. Monitoring the state of nature is still problematic as the conservation status of 47% of species and 14% of habitats was unknown in 2018.

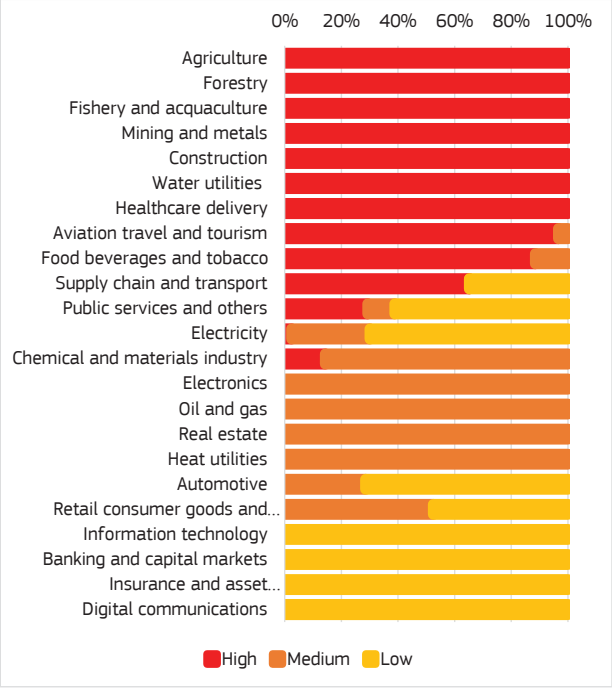
Nature degradation creates significant risks to the economy and to competitiveness as Croatia has one of the highest degree of dependency on ecosystem services in the EU. Croatia is the Member State with the highest direct dependency on ecosystem services, with 59% of its gross value added categorised as highly dependent, against the EU-27 average of 44%. Several sectors such as agriculture, forestry, fisheries, construction, water utilities, mining and metals and healthcare delivery (see Graph A9.1) are estimated to be particularly dependent on

([200])Water produced and lost before it reaches the customer.

([201])European Commission, The World Bank (2023), *Technical assistance on support to reduce water loss within the reform of the water sector in Croatia*, Link.

ecosystem services. 100% of the gross value added of these sectors is highly dependent on ecosystem services. In addition, the chemicals sector has a particularly high degree of dependency, with 14% of gross value added highly dependent and 86% with a medium degree of dependency. This means that failure to maintain the capacity of ecosystems to deliver services could entail significant costs or even stop production in these sectors. Protecting and restoring key ecosystems would help maintain the long-term competitiveness of these sectors.

Graph A9.1: **Direct dependency(1) on ecosystem services(2) of the gross value added generated by economic sector in 2022**



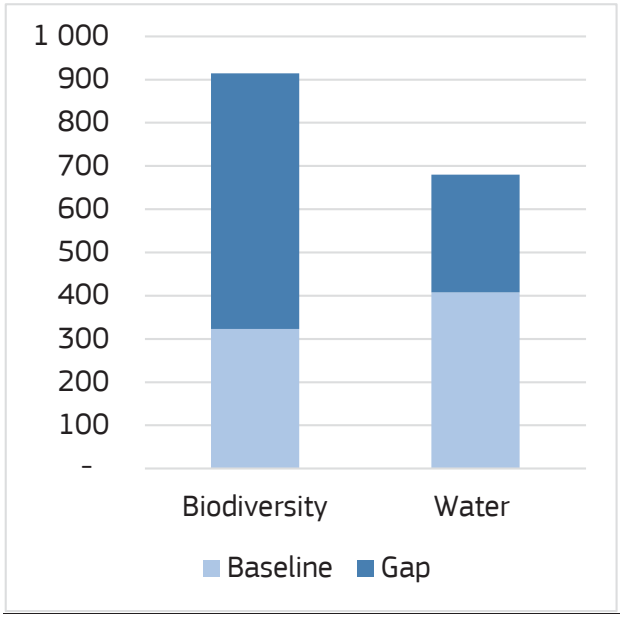
(1) Dependency based on the sector's own operations, excluding value chain operations within countries and across international value chains. A high dependency indicates a high potential exposure to nature-related shocks or deteriorating trends, which means that the disruption of an ecosystem service could cause production failure and severe financial loss.
(2) Ecosystem services are the contributions of ecosystems to the benefits that are used in economic and other human activity, including provisioning services (e.g. biomass provisioning or water supply), regulating and maintenance services (e.g. soil quality regulation or pollination), and cultural services (e.g. recreational activities).
Source: Hirschbuehl et al, 2025, *The EU economy's dependency on nature*, Link.

Targeted action on nature protection and restoration is needed to meet Croatia's nature restoration targets. In 2021, 38% of land was protected, and this percentage has remained constant over the last few years. Croatia therefore has one of the highest shares of protected land in the EU. By contrast, only 9.5% of Croatia's marine area is protected. Croatia's land protected area makes an above-average contribution to the EU biodiversity strategy target but below-average contribution to the EU target to protect marine areas. Croatia is currently drawing up management plans for protected areas, which is a step towards making an effective contribution to biodiversity protection. Between 2006 and 2012, the extent of soil areas providing flood control ecosystem services decreased by 48% due to soil sealing ([202]) caused mainly by urbanisation, industrial plants, roads and water accumulation. Limiting soil sealing and investing more in nature-based solutions for flood protection would both limit flood damage and improve river ecosystems. Croatia also needs to restore 351 to 6 908 km^2 of habitats listed in Annex I to the Habitats Directive, corresponding to 0.6% to 12.4% of the country's territory and up to 798 km^2 of its marine habitats ([203]). It requires EUR 914 million of investment per year to effectively protect and restore its natural capital, mitigate the impacts of climate change and preserve the country's rich biodiversity (see Graph A9.2). The current level of financing for biodiversity and ecosystem conservation in Croatia is around EUR 313 million per year. This shortfall undermines the country's commitment to global biodiversity agreements and its long-term economic and social development.

([202])European Commission, European Environment Agency (2021), *Accounting for ecosystems and their services in the European Union.*

([203])European Commission (2022), *Impact assessment accompanying the proposal for a Regulation on nature restoration.*

Graph A9.2: **Investment needs and gaps in EUR million, in 2022 constant prices**



Source: European Commission, DG Environment, Environmental investment needs & gaps assessment programme, 2025 update.

Sustainable agriculture and land use

Croatia's carbon removals fall short of the level of ambition needed to meet its 2030 target for land use, land-use change and forestry (LULUCF). In Croatia, net carbon removals in the LULUCF sector fell by almost 1 million tonnes in 2022 due to sanitary logging and forest fires. To meet its 2030 LULUCF target, additional carbon removals of -0.6 million tonnes of CO_2 equivalent (CO_2eq) are needed ([204]). The latest available projections show a gap to target of 2.0 million tonnes of CO_2eq for 2030 ([205]). Therefore, additional measures are needed for the country to reach the 2030 target.

Several initiatives are underway to improve carbon sequestration capacities in the LULUCF sector, but additional investments are needed. In August 2024, the government adopted an action plan to plant 1 million additional trees per year by 2030. Croatia started preparing a new forest management plan (2026-2035) and plans to publish the results of the second national inventory of forest resources in 2026. To improve reporting, a land matrix will also be created for forests and forest land and carbon stocks in soil, litter, humus and large and small dead wood will be assessed. Croatia is in the process of establishing a national certification scheme for forest-based carbon removals. However, investments in the conversion of ageing degraded forests and afforestation are needed to boost carbon sequestration capacity, especially given Croatia's vulnerability to wildfires.

Agriculture is a source of greenhouse gas emissions in Croatia and has a significant impact on soils, air and water. In 2022, agriculture generated 2.47 million tonnes of CO_2eq, down slightly since 2018, accounting for around 10.5% of the country's total emissions. This includes 1.5 million tonnes of CO_2eq from livestock (also down since 2018). The utilised agricultural area (UAA) in Croatia increased by 11.6% from 1.33 million hectares in 2012 to 1.48 million in 2023 but on a downward trend since 2016. The increase has translated into a rise in nutrient losses from agriculture, mainly from mineral fertilisers and manure, which poses a significant environmental concern and a threat to human health. This is reflected in the country's nitrogen balance, which reached 59.5 kg of nitrogen per hectare of UAA in 2021, one of the highest values in the EU. Nonetheless, according to data collected under the Nitrates Directive, only 1.5% of groundwater monitoring stations in Croatia recorded average nitrate concentrations above 50 mg/l between 2016 and 2019, exceeding the healthy threshold for human consumption. Although the livestock density index was 0.61 in 2020, slightly below the EU average of 0.75, ammonia emissions remained constant from 2013 to 2022. However, that the average consumption of pesticides in Croatia (1.0 kg per hectare in 2023) is only half of the EU average (1.9 kg per hectare).

Croatia is transitioning to a sustainable food system by implementing policies to reduce the environmental impact of agriculture. In 2022, 6.9% of its agricultural land had landscape features such as woods and non-productive grasslands, above the EU average of 5.6%. Organic farming, which reduces the use of synthetic fertilisers and pesticides, made up almost 9% of Croatia's agricultural land, a 272% increase since 2012. Croatia aims to reach 12% of

([204])National LULUCF targets of the Member States in line with Regulation (EU) 2023/839.

([205])Climate Action Progress Report 2024, COM/2024/498.

UAA under organic farming by 2030, which it will comfortably achieve with the current growth rate of organic farming. However, this is not ambitious enough to meet the objective of 25% at EU level, set in the European Green Deal.

Croatia's common agricultural policy (CAP) strategic plan and recovery and resilience plan (RRP) contain measures to help reduce soil, air and water pollution. As agricultural emissions mainly stem from soil and manure management, a number of measures were introduced in Croatia's CAP strategic plan to protect soil organic matter and carbon content. This will contribute to climate change mitigation and improve water quality and biodiversity. Almost 48% of UAA will be covered by measures to improve and protect soils while 12% of UAA will be covered by measures to improve air quality. Other CAP strategic plan measures covering 65% of livestock aim to improve animal feeding, care and welfare conditions, and by extension to reduce emissions in the livestock sector. The bioeconomy, encompassing the production and processing of biological products, contributed EUR 4.35 billion of added value to the country's gross domestic product in 2021. Agriculture, forestry and fisheries generated EUR 2.62 billion, while the food industry contributed EUR 1.78 billion in 2023. Measures under the RRP, including the land consolidation and monitoring programme, should contribute to better water management, prevention of soil erosion and acidification, air conservation, and landscape protection.

Table A9.1: **Key indicators for progress on climate adaptation, preparedness and environment**

Climate adaptation and preparedness:	Croatia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Drought impact on ecosystems *[area impacted by drought as % of total]*	0.03	0.07	1.92	3.09	31.86	0.05	6.77	2.76
Forest fires burned area (1) *[ha, annual average 2006-2023]*	13 647	13 647	13 647	13 647	13 647	13 647		
Economic losses from extreme events *[EUR million at constant 2022 prices]*	334	-	61	-	352	151	24 142	62 981
Insurance protection gap (2) *[composite score between 0 and 4]*	-	-	-	-	1.88	1.75		
Heat-related mortality (3) *[number of deaths per 100 000 inhabitants in 2013-2022]*	121	121	121	121	121			
Sub-national climate adaptation action *[% of population covered by the EU Covenant of Mayors for Climate & Energy]*	50	51	53	55	55	62	41	44

Water resilience:	Croatia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Water Exploitation Index Plus, WEI+ (4) *[total water consumption as % of renewable freshwater resources]*	0.2	0.2	0.3	0.2	0.3	-	4.5	4.5
Water consumption *[million m^3]*	215	209	210	204	217	-		
Ecological/quantitative status of water bodies (5) *[% of water bodies failing to achieve good status]*								
Surface water bodies	-	-	-	67%	-	-	-	59%
Groundwater bodies	-	-	-	2%	-	-	-	93%

Biodiversity and ecosystems:	Croatia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Conservation status of habitats (6) *[% of habitats having a good conservation status]*	39.2	-	-	-	-	-	14.7	-
Common farmland bird index *2000=100*	-	-	-	-	-	-	72.2	74.4
Protected areas *[% of terrestrial protected areas]*	-	-	-	38	38	-	-	26

Sustainable agriculture and land use:	Croatia						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Bioeconomy's added value (7) *[EUR million]*	3 704	3 965	3 713	4 352			634 378	716 124
Landscape features *[% of agricultural land covered with landscape features]*	-	-	-	-	7	-		
Food waste *[kg per capita]*	-	-	71	71	72	-		
Area under organic farming *[% of total UAA]*	6.9	7.2	7.2	8.3	8.9		7.99	-
Nitrogen balance *[kg of nitrogen per ha of UAA]*	58.8	55.2	55.8	59.5	-	-		
Nitrates in groundwater (8) *[mgNO_3/l]*	-	-	-	-	-	-		
Net greenhouse gas removals from LULUCF (9) *[Kt CO_2-eq]*	- 5 493	- 5 726	- 5 659	- 5 764	- 4 867	-	- 256 077	- 240 984

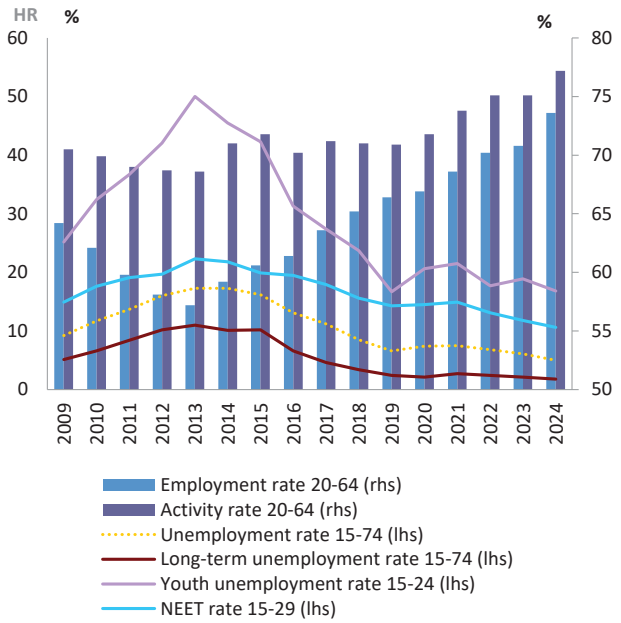
(1) The data show the average for the timespan 2006-2023 based on EFFIS - European Forest Fire Information System.
(2) Scale: 0 (no protection gap) – 4 (very high gap). EIOPA, 2024, Dashboard on insurance protection gap for natural catastrophes.
(3) van Daalen, K. R. et al., 2024, The 2024 Europe report of the Lancet Countdown on health and climate change: unprecedented warming demands unprecedented action, The Lancet Public Health.
(4) This indicator measures total water consumption as a percentage of the renewable freshwater resources available for a given territory and period. Values above 20% are generally considered to be a sign of water scarcity, while values equal or greater than 40% indicate situations of severe water scarcity.
(5) European Commission, 2024, 7th Implementation Report from the Commission to the Council and the European Parliament on the implementation of the Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC) (Third River Basin Management Plans and Second Flood Risk Management Plans).
(6) For this indicator, the EU average includes figures for the UK under the previous configuration, EU-28.
(7) European Commission, 2023, EU Bioeconomy Monitoring System dashboards.
(8) Nitrates can persist in groundwater for a long time and accumulate at a high level through inputs from anthropogenic sources (mainly agriculture). The EU drinking water standard sets a limit of 50 mg NO_3/L to avoid threats to human health.
(9) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2024 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 – Annex IIa.
Source: Eurostat, EEA.

ANNEX 10: LABOUR MARKET

Croatia's labour market has shown resilience and continuous improvement, yet structural challenges remain that hinder competitiveness and economic growth potential. Employment has increased in recent years and unemployment is historically low. Nevertheless, underrepresentation of some vulnerable groups in the labour market – particularly older people, low-skilled workers and persons with disabilities – negative demographic trends as well as labour shortages and skills mismatches affecting labour productivity together with segmentation pose challenges. As Croatia works towards reaching its 2030 employment rate target, key challenges towards achieving a more inclusive labour market and robust economic growth will be activating underrepresented groups and better using their potential and addressing potential skill mismatches through increasing relevant labour market training.

Croatia's labour market continues to improve but still performs below the EU average. Though improving since 2021, the employment rate remained below the EU average in 2024 (73.6% vs 75.8%). At 75%, the country's 2030 employment rate target remains above the current rate (by 1.4 percentage points (pps), underscoring the need for further efforts. The unemployment rate has steadily declined since 2014, reaching historically low levels below the EU average (5% vs 5.9% in 2024). In addition, strong economic activity and labour demand led to record low long-term unemployment in 2024 (1.8%). Labour market slack ([206]) decreased slightly to 8% in 2024, remaining significantly below the EU average (11.7%). However, skills mismatches persist as the macroeconomic skills mismatch remains above the EU average (24% vs 19% in 2023), as does youth unemployment (16.8.% vs 14.9% in 2024). Regional disparities in employment rates are relatively high, with the Pannonian and Adriatic regions having lower employment rates (67.3% and 65%, respectively) than the national average. The labour market participation rate, although increasing in recent years, is still below the EU average (71.9% vs 75.4% in 2024), making it harder to reach the 2030 employment rate target. This emphasises the need for further labour market activation and for bottlenecks in labour migration to be addressed.

Graph A10.1: **Key rates: activity, unemployment, long-term unemployment, youth unemployment, NEET**



(1) Activity rate and Employment rate (% of population), total, ages 20-64
Unemployment rate and long-term unemployment rate (% of labour force), total, ages 15-74
Youth unemployment rate (% of labour force), total, ages 15-24
NEET: Not in employment, education or training (% of population), total, ages 15-29
Source: Eurostat, LFS [lfsi_emp_a, une_rt_a, edat_lfse_20, une_ltu_a]

Despite increasing labour market participation overall, older people and low-skilled workers face persistent challenges in accessing quality employment. Overall, investments in active labour market policies (ALMPS) in Croatia are low compared to other EU Member States, negatively affecting the support to vulnerable groups with spending predominantly focused on subsidies and financial incentives. Older workers and the low skilled remain underrepresented in the labour market. While some progress has been made in recent years, Croatia still has one of the lowest employment rates for older workers (aged 55-64) in the EU. In 2024, their employment rate was 53.9%, well below the EU average of 65.2%, with even lower

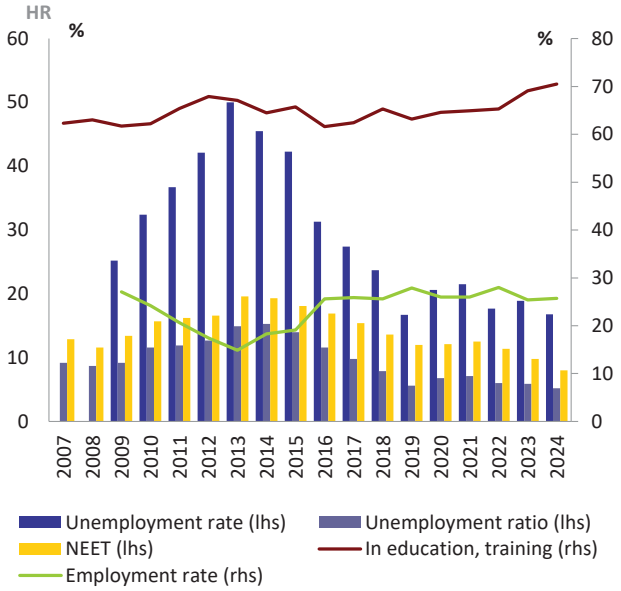
([206])The labour market slack is the underutilization of labour resources, including unemployment, underemployment, and those available for work but not actively seeking employment.

employment rate for those aged 60-64 (40.9% vs 53.1% in the EU). This disparity in the 55-64 group is partly due to historically high retirement rates, driven by low statutory and early retirement ages, as well as widespread early retirement among specific population groups. Similarly, the employment rate for low-skilled workers (aged 20-64) remains well below the EU average (41.3% vs 58.7% in the EU in 2024). It also significantly lags behind the employment rates of medium-skilled (71.9%) and high-skilled (87.2%) workers, particularly pertaining to skills that are inadequate for labour market needs, highlighting the need for upskilling and reskilling opportunities for this group in particular.

The employment situation for persons with disabilities is particularly concerning. The disability employment gap increased significantly over two consecutive years, rising from 28.7 pps in 2021 to 41.0 pps in 2024, well above the EU average of 24.0 pps. Only 38.3% of people with some or severe disabilities are active in the labour market, well below the EU average of 64% ([207]). In 2022, almost half of young persons with disabilities were not in employment, education or training (48% compared to the EU average of 27.3%). Croatia has not yet set a target for the employment of persons with disabilities. It is implementing the national plan for equalising opportunities for persons with disabilities for the period 2021-2027, and personal assistance services are regulated through the country's Law on Personal Assistance, with support from the European Social Fund Plus (ESF+). Further policy initiatives would be beneficial for expanding employment and training opportunities and help improve labour market inclusion for persons with disabilities.

Increasing access to formal childcare and long-term care (LTC) services improves women's participation in the labour market. Women's employment rate is slightly below the EU average (70.8% vs 70.6% in 2024), showing a 3.2 pp increase form 2023. Women are often unable to work full-time due to insufficient availability of early childcare services – only 30.2% of Croatian children under 3 were in formal childcare in 2024, compared to the EU average of 39.2%, and the rate was even lower for children at risk of poverty or social exclusion (8.2%). However, major reforms and investments, including those supported by the Recovery and Resilience Facility (RRF) and the ESF+, are being carried out to improve early childhood education and care (ECEC) quality and availability In addition, Croatian women also take on most of the (informal) long-term care responsibilities for family members as the country has the lowest coverage of formal institutional and home care in the EU. To address this, the government has started a structural reform of the LTC system with RRF and ESF+ support. Successful implementation of ECEC and LTC reforms should help further increase the labour market participation of women and reduce gender disparities in employment.

Graph A10.2: **Young people: in education and training, employment rate, unemployment rate, unemployment-to-population ratio, NEET**



(1) Employment rate (% of population), total, ages 15-24
Young people in education and training (% of population), total, ages 15-24
Youth unemployment rate (% of labour force), total, ages 15-24
Youth unemployment-to-population ratio (% of population), total, ages 15-24
NEET: Not in employment, education or training (% of population), total, ages 15-24
Source: Eurostat, LFS [edat_lfse_18, lfsi_emp_a, une_rt_a, lfsi_act_a, edat_lfse_20]

Despite long-term improvements, young people still face challenges in the labour market. In 2024, the youth unemployment rate stood at 11.9%, slightly above the EU average (11.4%). In addition, young workers are more often employed on temporary contracts than the overall population (27.1% vs 11.1% in 2023),

([207])European comparative data on persons with disabilities - data 2022 - European Commission.

underscoring their limited access to stable jobs. On the other hand, the share of young people not in education, employment or training (NEETs) has steadily declined, falling for the first time below the EU average in 2024 (10.6% vs 11.0% in the EU). The ESF+ supports access to employment prioritising youth employment, including through ALMPs and skills development initiatives, which include implementing the vouchers system that is expected to be transformed into individual learning accounts (ILAs). Various measures aim to reach almost 70 000 people. The better use young talent in the Croatian labour market could be achieved by raising the quality of offers and outreach activities, especially for young people under the European Youth Guarantee, along with strengthening training and education to align with labour market needs and better preparing young people for their transition to work.

Further integrating underrepresented groups into the labour market is critical as Croatia's decreasing and ageing population poses long-term risks. Croatia's population is both shrinking and ageing rapidly, driven by declining birth rates and rising life expectancy. According to the 2021 census, the population fell by 9.25% between 2011 and 2021. Between 2022 and 2070, it is projected to further decrease by approximately 22%, from 3.86 million to 3.01 million people. The labour force participation rate and the employment rate for the working-age population (20-64 or 20-74) are both projected to rise throughout the projection period. These increases are partly due to the rising retirement age for women, affecting both early and statutory retirements (see below). Nevertheless, the working-age population is projected to decline, and life expectancy is anticipated to rise significantly. As a result, the old-age dependency ratio (the ratio of people aged 65 and over to those aged 20-64) is set to grow from 38.9% in 2022 to 62.2% by 2070. To address these challenges, Croatia has introduced a pension reform, including gradually increasing the pensionable age for women (by three months every year), reaching 65 in 2030. It also introduced the possibility of combining the right to a pension with employment. The ESF+ is financing ALMPs targeted towards activating, reskilling and upskilling groups underrepresented in the labour market. However, further efforts in these areas would be beneficial and the country could encourage legal migration and attract talent, including from non-EU countries. In addition, the ageing population will place further strain on the healthcare system, which is already under pressure (see Annex 14).

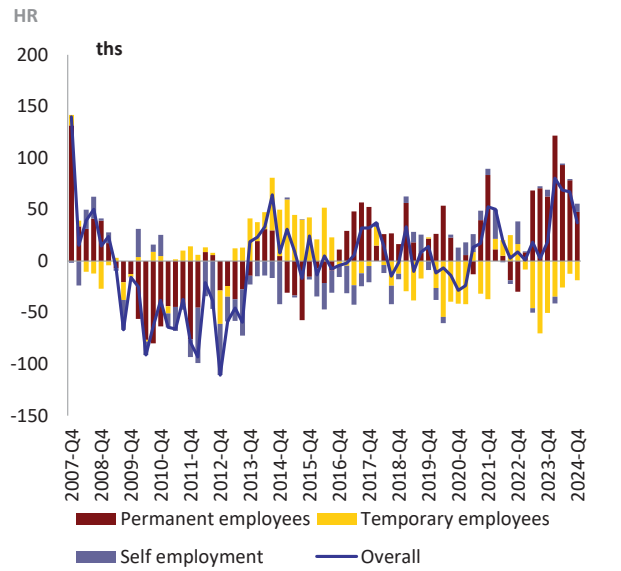
Labour migration from non-EU countries has increased, although the impact on the labour force is expected to remain limited. In 2022, Croatia experienced a positive migration balance for the first time since 2008. In 2023, the number of new permits for third-country nationals increased by 42% compared to 2022([208]). Over 95% of permits were given for employment reasons. The employment rate of non-EU nationals is higher than the overall rate, standing at 80.3% (vs 64.2% in the EU). However, migration flows are relatively low overall and are projected to have a limited effect on future labour force numbers. Promoting legal migration and attracting talent, particularly from non-EU countries, is therefore becoming increasingly important. In March 2025, Croatia has amended its Foreigners Act to ease hiring and keep the non-EU- nationals in the labour market as well as increase their social protection and inclusion.

Skills mismatches pose a challenge to the labour market, with workforce shortages in many sectors. Croatia's recent efforts in upskilling and reskilling are supported by the recovery and resilience plan (RRP) and the ESF+; these measures include creating ILAs. However, adult learning remains limited (23.3% vs 39.5% in the EU in 2022), with particularly low participation rates among vulnerable groups (see Annex 12). Skills mismatches contribute to labour shortages, employment below the level of the qualification attained and fewer employment opportunities for workers with medium and especially lower qualifications. While the job vacancy rate fell below the EU average in Q4-2024 (1.7% vs 2.3% in the EU), it remains above its pre-pandemic level (1.5% in Q4-2019). In January 2025, the share of employers expecting labour shortages to limit their production was particularly high in construction (47%) and manufacturing (40.6%). High shortages were also reported in public administration, education and healthcare sector. The declining working-age population risks further exacerbating labour shortages, especially among the people with intermediate and lower qualifications, undermining Croatia's economic

([208]) Residence permits – statistics on authorisations to reside and work - Statistics Explained

competitiveness. It would be beneficial if the country stepped up its efforts to improve the coverage and labour market relevance of adult education and training, for example, through ILAs.

Graph A10.3: **Employment by type (permanent, temporary, self-employed), year-on-year changes**



(1) Employment (thousand), total, ages 20-64, year-on-year change based on non-seasonally adjusted data. Self employment is defined as the total of self-employed persons and contributing family workers..
Source: Eurostat, LFS [lfsq_egaps, lfsq_etgaed]

Wage growth has been strong and well above the EU average. Following average annual growth of more than 13% in the period from 2022 to 2024 (among the highest wage growth rates in the EU), nominal wage growth is expected to slow down but remain above the EU average. Real wage growth, in turn, is expected to slow to 1.1% in 2025 ([209]), having previously risen rapidly and well above the EU average (1.6% in 2022, 7.3% in 2023 and 7.1% in 2024), driven by robust nominal wage growth and a rapid decline in inflation (from 8.4% in 2023 to 4.0% in 2024). The statutory minimum wage increased by around 56% between January 2022 and January 2025, which corresponds to a real increase of almost 26%. Despite above average growth in real wages in recent years, wages remain low compared to other Member States. Real labour productivity per hour worked was above the EU average in 2023 (110.1 vs 105.5).

Effectively navigating the green and digital transitions requires strengthened upskilling and reskilling actions. Employment in energy-intensive industries has increased in recent years and represented 2.3% of total employment in 2024 (vs 3.5% in the EU). By contrast, employment in mining and quarrying has fallen by 16% since 2015. Labour shortages in construction, a key sector for the green transition, are limiting business activity. Upskilling and reskilling in energy-intensive industries needs to be strengthened. In energy-intensive industries, workers' participation in education and training stood at only 3.7% in 2024, well below the EU average (11.7%). The RRP envisages the publication of a revised national skills development plan, which would encourage people to acquire green skills as part of Croatia's energy efficiency and renovation plans. The ICT sector faces significant challenges in retaining IT specialists. The percentage of female ICT specialists was below the EU average in 2023 (17.4% vs 19.4%). The RRP aims to address upskilling and acquisition of skills related to the green and digital transitions by introducing new ALMPs for long-term unemployed people and less employable people from disadvantaged groups, by using the voucher system for adult education. ESF+ funding also contributes to green skills and jobs, adding to RRP investments and aligning vocational education and training to the labour market needs of the green transition.

([209])Based on the European Commission Autumn 2024 economic forecast.

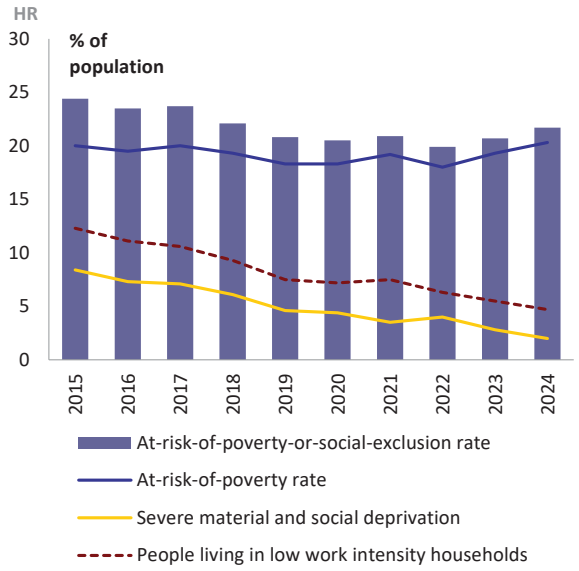
While social conditions in Croatia are improving, the country still faces significant challenges related to poverty and social exclusion, especially among vulnerable groups and in rural areas. Key contributing factors include the low impact of social transfers (excluding pensions) on poverty reduction and high-income inequality. Limited employment opportunities and the low impact of the social protection and pension system, in terms of both adequacy and coverage continue to pose a challenge. Demographic changes raise concerns about the adequacy and sustainability of the pension and care systems. The limited capacity of the social protection system and lack of quality community-based services, in particular long-term care, pose risks to Croatia's sustainable and inclusive growth and prosperity.

Poverty and social exclusion remain moderate, but the situation has been worsening for older people and persons with disabilities. The at-risk-of-poverty or social exclusion (AROPE) rate increased by 1.8 pps to 21.7% in 2024, surpassing the EU average (21% in 2024). This was mainly driven by the increase in monetary poverty (measured by the at risk of poverty rate), which stood at 20.3% in 2024, above the EU average of 16.2%. The poverty gap, measuring the distance of the income of those at risk of poverty from the poverty threshold, was also significantly above the EU average (27.8% vs 22.8%). Worsening trends are noticeable in AROPE rates for vulnerable groups, especially the older people and persons with disabilities.

Vulnerable groups and rural areas are particularly affected by poverty and social exclusion. In 2024, AROPE rates were at 27.2% in rural areas, 12.7 pps higher than in cities 14.5. The region of Pannonian Croatia in particular shows higher AROPE rates, at 31%, 9.3 pps higher than the Croatian average. The AROPE rate for older people (65 and over) was at 37.6% in 2024, substantially higher than the EU average of 19.4%. The AROPE rate for persons with disabilities increased for the third consecutive year, reaching 40.2% in 2024, and is among the highest in EU (28.8% EU average). 49.1% of persons with severe disabilities are at risk of poverty and social exclusion in Croatia (vs the EU average of 36.3%, 2024). This is linked to lower employment and a high disability employment gap in Croatia (see Annex 10).

Croatia is implementing the National plan for combating poverty and social exclusion 2021-2027 and the National Plan for the Development of Social Services 2021-2027, as well as multiple sectoral strategies. More than EUR 600 million from the European Social Fund Plus (ESF+) and more than EUR 110 million from the European Regional Development Fund (ERDF) will be invested to improve social services and infrastructure in the social sector. Planned measures include developing poverty diagnostics, county social plans, social welfare academy, support of social inclusion of children and deinstitutionalisation and the development of community services.

Graph A11.1: **At-risk-of-poverty or social exclusion rate and its components (AROP, SMSD, LWI)**



(1) AROPE: At-risk-of-poverty or social exclusion rate (% of total population). People who are at-risk-of poverty (AROP) and/or suffering from severe material and social deprivation (SMSD) and/or living in household with very low work intensity (LWI).

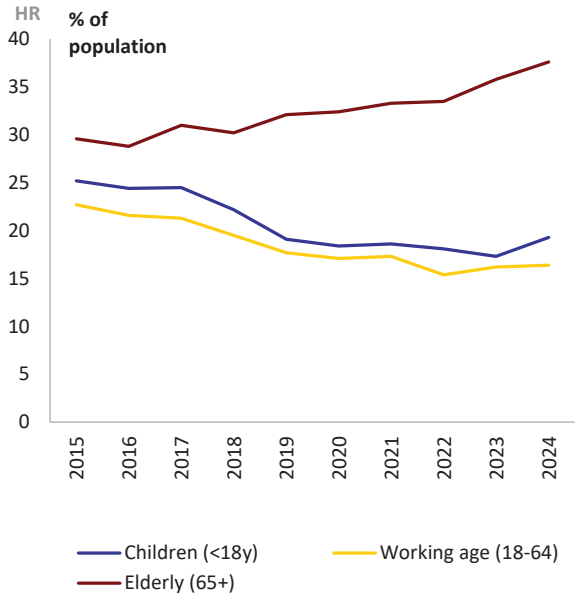
Source: Eurostat, EU-SILC [ilc_peps01n, ilc_li02, ilc_mdsd11, ilc_lvhl11n]

Additional efforts are needed to reach the national poverty reduction target by 2030. The number of people at risk of poverty or social exclusion (AROPE) decreased by 31 000 persons since 2019 leaving considerable room for further progress towards reaching the 2030 target of reducing the number by 298 000. More action is needed to combat poverty and reach the 2030 target, including improvement in the areas of social benefits and employment support, health and education especially targeting the disadvantaged groups.

The risk of poverty or social exclusion among children has increased. Between 2023and 2024, the AROPE rate for children increased by 2 pps to 19.3% (EU: 24.2%) reversing the earlier positive trend. This development suggests that Croatia should increase efforts to achieve its target for child AROPE reduction (94 000 in 2030, compared to 134 000 in 2019). To mitigate the impact of poverty on children, Croatia is implementing the European Child Guarantee (ECG) in line with its 2023 action plan, which is also supported by the RRP and ESF+.

Work intensity plays an important role in determining poverty risks. The poverty rate for quasi-jobless households was at 72.7% in 2024(vs 64.8% EU average), while in work poverty for households, traditionally lower than the EU average, increased in 2024 to 8.3%, surpassing the EU average of 8.2%. It has increased since 2023by 6 pps for single parents (22.0% in 2024 vs 18.9% in the EU) and by 6.9 pps for part time employees (16.6% in 2024 vs 12.8% in the EU). This points to the importance of active inclusion for those at risk of poverty, including adequate access to quality employment, education and services, specifically early childhood education and care, long-term care and employment support (see Annexes 10 and 12).

Graph A11.2: **At-risk-of-poverty or social exclusion rate, age groups**



(1) AROPE: At-risk-of-poverty or social exclusion rate (% of total population).
Source: Eurostat, EU-SILC [ilc_peps01n]

Income inequality is on the rise. The income of the richest 20% of the population was 4.97 times that of the poorest 20% (above the EU average of 4.66) in 2024. The difference is larger for women, at 5.05 (EU: 4.6) as well as for older people, at 4.65 (EU: 4.14) in 2024. The relatively high share of low-wage earners and low coverage of collective bargaining in Croatia are also factors contributing to income inequalities. The inequality reducing effect of the tax and benefit system is weak (35% in Croatia vs 49% EU average) ([210]). The inequalities have a regional component, with the indicator standing at 5 in Pannonian Croatia, and 4.2 in the Adriatic Croatia.

The social protection system presents considerable adequacy and coverage gaps. The impact of social transfers (excluding pensions) on poverty reduction is among the lowest in the EU. In 2024, it stood at 21.6%, well below the EU average of 34.4% and has significantly declined in the last decade. Expenditure on social protection benefits as a share of GDP in 2022 was below the EU average (21% vs 28%). The rate of persons at risk of monetary poverty after social transfers reached 20.3%, compared to 16.2% in the EU in 2024. The benefit recipient rate for persons that are at risk of poverty and living in quasi-jobless households is also much lower than the EU average in 2023 (56.3% vs EU: 83.5%). For those households receiving benefits in 2023 the relative poverty gap is still substantially larger than the EU average (67.8% vs 46.5%).

Croatia's minimum income scheme - the Guaranteed Minimum Benefit (GMB) - has low adequacy and coverage and does not protect people from falling below the poverty threshold. The adequacy of the minimum income scheme according to the benchmarking framework is much worse than the EU average (33.3% of the poverty threshold vs EU: 55.6%; and 30% of the income of a low-wage earner vs EU: 46.1%). Only around 2.5% of those whose income is below the at-risk-of-poverty rate threshold received the GMB in 2022 ([211]). Furthermore, the unemployment benefit coverage in Croatia is relatively low, only 16.8% of unemployed for less than twelve months

([210])Economic inequalities in the EU - Key trends and policies, p. 29 Publications catalogue - Employment, Social Affairs & Inclusion - European Commission.

([211])GODIŠNJE STATISTIČKO IZVJEŠĆE O PRIMIJENJENIM PRAVIMA SOCIJALNE SKRBI,2023.

received the benefit or assistance in 2024, compared to 35.7% EU average. The benefit coverage for those long-term unemployed (more than twelve months) is around 5.4%, substantially lower than the EU average of 28.6% in 2024 ([212]). Net replacement rates after six months of unemployment are below EU average, especially for single parents and single income families. There is scope for further actions to strengthen access to social protection, in line with the related 2019 Council Recommendation. The new Social Welfare Act came into force in 2022 under the recovery and resilience plan (RRP), bringing about changes in the minimum income scheme and other social benefits and services. However further steps to increase the adequacy of minimum income schemes would help secure adequate minimum income while ensuring also active inclusion as set out in the related Council Recommendation ([213]).

Demographic trends pose a significant challenge for the future adequacy of the pension system. The aggregate replacement ratio (ARR) is among the lowest in EU and has dropped to 35% in 2024 (EU: 61%), while the average pension as a share of the average salary amounted to 45.7%, reflecting the more favourable tax treatment of pensions. This can be explained by a very unfavourable pension system dependency ratio, low benefits from the pension system, and a limited number of years of contribution (short working lives). Over 30% of the population is currently retired, largely due to past insufficient incentives to delay early retirement, lenient criteria for obtaining disability pensions, and a comparatively complex pension system with favourable conditions for specific groups (for example war veterans) accounting for around 15% of all pensioners. The old-age dependency ratio is projected to increase from 38.9% in 2022 to 62.2% by 2070. Future demographic trends are expected to significantly strain the sustainability of the pension system. While the Croatian pension system lacks an automatic adjustment mechanism, the introduced reform of raising the statutory retirement age for women from sixty-three years and three months in 2023 to sixty-five, and the early retirement age from fifty-eight years and three months in 2023 to sixty by 2030, is expected to alleviate some of this pressure ([214]).

Access to non-institutional long-term care services remains very limited. In addition to low-to-medium replacement ratios for pensions, underdeveloped and low coverage of long-term care contributes to inadequate support to the living standards of older people ([215]). According to the EU Ageing Report of 2024, public spending on LTC (health and social) is among the lowest in the EU (0.5% of GDP against 1.7% in the EU in 2022) and concerns primarily residential care (53.7% of total LTC expenditure in 2022 vs 46.2% EU average). This influences the relatively high proportion of older people with unmet assistance needs (at 71% of the 65+ population vs 46.6% EU average in 2019). Limited availability of long-term care services and significant shortages of qualified staff are hindering the process of deinstitutionalising and transitioning persons with disabilities to independent living. It also leads to a high proportion of informal carers delivering intensive informal care**.**

Enhancing the pace of deinstitutionalisation requires substantial investments in community-based services and related infrastructures. Under the RRP, Croatia is investing in centres for the elderly to provide community care and services to older people living at home and European Regional Development Fund (ERDF) is investing in organised housing to support the deinstitutionalisation process. In 2022, under ESF+, Croatia developed its operational plan for deinstitutionalisation and its operational plan for long-term care, which are due to be adopted in 2025. By 2025, transformation plans for 35 social welfare institutions were completed, providing a critical foundation for EU investments ensuring the timely and efficient implementation of the deinstitutionalisation process.

Croatia does not face significant challenges with energy and transport poverty, but some households are in a more vulnerable situation. The percentage of the population unable to keep their homes adequately warm is below the EU average (4.6% vs 9.2% in 2024). The

([212])Data are with low reliability, Statistics | Eurostat.

([213])Council adopts recommendation on adequate minimum income - Employment, Social Affairs & Inclusion - European Commission

([214])2024 Ageing report-Croatia.

([215])The 2024 pension adequacy report. Current and future income adequacy in old age in the EU.

share of households that faced arrears on utility bills has been falling since 2021 but still remains above the EU average (8.8% vs 6.9% in 2024) with those at risk of poverty particularly effected (16.2% in 2024). As for transport poverty, the continued dominance of private cars and the stagnation in public transport use (only 14.5% of population used trains, motor coaches, and trolleybuses in 2022, vs 16.6% in EU) highlight challenges in promoting sustainable and inclusive transportation systems. Croatia is addressing energy poverty through a combination of financial aid, energy efficiency programmes, and support for renewable energy. There are subsidies for heating and income support for vulnerable households. Furthermore, measures outlined in Croatia's RRP include targeted programmes to reduce energy consumption, increase the use of renewable energy, and tackle energy poverty in rural areas, with a particular focus on building renovation and capacity-building for local authorities.

House prices have been increasing but housing affordability has remained broadly stable over the past years with strong house price increases but also expanding housing supply. House price growth became very dynamic in the last years, supported both by dynamic mortgage growth and foreign demand. Nominal house prices have been increasing (12.3% year-on-year in 2024-Q3), as well as mortgage rates (from 2.8% in 2021 to 3.3% in 2023). Mortgage credit remains dynamic (+9.8% in 2023) and the borrowing capacity of households improved significantly over the past decade. Building permits are increasing and if the supply remains strong, it may moderate the evolution of house prices. This will require close monitoring. In terms of financial stability, in 2024, the ESRB concluded that following the combination of relaxed lending standards together with house price and credit dynamics, the residential real estate market in Croatia was subject to medium risks and the macroprudential policy mix was partially appropriate and partially sufficient to mitigate the situation. Housing affordability however hasn't changed much. The standardised house price-to-income ratio, persistently very high, shows only a mild increase since 2015 (+2% vs +8% EU average) and stood in 2023 close to its 2015 level as household income grew at similar pace as house prices. With very high home-ownership rates, the rental market remains rather underdeveloped with arguable large share of informal rental agreements. The ratio of dwellings per capita has increased continuously since 2015 due to an increase in the number of dwellings amid declining population. Furthermore, the ratio of house completions per capita has also increased from low level to slightly above the EU average. Residential construction and granted building permits have increased over the past years. On the other hand, significant share of house remain vacant and large share of units in coast regions are used for short-term rentals, which are aimed to be tacked from 2025 by introduction of recurrent taxation of vacant housing units and higher taxation for income from short-term rent.

Overcrowding and housing cost overburden rates are declining, but some regions might face higher affordability challenges. According to the 2021 census, the number of households fell by 5.3%, while the number of housing units increased by 4% since 2011 ([216]). The housing overcrowding rate is decreasing but remains higher than in EU average, 31.7% vs 16.9% in 2024. For people at risk of poverty, the rate has also been falling and is approaching EU average (29.2% vs 28.8 in the EU). However, the housing cost overburden rate is lower than EU (3.7% in 2024 vs 8.2% in the EU), also for those at risk of poverty and social exclusion (16.8% vs EU: 31.1%). According to preliminary results of the ESPON study 'House for all', housing affordability on NUTS3 level shows regional variation. In many cities, particularly along the coast, property prices are rising, driven by high demand from tourists and foreign buyers, making it difficult for locals to afford homes. Poor housing conditions are relatively limited, with 6.9% of population living in housing deprivation (vs 14.5% EU average in 2023)([217]). Croatia is implementing measures to improve housing affordability and availability. The National Housing Policy Plan focusing on affordable housing models is expected to be adopted in 2025 and implemented with support of Technical support instrument.

([216]) Državni zavod za statistiku - Objavljeni konačni rezultati Popisa 2021

([217]) The indicator is defined as the percentage of the population deprived of each available housing deprivation items. The items considered are: - Leaking roof, damp walls/floors/foundation, or rot in window frames or floor; - Lack of bath or shower in the dwelling; - Lack of indoor flushing toilet for sole use of the household; - Problems with the dwelling: too dark, not enough light.

Skills shortages, low participation in adult learning and underperformance in mathematics represent some of the key challenges for Croatia's human capital formation and competitiveness. Skills development challenges start at an early age, as participation in early childhood education and care (ECEC) is among the lowest in the EU. This stems from both lack of infrastructure and shortages of teachers. The education system struggles to equip young people with basic skills in mathematics. Together with a low share of top performers, this poses a risk for competitiveness. Higher education challenges are low attainment rates and lack of alignment with labour market needs. Croatia continues to improve the labour-market relevance, quality and attractiveness of vocational education and training (VET). The share of adults engaged in learning activities nevertheless remains very low. Efforts have been made to improve the quality of adult education and training and increase its labour market relevance. However, further action, such as creating individual learning accounts (ILAs), is needed to increase the country's potential for research and innovation, productivity growth, and competitiveness.

Croatia is investing in boosting participation in ECEC, but staff shortages persist and may hinder quality and participation. ECEC participation has increased substantially over the last decade ([218]), although it is still among the lowest in the EU (83.5% vs EU 93.3%). The country has invested substantial resources to improve the quality and accessibility of ECEC. Infrastructure investments under the recovery and resilience plan (RRP) and the cohesion policy aim to create 22 500 additional ECEC places and increase the participation rate to 96%. Universal pre-school access is planned by 2030. Reforms underway include the development of a national ECEC curriculum ([219]) and a pre-school curriculum ([220]). These would increase the number of hours of pre-school education from 250 to 700. According to most recent estimates, around 7 000 teachers need to be hired to meet the 2030 needs. This would require increasing the number of graduates from ECEC teacher programmes and additional immediate measures ([221]). Croatia is working to increase the number of trained ECEC teachers in the medium term, by enabling primary school teachers to work as ECEC teachers, while completing requalification programmes. In 2024/2025, three universities launched such programmes with a current total of 71 students, and additional programmes are expected.

Shortages of qualified teachers and low instruction time contribute to high underperformance in mathematics and low share of top performers, posing risks for competitiveness. Although basic skills have remained generally stable since 2018 and improved in science according to the OECD Programme for International Student Assessment (PISA) 2022 results, the underachievement rate in mathematics remained high (32.9% vs EU 29.5%). The underperformance is particularly high among disadvantaged students (47.8% in 2022). Performance gaps can also be noted between rural and urban schools, with students from rural schools achieving on average lower results in basic skills than those in urban schools ([222]). The share of top performers in all three subjects is below the EU average. This may harm competitiveness and innovation. The overall quality of education in mathematics and physics is further constrained by shortages of qualified teachers. The government is trying to address this through scholarships for students studying to become STEM teachers and enabling re-employment of retired STEM teachers. In addition, 47% of eighth graders do not reach a basic level in computer and information literacy

([218]) In 2023, 29.6% of children under three were enrolled in formal childcare. Compared to 2013, the rate increased by 18.6 percentage points (pps). In 2022, the participation rate of children between the age of three and the age for starting compulsory primary education was 83.5%, having increased by 15.9 pps since 2013. Eurostat: educ_uoe_enra21.

([219]) Croatian Ministry of Science and Education: Odluka o imenovanju Radne skupine za izradu Nacrta prijedloga Nacionalnoga kurikuluma za rani i predskolski odgoj i obrazovanjeh.

([220]) Ministry of Science and Education: Odluka o imenovanju Radne skupine za izradu Nacrta prijedloga Nacionalnog kurkuluma predškole

([221]) Matković, T., (2021), Ažurirana procjena kvantitativnih potreba za obrazovanjem i zapošljavanjem odgojitelja u sustavu ranog i predškolskog odgoja i obrazovanja, Ministarstvo znanosti i obrazovanja, Zagreb.

([222]) Students in rural schools achieved 58 points less in reading (EU 52), 63 in maths (EU 46), 57 (EU 46) in science. OECD (2023). PISA 2022 Results (Volume I).

(EU average: 43%) ([223]). To better monitor educational outcomes, national exams were extended in March 2024 to all fourth-grade pupils, covering Croatian, mathematics, nature and society and a national minority language.

The country's education system performs well in terms of equity. The gap in underachievement between students from high and low socio-economic backgrounds is one of the lowest in the EU (14.9 pps vs EU 24.1 pps). In 2024, 2% of students left education and training early, the lowest percentage in the EU ([224]). Although primary education is free, some materials and activities are not accessible to disadvantaged students.

A major reform to move towards a whole-day school model is underway. Croatia launched a pilot project in 2023, implementing single shift, full-day teaching in 65 primary schools. The objective is to address low instruction time, which is seen as a key driver of poor education outcomes. In this context, the Ministry of Education allocated EUR 2 million to support the organisation of elective activities (sports, creative or IT competencies) in schools in the afternoon. The RRP is also supporting the development of school infrastructure necessary for single shift teaching with a budget of EUR 303 million ([225]). Schools involved in the project are testing adapted curricula. Full implementation of the whole-day school model (supported by cohesion policy investments of EUR 122 million) is expected for the 2027/2028 academic year. It could result in better education outcomes, better educational opportunities for disadvantaged students and more efficient use of resources ([226]). However, the reform is still in its initial phases. Its success will largely depend on the implementation of the next phases, i.e. the completion of the curricular reform, preparing teachers for its implementation and adapting the school infrastructure.

Croatia is enhancing the labour market relevance of VET. The share of learners in medium-level education that are enrolled in vocational programmes is one of the highest in the EU (70.6% vs EU 49.1% in 2023). However, the employment rate of recent VET graduates lags behind the EU average (75.7% vs EU average of 80.0% in 2024) ([227]). The Croatian VET system is changing from input-oriented to learning-outcome-oriented, with many aspects of the reformed system currently under development. With support from the European Social Fund Plus (ESF+), outdated subject-based curricula are being replaced by modular curricula based on occupational standards and aligned with labour market needs**.**

The VET reforms focus on relevance, quality and attractiveness. Modular teaching connecting general education subjects with vocational education is being implemented. Efforts are underway to increase participation in work-based learning (38.3% of VET graduates aged 20-34 in 2024, compared to the EU 65.3% ([228]), by providing incentives for learners and employers. In 2023, Croatia finalised the development of a quality assurance system in adult education and continuous VET. The country is also reviewing self-assessment of training providers in initial VET and expanding the scope of the pilot tracking of VET graduates. These reforms are significant stepping stones towards a comprehensive VET quality assurance system. Their success will also depend on promoting lifelong learning through strategic planning and awareness campaigns, as well as active involvement of all stakeholders at local and national level.

Higher education (HE) is not supplying the advanced skills needed by the economy. In Croatia, higher education challenges are low tertiary educational attainment (TEA) and lack of alignment with the needs of the labour market, due to a mismatch with the fields of study chosen by students. The tertiary educational attainment rate for people aged 25-34 was 39.4% in 2024 in Croatia (below the 44.2% EU average and 45% EU target). The gender gap in favour of women is high at 20.5 pps. The employment rate of recent HE graduates in 2024 was 85.9%, (vs 86.7% EU

([223])European Commission (2024). International Computer and Information Literacy Study (ICILS) in Europe – 2023. Main findings and educational policy implications.

([224])Eurostat: edat_lfse_14.

([225])Objava otvorenog Poziva za dodjelu bespovratnih sredstava „Izgradnja, rekonstrukcija i opremanje osnovnih škola za potrebe jednosmjenskog rada i cjelodnevne škole".

([226])World Bank. (2023). Harnessing human capital for growth in Croatia - Unleashing Potential for Economic Take-off amid Demographic and Technological Change.

([227])Eurostat: edat_lfse_24.

([228])Eurostat: edat_lfs_9919.

average). Students tend to have a strong preference for social sciences, although the interest in STEM is growing ([229]). Enrolment quotas are not sufficient to meet the demand for pharmacists, doctors and STEM teachers ([230]).

Tertiary attainment of young people living in rural areas is lower. That of young people living in cities is 20.7 pps higher ([231]). The high cost of living poses an obstacle to studying, especially for students from lower socio-economic backgrounds in rural areas of Croatia. Therefore, EUR 47.6 million from cohesion policy funds will be used to build and renovate student dormitories.

Croatia is working to strengthen the quality of HE programmes and connect them to the needs of the labour market. Performance agreements are now the mandatory method of financing for all public universities. This new method links financing to performance and fulfilment of certain goals. The objective is to improve quality and increase internationalisation and relevance of higher education. The evaluation phase will start in 2026.

Enrolment in STEM studies is insufficient to meet the growing demand. In 2022, the level of students enrolled in STEM subjects as a share of total tertiary enrolments in Croatia was 28.3% (EU 27.1%). Pupils enrolled in medium-level VET in STEM fields: 40.6% for Croatia in 2022 (36.2% EU-wide). Nevertheless, with a low TEA level, this is not enough to meet the demand for high-level skills of the labour market. The Ministry of Education provides scholarships for students enrolled in STEM, using funding from the Recovery and Resilience Facility (RRF). In 2022, the share of students enrolled in ICT subjects was in line with the EU average (5.2%), of which 21.7% were girls. Boys favour computer science and engineering, while girls favour biomedicine and healthcare. Both share similar interest in natural sciences and mathematics. Further action to support STEM careers would contribute to enhancing Croatia's innovation capacity.

There is an unmet need for advanced digital skills and ICT specialists in the context of digital transitions. The share of workers (25-64) with at least basic digital skills is significantly higher than the EU average (74.4% vs 64.7% in the EU in 2023) and the share of ICT specialists reached the EU average of 5.0% in 2024 However, women are under-represented in the sector (17.4% in 2023 vs the EU average of 19.4%). Croatia has taken steps to address these challenges, such as initiatives under its RRP to improve ICT-related education and promote digital upskilling. Nevertheless, efforts to increase the enrolment of students in ICT higher education programmes and strengthen workforce participation in ICT roles need to be intensified to meet the EU's Digital Decade targets.

Green competences are being developed at all levels of education. Since 2019, green competences are taught as cross-curricular topics in primary and secondary schools. In more than half of Croatian schools (53.8%), nearly all eighth-grade students have participated in activities related to environmental sustainability (EU-17: 48%) ([232]). As a result, Croatian eighth-grade students' knowledge is above the EU average (519.8 points vs 506.7 points for the EU-17), with girls and students with highly educated parents having better scores (28.15 and 79.3 points more, respectively).

VET teachers are offered training in green skills. The Croatian Agency for VET and Adult Education offers VET teachers training in green skills via VET teacher conferences, sector-specific training and a teacher-training web portal. Training topics include the circular economy, zero energy and sustainable construction, sustainable development, applied environmental science teaching, sustainability in fashion industry, pollution, solar and electric vehicles. The ESF+ is providing support for aligning VET to the labour market needs of the green transition.

Skills development is essential for competitiveness, resilience and fairness, in light of a shrinking labour force and skills shortages. Skills mismatches and shortages remain a considerable challenge for the country. In

([229])MOZVAG, 2022, https://mozvag.srce.hr/preglednik/.

([230])Croatian Employment Service (2024), Recommendations for Educational Enrolment Policy and Scholarship Policy for 2025

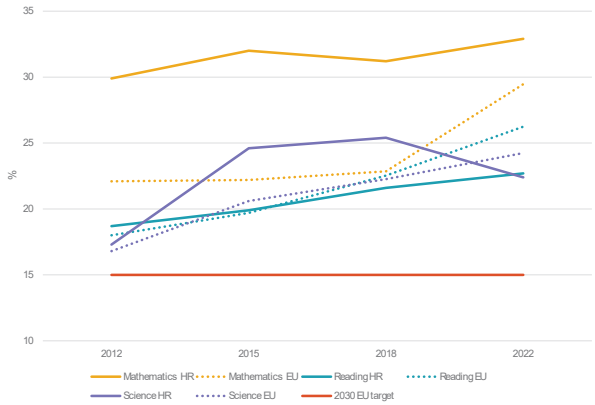
([231]) Eurostat: edat_lfs_9913.

([232]) 2022 International Civic and Citizenship Education Study (ICCS). The average in the 17 Member States surveyed was 48%.

2023, the macroeconomic skills mismatch remained above the EU average (24% vs 19% in the EU), and 43% of Croatian employers reported major difficulties to find and hire staff with the right skills (vs 38% in the EU) ([233]). In January 2025, the share of employers expecting labour shortages to limit their production was significantly higher than the EU average in construction (47%) and manufacturing (40.6%) ([234]). High shortages are also reported in the public administration, education and healthcare sector. The main drivers of skills shortages are the mismatch between education and labour market needs, the digital and green transitions, the emigration of high-skilled workers and the ageing population. Skills mismatches contribute to lower employment opportunities, especially for low-qualified workers. The employment rate for the low-qualified was only 41.3% in 2024, among the lowest rates in the EU. Croatia's investments in upskilling and reskilling under the RRP and the ESF+, including with a view to creating ILAs, will need to be boosted to reduce skills shortages.

Within the broader need for upskilling and reskilling, development of green skills in energy-intensive industries needs to be strengthened. In 2024, labour shortages were reported in several occupations requiring specific skills related to the green transition, including insulation workers, roofers and air conditioning and refrigeration mechanics ([235]). In energy-intensive industries, workers' participation in education and training stood at only 3.7% in 2024, well below the EU average (11.7%). To address these gaps, the RRP supports upskilling and acquisition of green skills through a national skills development plan, active labour market policies, new adult learning programmes in construction for workers from non-EU countries and by using the voucher system for adult education. RRP investments in green skills are being further reinforced through broader initiatives supported by the ESF+.

Graph A12.1: **Development of underachievement in mathematics, reading and science in PISA 2012 – 2022 (%)**



Source: OECD (2023).

Adult learning needs to be significantly enhanced to reduce skills mismatches and support Croatia's growth potential. Despite efforts to develop a high-quality, labour-market-relevant, adult learning system, the rate of participation in adult learning remains low, particularly among the low-skilled, elderly, rural and the long-term unemployed. In 2022, only 23.3% of Croatians aged 25-64 had participated in learning in the previous 12 months (excluding guided on-the-job training). This rate was down from 26.9% in 2016 and far below the EU average of 39.5% ([236]). Moreover, the rate of adult learning participation in 2022 varied greatly depending on: (i) gender (19% for men vs 27.5% for women); (ii) age (33.4% for those aged 25-34 years vs only 13.2% for those aged 55-64); and (iii) employment status (employed: 28.6%; unemployed: 12.2%; inactive: 8.9%). Croatia is investing (with funding from the RRF and the ESF+) in adult learning and in providing labour market-relevant skills. However, further efforts are needed to reach the national 2030 target of at least 55% of all adults participating in training every year, contributing to the economy's growth potential. Expanding the existing voucher system towards ILAs, as currently planned, may help achieve these goals.

([233])Flash Eurobarometer FL537: SMEs and skills shortages.

([234])Source: ECFIN European Business and Consumer Surveys.

([235])European Labour Authority 2025 EURES Report on labour shortages and surpluses 2024, based on data from EURES National Coordination Offices. Skills and knowledge requirements align with the ESCO taxonomy on skills for the green transition, with examples analysed using the ESCO green intensity index.

([236])Eurostat: Adult Education Survey- participation in education and training excluding guided on-the-job training.

Table A13.1:**Social Scoreboard for Croatia**

Equal opportunities and access to the labour market	Adult participation in learning (during the last 12 months, excl. guided on the job training, % of the population aged 25-64, 2022)	23.3
	Early leavers from education and training (% of the population aged 18-24, 2024)	2.0
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	59.0
	Young people not in employment, education or training (% of the population aged 15-29, 2024)	10.6
	Gender employment gap (percentage points, population aged 20-64, 2024)	5.9
	Income quintile ratio (S80/S20, 2024)	4.97
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2024)	73.6
	Unemployment rate (% of the active population aged 15-74, 2024)	5.0
	Long term unemployment (% of the active population aged 15-74, 2024)	1.8
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2023)	131.5
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2024)	21.7
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2024)	19.3
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2024)	21.6
	Disability employment gap (percentage points, population aged 20-64, 2024)	41.0
	Housing cost overburden (% of the total population, 2024)	3.7
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2024)	30.2
	Self-reported unmet need for medical care (% of the population aged 16+, 2024)	1.3

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

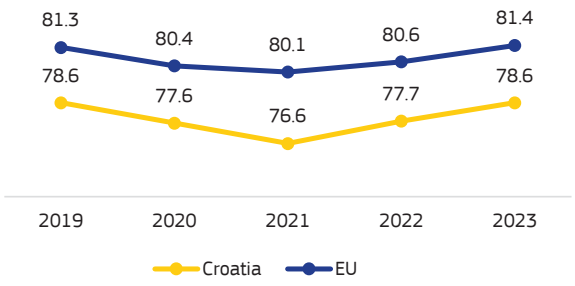
(1) Update of 5 May 2025. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2025 for details on the methodology (https://employment-social-affairs.ec.europa.eu/joint-employment-report-2025-0).

Source: Eurostat

Croatia's health system faces significant challenges. These need to be addressed if the country is to improve the health of its population and social fairness, while boosting the competitiveness of its economy. Challenges faced by Croatia include low life expectancy linked to high treatable mortality, and limited access to care. Both of these issues are associated with suboptimal funding, a lack of cost-effectiveness of the health system, insufficient focus on disease prevention, and shortages and an uneven geographical distribution of healthcare workers and healthcare resources.

Life expectancy at birth in Croatia rebounded to its pre-COVID-19 level but was still among the lowest in the EU in 2023 (see Annex 15)**.** Moreover, there are striking gender gaps in health outcomes. Women can expect to live 6.3 years longer than men. This said, they can only expect to live about 2.5 years longer than men in good health. Treatable and preventable mortality is among the highest in the EU, suggesting shortcomings in the effectiveness of the health system. Croatia participates in several joint actions funded by EU4Health aimed at reducing the burden of cardiovascular diseases, cancer, diabetes and respiratory diseases.

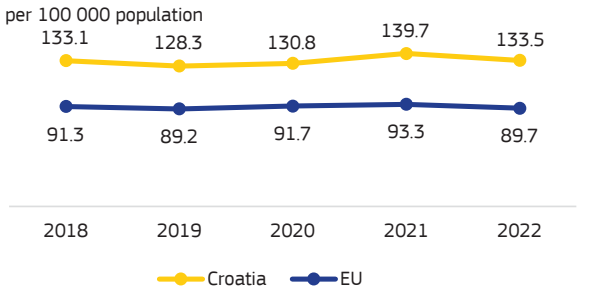
Graph A14.1: **Life expectancy at birth, years**



Source: Eurostat (demo_mlexpec)

Health expenditure per capita in Croatia is low. Health spending per inhabitant in 2022 remained one of the lowest in the EU (EUR 1 858 vs EUR 3 685 in 2022). The largest share goes towards outpatient care (35% of total health expenditure) followed by inpatient and hospital day care (32%). Croatia has a high number of hospital beds (488 per 100 000 population in 2022, higher than the EU average), pointing to low cost-effectiveness. Investment through capital formation is low in Croatia, while EU funds provide substantial support. Under the Croatian recovery and resilience plan (RRP), around EUR 354 million is planned for health reforms and related investments. In addition to the RRP, funding for healthcare (EUR 226 million) is planned under the EU cohesion policy funds in 2021-2027. These funds invest in cancer care, hospital infrastructure and equipment, quality improvements to hospital care and measures to improve the accessibility, effectiveness and resilience of the health system (see Annex 16). Reforms transferred ownership of general hospitals from the county to the state with the aim of strengthening hospital management, ensuring financial sustainability, and integrating hospitals into the state treasury for better oversight. Also, Croatia's national development strategy outlines priorities for strengthening primary healthcare, restructuring the hospital system, and improving access to palliative care and essential medicines ([237]).

Graph A14.2: **Treatable mortality**



Age-standardised death rate **(mortality that could be avoided through optimal quality healthcare)**
Source: Eurostat (hlth_cd_apr)

Croatia places insufficient focus on disease prevention. In 2022, spending on prevention accounted for 5.3% of total spending on health, lower than the EU average of 5.5%. Suicide rates have decreased over time, but the rates in Croatia remain among the highest in the EU. Mortality from cardiovascular diseases and especially cancer is among the highest in the EU, due in part to behavioural risk factors. Mortality linked to air pollution is also high (see Annex 7). Furthermore, Croatia is among the countries with the highest smoking rates, the lowest consumption of fresh fruit and vegetables, and the lowest level of physical activity outside working time ([238]). Little progress has been made on reducing smoking

([237]) National Development Strategy of the Republic of Croatia until 2030.

([238]) Health at a Glance: Europe 2024, Chapter 4.

Table A14.1:**Key health indicators**

	2019	2020	2021	2022	2023	EU average* (latest year)
Cancer mortality per 100 000 population	311.0	303.9	308.2	302.4	n.a.	234.7 (2022)
Mortality due to circulatory diseases per 100 000 population	572.8	590.9	601.3	591.7	n.a.	336.4 (2022)
Current expenditure on health, purchasing power standards, per capita	1 389	1 456	1 802	1 858	n.a.	3 684.6 (2022)
Public share of health expenditure, % of current health expenditure	81.9	84.2	85.5	85.3	n.a.	81.3 (2022)
Spending on prevention, % of current health expenditure	3.0	3.1	4.4	5.3	n.a.	5.5 (2022)
Available hospital beds per 100 000 population**	488	490	482	488	n.a.	444 (2022)
Doctors per 1 000 population*	3.6	3.6	3.8	4.0	n.a.	4.2 (2022)*
Nurses per 1 000 population*	1.9	2.0	2.2	2.4	n.a.	7.6 (2022)*
Mortality at working age (20-64 years), % of total mortality	16.2	15.1	15.2	14.3	15.2	14.3 (2023)
Number of patents (pharma / biotech / medical technology)	2	0	1	4	2	29 (2023)***
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants****	18.8	15.7	18.2	20.2	21.2	20.0 (2023)

*The EU average is weighted for all indicators except for doctors and nurses per 1 000 population, for which the EU simple average is used based on 2022 (or latest 2021) data except for Luxembourg (2017). Doctors' density data refer to practising doctors in all countries except Greece, Portugal (licensed to practise) and Slovakia (professionally active). Density of nurses: data refer to practising nurses (EU recognised qualification) in most countries except France and Slovakia (professionally active) and Greece (hospital only). **'Available hospital beds' covers somatic care, not psychiatric care. ***The EU median is used for patents. ***Source:*** Eurostat database; European Patent Office; ****European Centre for Disease Prevention and Control (ECDC) for 2023.

rates, due to lenient anti-tobacco policies ([239]). Croatia's RRP includes reforms to promote healthy lifestyles and prevent diseases, and investments for the training of health professionals in public health and the purchase of equipment for the prevention, diagnosis and treatment of cancer. Croatia has developed national cancer screening programmes and released a national plan against cancer for 2020-2030 to reduce both the incidence of and mortality from cancer among the population ([240]).

Access to healthcare is a challenge in Croatia, and there are geographical differences in unmet medical needs. Comparatively high unmet needs for medical examination are reported in Croatia's rural areas. This may be linked to the average distance to travel to healthcare facilities in these areas, which exceeds the EU average (21.8 km vs 14.4 km) (see Annex 17). Croatia also has a major gap in unmet needs between people living above and people living below the poverty threshold.

Shortages of health staff limit the availability of care. The density of doctors in Croatia (4.0 per 1 000 population in 2022) was below the EU average of 4.2 per 1 000, with an uneven distribution between regions. Croatia has a low share of general practitioners (16% vs an EU average of 21%). It also has one of the lowest shares of practising nurses in the EU (2.4 per 1 000 population in 2022 vs an EU average of 7.6), which presents a significant challenge to the country's health and long-term care systems (see Annexes 10 and 12) ([241]). Despite having more newly graduated nurses than the EU average, outflow of health workers contributes to staff shortages. Moreover, between 2020 (Q1) and 2024 (Q3) employment in healthcare fell in Croatia, compared to an overall increase in the EU of 11.3%. One of the health reforms set out in the Croatian RRP for 2021-2026 is the introduction of a system for the strategic management of human resources in health. This system aims for a more even geographical distribution of health workers, including in rural and less populated areas, with an emphasis on primary care staff. The government has also introduced specialised training for emergency medicine nurses and technicians. Croatia participates in the HEROES joint action ([242]) under EU4Health, through which EU countries share knowledge and experience on health workforce planning.

The Croatian health system's potential to drive innovation and foster industrial development in the EU medical sector remains largely untapped. Croatia is among the EU countries that report rather low public spending on health research and development. This is reflected in the low number of European patents granted: only two in 2023 in the combined areas

([239])OECD/European Observatory on Health Systems and Policies (2023), Croatia: Country Health Profile 2023, State of Health in the EU, p. 7.

([240])National Strategic Framework against cancer by 2030.

([241])Under the newly adopted Eurostat definition of nurses (in line with Directive 2005/36/EC on the recognition of professional qualifications) nurse density numbers are significantly lower than those arrived at when using a broader definition, for example that used for OECD health statistics.

([242])JA HEROES | Health workforce planning project.

of pharmaceuticals, biotechnologies and medical devices (vs an EU-level median of 29) ([243]). Clinical trial activity in Croatia is also limited ([244]).

Croatia is lagging behind on the uptake of e-health and the overall digitalisation of its health system, **and has yet to overcome gaps in data storage and sharing.** For example, in 2024, the share of the population using online health services (excluding phone) instead of in-person consultations was among the lowest in the EU (see Annex 17). Despite the above average overall technical deployment of electronic health records (see Annex 6), their use by patients is comparatively low: the share of people in Croatia who access their personal health records online is lower than the EU average (26.2% vs 27.7%). Investments are planned under the RRP and cohesion policy to boost the digital transformation of the healthcare sector in Croatia. Measures focus on: (i) improving management capacities through a more effective use of data; (ii) innovative solutions in healthcare; (iii) increasing the digital capacity of health institutions at all levels; (iv) improving data management; and (v) accelerating the adoption of telemedicine, including by vulnerable populations and in rural areas. These initiatives aim to equip health institutions with necessary digital health infrastructure, improve access to health data, reduce fragmentation, and improve the quality of healthcare services. Croatia participates in several EU4Health-funded projects which facilitate the implementation of the European Health Data Space ([245]) and strengthen digital infrastructure in Croatia ([246]).

([243])European Patent Office, Data to download | epo.org.

([244])EMA (2024), Monitoring the European clinical trials environment, p. 9.

([245])Second Joint Action Towards the European Health Data Space – TEHDAS2 - Tehdas, Project | Xt-EHR

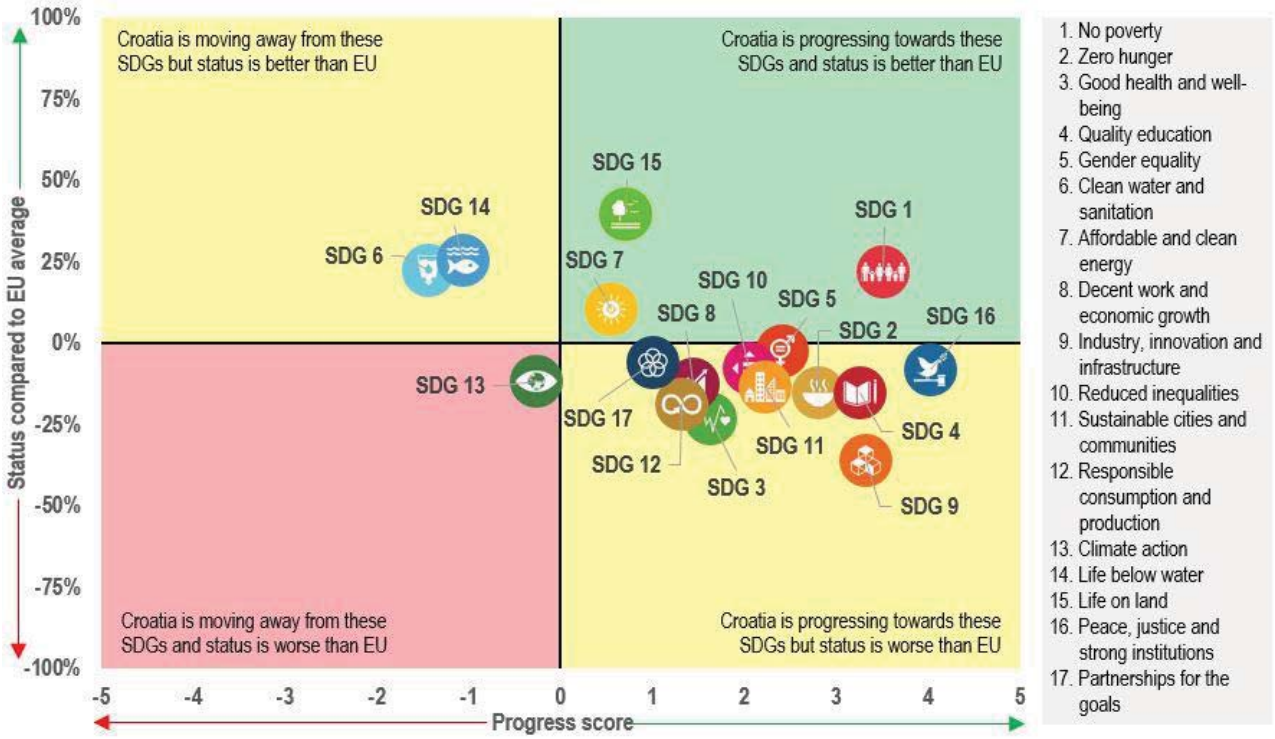
([246])MyHealthEUxHR: expansion of MyHealth@EU Digital Service Infrastructure with new services in Croatia; CHDC: Establishment of Croatia Health Data Access Body: Croatian Health Data Centre.

This Annex assesses Croatia's progress on the Sustainable Development Goals (SDGs) along the dimensions of competitiveness, sustainability, social fairness and macroeconomic stability. 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 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 the EU.

Croatia is improving on all the SDGs related to *competitiveness* but still needs to catch up with the EU average in all of them (SDGs 4, 8, 9). Regarding SDG 4, Croatia is lagging behind the EU in several indicators like participation in early childhood education and tertiary educational attainment. A significant part of the recovery and resilience plan (RRP) investments is earmarked for schools and kindergarten construction and renovation, which will contribute to improving these indicators. Croatia is lagging behind the EU average on the share of households with a high-speed internet connection and all the R&D indicators from SDG 9, like R&D expenditure, patent application, R&D personnel, etc. Taking this into account, the RRP has measures dedicated to increasing broadband access for households and stimulating R&D investments. Employment indicators for SDG 8 (Decent work and economic growth), which improved in recent years, are still below the EU average; 10.6% of young people aged 15-29 were not in education, employment or training in 2024 (EU average: 11.0%), and the employment rate for the population aged 20-64 was 73.6% in 2024 (EU average: 75.8%).

Croatia is improving on almost all the SDGs related to *sustainability* (SDGs 2, 7, 9, 11, 12,

Graph A15.1: **Progress towards the SDGs in Croatia**



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)]. 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 five 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 28 April 2025. Data refer mainly to the period 2018-2023 or 2019-2024. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

15) and, while moving away from its target on SDG 6, 13 and 14, is doing relatively well on SDG 6 and 14. However, it still needs to make additional efforts to catch up with the EU average in some of them, especially SDGs 2, 9, 11, 12 and 13. Although moving away from the target, Croatia performs better than the EU average (71.8% vs 57.1%) on SDG 14 (Life below water) and on SDG 6 (Clean water and sanitation) (60.5% vs 56.4%). It also outperforms the EU average in SDG 15 (Life on land – 82.3% vs 58.1%), in particular performing well in indicators protected areas, at risk of soil erosion and drought impact on ecosystems. Croatia is improving on SDG 7 (Affordable and clean energy), despite the increase in energy import dependency (up from 52.7% in 2018 to 55.7% in 2023). Croatia's RRP includes measures to further improve on energy-related challenges, namely the energy renovation of buildings, increasing overall energy efficiency and advancing the decarbonisation of the energy sector. Although the share of households with high-speed internet connection has increased significantly (up from 17.8% in 2017 to 67.8% in 2023 vs 78.8% at EU level), the country is lagging significantly behind the EU average on the overall SDG 9 (Industry, innovation and infrastructure) due to its low performance on R&D indicators like the number of patent applications and gross domestic expenditure on R&D. The RRP has a component dedicated to supporting R&D development.

Croatia needs to catch up on SDG 11 (Sustainable cities and communities), where it is struggling with waste recycling and wastewater indicators. Croatia is also lagging behind the EU average on SDG 2 (Zero hunger). This is mainly due to higher obesity rate and lower sustainable agricultural production indicators, in particular real factor income in agriculture. Croatia could improve some of its environmental indicators under SDG 2 (e.g. area under organic farming), while it has a better situation compared to the EU average for indicators such as ammonia emissions per hectare or risk of land erosion. The RRP envisages measures to improve these shortcomings, with a dedicated component to improve waste management and recycling, and investments to boost the green transition and the circular economy. Croatia needs to catch up on SDG 12 (Responsible consumption and production). This is in particular due to stagnation in gross value added in the environmental goods and services sector (1.7% in 2022; EU average for 2022: 3.3%), simultaneously with increases in generation of waste (even if below EU average), and material footprint in tonnes per inhabitant.

Croatia is improving on all SDGs related to *social fairness* (SDGs 1, 3, 4, 5, 7, 8, 10) but still needs to catch up with the EU average on SDGs 3, 4, 5, 8, and 10. While improvements were made on many poverty indicators (SDG 1) (See Annex 11), the in-work at-risk of poverty rate - most likely driven by high food inflation recorded in recent years - increased from 5.2% in 2018 to 6.2% in 2023, remaining below the EU average of 8.3%. Croatia is performing well on SDG 7: almost all indicators are above the EU average, in particular access to affordable energy and energy consumption indicators.

Although Croatia has made improvements, it is still performing below the EU average on SDG 3 (Good health and well-being), SDG 4 (Quality education), SDG 5 (Gender equality), SDG 8 (Decent work and economic growth) and SDG 10 (Reduced inequalities). This is particularly the case for healthy life expectancy (SDG 3; 60.3 years in 2022; EU average: 62.6 years), participation in early childhood education (SDG 4; 85.7% of children aged 3 and over in 2023; EU average: 94.6%) and adult participation in learning (6.6% of the population aged 25-64 in 2024 vs EU average of 13.3%). The RRP envisages measures to tackle these issues through dedicated components on healthcare and education. These include actions such as the 2021-2027 national health development plan adopted in 2021; the revised legal framework for adult learning adopted in 2021 and amendments to the Act on early childhood education and care (ECEC) adopted in 2022; investments in the construction and reconstruction of ECEC facilities; and a model for state co-financing of ECEC facilities. Croatia is also improving on SDG 10, although the urban-rural gap for risk of poverty or social exclusion remains well above the EU average (HR 13.3% vs EU 0.2% in 2023), meaning that social transfers could be better targeted.

Croatia is improving on SDGs related to *macroeconomic stability* (SDGs 8, 16, 17) but still needs to catch up with the EU average on all of them. One of the indicators linked to sustainable economic growth under SDG 8, investment share of GDP increased significantly in recent years and reached the EU average level in 2023, supported also by the RRP and structural EU

funds. Croatia has made significant improvements on its long-term unemployment rate (SDG 8; from 3.4% of the active population in 2018 to 1.8% in 2024, close to the EU average). Access to justice and the corruption perception indices (SDG 16) are below the EU average and point to structural issues linked to these areas. The Commission is monitoring this through different channels including the Rule of Law Report. In addition, the RRP has two components dedicated to modernising the justice system and preventing and combating corruption. General government gross debt (SDG 17) was 57.6% of GDP in end of 2024, below the EU average of 81.0%. The debt-to-GDP ratio is expected to drop further in 2025, driven by strong nominal growth that also supports government revenues (see also Annex 1).

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

Croatia faces structural challenges in a wide range of policy areas, as identified in the country-specific recommendations (CSRs) addressed to the country as part of the European Semester. They refer, among other things, to business environment, public administration, taxation policy, renewable energy, transport, skills and vocational training, and healthcare.

The Commission has assessed the 2019-2024 CSRs considering the policy action taken by Croatia to date and the commitments in its recovery and resilience plan (RRP). At this stage, Croatia has made at least 'some progress' on 62% of the CSRs ([247]), and 'limited progress' on 36% (Table A16.2).

EU funding instruments provide considerable resources to Croatia by supporting investments and structural reforms to increase competitiveness, environmental sustainability and social fairness, while helping to address challenges identified in the CSRs. In addition to the EUR 10 billion funding from the Recovery and Resilience Facility (RRF) in 2021-2026, EU cohesion policy funds ([248]) are providing EUR 8.7 billion to Croatia (amounting to EUR 10.2 billion with national co-financing) for 2021-2027 ([249]) to boost regional competitiveness and growth. Support from these instruments combined represents around 24% of 2024 GDP ([250]). The contribution of these instruments to different policy objectives is outlined in Graphs A16.1 and A16.2. This substantial support comes on top of financing provided to Croatia under the 2014-2020 multiannual financial framework, which financed projects until 2023 and has had significant benefits for the economy and Croatian society. Project selection under the 2021-2027 cohesion policy programmes has accelerated, while significant volumes of investment are yet to be mobilised.

The Croatian RRP contains 157 investments and 78 reforms to stimulate sustainable growth, support post-earthquake recovery, and to maximise the benefits of the digital transformation and to ensure social cohesion. A year before the end of the RRF timespan, implementation is well on its way with 44.7% of the funds disbursed. Croatia has fulfilled 36% of the milestones and targets in its RRP ([251]). Sustained efforts are needed to ensure completion of all RRP measures by 31 August 2026. It is important for Croatia to address implementation challenges, including limited administrative capacity, complex public procurement procedures, protracted permitting processes and insufficient coordination between local and regional authorities.

Croatia also receives funding from several other EU instruments, including those listed in table A16.1. Most notably, the common agricultural policy (CAP) provides Croatia with an EU contribution of EUR 3.4 billion under the CAP strategic plan for 2023-2027 ([252]). Furthermore, operations amounting to EUR 380 million ([253]) have been signed under the InvestEU instrument backed by the EU guarantee, improving access to financing for riskier operations in Croatia.

([247])11% of the 2019-2024 CSRs have been fully implemented, 9% substantially implemented, and some progress has been made on 42 %.

([248])In 2021-2027, cohesion policy funds include the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus and the Just Transition Fund. . The information on cohesion policy included in this annex is based on adopted programmes with the cut-off date of 5 May 2025.

([249])European territorial cooperation (ETC) programmes are excluded from the figure.

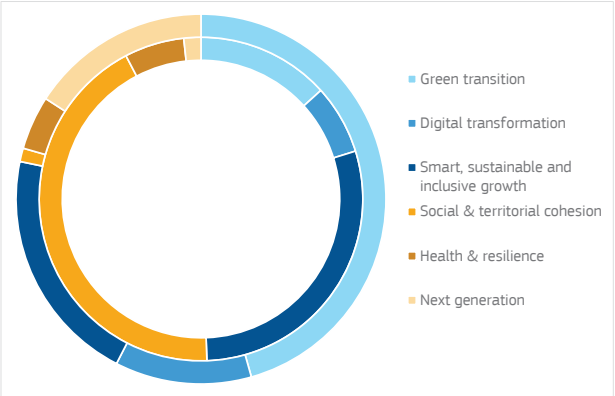
([250])RRF funding includes both grants and loans, where applicable. GDP figures are based on Eurostat data for 2024.

([251])As of mid-May 2025, Croatia has submitted 6 payment requests, the last one being under assessment.

([252])An overview of Croatia's formally approved strategy to implement the EU's common agricultural policy nationally can be found at: https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/croatia_en

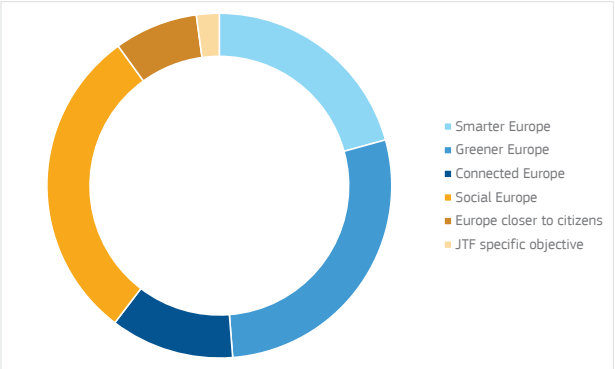
([253])Data reflect the situation on 31.12.2024.

Graph A16.1: **Distribution of RRF funding in Croatia by policy field**



(1) Each RRP measure helps achieve the aims of two of the six policy pillars of the RRF. The primary contribution is shown in the outer circle, while the secondary contribution is shown in the inner circle. Each circle represents 100% of the RRF funds. Therefore, the total contribution to all pillars displayed on this chart amounts to 200% of the RRF funds allocated.
Source: European Commission

Graph A16.2: **Distribution of cohesion policy funding across policy objectives in Croatia**



Source: European Commission

Cohesion policy funds aim to increase the productivity and competitiveness of Croatian firms and improve the business environment. The European Regional Development Fund (ERDF) provides funding to boost investment in research, innovation and digitalisation, primarily through financial instruments, with the aim of reaching over 1 800 companies. Additionally, more than 1 600 small and medium-sized enterprises (SMEs) outside the capital region will receive support to accelerate industrial transition and upskilling. The European Social Fund Plus (ESF+) addresses labour market challenges through two main investments: EUR 630 million for active labour market policies supporting employment and integration of vulnerable groups, and EUR 600 million for addressing skills mismatches through adult learning. The latter includes education reforms, new curricula based on the Croatian Qualification Framework, and development of individual learning accounts. ESF+ also supports modernising vocational education.

Other funds are contributing to competitiveness in Croatia, for instance through open calls. The Connecting Europe Facility has financed strategic investments for instance in rail infrastructure and the modernisation of Croatia's maritime and inland waterways transport network; energy market integration, decarbonisation of the energy system and security of energy supply; as well as capacity, resilience and security of backbone digital infrastructure and advancing the deployment of 5G in smart communities, enabling smart logistics in port transport. Horizon Europe has supported research and innovation, from scientific breakthroughs to scaling up innovations, with Widening participation and spreading excellence, Climate, Energy and Mobility and Digital, Industry and Space as top priorities in Croatia. In Croatia, the Technical Support Instrument (TSI) is focused on combating irregularities and fraud as well as the digitalisation of the justice system.

Croatia's RRP also contains ambitious measures to improve the business environment and competitiveness. As part of the measures covered by payment requests submitted over the past year, Croatia completed a number of reforms and investments across several areas relevant for businesses, such as the digitalisation of the SME Impact Assessment Test and the Tourism Act establishing a framework for monitoring and development of the tourism sector. Furthermore, major investments were completed for the digitalisation of services to businesses such as the one-stop-shop to provide improved services for businesses and citizens and a new platform for conducting public procurement procedures.

EU funds are playing a significant role in promoting environmental sustainability and green transition in Croatia during the current seven-year EU budget (multiannual financial framework). As a result of cohesion policy investment, thousands of residents in the Karlovac area will benefit from enhanced flood protection, while hundreds of thousands will gain access to improved water supply and wastewater treatment, primarily in larger cities along the Croatian coast. Over 2 600 private dwellings and nearly 300 public buildings will see improved energy

performance. Additionally, public bodies and households will receive support to purchase micro-solar panels and heat pumps. In addition, Croatia's CAP strategic plan allocates EUR 540 million (37% of rural development funds) to environmental and climate initiatives, including landscape preservation, conservation of native breeds and genetic resources, animal welfare and organic farming. A further EUR 470 million (25% of direct payments) supports eco-schemes promoting sustainable practices like crop rotation, nitrogen-fixing crops, landscape maintenance, natural manure use, pasture grazing and soil erosion prevention.

Croatia's RRP, including the REPowerEU, has a comprehensive set of reforms and investments for the green transition. Croatia adopted a plan to promote advanced biofuels in transport, emphasising market assessments and innovative models like algae-based biofuels. Investments in wastewater and water supply aim to enhance rural services and reduce leakages. Additionally, published guidelines support energy renovation of culturally significant buildings, detailing technical solutions and procedural guidance for necessary permits.

Promoting fairness, social cohesion and improving access to basic services are among the key priorities of EU funding in Croatia. ERDF support will provide access to new or modernised healthcare facilities for over 4.2 million people annually, enhancing the healthcare system's capacity. It will also create additional classroom space in educational facilities for more than 15 000 people. The ESF+ is investing EUR 600 million in community-based services and social inclusion, focusing on children at risk, people with a disability and vulnerable groups. This includes EUR 200 million for teaching assistants and personal assistance services for people with a disability.

Croatia's RRP contains several reforms and investments related to fairness and social policies. Croatia introduced a support scheme for food banks, improving infrastructure and boosting food donations by 43.8% in 2023. Social Welfare Act amendments enhanced support for vulnerable groups by raising guaranteed minimum benefit amounts and eliminating repayment requirements. Education reforms aim to improve learning outcomes through a full-day teaching model, particularly benefiting disadvantaged students. In addition, the TSI supports Croatia to promote mental health by addressing the risks of gambling and gaming.

Table A16.1:**Selected EU funds with adopted allocations - summary data (million EUR)**

Instrument/policy	Allocation 2021-2026		Disbursed since 2021 (1)
RRF grants (including the RepowerEU allocation)	5 786.5		3 691.9
RRF loans	4 254		795.9
Instrument/policy	**Allocation 2014-2020 (2)**	**Allocation 2021-2027**	**Disbursed since 2021 (3)** (covering total payments to the Member State on commitments originating from both 2014-2020 and 2021-2027 programming periods)
Cohesion policy (total)	9 114.9	8 706.6	6 089.1
European Regional Development Fund (ERDF)	4 833.1	5 404.7	3 056.5
Cohesion Fund (CF)	2 130.8	1 182.4	1 484.5
European Social Fund (ESF, ESF+) and the Youth Employment Initiative (YEI)	2 151.0	1 933.6	1 490.6
Just Transition Fund (JTF)		185.9	57.6
Fisheries			
European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the European Maritime and Fisheries Fund (EMFF)	252.6	243.7	154.8
Migration and home affairs			
Migration, border management and internal security - AMIF, BMVI and ISF (4)	128.5	298.8	137.7
The common agricultural policy under the CAP strategic plan (5)	**Allocation 2023-2027**		**Disbursements under the CAP Strategic Plan (6)**
Total under the CAP strategic plan	3 384.9		815.4
European Agricultural Guarantee Fund (EAGF)	1 926.8		619.1
European Fund for Agricultural Development (EAFRD)	1 458.1		196.3

(1) The cut-off date for data on disbursements under the RRF is 31 May 2025.
(2) Cohesion policy 2014-2020 allocations include REACT-EU appropriations committed in 2021-2022.
(3) These amounts relate only to disbursements made from 2021 onwards and do not include payments made to the Member State before 2021. Hence the figures do not comprise the totality of payments corresponding to the 2014-2020 allocation. The cut-off date for data on disbursements under EMFAF and EMFF is 29 April 2025. The cut-off date for data on disbursements under cohesion policy funds, AMIF, BMVI and ISF is 5 May 2025.
(4) AMIF - Asylum, Migration and Integration Fund; BMVI- Border Management and Visa Instrument; ISF - Internal Security Fund.
(5) Expenditure outside the CAP strategic plan is not included.
(6) The cut-off date for data on EARDF disbursements is 5 May 2025. The information on EAGF disbursements is based on the Member State declarations until March 2025. Disbursements for the Direct Payments (EAGF) started in 2024.
Source: European Commission

Table A16.2:**Summary table on 2019-2024 CSRs**

Croatia	Assessment in May 2025	Relevant SDGs
2019 CSR 1	**Limited progress**	
Reinforce the budgetary framework and monitoring of contingent liabilities at central and local level.	Some progress	SDG 8, 16
Reduce the territorial fragmentation of the public administration and streamline the functional distribution of competencies.	Limited progress	SDG 10, 11, 16
2019 CSR 2	**Some progress**	
Deliver on the education reform and improve both access to education and training at all levels and their quality and labour market relevance.	Some progress	SDG 4, 5
Consolidate social benefits and improve their capacity to reduce poverty.	Limited progress	SDG 1, 2, 10
Strengthen labour market measures and institutions and their coordination with social services.	Substancial progress	SDG 8
In consultation with the social partners, introduce harmonised wage-setting frameworks across the public administration and public services.	Full implementation	SDG 8
2019 CSR 3	**Some progress**	
Focus investment-related economic policy on research and innovation,	Some progress	SDG 9, 10, 11
sustainable urban and railway transport,	Limited progress	SDG 10, 11
energy efficiency, renewables and environmental infrastructure, taking into account regional disparities.	Limited progress	SDG 6, 7, 9, 10, 11, 12, 13
Increase the administration's capacity to design and implement public projects and policies.	Some progress	SDG 16
2019 CSR 4	**Some progress**	
Improve corporate governance in State-owned enterprises and intensify the sale of such enterprises and non-productive assets.	Limited progress	SDG 9
Enhance the prevention and sanctioning of corruption, in particular at the local level.	Some progress	SDG 16
Reduce the duration of court proceedings and improve electronic communication in courts.	Some progress	SDG 16
Reduce the most burdensome parafiscal charges	Substantial progress	SDG 8, 9
and excessive product and services market regulation.	Some progress	SDG 9
2020 CSR 1	**Some 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	SDG 8, 16
Enhance the resilience of the health system. Promote balanced geographical distribution of health workers and facilities, closer cooperation between all levels of administration and investments in e-health.	Some progress	SDG 3
2020 CSR 2	**Some progress**	
Strengthen labour market measures and institutions	Some progress	SDG 8
and improve the adequacy of unemployment benefits and minimum income schemes.	Limited progress	SDG 1, 2, 10
Increase access to digital infrastructure and services.	Some progress	SDG 9
Promote the acquisition of skills.	Some progress	SDG 4
2020 CSR 3	**Some progress**	
Maintain measures to provide liquidity to small and medium-sized enterprises and the self-employed.	Full implementation	SDG 8, 9
Further reduce parafiscal charges and	Substantial progress	SDG 8, 9
restrictions in goods and services market regulation.	Some progress	SDG 9
Front-load mature public investment projects	Substancial progress	SDG 8, 16
and promote private investment to foster the economic recovery.	Substancial progress	SDG 8, 9
Focus investment on the green and digital transition, in particular on environmental infrastructure,	Limited progress	SDG 6, 12, 15
sustainable urban and rail transport,	Limited progress	SDG 11
clean and efficient production and use of energy	Limited progress	SDG 7, 9, 13
and highspeed broadband.	Some progress	SDG 9

(Continued on the next page)

Table (continued)

2020 CSR 4	**Some progress**	
Reinforce the capacity and efficiency of the public administration to design and implement public projects and policies at central and local levels.	Some progress	SDG 16
Improve the efficiency of the judicial system.	Some progress	SDG 16
2021 CSR 1	**Not relevant anymore**	
In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment. Keep the growth of nationally financed current expenditure under control.	Not relevant anymore	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.	Not relevant anymore	SDG 8, 16
At the same time, enhance investment to boost growth potential *Pay particular attention to the composition of public finances, both on the revenue and expenditure sides of the budget, and to the quality of budgetary measures, to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, notably supporting the green and digital transition.*	Not relevant anymore	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 by strengthening the coverage, adequacy, and sustainability of health and social protection systems for all.	Not relevant anymore	SDG 8, 16
2022 CSR 1	**Not relevant anymore**	
In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	Not relevant anymore	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.	Not relevant anymore	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	Not relevant anymore	SDG 8, 16
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 20 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 on 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	**Limited progress**	
Diversify fossil-fuel imports and reduce overall reliance on fossil fuels.	Some progress	SDG 7, 9, 13
Accelerate the deployment of renewables, focussing in particular on wind, solar and geothermal sources, including through small-scale renewable energy production and developing energy communities, mainly by streamlining procedures for administrative authorisation and permits.	Limited progress	SDG 7, 8, 9, 13
Further upgrade electricity transmission and distribution grids and invest in electricity storage.	Some progress	SDG 7, 9, 13
Step up efforts to reduce energy demand by increasing energy efficiency in industry and in private and public building stock.	Some progress	SDG 7
and transport sectors.	Limited progress	SDG 11
2023 CSR 1	**Some Progress**	
Wind down the energy support measures in force by the end of 2023, using the related savings to reduce the government deficit. Should renewed energy price increases necessitate support measures, ensure that these are targeted at protecting vulnerable households and firms, fiscally affordable, and preserve incentives for energy savings.	Limited progress	SDG 8, 16
Ensure prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 5.1%.	No Progress	SDG 8, 16
Preserve nationally financed public investment and ensure the effective absorption of RRF grants and other EU funds, in particular to foster the green and digital transitions.	Full implementation	SDG 8, 16
For the period beyond 2024, continue to pursue a medium-term fiscal strategy of gradual and sustainable consolidation, combined with investments and reforms conducive to higher sustainable growth, to achieve a prudent medium-term fiscal position.	Full implementation	SDG 8, 16

(Continued on the next page)

Table (continued)

2023 CSR 2		
Continue the steady implementation of its recovery and resilience plan and swiftly finalise the REPowerEU chapter with a view to rapidly starting its implementation. Proceed with the speedy implementation of cohesion policy programmes, in close complementarity and synergy with the recovery and resilience plan.	*RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress with the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.*	
2023 CSR 3	**Some progress**	
Reduce overall reliance on fossil fuels	Limited progress	SDG 7, 9, 13
by accelerating the deployment of renewables, in particular wind, solar, and geothermal sources, finalising the incomplete legislative framework, streamlining administrative procedures for permitting, simplifying the procedures for installing renewable energy sources (i.e. solar photovoltaic facilities) in multi-apartment buildings and providing more legal certainty.	Limited progress	SDG 7, 8, 9, 13
Support small-scale renewable energy generation capacity.	Some progress	SDG 7, 9, 13
Further upgrade electricity transmission and distribution grids, in particular by improving the transmission links between the north and south of the country, and advancing the roll-out of smart meters.	Some progress	SDG 7, 9, 13
Accelerate the implementation of energy efficiency measures, including the installation of heat pumps.	Some progress	SDG 7, 9, 13
Reduce dependence on fossil fuels in the transport sector by promoting sustainable solutions, in particular rail and the electrification of road transport.	Limited progress	SDG 7, 11
Step up policy efforts aimed at the provision and acquisition of the skills needed for the green transition.	Limited progress	SDG 4
2024 CSR 1	Full implementation	
Submit the medium-term fiscal-structural plan in a timely manner.	Full implementation	SDG 8, 16
In line with the requirements of the reformed Stability and Growth Pact, limit the growth in net expenditure in 2025 to a rate consistent with, inter alia, maintaining the general government deficit below the 3% of GDP Treaty reference value and keeping the general government debt at a prudent level over the medium term.	Full implementation	SDG 8, 16
2024 CSR 2		
Strengthen administrative capacity to manage EU funds, accelerate investments and maintain momentum in the implementation of reforms. Address relevant challenges to allow for continued, swift and effective implementation of the recovery and resilience plan, including the REPowerEU chapter, ensuring completion of reforms and investments by August 2026. Accelerate the implementation of cohesion policy programmes. In the context of their mid-term review, continue focusing on the agreed priorities while considering the opportunities provided by the Strategic Technologies for Europe Platform initiative to improve competitiveness.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets. Progress with the cohesion policy programming is monitored in the context of the Cohesion Policy of the European Union	
2024 CSR 3	Limited Progress	
To strengthen competitiveness: (i) boost access to diverse sources of financing and promote capital markets by further facilitating the participation of retail investors in the bond market, and addressing barriers to listing and strengthening corporate governance to improve the attractiveness of the stock market;	Some progress	SDG 8, 9
(ii) reduce labour and skills shortages by strengthening basic skills, enhancing upskilling and reskilling,	Limited Progress	SDG 8, 4
and improving access to formal home- and community-based long-term care;	Limited Progress	SDG 8,10
and (iii) address the fragmentation of public institutions that carry out research, development and innovation activities by ensuring a comprehensive and binding approach to merging various support functions, bolstering the financial incentives for mergers, and ensuring the promotion of relevant strategic goals under the performance agreements between the Ministry of Science and Education and Youth and public research and higher education institutions.	Limited progress	SDG 9

Source: European Commission

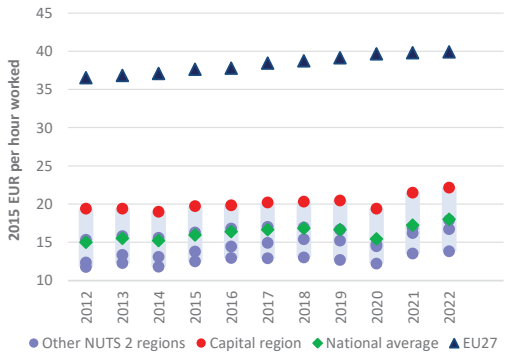
A positive economic context provides Croatia with an opportunity for further convergence through leveraging its regional competitive advantages in key sectors. Addressing skills shortages, housing affordability as well as improving circularity and clean energy transition are crucial in securing fair and sustainable growth for Croatian regions.

Croatia shows strong growth momentum but also significant regional disparities. In 2023, the capital region of Zagreb had a GDP per head (in purchasing power standard – PPS) of 125% of the EU average, significantly higher than Jadranska Hrvatska (72%) and more than twice as much as Sjeverna Hrvatska (62%) and Panonska Hrvatska (53%).

Competitiveness

Despite overall positive trends, with all regions growing faster than the EU average, structural challenges with substantial productivity gaps remain. The capital region, the country's strongest performer, is at 84% of EU average (GDP per hour worked) while Panonska Hrvatska reached just 53% in 2022. As regards the trends in productivity over 2014-2023, internal disparities in productivity decreased between the two more developed regions, Zagreb and Jadranska Hrvatska, and the two less developed regions, Sjeverna Hrvatska and Panonska Hrvatska. This reduction is mainly due to the encouraging catching-up process of Sjeverna Hrvatska, while convergence remains slow for Panonska Hrvatska.

Graph A17.1: **Labour productivity per hour**



Unit: Real GDP per hour worked (EUR, 2015 prices)
Source: ARDECO (JRC)

Creating opportunities across Croatian regions would help increase their productive base and growth potential, simultaneously addressing negative demographic trends. Regional demographic trends mirror economic disparities. Against the national population decline of average 10 per 1 000 residents per year in 2013-2022, Panonska Hrvatska faces severe losses (-19), while Zagreb shows more resilience (-3). Jadranska and Sjeverna regions face moderate declines (-8).

Alongside boosting traditional sectors, there is potential for strengthening the competitiveness of Croatian regions in priority niches and regional value chains, such as agri-food, blue economy and advanced manufacturing. Heavily dependent on tourism, Croatia's path to increasing its potential and sustainability lays in its diversification and in spreading it across the country (Panonska Hrvatska) as well as across seasons, particularly in Jadranska Hrvatska, which also has significant potential for growth in the blue economy and the health sector ([254]). The agri-food sector plays an important role in Panonska Hrvatska where smart solutions can boost agricultural productivity and sustainability. Sjeverna Hrvatska, characterised by having the largest share of industrial activity in the country, has opportunities in developing industry 4.0 and the automotive sector. The ICT sector shows potential in all regions, particularly in Panonska Hrvatska with significant growth rates. Croatian regions show promising capabilities in clean tech manufacturing, particularly in wind energy components (AC generators, pipe fittings), solar value chain (aluminium alloy plates/sheets, plastic components), and heat pump technologies (water heaters) ([255]).

Croatia's innovation landscape shows positive momentum across regions, with particular potential to extend beyond Zagreb to other university cities. The presence of major universities in Osijek, Rijeka, and Split creates opportunities for knowledge-based development, leveraging academic research capabilities and talent pools. The capital region,

([254]) Industrial transition plans of Panonska, Sjeverna and Jadranska Hrvatska.

([255]) 2024 World Bank, EU Regular Economic Report, Clean Tech Value Chains.

Table A17.1:**Selection of indicators at regional level in Croatia**

	GDP per head (PPS)	Real GDP per head growth	Productivity - GDP per person employed (PPS)	Real productivity growth (per person employed)	Productivity - GDP per hour worked (PPS)	Real productivity growth (per hour worked)	Employment growth	Employment in knowledge-intensive services	Population with high educational attainment	Participation in lifelong learning	Employment rate 20-64	Female employment rate 20-64	At-risk-of-poverty or social exclusion	Access to alternative fuel infrastructure	Passenger rail transport performance
	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	Average annual % change	% of total employment	% of population aged 25-64	% of population aged 25-64	% of population aged 20-64	% of women 20-64	% of total population	Points per million inhabitants	% of population within 1h30min reach
	2023	2014-2023	2023	2014-2023	2022	2013-2022	2014-2023	2024	2024	2024	2024	2024	2024	2021	2019
European Union (27 MS)	100	1.6	100	0.6	100	0.9	1.1	41.5	36.1	13.3	75.8	70.8	21.0	120.3	15.7
Croatia	76	3.8	84	1.6	69	1.8	1.6	38.1	30.4	6.6	73.6	70.6	21.7	53.1	4.8
Panonska Hrvatska	53	3.9	66	1.3	53	1.6	0.7	33.3	17.9	4.4	67.2	62.9	31.0	31.2	2.3
Jadranska Hrvatska	72	3.5	80	1.5	70	1.6	2.1	37.2	31.0	5.7	73.1	70.4	22.9	94.3	2.4
Grad Zagreb	125	3.2	103	1.7	84	1.3	1.1	51.5	51.3	12.4	79.7	80.2	11.1	28.0	18.7
Sjeverna Hrvatska	62	4.4	84	2.2	63	3.1	0.6	30.4	23.5	4.9	76.0	70.6	18.3	39.6	5.8

Source: Eurostat and JRC, DG REGIO estimation of employment

with its concentration of public research capacity, is positioned as a strong innovator ([256]), performing above the EU average. Innovation performance has also increased at a higher rate than that of the EU (8.5 percentage points) in Sjeverna Hrvatska and Jadranska Hrvatska, while in Panonska Hrvatska the increase has been slower. Knowledge spillovers through tech transfer and strategic public-private partnership, including between Zagreb and other regions, represent opportunities for strengthening the overall innovation performance and diffusion ([257]) (See Annex 3).

Regional innovation and human capital patterns reveal a complex landscape beyond Zagreb outperformance. While the capital leads in R&D expenditure (2.6% of GDP - gross domestic expenditure on R&D - GERD), Sjeverna Hrvatska shows remarkable catching-up dynamics with GERD at 1.7% and business R&D expenditure at 1.6% – above the EU average of 1.5%. In contrast, Panonska and Jadranska Hrvatska lag significantly (0.5% and 0.6% GERD, respectively). These disparities mirror the ones in tertiary education attainment, with Zagreb at 15 percentage points above and Panonska Hrvatska at 18 percentage points below the 2024 EU average. High-tech employment follows similar regional divides in 2024, from 12% in Zagreb to just 2.5% in Panonska and 3.0% in tourism-focused Jadranska Hrvatska. However, knowledge-intensive services show a more balanced regional distribution, suggesting potential for broader-based development.

The capital region is well equipped to keep pace with the rest of the EU and even outperform it, **while the rest of the country shows a reduced ability to keep pace with growth trends in dynamic and advanced sectors**. However, emerging evidence on the catching-up process of Sjeverna Hrvatska may make this duality more nuanced. Investing in high-tech sectors and human capital would be instrumental to boosting regional economic performance as skills shortages and low participation in adult learning, especially outside the capital region, are key challenges that hamper sustainable growth in Croatian regions. It would be beneficial to further strengthen planned cohesion policy measures targeting upskilling and reskilling in priority areas, in line with the smart specialisation strategy (S3) and the green and digital transitions (see also Annex 12).

Improving Croatia's quality of local government, and its ability to deliver quality services efficiently would help boost regional level competitiveness and uphold people's rights to stay in their regions. The local public administration is responsible for providing basic services and capital investments in various sectors in Croatia, but the process is hampered by uneven institutional and financial/operational capacity ([258]) and administrative fragmentation. With 556 local government units (LGUs), including 428 municipalities, the administrative-territorial structure weakens economies of scale in public service delivery. Therefore, improved strategic planning and stronger coordination between LGUs

([256])Regional Innovation Scoreboard, 2023.

([257])2024 European Innovation Scoreboard (EIS), country profile: Croatia.

([258])Subnational B-READY Report Croatia, World bank, 2024. The report offers actionable insights for improving administrative processes and regulatory frameworks directly affecting businesses at local level in five Croatian cities.

and perhaps full mergers in some cases could be considered as a viable solution to strengthen the capacity to deliver public services more efficiently and improve the uptake of investments, in line with the principles of integrated territorial development and partnership. This is particularly crucial for smaller cities and bodies implementing new territorial tools, including in the two Just Transition Fund territories of Istarska and Sisačko-moslavačka counties and on the islands.

Social fairness

While the overall employment rate increased in all Croatian regions in 2024 and gap between regions narrowed, regional variations in labour market conditions are significant. The employment rate ranges from levels close to the EU average in Sjeverna Hrvatska and even above in Grad Zagreb, to levels below the EU average in Jadranska (-2.7 percentage points difference (pps)) and Panonska Hrvatska (8.6 pps). The unemployment rate in 2024 ranges from around 3% in the capital region and Sjeverna Hrvatska to 6-7% in Jadranska Hrvatska and Panonska Hrvatska.

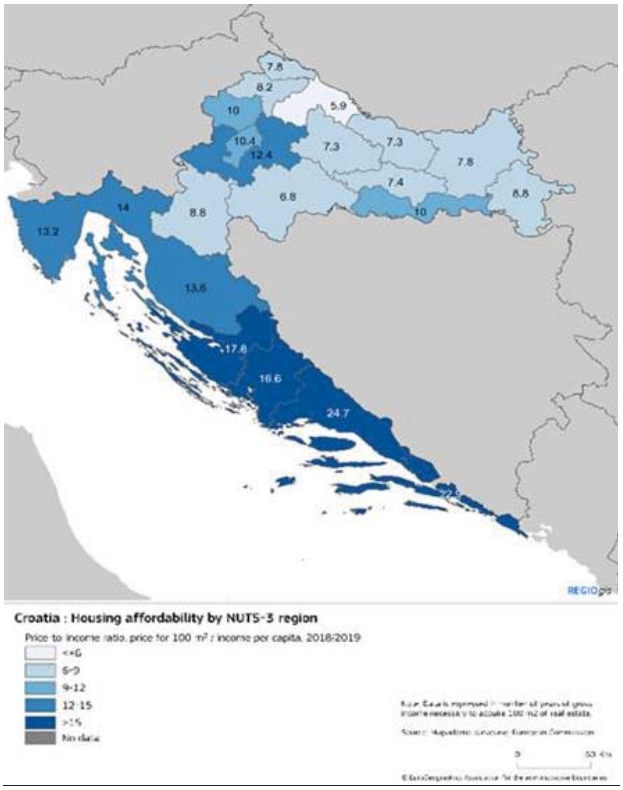
Young people's participation in the labour market is a concern in the less developed regions. While the national unemployment rate for 15-24-year-olds in 2024 was 16.8%, just 2 pps above the EU average, in Panonska Hrvatska it was 20.8%, two and a half times higher than that of Zagreb (7.9%). The employment rate of women shows similar picture, with more than 17 pps of a difference between the city of Zagreb (80.2%) and Panonska Hrvatska (62.9%). These figures coincide with the low rates of children in formal childcare, which continue to place greater caregiving responsibilities on women. In 2024, 70% of children below the age of 3 did not participate in early childhood education and care, with the participation rate being the lowest in Panonska Hrvatska, and the highest in the capital region. By harnessing talents and mobilising inactive people, especially young people and women outside the capital region, the country would have considerable potential to address key challenges to medium-term growth prospects.

Despite recent efforts and steps to improve the quality of public administration (see Annex 6), insufficient administrative capacity impedes local and regional potential for inclusive and sustainable development, creating deficiencies in the accessibility and quality of public services. The rate of the Croatian population at risk of poverty slightly increased in 2024 (21.7%), with continued stark interregional contrasts (see Annex 11). Panonska Hrvatska had poverty rates of 31%, substantially above the national figure and almost three times higher than the city of Zagreb (11.1%). Access to healthcare facilities in Croatian regions remains below the average for the EU's less developed regions, especially in Jadranska Hrvatska where only 7.9% of the population lives within a 10-minute drive of the nearest health centre (vs 28.8% of EU average). In this region the coastal geography plays a role and requires tailor-made solutions. Telemedicine deployment could increase healthcare accessibility, but it would require investments in digital infrastructure as well as in the development of digital skills.

Affordable housing remains a persistent challenge in Croatia, **the issue being more pronounced in main urban centres and touristic coastal areas.** Challenges related to rising house prices and the thin rental market have led to housing shortages and overcrowding (31.7% vs EU average of 16.9% in 2024). Unused property (25% of total housing stock) and high secondary home use, especially in main cities and coastal areas, further reduce dwelling availability. The housing affordability index at NUTS 3 level (Map A17.1) shows that houses are least affordable in Jadranska Hrvatska**,** especially on the southern Dalmatian coast due to the pressure of tourism. Most recent data on the housing gap per county ([259]) show a slightly different picture with a significant number of housing units missing in the capital region and the surrounding counties in Sjeverna Hrvatska, as well as in the Osječko-baranjska and Splitsko-dalmatinska counties. Given that the challenges are specific to local areas, addressing them at the appropriate level would be instrumental. Evaluating current policy choices and measuring the housing stock and investment needs are crucial to improving the overall prosperity of local communities and encouraging fair and sustainable urban development in the long term.

([259]) Croatian national housing policy plan (2030).

Map A17.1: **House prices relative to income, 2019**



Source: European Commission, Mapadomo

Sustainability

Notwithstanding significant challenges due to delays in complying with the EU *acquis* and exposure to climate change-related risks (see also Annex 9), all Croatian regions have good prospects in terms of achieving more sustainable development. This is thanks to their untapped potential for renewables and room to introduce more effective measures for making the economy more circular and increasing the greening of the transport sector.

Croatia's overall energy mix in 2023 remained heavily reliant on fossil fuels while its renewable energy mix, representing 27.8% of the overall energy mix, is dominated by biomass and hydropower, with limited shares of solar, wind and geothermal energy. There is a strong potential for developing renewable energy production at regional and local level (i.e. Jadranska Hrvatska for solar and wind, Panonska Hrvatska for geothermal) that is largely untapped (wind at 20% and solar below 2% of electricity generation). Croatia's decentralisation of energy production is progressing slowly with only three energy communities registered by end of 2024. Existing administrative challenges are slowing down renewable energy investments, including on the islands.

A comprehensive circular economy strategy would be an opportunity to put in place an efficient waste management system and increase the level of reuse and recycling. Despite improvements, the waste management system in Croatia still relies on landfilling, with 52% of the municipal waste produced ending up in one of the 77 active landfills in the country in 2023 ([260]). This is mainly due to the slow roll out of the regional waste management centres and limited capacities of the authorities to take up complex and large-scale waste investments. Separating and processing municipal waste remains a challenge, with the stark disparities at county level, going from 55% separately collected municipal waste in Međimurska county to only 5,5% in Dubrovačko-neretvanska county.

The implementation and quality of water utility services significantly vary among Croatian regions and cities. Only 84% of the country's population has access to water supply and only 47% to sanitation services. Larger cities in Jadranska Hrvatska, such as Dubrovnik, Split, Zadar and Rijeka, have to complete the construction of their water sanitation infrastructures as per the EU accession's treaty commitments. The capital region has one of the lowest compliance rates with EU water legislation (6%) and faces the highest investment needs to reach and maintain compliance. Despite some progress made in recent years (wastewater treatment increased in 2023 by 2.1%), public water network leakages ([261]) and insufficient urban wastewater treatment, especially in Jadranska Hrvatska (almost 12% of urban wastewater not collected), continue. Stepping up efforts to extend and modernise drinking water and wastewater infrastructure, and to ensure sustainable service at a reasonable price would be beneficial.

([260]) Municipal Waste Report for 2023. Ministry of Environmental Protection and Green Transition, 2024.

([261]) European Commission, The World Bank (2023), Technical assistance on support to reduce water loss within the reform of the water sector in Croatia.

Croatia's significant share of Natura 2000 sites (36.7%, the second largest in the EU) highlights the positive role of effective nature protection and the implementation of restoration legislation. It is key to achieve the birds and habitats directives' objectives, especially in Jadranska Hrvatska (50.3%). Cohesion policy investments in the biodiversity sector provide an opportunity to make significant progress in maintaining or restoring favourable conservation status of habitats, strengthening local administrative capacities and developing knowledge and human resources in charge of managing these sites.

Greening the transport sector presents an opportunity to counter the last decade's increasing greenhouse gas (GHG) emissions, while contributing to the competitiveness of Adriatic ports. With only 7% of core rail TEN-T network, compared to an EU average of 60%, a strong shift from mainly road-based transport to underdeveloped rail infrastructure would help reduce GHG emissions, particularly in Panonska and Jadranska Hrvatska, where GHG emissions are above the EU average. Moreover, modernising and improving rail infrastructure would help increase the development and competitiveness of the regions, for example, the port of Rijeka, and its strategic position as a gateway for cargo entering central and eastern Europe. Improving access to alternative fuel infrastructure in urban centres across the country, would contribute further towards more sustainable mobility and reduced emissions, as electric vehicle charging stations points are far below EU average, especially in Panonska Hrvatska and the capital region (see Table A17.1).