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2026 Country Report - Poland

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

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

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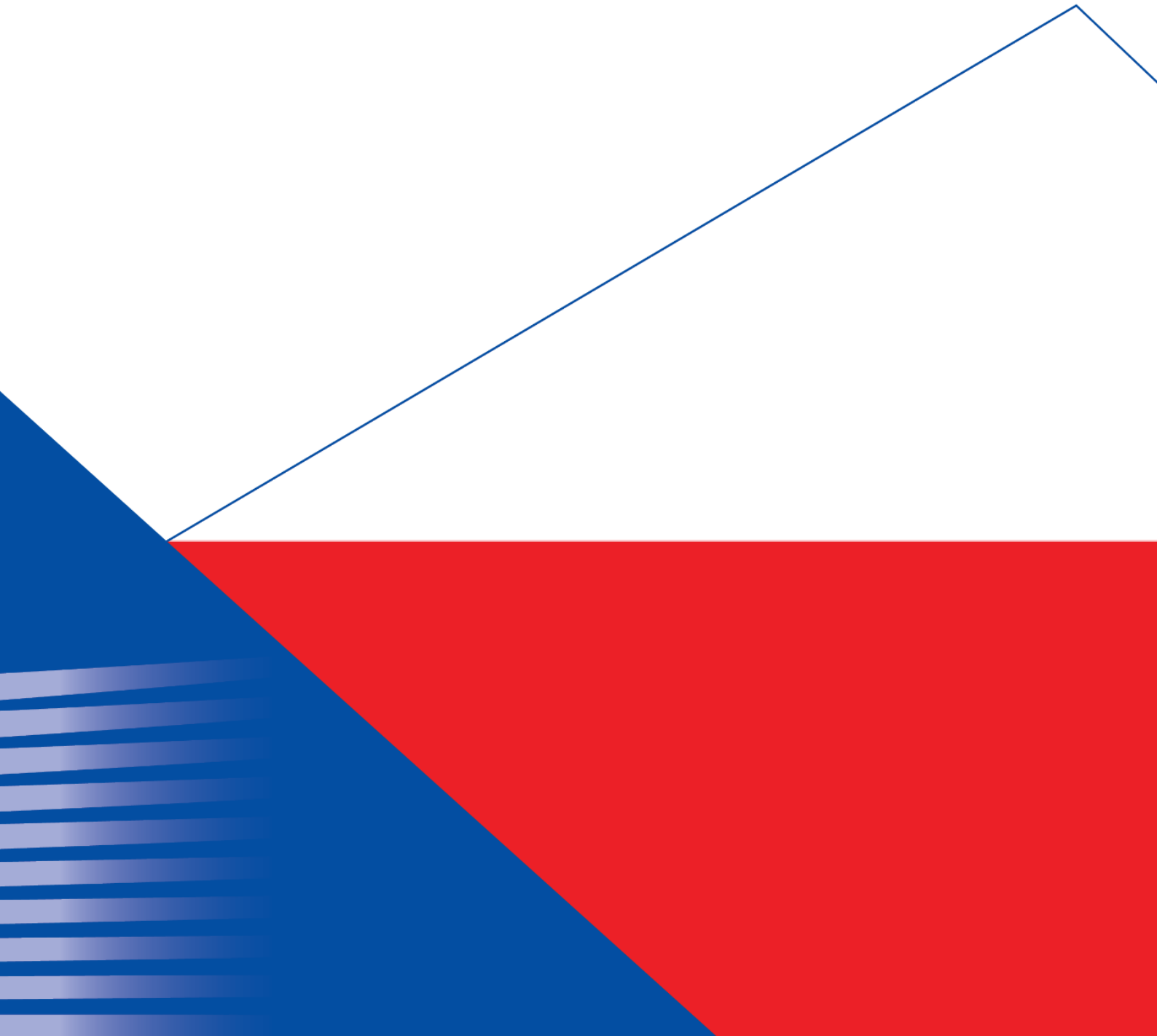
European Commission

Economic and Financial Affairs

Poland

2026 Country Report



ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

Robust growth momentum and fiscal imbalances

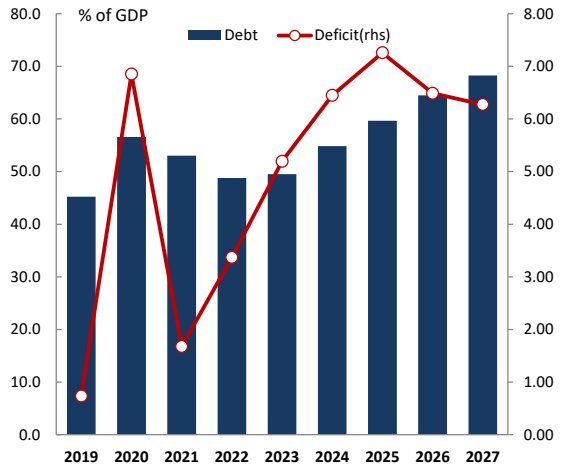
Poland has one of the fastest-growing economies in the EU. Its GDP grew by 3.6% in 2025 and growth is also set to remain high in 2026, driven by private consumption and investment (this includes investment funded by the EU). The negative contribution to economic growth from trade is expected to lessen as exports gradually increase.

Price pressures are continuing to ease. Inflation decreased from 3.7% in 2024 to 3.3% in 2025. Inflation is set to increase in 2026 due to higher energy prices and moderate in 2027.

The labour market remains robust and tight. In 2025, the employment rate among people aged 20-64 reached 78.8% and the labour market slack was significantly below the EU average (see Annex 11). The unemployment rate remained broadly unchanged, around 3% in 2025 (one of the lowest in the EU).

Public finances are unbalanced, and Poland has high deficits and growing debt. The general government deficit increased from 6.4% of GDP in 2024 to 7.3% of GDP in 2025, largely because of increased spending on social protection and defence. The Commission's Spring 2026 Economic Forecast projects that the deficit will decrease to 6.5% of GDP in 2026 and 6.3% of GDP in 2027. Public debt reached 59.7% of GDP in 2025 and is expected to increase to 68.3% of GDP in 2027, mostly due to high deficits and cash prefinancing of military investments. Poland has been in the excessive deficit procedure (EDP) since 2024, with a recommendation to reduce the deficit below 3% of GDP by 2028.

Graph 1.1: **Evolution of Poland's general government deficit and debt (% of GDP)**



Source: European Commission Spring 2026 Forecast

Contained macroeconomic challenges and persistent competitiveness challenges

Macro-financial challenges and risks remain limited overall, but concerns about competitiveness remain. The real effective exchange rate has appreciated significantly and, despite slowing down, growth in unit labour costs has remained high. Poland has gained export market shares against advanced economies in recent years. In 2025, the current account balance worsened as buoyant imports outpaced exports. The financial sector remains stable.

Substantial fiscal challenges persist and are linked with the structural imbalance in public finances. Poland's medium-term fiscal-structural plan (MTP) for 2025-2028 contains a commitment to limit expenditure growth that would reduce the fiscal deficit in line with its EDP and place debt on a

downward trajectory (see Annex 2). According to the MTP, this would imply an improvement in the structural primary balance of 3.3 percentage points between 2025 and 2028. Poland's total public expenditure relative to GDP has increased above the EU average, rising from around 41% of GDP in 2019 to around 51% of GDP in 2025. However, government revenues only increased from about 41% of GDP to 44% of GDP during the same period, resulting in a persistent fiscal deficit.

Poland's fiscal strategy relies on expenditure restraint and discretionary revenue increases. The consolidation effort planned in the 2026 budget is lower than assumed in the MTP, while the recommended net expenditure growth is respected. Moderate growth in public-sector salaries and the reduction of subsidies are contributing to a gradual reduction of nationally financed expenditure relative to GDP. However, spending on defence, social benefits, healthcare and long-term care is expected to grow. Consolidating total expenditure will therefore be a significant challenge for the government in the medium term. Government revenues are expected to increase in 2026, driven by discretionary revenue measures (particularly the non-indexation of personal income tax brackets and an increase in corporate income tax on banks). Some tax increases planned by the government are subject to political risks in the national legislative process. In addition, tax non-compliance is undermining revenue collection, and the VAT compliance gap is estimated to have increased to 16% in 2023 (EU: 9.5%). In 2024, Poland saw a decrease in the VAT compliance gap to 10.9%. Further revenue mobilisation (especially by broadening the tax base for sources less detrimental to growth and by strengthening tax compliance) may help to rebalance public finances (see Annex 3).

Reforms to enhance the quality and efficiency of public finances are underway, but weaknesses remain. Substantial progress has been made on the 2025 country-specific recommendation (CSR) to improve the efficiency of public spending in the area of public investment, but no progress has been made on better targeting social benefits. In particular, no measures were taken to expand means-testing in family benefits. In line with its recovery and resilience plan (RRP), Poland has introduced a public investment management framework and initiated a long-term reform of the budgetary system. The Polish Fiscal Council was established on 1 January 2026 with a clear mandate to assess the national macroeconomic forecast and the draft budget law's compliance with EU and national fiscal rules. However, it has no mandate to regularly assess long-term public finance sustainability. Spending reviews carried out by the Ministry of Finance and sectoral ministries since 2024 have had only a limited impact in terms of spending reallocations and the framework is being revised under the RRP in 2026. A requirement to broaden coverage of public spending and tax expenditures with spending reviews could contribute to fiscal consolidation and improve the efficiency of public spending.

Spending on defence is set to continue increasing in accordance with new geopolitical priorities. Total expenditure on defence rose from 1.6% of GDP in 2021 to 3.4% of GDP in 2025 and is scheduled to increase further in the coming years. In the absence of compensating consolidation measures, this surge is pushing up the government's deficit. It is even more quickly pushing up public debt, which is also rising due to the cash prefinancing of military contracts with future planned deliveries. The Council of the European Union has activated the national escape clause for Poland [1] in order to facilitate an increase in defence spending. Following an assessment by the Commission of Poland's national defence investment plan under Security Action for Europe (SAFE), the Council adopted a decision that makes up to EUR 43.7 billion in financial assistance available to Poland for strategic defence

[1] The activation of the national escape clause gives Member States budgetary flexibility to increase defence expenditure without immediately requiring them to finance this increase with spending cuts or revenue-raising measures. This flexibility gives Member States the time they need to accommodate higher defence expenditure within national budgets.

projects in 2025-2030. Poland's defence capacity is being further bolstered by investment from the Security and Defence Fund (financed by Recovery and Resilience Facility (RRF) loans) along with projects financed through the EU's cohesion policy funds.

Challenges to competitiveness persist, particularly in relation to the business environment, research and innovation, skills and education, and the clean energy transition. Polish firms have a low investment rate and low volume of high-tech exports. Access to finance is limited and leans heavily towards the traditional banking system. Corporate growth is hindered by the low absorption of digital solutions and increases in labour costs that exceed gains in labour productivity (see Section 2). Significant progress has been made in recent years, but Poland remains heavily carbon-dependent and this in turn increases energy prices and poses environmental challenges (see Section 3). Enterprises are suffering from skills shortages that are being exacerbated by a decline in adults' and students' basic skills. This is in turn increasing inequalities in education and reducing participation in adult learning as well as STEM programmes at tertiary level (see Section 4).

Addressing the affordable housing shortage

Poland's housing market has in recent years been characterised by a slowing down supply of housing and a decrease in affordability. House prices and rents have been rapidly increasing since 2015 (by 117% and 74% respectively – far above the EU averages of 62% and 21%), particularly in cities and urban areas. Despite a relatively high number of completed dwellings per 1 000 citizens when compared to other EU countries, housing supply has been slowing down since 2022, and investment in housing remains the lowest in the EU (2.2% of GDP vs EU average of 5%), while the overall number of dwellings per 1 000 inhabitants is significantly below the EU average (see Annex 16). Housing conditions remain challenging, with high overcrowding rates. Poland's RRP has only partly addressed the existing housing stock's low energy efficiency. Access to social and municipal housing is low and many people fall into a 'rental gap': they face excessive housing costs in their owned or rented house but remain above the income thresholds for accessing social and municipal housing. Poland could invest more in expanding the social and municipal housing stock and making it available to more social and vulnerable groups (including those affected by the rental gap).

Poland's housing policies are fragmented. The governance of housing policy at the national and subnational levels is uncoordinated (see Annex 16). No holistic programme for monitoring and analysing the housing stock and housing needs has been set up to help analyse precise housing needs and existing stock (including at the local level). There is also no legal definition of affordable housing set. Strengthening the coordination of housing policy at the national level, implemented in a long-term perspective with consistent political support and stable funding sources, alongside active local housing policies by municipalities and a multi-level data collection mechanism, would help better satisfy housing needs at the local level. Strengthening authorities' cooperation with civil society organisations and the private sector and setting a legal definition of affordable housing would also be beneficial.

Some existing regulations are creating inflationary pressures for house prices and hindering the rental market's growth. Financial assets such as stocks are taxed more heavily and are riskier than housing investments. This in turn creates risks of speculative demand and fuels house price increases. Poland could consider adjusting the tax environment and moving away from flat-rate property taxation in favour of a value-based tax on land or a cadastral property tax. This would help curb speculative investment demand and slow down housing price inflation, while taking into account the potential distributional impacts of value-based taxes. The private rental market is unbalanced, because current legislation does not protect landlords' and tenants' rights. The implementation of the existing regulatory

framework needs to be further improved. Poland could implement a more balanced approach to landlords' rights and tenants' security in order to facilitate stable, long-term renting, and to improve the enforcement of the existing law. Regulatory procedures in the construction sector could also be improved. The significant amount of time required to obtain a building permit in some municipalities is constraining housing supply (see Annex 16).

Vulnerable groups face specific barriers when seeking to access housing (including discrimination and accessibility constraints). Housing policies increasingly reflect demographic ageing and the need for accessible housing solutions for older people. One example is the 2023 introduction of senior lease agreements (see Annex 16). Homelessness remains a persistent social challenge. Poland's efforts to implement housing-led and person-centred schemes of interventions to address housing exclusion are significantly limited in their scope.

Regional and territorial disparities

Poland has achieved substantial progress in narrowing regional disparities in recent decades, but significant differences persist (both between regions and between larger cities and rural areas). The main challenges stem from economic (see Section 2), demographic, environmental and energy transformation (see Section 3) and governance factors. These regional disparities highlight a continuing need for precise and well-planned policy interventions and investment at both national and regional level.

Poland faces uneven demographic pressures, with eastern and rural areas marked by a significant population decline due to outward migration and an insufficient provision of public services. Smaller towns, which historically served as subregional or local centres, are facing increasing difficulties in terms of an ageing population, a lack of attractive jobs and brain drain. Strengthening the functional role of small and medium-sized towns as service, employment and innovation hubs for surrounding areas is therefore crucial to counteracting demographic decline and maintaining territorial cohesion. Particularly in rural areas, unsatisfactory availability and quality of public services (particularly education and health) as well as deficiencies in transport accessibility are contributing to a decline in population, undermining both economic opportunities and residents' right to stay. The eastern border regions face additional challenges due to security pressures from neighbouring Russia and Belarus. These have been compounded by Russia's war of aggression against Ukraine, which has exacerbated their already difficult economic and demographic situation. These factors make these regions significantly less attractive for inhabitants and investors. To counter these trends, targeted public investments (guided by strategic spatial planning) could help revitalise struggling areas. Digitalising public services, improving connectivity and upskilling residents to access digital tools would also strengthen these communities' quality of life and attractiveness.

Regional authorities are actively involved in implementing EU funding. Poland manages cohesion policy funds through a mixed system. One central authority manages national and multiregional programmes that account for 56% of total funds. 16 regional authorities manage regional programmes that account for the remaining 44%. The persistent disparities between regions across many sectors (i.e. innovation, education and healthcare) underscore the varying capacities of regional authorities to efficiently plan and invest available funds, and to implement changes needed to address these disparities. Strengthening regional capacity (both in strategic planning and execution) could allow more effective responses to local and subregional priorities.

Pension system and active ageing

The declining adequacy of pension benefits poses a significant risk of

poverty among seniors and of increased budget spending. Poland received a CSR in 2025 to ensure the adequacy of future pension benefits and strengthen the sustainability of the pension system (including by taking measures on the effective retirement age and reforming preferential pension schemes), but Poland has made little progress in addressing this recommendation. The ratio of the average gross pension to the average wage decreased from 66% in 2005 to 55% in 2024 ([2]) and this decline will accelerate in the coming years ([3]). The average pension for women is about two thirds that for men ([4]). The employment rate of people aged 55-64 was 59% in 2024 (EU: 65.2%). The particularly low employment rate for women (48.3% vs 59.4% in the EU) reflects their lower statutory retirement age. The effective retirement age remains close to the statutory threshold (averaging 65.1 years for men and 60.6 years for women in 2024) and has remained stable for several years, despite policy actions ([5]).

Significant risks of inadequate pension coverage are present for persons on non-standard work contracts. Persons who are self-employed and pay minimal contributions ([6]) as well as those on civil law contracts are at risk of receiving low pensions from the universal system. It is estimated that those who began their professional activity after 1998 will fail to accumulate sufficient pension capital for the minimum pension ([7]). The State budget will therefore need to cover the shortfall ([8]). The number of the self-employed has grown by over 40% between 2015-2024 ([9]), which can also be explained by the significant difference in the tax wedge between income from business activities and employment contracts (see Section 4). By 2040, 50% of pensioners may receive a retirement benefit that equals the statutory minimum ([10]). Poland provides annually two additional one-off benefits to compensate for the loss in adequacy. With the current demographic trends, the pressure for additional expenditure to alleviate the loss in the replacement rate will increase and this might jeopardise the pension system's sustainability. If the current pension benefit ratio (average pension benefit as a percentage of average wage) is maintained, pension spending is projected to increase by 2.5 percentage points of GDP by 2045 ([11]). Supplementary pensions play only a limited role in the provision of retirement income, with limited financial assets allocated to voluntary pension schemes (see Annex 2).

The Polish pension system is fragmented, with special regimes for certain professions. The largest special pension scheme (the KRUS scheme ([12])) is dedicated to farmers. It receives substantial subsidies from the State budget (around 0.7% of GDP in 2025) ([13]) because contributions paid by farmers cover less than 10% of the benefit amount (compared with around 80% in the

([2]) Statistics Poland, 2025, *Retirement and other pensions in 2024*, Warsaw.

([3]) European Commission, *2024 Ageing Report, Economic and Budgetary Projections for the EU Member States (2022-2070)*.

([4]) Statistics Poland, 2025, *Retirement and other pensions in 2024*, Warsaw.

([5]) According to tax data from 2024, over 157 000 seniors benefited from the PIT-0 allowance. This constituted 2% of pensioners.

([6]) 99.18% of self-employed persons in the analysed sample did not declare social contributions higher than the basic minimum (60% of the projected average salary in the economy).

([7]) Petelczyc, J. and Lasocki, T., 2024, *Dobrowolne ubóstwo. O konsekwencjach dobrowolnego ZUS dla samozatrudnionych*, Polska Sieć Ekonomii, https://www.zus.pl/-/-dobrowolne-ub%C3%B3stwo-o-konsekwencjach-dobrowolnego-zus-dla-samozatrudnionych-raport.

([8]) Act of 17 December 1998 on pensions and disability benefits from the Social Insurance Fund (consolidated text at Journal of Laws 2025, item 1749)

([9]) This excludes those who are self-employed in agriculture.

([10]) Malec, M. and Tyrowicz, J., 2017, *Starzenie się ludności. Rynek pracy i finanse publiczne*, European Commission.

([11]) European Commission, *2024 Ageing Report, Economic and Budgetary Projections for the EU Member States (2022-2070)*.

([12]) '*Kasa Rolniczego Ubezpieczenia Społecznego*' - Agricultural Social Insurance Fund

([13]) 0.66% of GDP is planned for 2026 according to the State budget law.

general pension system) ([14]). Significant changes have occurred in the agricultural sector, such as population outflow and farm structure shifts that have led to productivity growth ([15]). However, the KRUS scheme has remained unchanged. Social contributions from large-scale agricultural activity have not kept pace with farmers' incomes ([16]). Rules governing the calculation of transfers of pension capital from the KRUS scheme to the general ZUS scheme do not incentivise farmers to switch to the general scheme. Other special pension schemes exist for the uniformed services and for judges and prosecutors. Their dedicated pension schemes provide for higher pension benefits and earlier retirement options than the general scheme (ZUS). These are not linked to contributions and therefore rely on State budget subsidies (1% of GDP in 2025) ([17]).

Health and long-term care

Unsustainable funding and unequal access to services are the primary challenges for the healthcare system. Healthcare spending has grown significantly in recent years but remains below the EU average. The funding level reached 7.1% of GDP in 2023 ([18]), compared with the EU average of almost 10%. The State budget's share in the healthcare system's financing is increasing because health insurance contributions are insufficient to cover expenditures ([19]) and this poses risks to fiscal sustainability. However, this increased expenditure has not improved accessibility, primarily because resources are not efficiently allocated. Access to healthcare services in Poland is unequal, largely due to a shortage of medical personnel (especially in small counties and rural areas) ([20]). Physician density has increased significantly in recent years but remains below the EU average (3.9 vs 4.3 per 1 000 population). Recent changes in the rules setting minimum wages for medical staff have significantly increased salaries in the sector ([21]). Despite actions taken under the RRP, the system continues to support inpatient hospital treatment at the expense of primary and outpatient care. The number of hospital beds per capita remains above the EU average (5.6 vs 4.4 per 1 000 inhabitants in 2023). Spending on preventive healthcare in Poland was among the lowest in the EU in 2023, accounting for only 1.7% of total healthcare spending. Recent government and local authority measures to limit alcohol sales and increase taxes on tobacco and nicotine products were steps in the right direction. Nevertheless, the absence of an earmarked funding stream for prevention is preventing a consistent approach between different administrative levels and institutions. Preventive programmes are often short-term and project-based, hindering the achievement of lasting outcomes ([22]) (see Annex 15).

Long-term care services are not prepared to meet growing demographic challenges, there is a marked preference for residential care and Poland is facing affordability challenges. In 2022, public expenditure on long-term care was low (0.5% of GDP vs 1.7% in the EU) ([23]). In 2022, public

([14]) ZUS, 2025, *Podsumowanie sytuacji finansowej Funduszu Ubezpieczeń Społecznych po trzech kwartałach 2025 r.*, https://www.zus.pl/o-zus/dla-mediow/analizy-i-raporty.

([15]) Total factor productivity in the agriculture sector grew moderately and steadily in the EU by around 9% in 2012-2022, but Poland recorded growth of 25% in this period.

([16]) The replacement rate in the KRUS scheme is around 29%.

([17]) On calculations that concern the budgeted expenditure within the remit of the Ministry of Defence, Ministry of Justice and Ministry of Internal Affairs, see data for 2025.

([18]) Statistics Poland, 2025, *Health and health care in 2024*, Warsaw and Kraków, p. 191.

([19]) A decade ago, health insurance contributions and other non-subsidy revenues of the National Health Fund (NFZ) covered 97% of its expenses. In 2024, it was only 84%.

([20]) OECD Country Health Profile 2025: Poland.

([21]) Instytut Finansów Publicznych, 2024, *Luka finansowa systemu ochrony zdrowia w Polsce*, Warsaw, p. 5.

([22]) SGH think tank dla ochrony zdrowia, 2026, *Nowa architektura finansowania ochrony zdrowia w Polsce*, Warsaw, p. 47.

([23]) Ageing Report 2024: https://economy-finance.ec.europa.eu/publications/2024-ageing-report-

Box 1:

SDG progress box

Poland has made progress on the SDGs related to macroeconomic stability (SGDs 8, 16 and 17), competitiveness (SDGs 4, 8 and 9) and social fairness (SDGs 1, 3, 4, 5, 7, 8 and 10) and on some of the SDGs related to sustainability (SDGs 6, 7, 9, 11, 12, 13, 14 and 15).

Poland exceeds the EU average on SDG 1 (no poverty), SDG 4 (quality education), SDG 10 (reduced inequalities), SGD 11 (sustainable cities and communities), SGD 15 (life of land), SDG 16 (peace and personal security) and SDG 17 (partnerships for the goals). However, its performance is declining for some of the targets for SDG 2 (zero hunger), which includes indicators on malnutrition, sustainable agricultural production and the environmental impacts of agricultural production.

long-term care expenditure was largely allocated to residential care (65.4% in Poland vs 46.2% in the EU) ([24]). Support programmes for municipalities aimed at developing community-based care, such as Care 75+ (Opieka 75+), remain underfunded. Newly created day care places, such as Day Care Homes (Dzienne Domy Pomocy) and Day Medical Care Homes (DDOM), are highly dependent on project-based EU support and therefore lack long-term stable funding. Progress in establishing home care standards has been delayed. In 2024, the number of long-term care workers per 100 individuals aged 65 or over was very low (0.4 in Poland vs 3.3 in the EU). This underscores the continuing overall reliance on informal care. Legislative work is ongoing on a draft law on the coordination of the long-term care to introduce a senior voucher that will support family caregivers and reduce informal employment. Public social protection is limited for older people with moderate and severe needs, leading to out-of-pocket costs that are above the EU average ([25]) (Annex 12).

EU funding instruments provide considerable resources to Poland. They support investments and structural reforms to increase competitiveness, environmental sustainability, skills, social fairness and security, while helping to address challenges identified in the CSRs. Key instruments include the Recovery and Resilience Facility (see Box 3) and Cohesion policy funds (see Box 2). In addition, the Common Agricultural Policy (CAP) provides Poland with an EU contribution of EUR 22.1 billion under the CAP strategic plan for 2023-2027 ([26]). A further EUR 560.5 million are available under the Asylum, Migration and Integration Fund (AMIF), together with the Border Management and Visa Instrument (BMVI) and the Internal Security Fund (ISF). Other EU programmes also support competitiveness in Poland, for instance through open calls under Horizon Europe and the Connecting Europe Facility.

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([24]) EU Labour Force Survey.

([25]) OECD https://www.oecd.org/en/topics/sub-issues/ageing-and-long-term-care/social-protection-for-older-people-with-ltc-needs.html.

([26]) An overview of Poland '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/poland_en

Box 2: **Contribution of cohesion policy funds**

EU cohesion policy funding is supporting Poland's efforts to boost competitiveness, environmental sustainability, skills and social fairness. In the 2021-2027 programming period, EU cohesion policy funds ([27]) are providing EUR 75.46 billion (amounting to EUR 90.48 billion paired with national co-financing), or almost 9% of 2024 GDP ([28]), to Poland. This makes cohesion policy one of the main sources of public investment in the country. The value of selected projects corresponded to 66.4 % of the total allocation as of March 2026, with additional calls for projects in the pipeline.

- **Innovation, business environment and productivity:** EUR 12.2 billion is allocated to research, innovation and SMEs competitiveness. Selected projects are already supporting over 32 000 businesses (including almost 6 500 SMEs), as well as science–business cooperation (over 100 research institutions are participating in joint projects with enterprises). Alongside enterprise, funding is supporting strategic innovation hubs to provide advisory, analytical and start-up acceleration assistance.

- **Decarbonisation, energy affordability and sustainability:** EUR 28.8 billion is allocated to the green transition, out of which EUR 11.9 billion has been dedicated to sustainable transport. The projects under this policy objective will, in addition to other aims, add 4 269 MW of renewable energy capacity; increase waste recycling capacity by 92 260 tonnes per year; and deliver new or upgraded wastewater treatment capacity equivalent to over 2 million people, thus strengthening environmental protection and climate resilience.

- **Skills, quality jobs and social fairness:** Under the ESF+, inclusive education and training is supported by EUR 2.1 billion, as well as lifelong learning (EUR 1.38 billion) and education and training systems (EUR 729 million). The fund also intervenes in fields such as active inclusion and measures to counter severe material deprivation (EUR 1.7 billion), healthcare (including long-term care services for older people and persons with disabilities) (EUR 1.88 billion) and access to employment (EUR 1.69 billion). In addition, 100 000 new childcare places will be supported to tackle the gender employment gap.

- **Digital transformation:** the EU allocation to Digital Development programme for 2021-27 amounts to EUR 1.99 billion. The programme covers support to public e-services, cybersecurity and digital skills as well as connection of nearly 46 000 dwellings and over 5 000 businesses to broadband and VHC network.

The mid-term review ([29]) reinforced cohesion policy's contribution to emerging strategic priorities, reallocating EUR 8.05 billion. More than 78% of this reallocation is to support defence (particularly military mobility) as well as industrial capacity in order to foster defence and dual-use capabilities. The mid-term review will further strengthen competitiveness by supporting the development and manufacturing of critical technologies under the Strategic Technology for Europe Platform (STEP) (12% of the reallocated funds have been allocated to this). The reallocations will also support a range of other priorities, including water resilience and sustainable water management, affordable housing, sustainable energy and energy security.

([27]) ERDF, ESF+, CF and JTF.

([28]) Eurostat, *Gross domestic product (GDP) and main components (output, expenditure and income)* [nama_10_gdp].

([29]) The mid-term review was undertaken halfway through the 2021-2027 programming period. It is a formal assessment process required under Article 18 of the Common Provisions Regulation to assess the implementation of a programme; and, where necessary, to propose adjustments to improve its performance, ensure its continuing relevance in the light of new and emerging needs and maintain consistency with other EU policies.

Box 3:

Key achievements of the RRF

Poland's recovery and resilience plan (RRP) has a total envelope of **EUR 54.7 billion** (corresponding to **8% of GDP**) to support reforms and investments that contribute to the green and digital transitions, strengthen economic resilience and address long-standing structural challenges identified in the European Semester.

As of 2 June 2026, **EUR 34.15 billion** (around **62% of the total allocation**) had been disbursed to Poland following the satisfactory fulfilment of 166 milestones and targets (this included EUR 19.7 billion in loans). Implementation has progressed steadily, with a growing number of reforms and investments already fulfilled and delivering tangible results on the ground.

Highlights and impact of the RRP

- **accelerated renewable energy deployment:** major investments have been made in more affordable and clean energy, and far-reaching reforms are enabling faster deployment of renewables (especially onshore wind installations), already **connecting 38.9 GW of renewables to the grid,** overachieving the target of 30 GW by 2026;
- **enhanced competitiveness and resilience of the Polish economy**: a mix of reforms to reduce the regulatory and administrative burden on businesses (digitalising administrative procedures, reducing the use of two-instance procedures, etc.), support for the **digital and green transition of SMEs and businesses**, and improvement of the innovation ecosystem (by constructing more than 50 research laboratories and investing in technologies for the circular economy);
- **increased labour market participation of parents**: construction, renovation or adaptation of **1 060 childcare facilities** (nurseries, children's clubs) for children below three years of age) and of caregivers (by improving **long-term care services**);
- **improved effectiveness of public employment services:** reforms and investments (training courses on new and improved procedures provided to 50% of employees of public service services and the creation of 120 sectoral skills centres) are helping to increase the matching of skills and qualifications with labour market requirements as well as decrease unemployment;
- **energy efficiency in buildings**: the RRP is expected to reduce primary energy consumption by **4.2 TWh** a year (equivalent to the average usage of **280 000 households**) through energy efficiency reforms that target households (e.g. through the 'Clean Air' Priority Programme) and businesses, coupled with investments to improve energy efficiency and reduce energy intensity in buildings, as well as in industrial and production installations in businesses.;
- **digital transformation in education:** digital **infrastructure and equipment** will be delivered to **more than 15 000 schools**, supported by comprehensive reforms that will introduce a digital competence development programme and binding standards for equipping schools with digital infrastructure;
- **modernisation of healthcare infrastructure:** over **120 hospitals** will be modernised (with highly specialised care centres), building on reforms that are establishing the national oncological and cardiological networks;
- **increased coverage with affordable, high-quality and high-speed broadband services:** the extension of high-speed broadband access to **over 400 000 households** in underserved areas, enabled by reforms that are removing legislative barriers to broadband investment and aligning national legislation with the EU-wide Connectivity Toolbox;
- **zero-emission transport:** increased provision of clean public transport services through the purchase of 88 trams for public transport in cities and at least 77 units of rolling stock for regional transport.

INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

In 2025, Poland received country-specific recommendations (CSRs) to simplify regulation; improve and stabilise the regulatory framework; reduce the administrative burden for companies; encourage competition in public procurement; strengthen science-business links; modernise public research system; and focus economic policy on innovation. Several measures have been implemented, focusing on simplifying regulation and digitalising administrative procedures. Challenges nevertheless remain, especially in placing research-generated innovation on the market and efficiently using digital technologies in the public and private sectors.

Turning ideas into growth – strengthening the Polish innovation ecosystem

Poland has stepped up efforts to stimulate private investment in research, development and innovation (RDI), including by raising public expenditure, but the impact remains incomplete so far. In 2025, Poland received a CSR to focus investment-related economic policy on innovation. Since then, besides the existing tax incentives, Poland has directed a large stream of financing towards innovation in business, both from cohesion policy (notably the European Funds for Smart Economy programme) and national funds (such as the Innovate Poland programme launched in Q4 2025). Business expenditure on R&D (BERD) in Poland has grown substantially in recent years (both for enterprises in general and for SMEs) but remains far below the EU average (see Annex 4). Despite consistent economic growth and a strong industrial base, Polish enterprises (especially SMEs) invest less in new products or services, resulting in a low level of high-tech exports and a low number of innovations being introduced to the market (see Annex 6). R&D expenditure is growing but does not effectively translate into market-ready innovations. Polish enterprises are not sufficiently integrated into high-value innovation chains.

Public financing is not sufficiently strategically used to leverage private RDI expenditure, including by focusing on selected areas of specialisation. Disparities between Polish regions highlight the need for region-focused solutions to ensure spillover effects. This particularly concerns eastern regions and smaller regions in western Poland. Smart specialisation strategies in these regions are often not sufficiently focused on regional specificities and would require adjustment to improve the regional competitiveness (see Annex 18 for details). Public support is often dispersed between various instruments and priorities, which makes it difficult to access and does not sufficiently mobilise private investment in general and investment in innovation in particular ([30]). Intermediaries in the business environment (such as incubators, clusters, venture capital funds and contact points) could be more engaged in innovation ecosystems in order to provide more tailor-made support, strengthen science-business linkages, and enhance smart specialisation and innovation

([30]) Kłosiewicz-Górecka, U., Rozbicka, I., Szymańska, A., Wincewicz-Price, A. and Zybertowicz, K., 2025, *Aktywność inwestycyjna polskich firm – skala i bariery*, Polski Instytut Ekonomiczny, Warsaw.

focus (including networking and spillover effects; see also Annex 5) ([31]).

The number of start-ups, scale-ups and 'unicorns' is growing but remains low given the size of the Polish economy. Start-ups face difficulties in finding support for growth, particularly in terms of financing but also managerial competences (see Annex 4). This restricts the number of growth champions leading the economy towards more innovation-based competitiveness. Poland is preparing a strategy for developing the start-up ecosystem until 2035 and this strategy could bring improvements in the regulatory framework, access to finance and entrance to international markets. Legislative changes already initiated include introducing the Qualified Investment Fund (*Kwalifikowany Fundusz Inwestycyjny*) with the aim tofacilitate VC development. Strengthening the early-stage financing market (seed or venture capital), supporting the creation of start-ups in research entities and developing the ability of founders to interact with investors could be considered in order to develop the ecosystem in the future.

The research infrastructure and regulatory framework have improved, but significant barriers remain to commercialising the scientific results and this is hindering the full realisation of its innovative potential. The number of public-private research projects, co-publications, patent applications and researchers employed by businesses is increasing, but progress remains uneven, and the levels are significantly below the EU average (see Annex 4). The main challenges include an underfunded and fragmented technology transfer ecosystem, not facilitating business-science collaboration effectively (including motivating businesses to source innovation from research), a research evaluation system that fails to fully incentivise and reward commercialisation, and the limited attractiveness and competitiveness of the research career system.

Further strengthening science-business cooperation at both national and regional levels remains essential. The continuing professionalisation and capacity-building of university-based technology-transfer centres and knowledge-transfer companies, as well as their associations, are crucial for enhancing their role and the pipeline of investment-ready projects following on from research. Cohesion policy funds include measures to promote the commercialisation of scientific results. Their effective implementation is expected to further advance these efforts in Poland. One notable example is the Science4Business (*Nauka dla biznesu*) project, which was launched in 2025 with funding from the European Funds for Smart Economy 2021-2027 and is aimed at improving the effectiveness of technology-transfer centres and university knowledge-transfer companies, which are crucial for creating start-ups and spin-offs. A stronger focus of the projects selection criteria on the commercialisation of research results within public support instruments (provided, inter alia, by the National Centre for Research and Development (NCBR) and the Foundation for Polish Science (FNP)) would further bridge the gap between research and commercial application. At the regional level, fostering the technology-transfer ecosystem could involve structured collaboration platforms that connect SMEs, universities and technology parks to support applied R&D, prototyping and technology transfer. Poland has initiated several actions, but many are still at an early stage and have had only a limited impact so far**.** Noteworthy measures (taken in the context of a 2025 CSR to strengthen science-business links) include establishing new rules for the Council for Innovation; forming an expert team to enhance the transfer of scientific results to the economy; launching a comprehensive evaluation of the effectiveness of the science-business cooperation support system; and works on a strategy for developing the start-up ecosystem until 2035 (see Annex 4). The recommendations from these strategic documents and experts' insights could boost science-business links if they are translated

([31]) Kogut-Jaworska, M. and Ociepa-Kicińska, E., 2023, *Do Regional Smart Specialization Strategies Affect Innovation in Enterprises? Sustainability*.

into concrete legislative and institutional changes.

Further progress in the ongoing review of the academic evaluation system is crucial for fostering an entrepreneurial culture among scientists and in academia. In 2025, Poland received a CSR highlighting the need to create incentives for researchers to engage with the private sector. A review is necessary because public research institutions still undervalue links with businesses and market. Higher education reforms (including those that introduced the Constitution for Science (2018), initiated the Excellence Initiative – Research University (IDUB) and adopted the 2022 strategic document 'National science policy' (see Annex 4)) did not sufficiently address the issue. The prioritisation of publication over practical application remains a key weakness of the current framework.

Modernising the public research system and improving the attractiveness of research careers (as recommended by a CSR in 2025) requires additional policy measures. The number of PhD students per 1 000 inhabitants and researchers per 1 000 employees in the public sector remains low and below the EU average (see Annex 4). This indicates structural challenges in the attractiveness of the research career path, especially when compared with offers in industry or from outside Poland. The Polish RRP includes investments in the research and analytical infrastructure that are already being implemented, but further measures are needed to ensure a lasting impact on the research system. Establishing a robust and attractive research career system could involve offering competitive salaries for PhD candidates and postdoctoral researchers, and providing transparent pathways to stable employment and enhanced job security.

Digitalisation: an enabler of innovation, growth and productivity

Poland has made progress in digitalising its public services, but challenges remain regarding their availability for citizens and businesses, as well as interoperability of state systems. Some improvements have been made recently thanks to RRP investment (e.g. measures on public e-services and IT solutions for public administration and on scaling up digital applications in the public sphere, the economy and society). However, Poland scores below the EU average on availability of digital public services for citizens and for businesses as well as cross-border access to services for citizens (Poland scores 71, 85 and 50; EU averages: 82, 86 and 71). In addition, low levels of interoperability and data exchange in State systems are undermining their potential to reduce the administrative burden for businesses (as recommended by a 2025 CSR). Further meaningful steps could be taken to further digitise sectors such as justice, with potential to improve efficiency and accessibility (see Annex 7). To enable the cross-border exchange of data and documents between authorities through the EU Once-Only Technical System (OOTS) Poland could still identify the types of documents and data that could be exchanged through the system; and could explore ways to shift from submission of documents to exchange of structured data. This could unlock further benefits of the single market (see Annex 7).

The integration of advanced digital technologies and the broader digitalisation of small and medium-sized enterprises is progressing, but remains significantly below the EU average and this is hindering productivity growth. In 2025, only 59% of Polish SMEs achieved at least a basic level of digital intensity (below the EU average of 71.4%) (see Annex 18). This hampers productivity and innovation. The adoption of the most advanced technologies is also sluggish. For instance, in 2025 8.4% of enterprises adopted AI – well below the EU

average of 20% (see Annex 4). Stimulating investment in research and innovation, providing financial and specialised knowledge support and further participation in EU-wide initiatives could accelerate the dissemination of these technologies.

Nurturing growth: business environment

Poland has strong business dynamics, a resilient economy and favourable business condition, but more measures are needed to improve the business environment. The business churn rate ([32]) was 23.9% in 2023, above the EU average of 19%. This made Poland one of the most dynamic Member States in the EU. Productivity among Polish SMEs remains low (at only 68% of large firms' productivity in 2021 – the OECD median was 78%). Collaboration between firms in Poland is notably scarce, with just 14% of enterprises engaged in strategic partnerships (compared with 37% in Finland and 25% in Germany). Smaller firms are particularly struggling with limited capacities and facing challenges in accessing knowledge, technology and market expertise. Clusters and innovation hubs are opportunities for Polish firms to enhance innovation and access skills and technology, acting as accelerators by providing SMEs with access to advisory networks, global value chains, specialised knowledge and shared resources. However, business support institutions (BSIs) are concentrated mainly in metropolitan and economically stronger regions. They are more dispersed and narrower in scope in structurally weaker areas (particularly in eastern regions). 72% of Polish companies experienced difficulties because of late payments in 2024 – the highest share in the EU. To combat this, Poland is introducing the National e-Invoicing System (KSeF) under the RRP to mandate structured invoices. Further improvements could complement the e-invoicing system with payment monitoring, which may increase transparency and motivate timely settlements.

Poland's better regulation and simplification has made particular progress by introducing regulatory impact assessments and reducing administrative burdens on businesses. These measures were taken in the context of a 2025 CSR on the need to simplify regulation, improve regulatory tools and make the legal framework more stable and clearer for the business sector. Their effective implementation is still ongoing. In 2025, Poland introduced deregulatory measures, notably in the tax law, through initiatives like SprawdzaMY ('We check'), which gathers and relays business proposals to the government. However, legislative unpredictability is a challenge for Polish companies, with 85% complaining about frequent changes in the legislative framework (see Annex 5). Poland has introduced a reform under the RRF, which requires the preparation of impact assessments and public consultation for draft laws.

In 2025, Poland continued to experience high single-bid rates in public procurement. Poland received a CSR in 2025 to encourage competition in public procurement processes, making them more efficient and less cumbersome (especially for SMEs). Single-bid rates reached over 60% in sectors like medical and health services – well above the EU average of 29%. Even for contracts over EUR 5 million, rates remain high at 52-57%. Discrepancies exist among contracting authorities (rates for the central government are below rates for local and regional bodies and public-law organisations). Direct awards play an important role, accounting for 7% of the overall number of public procurements and ranging from 2.4% and 3.4% for works and supplies respectively to 13% for the procurement of services (see Annex 5). Poland is making progress in strategic procurement and SME involvement; and actively monitors green, social and innovation criteria. Despite increased use of green and social criteria, the planning is often

([32]) Eurostat defines the business churn rate as the sum of enterprise births and death rates. High-growth enterprises are enterprises that had at least 10 employees at the beginning of a three-year period and an annual growth in the number of employees above 10% during that period.

strictly aligned with annual budgets, restricting bidder preparation time. Authorities could enhance participation by developing tentative multiannual plans, especially for substantial procurements. This would allow broader participation of companies (including SMEs) in public procurement processes.

Gaps in access to finance

Poland's credit supply to the economy lags behind EU peers. Banks are facing country-specific challenges (see Annex 6) and the domestic capital market is relatively shallow ([33]). The share of bank assets invested in Polish sovereign bonds is one of the highest in the EU. This is due to distortionary bank levy rules that exempt these holdings from the tax base, which is being revised in 2026.

Non-bank financial intermediaries are gradually expanding their footprint. Institutional investors have a very conservative asset allocation profile. In particular, allocating assets under management to riskier asset classes such as venture capital remains an exception. This is primarily due to systemic and regulatory reasons, particularly for private pension funds. However, the shallow venture capital and private equity markets are not sufficiently stimulating the development of adequate management know-how that fund managers need to develop in this market segment. Seed and venture capital financing is dominated by public funds channelled primarily through various national development institutions (see Annexes 4 and 6). Later-stage financing of growth companies on the domestic market is insufficient. The Warsaw Stock Exchange (WSE) rarely offers the right exit opportunities for venture capital investors. Making the WSE more attractive would require governance reforms and deeper integration into EU capital markets. Better governance of State-owned enterprises, which account for a significant share of the WSE's listings, could also enhance domestic market credibility.

There is ample scope to increase the level of direct or indirect retail investment in capital market instruments. Polish households prefer bank deposits and non-financial wealth (e.g. real estate ownership) and have accumulated only limited financial wealth. Only a quarter of this is invested as a result of relatively lower levels of financial literacy among Polish citizens. Upcoming changes to the private pensions pillar could increase the level of financial wealth invested in capital markets. However, these products need to be carefully designed in order to ensure that the public support is not regressive and that a domestic bias does not reduce returns for Polish households.

The single market

Poland is strongly integrated into the EU's single market. Around 70% of Poland's foreign trade takes place within the EU. In 2025, more than 75% of Polish exports were directed to other EU Member States (see Annex 5), reflecting Poland's deep integration into EU value chains (particularly in manufacturing sectors such as the automotive and assembly industries). Poland's export structure remains relatively concentrated in low-technology goods and services, indicating scope to expand the knowledge-intensive industries.

However, the functioning of the single market in Poland is affected by reluctance to transpose and enforce EU rules. Poland's transposition deficit reached 2.1% in December 2025 (above both the EU average and the 1% target). Conformity deficits and the number of pending infringement cases also remain above the EU average ([34]). Easing administrative requirements in the implementation of posting

([33]) OECD Economic Surveys: Poland 2025, https://www.oecd.org/en/publications/oecd-economic-surveys-poland-2025_483d3bb9-en.html.

([34]) This is one of the barriers highlighted in the 2025 single market strategy ('Terrible 10'). See also the Annual Single Market and Competitiveness Report 2026.

of workers rules could reduce regulatory fragmentation within the single market, facilitate cross-border mobility and foster competitiveness – without undermining workers' protections (see Annex 5). Businesses report that divergent national approaches to cross-border waste shipments and goods packaging are a matter of significant concern regarding compliance, costs, potential penalties and market access. Barriers to competition also persist in some service sectors. The number of regulated professions in Poland remains one of the highest in the EU. Restrictions on professional services (e.g. regulated fees, geographical restrictions and mandatory professional body membership for certain professions including notaries, lawyers, architects and civil engineers) continue to limit market entry and competition.

DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

Poland received a country-specific recommendation (CSR) in 2025 to accelerate its green transition by reducing its dependency on coal, advancing the deployment of renewable energy sources, expanding grid infrastructure, making the energy system more flexible, reforming electricity pricing, and phasing out fossil fuel subsidies, as well as to build climate resilience by strengthening adaptation governance and focusing on sustainable water management. Poland has since made progress in some areas (deployment of renewables and expansion of grid infrastructure). However, no progress has been made in other areas (e.g. reforming electricity pricing to strengthen the incentive for electrification and phasing out fossil fuel subsidies).

Addressing structural elements of the energy transition – market reforms and infrastructure investments for improved affordability and security

Poland's energy transition is a mixed picture. Renewables in the electricity mix are increasing (31% in 2025) while coal continues to decrease (53% in 2025; 70% in 2022). However, gas still plays a critical role as the main flexible balancing resource and Poland has the most carbon-intensive energy sector in the EU. Price signal distortions for electrification, grid bottlenecks, the lack of a district heating decarbonisation programme and coal subsidies are significant action gaps. Moreover, Poland is the only Member State not to have submitted an updated national energy and climate plan (NECP) and this is undermining the overall long-term planning, coordination and predictability of the energy and industrial transformation. An NECP could inform the strategic use of the substantial resources Poland has at its disposal to advance the deployment and penetration of clean and cheaper energy. These resources include among other revenues from the EU's emissions trading system (ETS) and the Modernisation Fund (supplied by the EU ETS).

Poland's electricity-pricing framework remains heavily distorted by government intervention and the high share of fossil fuels in the generation mix. Poland received a CSR in 2025 to promote balanced electricity price signals that support investment in clean electricity generation by adjusting taxes and levies on electricity for households and industry relative to those on fossil fuels, but no progress has since been made in this respect. Consumer protection was a legitimate short-term goal, with electricity prices frozen until the end of September 2025, but the share of taxes and levies in electricity prices was the highest in the EU during the first half of 2025 (Poland's share was around 50%, EU average: 28%). These charges (including capacity fees, RES fees and cogeneration charges) result in legacy costs being passed on to consumers – rather than price signals being aligned with energy transition priorities. Coal and gas accounted for 71% of electricity generation in 2025 on average. Expensive fossil fuels therefore remained the primary marginal price setters, driving the average wholesale electricity price up to 105 EUR/MWh (one of the highest in the EU). Daytime prices have fallen in recent years (owing to the growing penetration of solar and onshore wind), but Poland remains heavily exposed to price spikes during peak-demand hours.

Poland's coal mining sector is heavily subsidised and absorbs resources that

could otherwise be used to accelerate the clean energy and industrial transition. Poland has received a CSR to phase out fossil fuel subsidies, especially those related to mining. However, in 2025, the government spent PLN 9 billion (approx. EUR 2.2 billion) propping up the coal mining sector in the form of production subsidies paid to the three main state-owned mining companies ([35]). Other subsidies covered miners' pensions and social security benefits, and state-backed financial support for mine closures, decommissioning costs and worker severance packages (see Annex 9). The scale of the challenges associated with the transformation makes it necessary that if engaged, public funds are used strategically to effectively move away from mining and change the economic profile of coal regions.

Investment in the grid is underway, but critical bottlenecks are still slowing the pace of the energy transition. Grid-related challenges in Poland have become acute due to the rapid growth of renewables and system inflexibility. This has clear regional implications (storage, demand-response, interconnection and dynamic dispatch) (see Annex 18). Poland has received a CSR to boost grid capacity and flexibility. In 2025, connection requests for approximately 42 GW of renewable capacity were declined (the total installed capacity in the Polish system is 72 GW). Polskie Sieci Energetyczne (PSE, the Polish transmission system operator) recognised these challenges in its 2025 investment strategy, which outlines infrastructure investment priorities: transmission networks; establishing a north-south transmission corridor as well as dedicated corridors to new capacities currently under development (both offshore and nuclear); and flexibility solutions. The Polish electricity system remains weakly interconnected. The level of interconnection of the Polish energy system was 4.3% in 2025, well below the 2030 target of 15%. The Harmony Link with Lithuania is the only cross-border connection project currently underway and there are no other interconnection projects in the pipeline. However, recent regulatory reforms and investments under the Polish recovery and resilience plan (RRP) are significantly improving grid access for renewable energy developers (examples include the introduction of cable pooling and an overhaul of electricity grid connection rules, as well as the construction of 370 km of new lines).

Capacity-allocation constraints have systematically decoupled Polish electricity prices from the EU market and are now contributing to higher prices. Poland has received a CSR to increase cross-border trading and limit restrictions to cases justified under EU energy market rules (particularly in cases involving constraints in allocating national capacity). The use of allocation constraints is declining thanks to the balancing market reform under the Polish RRP, which is modifying the market structure by introducing obligation for earlier procurement of balancing reserves, but the frequency of allocation constraints activation is still concerning. Under the inherited integrated scheduling process, the TSO continues to optimise real-time power flows, restricting exports and imports from/to Poland when needed. This is to retain sufficient upward/downward balancing capacity at home (i.e. a reserve margin) that is ready to be ramped up/down if a sudden drop in renewables or a spike in demand occurs; and to avoid oversupply because the generation levels of large coal-fired units cannot be modulated. This probably increases the need to reduce other sources (such as renewables or imports) when coal output cannot be reduced further. By September 2025, accumulated RES curtailment reportedly topped 1.13 TWh – indicating a lost opportunity for clean energy (see Annex 8).

Further integration of renewables in the energy system is being hampered by limited flexibility, demand-side response and permitting time. 30 GW of new solar and offshore capacity has been delivered under the Polish RRP. Solar capacity continued to increase in 2025 (albeit more slowly), while onshore wind stagnated due to constraints in the permitting rules. The development of

([35]) Polska Grupa Górnicza (PGG), Południowy Koncern Węglowy (PKW) and Węglokoks Kraj.

Poland's first offshore capacity as part of its RRP is ongoing. Poland concluded its first offshore wind auction at the end of 2025, awarding support to three projects for a total of 3.4 GW of additional offshore wind capacity. A reform under the Polish RRP to introduce an obligation to designate renewable energy acceleration areas (RAAs) was adopted in 2025 but is yet to yield results. Timely designation of RRAs is key to unlocking the potential of different renewable technologies, accelerating their deployment and coordinating infrastructure planning. It is also crucial to address legal and grid connection-related constraints in RES development. Poland's current installed battery storage capacity (BESS) is still modest (about 200 MW online in early 2025), but the project pipeline is extremely large. An additional 450 MW of storage capacity will already be delivered in 2026 under the Polish RRP. Over 4 GW of new battery capacity secured contracts in the last three capacity mechanism auctions (for 2027-2029 delivery). Demand-response solutions also face market access barriers. Potential solutions (e.g. aggregators that offer flexible load reduction services to industrial and commercial consumers; dynamic electricity tariffs that enable households to adjust consumption in response to real-time price signals; virtual power plants that aggregate prosumer solar installations; and battery storage) are therefore not being deployed at all or only to a very limited extent.

Taking a strategic approach to energy and industrial decarbonisation to foster growth and a just transition

The industrial transformation lacks a coherent framework that would align policy incentives, infrastructure planning and financial support with objectives to advance investments in priority sectors. The priority sectors in terms of both economic relevance and industrial decarbonisation challenge include cement, chemicals and fertilisers production, oil refining and coke extraction, as well as steel and metal production. Key decarbonisation interventions needed in these sectors (electrification, deployment of onsite renewables, uptake of green hydrogen and deployment of carbon capture, utilisation and storage (CCUS)) are implemented incrementally rather than structurally. The cement sector is investing in CCUS under the Innovation Fund, which is funded by the EU ETS, but the legislative framework for the capture, transport, storage and use of carbon and the strategic vision for the recycled carbon chain are lacking. In the chemicals and fertiliser production sectors, the uptake of hydrogen is constrained by the limited availability of additional renewable and nuclear energy capacity. With the enabling policy and support framework, rural areas could also assume their role in the energy transition through bioeconomy with special focus on agriculture waste.

Above-average energy prices and the disproportionate tax burden on electricity (compared with natural gas) are hampering the electrification of industry sectors. Industrial consumers pay around three times more for electricity than for gas. Taxes and levies account for a third of their electricity bill. The share of renewable energy sources (RES) in the energy consumed by the industry (electricity and heat) is low. Electrification in Polish industry is advancing mainly through lower- and medium-temperature heat, efficiency upgrades, rooftop solar photovoltaics for onsite consumption and power purchase agreements for renewable energy. However, far-reaching electrification also depends on sufficient pricing incentives and the deployment of onsite renewables. Complex permitting and grid connection remain the main obstacles for the latter.

The phasing-out of coal poses major economic and social challenges for those regions that are still reliant on mining and emission-intensive industries. Five regions in southern and central Poland receive support from the Just Transition Fund: the Śląskie, Małopolskie, Dolnośląskie, Wielkopolskie and Łódzkie regions. Poland accounts for nearly 97% of the EU's hard-coal extraction, with around 80% of national reserves concentrated in the Śląskie and

Małopolskie regions. The mining industry remains highly important for these regions, both demographically and economically but is becoming increasingly unprofitable. The north of Poland is set to become more important thanks to new offshore and expected nuclear energy capacities, and the associated expected infrastructure. It is essential that grid reinforcement reflects the emergence of the northern regions in the energy and industry transition, while also enabling a clean transition for the coal-dependent regions.

Poland lacks a national strategic vision for the energy and industrial transition. The phasing-out of coal mining is challenging in terms of a just transition (especially in reskilling) but is also an opportunity for regional innovation and growth. Mining technologies and skills can be repurposed into specialised engineering and technical services (e.g. underground engineering works and land reclamation), thus enabling the regions in question to maintain their competitiveness and capitalising on lessons learned from the ongoing Just Transition Fund. Clear investment priorities, policy incentives and support for mechanisms would help steer regional transition away from coal toward clean technologies. Poland does not currently assess and integrate climate-related macrofiscal implications into macroeconomic projections and budget plans at national level. Better awareness of these implications would facilitate the planning of industrial transition.

Phasing out coal from heating and making buildings more efficient

Some progress has been made, but phasing coal out of individual heating and energy efficiency improvements in buildings remain key challenges to reducing emissions and air pollution, improving living comfort and reducing energy poverty. Poland has received a CSR to reduce reliance on fossil fuels, including by transitioning to decarbonised systems that integrate renewable energy sources and improve energy efficiency. It is estimated that around 2 million households still use coal for heating and around 1.5 million households experience energy poverty. No other EU Member State uses anything like as much coal for heating and Polish cities have some of the worst air quality levels in the EU. The Clean Air Programme, which is supported by the Polish RRP, cohesion policy and revenues from the EU ETS, has helped advance heat source replacement, the deployment of small RES and thermal modernisation. However, its successful implementation in the near-term hinges on coupling heat source replacement with thermal modernisation. This is critical to mitigate air pollution from biomass boilers that are mostly being installed to replace coal boilers.

Heat pump deployment fell by 35% in 2024 due to the disproportionate tax burden on electricity compared with natural gas. Heating and cooling account for 81% of residential energy consumption. Renewables supply only 21% of the energy used for heating and cooling in all sectors. Income-based incentives and subsidies for heat pumps exist, including from the Polish RRP and cohesion funding. However, their impact is likely to be affected by electricity being more expensive than fossil-fuel-based heating and cooling sources.

A shift from coal to gas-based cogeneration is underway in the district heating sector, but integration of renewable energy sources is lagging behind. Investments in district heating decarbonisation are being supported under the Polish RRP and the Modernisation Fund (funded by the EU ETS). Only 22% of district heating systems in Poland currently meet efficiency requirements under the Energy Efficiency Directive. Deployment of district heating systems based solely on renewable and low emission heat sources is limited to demonstration projects and a few smaller cities. Scaling-up hinges on more effective spatial planning and investment in heating networks to promote their integration. Dedicated support in this respect (linked to specific investment objectives) will be key to advancing investment decisions, because the regulatory model for district heating tariffs is

not keeping up with wholesale market developments (particularly as regards the high share of cogeneration).

Poland is analysing possible support for power-to-heat technology with a view to promote the offtake of surplus renewable energy; however, this is an example of an incremental intervention rather than a structural change. Poland is considering simplifying network connections for power-to-heat installations, exempting them from capacity charges and adjusting tariffs to promote the offtake of surplus renewable energy. According to the government, power-to-heat is a supplementary way to ensure that the district heating sector complies with the increasingly stringent efficiency requirements of the Energy Efficiency Directive.

Advancing the shift to sustainable transport

The shift towards sustainable transport remains challenging in Poland, with emissions from road transport having nearly doubled in the last two decades. Emissions from road transport grew by 95% in 2005-2024 despite incremental efforts to decarbonise private and freight transport as well as increase the uptake of public transport. Continued investments in rail infrastructure, including intermodal terminals, and zero-emission rolling stock can further advance decarbonisation efforts. Since the end of 2019, the number of electric vehicles has increased more than 27-fold. However, private and freight transport incentives for the uptake of zero-emission vehicles lack scale and subsidy programmes do not match demand. By 2025, there were 237 000 electric vehicles in Poland, representing only 1.1% of the car fleet and including 121 000 battery-electric (BEVs) and 116 000 plug-in hybrid vehicles. Targeted support under the RRP and cohesion policy has improved the availability and accessibility of low-carbon public transport at regional and local levels, modernised the railway infrastructure and supported the acquisition of zero-emission rolling stock, buses and trams (see Annex 8). The RRP has also introduced a reform that requires public transport operators in large cities to purchase zero-emission buses. More ambitious efforts are needed in order to significantly increase the low market share of electric vehicles – particularly for private users, who have not benefited from the same levels of dedicated support and sustainable frameworks (e.g. green public procurement rules for public transport). Interventions in line with the 'polluter pays' principle (e.g. emissions-related fees for highly pollution combustion-engine vehicles and fiscal incentives such as emission-related modulation of registration fees for light vehicles or exemptions for heavy-duty vehicles from the infrastructure-charge element of the toll) would help incentivise the shift to sustainable transport – if they are accompanied by accelerated deployment of charging infrastructure. At present, the limited availability of charging points for both private and freight transport remains an obstacle that is delaying the electrification of road transport.

Climate adaptation depends on effective governance and environmental resilience

Strengthening climate adaptation action relies on the updating of the national strategy, which has been underway since 2023. Poland has received a CSR to improve climate adaptation governance (particularly policies that are focused on the management, protection and sustainable use of water resources, and that incorporate current assessments of climate change impacts to ensure the long-term sustainability of sectors and activities dependent on water ecosystem services). Work on the national strategy is reportedly advancing but is only expected to be completed in 2027. Meanwhile, Poland is particularly vulnerable to high risks of drought, flood, heatwaves and extreme weather events, which threaten economic and personal security. Coordination is lacking between local, regional and national authorities when it comes to addressing the acute challenges of

climate resilience, preparedness and financing adaptation effort. This is particularly problematic given the risk of floods in the south of Poland. The efforts to strengthen resilience and the resources allocated to this do not appear comprehensive enough to address the level of risk being faced.

Climate change is exacerbating environmental risks, and water resources and ecosystems are particularly vulnerable. Unabated water pollution from industry remains a critical challenge. Increased salinity caused by wastewater discharge from coal mining and other industrial activities (combined with increased temperatures and biogenic influx from agriculture) is creating conditions that allow invasive and toxic species to bloom, poisoning waters, destroying natural habitats and endangering peoples' safety. Limiting wastewater discharges from the mining and industrial sectors will require incentives to invest in desalination installations and higher environmental fees in line with the 'polluter pays' principle. Measures included in the common agricultural policy (CAP) strategic plan offer some positive examples of how water management in rural areas can be improved through investment in water and wastewater infrastructure, rainwater harvesting, water recirculation and digital water management solutions. The CAP strategic plan also promotes water retention and the protection of peatlands and wetlands in order to mitigate drought and flood risks and strengthen resilience.

Effective climate adaptation and mitigation require action in all economic sectors. Climate adaptation outcomes depend on ecosystem integrity and effective environmental protection policies. The energy and industry sectors put pressure on water resources. In 2024, energy and industry accounted for 68% of water use in Poland. Gradual decarbonisation would help alleviate the situation, but investments in retention (including nature-based solutions and wastewater treatment) are urgently needed. Support for wastewater treatment systems in rural area is being provided under Poland's RRP. In years of drought in particular, additional pressure on water use comes from agriculture, where retention is still not sufficiently developed to foster water balance in rural areas and enhance the resilience of farming businesses to drought. There are no dedicated incentives and education initiatives to enhance retention and use water more effectively in agriculture. A project under the EU's Technical Support Instrument will assist the Polish government in designing a comprehensive set of policies to improve water management in agriculture. Improved water management is also linked to climate change mitigation potential. Carbon removals in Poland are not ambitious enough to meet its 2030 target for land use, land-use change and forestry (LULUCF). Existing policies focus mainly on forestry, with less emphasis on wetland and peatland agriculture, and on urban settlements management.

SKILLS, QUALITY JOBS AND SOCIAL FAIRNESS

In 2025, Poland received country-specific recommendations (CSRs) in the areas of education and training, skills and labour market inclusion. Poland was recommended to improve the quality and inclusiveness of education and training; the quality of teacher education; and boost participation in science, technology, engineering and mathematics (STEM) programmes at tertiary level. The recommendation also called on Poland to foster skills relevant to the labour market (including for the digital and green transitions) and further strengthen the efficiency of vocational education and training (VET). However, only limited progress has been made. A few measures have been adopted or are under preparation, but their implementation is yet to show results.

Facilitating learning in science, technology, engineering, and mathematics (STEM); and boosting basic skills to support competitiveness

Declining basic skills and increasing inequalities in education remain a challenge. In 2025, Poland received a CSR on fostering high-quality and inclusive education. Some measures supporting inclusion and the curriculum reform are in preparation, but progress has been limited. The decreasing basic skills of Polish students, increasing inequalities and challenges in inclusive education pose challenges for human capital development and the competitiveness of the Polish economy. Since 2018, the underachievement among 15-year-olds in basic skills has increased more than the EU average. However, the proportion of top performers has decreased, and this limits the talent pool (see Annex 13). Urban-rural disparities are above the EU average – pointing to gaps in the quality of teaching. Spatial inequalities remain – in relation to outcomes as well as to access to education (see Annex 18). The impact of students' socio-economic backgrounds on their educational results has increased, deepening inequalities between students. The highest proportion of students with low basic skills is clustered in VET sectoral stage I schools. Integration of students with a migrant background also continues to pose challenges. This is reflected in the higher drop-out rates of secondary-level students (see Annex 13), for which monitoring at the national level is missing.

Poland has prepared a comprehensive curriculum reform to improve the quality of school education outcomes but a long-term strategic approach to inclusive education would also be necessary. The curriculum reform covers the pre-primary, primary and secondary levels and is to be rolled out gradually between September 2026 and mid-2032. The reform aims to increase the focus on competences (including basic skills), address widening inequalities and strengthen the inclusiveness of the core curricula. It also aims at improving students' well-being and developing digital competences. Monitoring and evaluating the reform from an early stage will be necessary in order to ensure its effective implementation. In the area of inclusive education, Poland is (with ESF+ support) developing support for students with special educational needs in mainstream education. Poland is also supporting Ukrainian students through the 'Przyjazna Szkoła' programme and ESF+ funding, but further systemic solutions would be needed, a because many of these Ukrainian students are being taught in segregated classes (see Annex 13). Students with disabilities also continue to face barriers to effective participation in mainstream education and this is further undermining their

employment prospects. Developing a long-term strategic approach to inclusive education would facilitate stakeholder engagement, implementation of comprehensive measures and widening of access to inclusive education for all students.

Equipping teachers with the necessary skills and improving teacher retention would also be key to a successful implementation of the curricular reform. In the context of the 2025 CSR on improving the quality of teacher education, some measures with limited impact on formal teacher education are currently being implemented. Teacher shortages, which are exacerbated by the low proportion and retention of young teachers, as well as insufficient skills are affecting the quality and inclusiveness of education. Poland is mainly implementing measures related to continued teacher education, such as post-graduate degrees. A sufficient number of highly skilled teachers is also key in the context of the new curricular reform. Its successful implementation would benefit from a sufficiently staffed teacher workforce, modernisation of initial teacher education and sustained investment in their professional development (including in the context of inclusive education).

A more comprehensive approach to promoting STEM fields is needed to boost participation in tertiary education programmes, which is key for competitiveness. In relation to the 2025 CSR on stepping up participation in STEM fields in higher education, Poland has only undertaken selected measures that do not directly target tertiary education. Persistently low enrolment in STEM is restricting the economy's innovation capacity and its green and digital transition. Despite a comparatively high tertiary educational attainment rate, enrolment in STEM study programmes has dropped since 2015 and remains below the EU average. Enrolment in science and mathematics is particularly low. Under the recovery and resilience plan (RRP), Poland has been investing in digitalising school education, STEM and AI laboratories; and in training teachers in digital skills. The upcoming curriculum reform also aims to strengthen science teaching in schools. A 2025 TSI project aims to help Poland identify existing barriers to women's participation in ICT-related fields; identify actions that could promote the participation of girls in ICT education and women in ICT professions; and develop instruments and a methodology that will enable Poland to monitor the effectiveness of initiatives to increase the share of women in the ICT workforce. A more integrated approach towards STEM education (including better career awareness, mentoring and reaching out to disadvantaged groups) would not only monitor the impact of these measures but also be beneficial in proactively encouraging students (especially women) to pursue STEM careers.

Improving the quality and relevance of higher education remains a challenge. The outcomes of higher education continue to be affected by gaps in the quality assurance system and long-term underfunding (see Annex 13). While the consultation process on the draft 2025-2035 higher education development strategy is still ongoing, stakeholders' comments would need to be considered. Sufficient funding would have to underpin the strategy to facilitate progress.

Encouraging adult learning, improving the effectiveness of vocational education and training, and boosting green and digital skills

Some progress has been made (primarily supported by the RRP and cohesion funds), but green and digital skills remain bottlenecks for the twin transitions. Some progress has been achieved (primarily via RRP-funded measures) in response to the 2025 CSR calling on Poland to foster skills relevant to the labour market (including green and digital skills). The challenges regarding skills shortages in the context of green and digital transition nevertheless remain significant. Despite a recent decline, Poland still has one of the largest shares of workers in emission-

intensive industries in the EU, at 4.9% of total employment in 2024 (EU average: 3.5%). Digital skills also remain a key bottleneck for innovation and productivity. The proportion of young people aged 16-24 with basic or above basic digital skills grew from 68.6% in 2021 to 73.6% in 2025, but only 50.4% of the population aged 16-74 had at least basic digital skills in 2025 (10 pps below the EU average). To address these challenges, Poland has been pursuing investments under the RRP to increase e-competencies in the society via training, as well as ESF-funded Digital Development Clubs. Poland has also set out to digitalise school education with the Digital Transformation of Education Policy to 2035 and to set up the 'Digital Student' national programme for 2025-2029. Furthermore, the 2025-2029 Cybersecurity Strategy aims to raise awareness of cyber threats through education and training. In the area of green skills, implementation of an RRP-funded measure to amend qualification frameworks in sectors critical to the green transition is ongoing. Poland could benefit from closer monitoring and evaluation of reforms and investments in skills at all levels, as well as from a more holistic approach to addressing skills shortages in the context of the twin transitions.

Despite high participation rates, the relatively low efficiency of the vocational education and training (VET) system is limiting the development of skills relevant to the labour market. Some measures have been taken in response to the 2025 CSR to further strengthen VET efficiency, including under the RRP, but their implementation is ongoing. Participation in VET remains strong, but labour market outcomes for VET graduates have declined weakened. Despite increased employer involvement in vocational education and sectoral discussions about vocational education and skills, the employment rate of recent VET graduates has decreased from 82.3% in 2022 to 76.9% in 2025, below both the EU average of 80.2% and the EU-level target of at least 82% by 2025. The creation of a network of sectoral skills centres under Poland's RRP is ongoing. Poland has also been reviewing curricula for chosen professions in order to improve the labour market relevance of the VET offer; and has been developing the sectoral council system in order to build cooperation between business, education and public administration. The identification of the root causes of poorer employment outcomes of VET graduates and a dedicated action plan to address them could improve the situation of VET graduates.

Participation in adult learning remains below EU average, with limited progress achieved, despite RRP and ESF+-funded measures. In 2025, Poland received a CSR to facilitate and increase adult participation in learning, including in non-formal learning and in areas key for Poland's competitiveness. However, only limited progress has been made, as adult participation in learning remains below the EU average according to the Adult Education Survey and Labour Force Survey. The 2023 PIAAC results for Poland also show a sharp increase in the share of adults performing at the lowest proficiency levels compared with 2012: 39.5% (up from 19%) in literacy and 38% in numeracy (up from 23%)([36]). Public funding for adult learning remains heavily dependent on the European Social Fund Plus (ESF+) and other EU instruments. This includes a financial instrument in the form of education loans and the planned piloting of individual learning accounts as well as the development and expansion of Local Knowledge and Education Centres (LOWE). Despite new measures introduced under the RRP (the 2025 Act on Labour Market and Employment Services), including enhanced support for disadvantaged groups, the system remains fragmented and could benefit from stronger national-level coordination. However, an important step in this direction was taken in the form of another RRP related initiative – new Act of 27 February 2026 on Regional Coordination Teams for skills policy which aims at enhancing the regional coordination of skills policy and at the same time gives the foundation for the future

([36]) Note: In Poland, there were issues with the data quality for a high share of respondents. Despite efforts to minimise the (negative) impact of data anomalies, results should be interpreted with greater caution than those of other participants.

development of the coherent skills policy system in Poland.

Removing barriers to labour market participation and integration, while reducing labour market segmentation

Participation of persons with disabilities in the labour market remains a major challenge and is exacerbating labour shortages. In 2025, Poland received a CSR on increasing the participation of disadvantaged groups in the labour market, including through effective education-to-employment transitions. The progress achieved (including under the RRP) varies between groups. Low participation of underrepresented groups in the labour market persists, notably for persons with disabilities. The disability employment gap further increased from 33.9 pps in 2023 to 35.6 pps in 2024, higher than the EU average of 24 pps ([37]). The labour force participation of persons with disabilities is just above 50%, because disability and illness remain a leading driver of inactivity. Further progress is constrained by limited access to tailored labour market support. Poland has introduced a new Act on the Labour Market and Employment Services (Journal of Laws of 2025, item 620), while the European Social Fund Plus (ESF+) and the Polish RRP also supports Public Employment Services. However, strengthening targeted support could help in making full use of this opportunity to support disadvantaged groups.

Progress has been made on access to childcare services, but the participation of women in the labour market remains low and an untapped source of potential growth. In 2025, women's labour force participation stood at 70.1%, compared with 80.3% for men (71.1% vs 80.1% for the EU as a whole). This reflects persistent barriers linked to care responsibilities, the limited availability of institutions and services that provide care for dependants, inflexible and relatively long working hours, and lower job quality in sectors where women are overrepresented. With the support of the RRF and ESF+, Poland has been implementing a comprehensive reform to improve the accessibility, quality and affordability of childcare services for children under the age of three. The 'Active Parent' programme was launched in 2024 and contributes to parent's childcare costs. The share of children under the age of three participating in formal childcare increased by 6 pps between 2024 and 2025 to 21% but remains far below the EU average of 40.5%. Regional disparities remain pronounced.

Low social protection of non-standard workers and the self-employed can cause economic and social vulnerabilities. Effective access to social protection is very limited for several groups (see Annex 12). The proportion of civil -law contracts in total employment is increasing. In the third quarter of 2025, the number of people working exclusively on contract of mandate exceeded 1.5 million, representing a 16% rise over the past 2.5 years. The number of self-employed workers without employees of their own has risen by 42% over the last 10 years and is now close to 14% of total employment (EU average: around 9.5%). Both groups are not fully covered by social protection and they are at risk of receiving low pensions due to the right to make lower pension contributions than would be required under the standard employment contract (see Section 1). The growth in the number of non-standard contracts is due to the wide variations in the tax wedges for different types of work ([38]) and these in turn encourage labour market segmentation. Poland has taken steps in addressing labour market segmentation under

([37])Eurostat, https://ec.europa.eu/eurostat/databrowser/product/page/tepsr_sp200.

([38]) The tax wedge for the average wage in Poland varies considerably. It is over 40% for employment contracts; 21-34% for the self-employed (depending on the available tax reliefs); 15-37% for mandatory contracts; and 6% for specific-task contracts. The difference in the tax wedge rises with income (for example, in the case of a salary that is twice the average, the tax wedge is 46% for employment contracts and 31% for the self-employed).

the RRP by reforming the State Labour Inspectorate. Since the law will enter into force in July 2026, the effects remain to be seen.

Social dialogue remains limited, and many low-income households do not receive minimum income support. Collective bargaining coverage (11.6% in 2023) and trade union density (9.4% in 2022) remain low. Bargaining is largely confined to the company level and sectoral agreements are lacking (see Annex 12). Stakeholders report continuing shortcomings in the functioning of the Social Dialogue Council and in consultation practices ([39]). Amendments to the Act on the Social Dialogue Council are still under preparation. Recent reforms, including the 2025 Act on Collective Agreements (Journal of Laws of 2025, item 1661), aim to broaden the use of collective bargaining and strengthen social partner involvement. Their effectiveness will depend on timely implementation and monitoring (including in the context of the Directive on Adequate Minimum Wages). In addition, minimum income benefits in real terms have been eroded by inflation, resulting in very low adequacy levels (see Anex 12).

Further measures to improve the labour market integration of non-EU nationals would help to address existing labour shortages. Labour shortages remain a significant challenge for companies. The share of managers reporting labour shortages as a factor limiting production remains very high: 62.4% of businesses in industry (EU: 17.5%), 67.5% in construction (EU: 27.5%) and 56.5% in services (EU: 23.1%) in Q4 2025. Poland scores only 44/100 in the Migrant Integration Policy Index (EU average: 54/100). Its 43/100 labour market mobility score is considered as 'halfway favourable' and is below the EU average. Non-EU workers' skills are underused, despite ongoing work on a strategy to integrate them and strong labour market indicators (81% participation and 3% unemployment compared with the 77% and 8% OECD averages). In 2023, 48% of non-EU nationals worked below their qualification level. Their integration into the labour market and full utilisation of their skills could contribute to addressing Poland's existing labour and skills shortages.

([39]) Eurofound, https://www.eurofound.europa.eu/en/publications/all/national-level-social-governance-european-semester-and-recovery-and-resilience.

KEY FINDINGS

In areas **covered by existing CSRs**, Poland would benefit from:

- **improving the efficiency of public spending** through spending reviews and better targeting of social benefits;
- **improving the adequacy of the pension system, while preserving its long-term sustainability** by increasing the effective retirement age, addressing the pension poverty of women and the self-employed, and reforming the special pension schemes;
- **enhancing innovation** by using available public financing to more efficiently leverage private RDI investments (including for start-ups and scale-ups) by creating innovation-friendly ecosystems, and by updating smart specialisation strategies;
- **enhancing the research-market pipeline** through effective support mechanisms, strong incentives for academia-industry collaboration and attractive working conditions for research professions;
- **fostering the agility of institutions and a leaner regulatory framework** by further simplifying administrative procedures, effectively implementing interoperable digital solutions, and encouraging transparency and further competition in public procurement;
- **boosting local administrative capacity to maximise the impact of EU funding** and reducing territorial disparities in key sectors like innovation, education and healthcare;
- **advancing the deployment of renewable energy sources and coal phase-out** (particularly in heating), coupled with storage and other flexibility solutions by better coordinating permitting procedures and infrastructure planning, and phasing out fossil fuel subsidies;
- **boosting grid capacity and flexibility as well as advancing integration with EU energy markets** by removing barriers to cross-border trading and enhancing interconnectivity;
- **fostering incentives for the clean energy and industry transition** by addressing the tax burden on electricity and phasing out fossil fuel subsidies (particularly for coal mining);
- **strengthening climate adaptation governance** by finalising the national strategy, establishing a regular update process and strengthening coordination mechanisms between governance levels;
- **advancing ecosystem restoration to enhance climate resilience,** in particular of water ecosystems by effectively implementing the 'polluter pays' principle, increasing water retention and promoting efficient water use;
- **enhancing human capital development by reversing the basic skills decline and reducing inequalities in education,** through efficient implementation of the curriculum reform, enhanced literacy and numeracy in vocational programmes, strategic approach to inclusive education, as well as improved teacher retention and quality of teacher education;
- **increasing participation in science, technology, engineering and mathematics in higher education** by enhancing career guidance and promoting STEM learning from an early age;

- **addressing labour and skills shortages** (particularly in the context of the twin transitions) by increasing participation in life-long learning, strengthening the VET system's efficiency, and improving the integration of non-EU nationals into the labour market;

- **increasing the labour market participation of persons with disabilities and women** by better targeting active labour market policies to support disadvantaged groups and further addressing regional disparities in access to early childhood education and care.

In **other areas**, Poland would benefit from:

- **mobilising additional revenues**, especially by broadening the tax base of sources less detrimental to growth and by strengthening tax compliance, to help rebalance public finances;

- **increasing the supply of affordable housing** (including rental, social and municipal) and targeting specific local housing needs and housing-led solutions for the vulnerable by implementing the coherent coordination of housing policies with a long-term strategy alongside the introduction of a system for monitoring housing needs and housing stock;

- **anchoring house prices and curbing speculatory risks in the market** by adjusting the property taxation regime (including by moving towards value-based taxes on land or a cadastral tax);

- **addressing funding challenges in the healthcare system** by increasing public spending (including on outpatient care and health prevention) and further increasing the density of medical staff;

- **improving the quality of, and access to, long-term care services** (particularly homecare and community-based care) by increasing related financing and its sustainability, and the availability of deinstitutionalised forms of care;

- **reducing administrative barriers** to the functioning of the single market, while fostering the development of knowledge-intensive sectors;

- **increasing the digital intensity of businesses** (particularly SMEs) by accelerating the adoption of digital (including advanced) technologies (e.g. AI) that have a high impact on productivity;

- **continuing to reduce labour market segmentation and improve access to social protection** for non-standard workers and the self-employed by addressing tax arbitrage between different types of contracts and strengthening the social dialogue;

- **advancing the shift to sustainable mobility** by improving the accessibility of zero-emission public transport and creating incentives for the acquisition of zero-emission vehicles (both private and freight);

- **ensuring investments in transport infrastructure for sustainable transport,** in particular in the TEN-T network, to support economic growth, competitiveness, connectivity and resilience of the transport system, including dual-use infrastructure, as well as the deployment of alternative fuels infrastructure and investments incentivising the shift from road to rail.

- **fostering long-term transition strategies for coal-dependent regions**, combining economic diversification and industrial transformation;

- **taking measures to meet the targets for land use, land use change and forestry (LULUCF)**, focusing on wetlands, agriculture and urban settlement management.

ANNEXES

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ANNEX 1: CSR IMPLEMENTATION

Table A1.1: **2025 CSR implementation and Commission assessment**

Poland faces challenges in a wide range of policy areas, as identified in the country-specific recommendations (CSRs). Poland was recommended, among other things, to strengthen defence and fiscal sustainability, boost private and public investment, accelerate the green transition, enhance education and labour market skills, and foster innovation and R&D.

The Commission has assessed the degree of implementation of the 2025 CSRs considering the policy action taken by Poland to date*. To do so, the Commission has taken into account the information provided by Poland in its Annual Progress Report as well as other information sources. This annex provides summary information on the policy actions taken or planned by Poland for each CSR. More detailed information on these actions is included in the relevant chapters and other annexes of the report.

**CSR 2 is not assessed in CeSaR. 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.*

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
1.1 Reinforce overall defence and security spending and readiness while ensuring debt sustainability in line with the European Council conclusions of 6 March 2025.	Total general government defence expenditure in 2026 is projected at 3.4% of GDP, corresponding to an increase of 0.5 ppt. compared to 2024.	Total general government defence expenditure in 2027 is projected at 4.0% of GDP, corresponding to an increase of 1.1 ppt. compared to 2024.	Substantial progress
1.2 Adhere to the maximum growth rates of net expenditure recommended by the Council on 21 January 2025, with a view to bringing an end to the situation of an excessive deficit while making use of the allowance under the national escape clause for higher defence expenditure.	Cumulated deviation in 2025 amounted to 1.2% of GDP but is fully explained by the NEC flexibility (1.5 pps. of GDP). Cumulated deviation in 2026 projected at 1.0% of GDP but it is fully explained by the NEC flexibility (1.5 pps. of GDP). The EDP is held in abeyance.		Full implementation
1.3 Improve the efficiency of public spending, including through better targeting of social benefits, improving the budgetary process,	Some provisions in the Act on public finances improving budget management and classification entered into force in April 2026.		Limited Progress
1.4 providing more transparency in investment planning and using standardised procedures for project assessment and selection more extensively.	Adoption process for the reform of public investment management and standardisation of appraisals completed in April 2026 also part of RRP.		Substantial Progress
1.5 Front-load mature public investment projects	Poland is implementing large-scale public investments, in particular in defence, transport, energy, as well as digital and green transition, including in the RRP context.		Full Implementation
1.6 and promote private investment to further the economic recovery.	Several RRP investments that are being implemented can incentivize private investment. The economic recovery is accomplished as GDP grew 3.6% in 2025, a fifth		Full Implementation

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Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
	consecutive year of economic growth.		
1.7 Ensure the adequacy of future pension benefits and strengthen the sustainability of the pension system, including by taking measures on the effective retirement age and reforming preferential pension schemes.	In 2021 Poland passed the law that introduced 'PIT-0 for senior' as from 2022 tax year (Act of 29 October 2021 amending the act on personal income tax, corporate income tax and some other acts (Journal of Laws of 2024, item 497)). Seniors who, despite acquiring the right to a pension (60 for women, 65 for men), temporarily resigned from receiving it and remained professionally active can benefit from the tax - they will not pay tax on income from full-time employment, contract work or business activity and maternity benefits – until they reach the tax threshold. The recent evaluation report on the tax relief (PIT-0) for seniors ( ), which should lead to an increase in the effective retirement age, shows a rather low but rising uptake. The total number of persons benefitting from the tax exemption amounted to 125 957 in 2022 and 142 535 in 2023. To a large extent, this is linked to the fact that there is more attractive solution embedded in the pension system that allows a person to receive a pension and a salary at the same time. Benefitting from this measure excludes the possibility to apply for PIT-0 for seniors. Almost four times more persons chose to work and receive pensions rather than work, not receive pensions and benefit from the tax exemption. The 2024 Ageing report ( ) indicates that the pension system's sustainability factor will lead to a substantial decline in pension benefits due to a shrinking working-age population. If the current benefit ratio is maintained, pension expenditure is expected to increase by 2.5 percentage points of GDP by 2045. The statutory retirement age in the Polish system is 60 years for women and 65 years for men. According to ZUS data for 2023 ( ), the average age of pension award for men equals the statutory age while for women, it is slightly above the		Limited Progress

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Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
	statutory age (60.7 vs. 60) but has remained stable for several years. Poland did not take measures to implement this part of the CSR 1. Pension benefits for farmers (KRUS) are subsidised by the state, amounting to 0.68% of GDP in 2025, and the method of calculating collected insurance contributions does not encourage them to move to the general pension system. On the other hand, KRUS has become a pension system which affects less people than in the past. Only between 2018 and 2023 the number of KRUS pensioners dropped by 9% and the number of insured in KRUS decreased by 15%. To compare: the number of insured in ZUS (general pension scheme) is growing and in 2022 amounted to 16 276 thousand. KRUS – with 1 092 thousand of insured in 2022, is 15 times smaller than ZUS.		
3.1 Simplify regulation, improve regulatory tools and ensure the legal framework is stable and clear for the business sector. Introduce measures to reduce the administrative burden placed on companies.	Poland has taken measures in response to the need to simplify regulations and enhance predictability of law with adoption of a deregulation act from May 2025 that introduced inter alia a six-month vacatio legis for regulations imposing obligations on entrepreneurs. To address the lacking systematic evaluation of laws after their enactment, the new deregulation law introduced a mandatory ex post regulatory impact assessment (a periodic evaluation of existing legislation is to be adopted by a Resolution of the Council of Ministers every three years). Poland approved a Deregulation Act in 2025 and is preparing a Regulatory Programme 2026–2028 on simplification. Several small administrative changes have been introduced in 2025. However, the work done by the Deregulation Task Force needs to be enhanced in the coming years. Simplification measures should have a measurable economic impact. Stakeholders still report the lack of consultation and the frequent changes of legislation. Other measures in order to simplify and digitalise procedures and services for businesses and citizens		Limited Progress

(Continued on the next page)

Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
	were introduced in 2025. The changes concerned, among others, the following areas: taxpayer rights (including the introduction of the presumption of innocence of the taxpayer); taxes and public finances (including a higher VAT exemption threshold and the extension of the "silent consent" principle); and the digitalisation of services (including the digitalisation of court proceedings, the creation of a single database of entrepreneurs instead of several separate registers, and the expansion of the mObywatel application with new functionalities). In addition, the government introduced new rules for inspections of businesses, including a reduction in the maximum duration of inspections for micro-enterprises, the obligation to provide entrepreneurs with a preliminary list of requested information and documents before the inspection begins, and the adjustment of the frequency of planned inspections to the identified level of risk. Measures were also introduced to make administrative procedures faster and simpler. These included the introduction of a hybrid administrative decision (where the decision itself is issued in paper form while attachments are provided electronically) and greater use of so-called "soft requests", allowing authorities to contact entrepreneurs and request clarification without formally initiating administrative proceedings.		
3.2 Encourage competition in public procurement processes, making them more efficient and less cumbersome, especially for SMEs	In 2025, Poland announced changes in its public procurement system to streamline the process. New legislation has introduced non-mandatory contractor certification and streamlined appeal procedures through remote trials and hearings to make them more efficient. However, the key issue of competition in the public procurement sector is not sufficiently covered, and SMEs share of awards declines in number and in value. In March 2026, the State Procurement Policy was adopted, including measures to boost SME participation.		Some Progress

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Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
3.3 Strengthen science-business links by improving support structures, implementing targeted funding schemes, and creating incentives for researchers to engage with the private sector.	Poland established a task force for enhancing transfer of research results and commissioned an evaluation of support for science-business links (results still pending). When using EU funding for innovation (FENG programme, measures implemented by NCBR and Foundation for Polish Science), PL applies criteria that support science-business links.	The Task Force and the evaluation have been launched. Poland has outlined a timeline for collecting and implementation of the recommendations, but without further operational details.	Limited Progress
3.4 Improve and modernise the public research system by making research careers more attractive, raising public R&I investment, and supporting research institutions.	Limited impact measures encouraging women to go into STEM and pursue scientific careers. Support for the AI ecosystem and for applying to EU programmes for research financing.		Some Progress
3.5. Focus investment-related economic policy on innovation.	Large AI-hub financed, AI regulatory sandbox under preparation. In FENG (R&I support programme in Cohesion Policy), EUR 942 m was reallocated to support STEP initiatives.	Late in 2025, Poland launched Innovate Poland, a programme based on French Tibi scheme and meant to match public and private financing to boost innovation, mainly through VC funding. The first funds were launched in April 2026.	Some Progress
4.1 Promote balanced electricity price signals that support investments in clean electricity generation by adjusting taxes and levies on electricity for households and industry relative to those on fossil fuels.	No changes of the electricity tax regime made.	No changes of the electricity tax regime announced.	No Progress
4.2 Boost grid capacity and flexibility, increase cross-border electricity trading, and limit restrictions to cases justified under EU energy market rules, particularly in cases involving constraints in allocating national capacity.	Cross-border trading has seen limited progress, primarily due to the continued application of capacity allocation constraints, which restrict the efficient use of interconnectors and hinder market integration. While investments are underway, grid capacity and flexibility are not advanced enough to fully enable effective integration of renewable sources in the electricity system. Recommendations for further actions were published following the assessment of the impact of balancing market reform on the use of allocation constraints. Polish TSO (PSE) published its strategy for the transformation of grids to integrate new renewables, and storage capacity.	Actions to follow-up on the recommendations for the energy market reform or to implement the TSO strategy have not been announced.	Limited Progress
4.3 Reduce the reliance on fossil fuels by accelerating	Investments in heat source replacement and thermal	Clean Air Programme under review. Draft Social Climate	Limited Progress

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Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
the phasing-out of coal in the heating sector by transitioning to decarbonised systems that integrate renewable energy, improve energy efficiency,	modernisation and RES deployment in both single and multifamily as well as public buildings under various programmes ongoing (including with RRF support). Issues ensuring a stable source of financing of these programmes remain. Investments in coal phase out in district heating in progress.	Plan prepared. No updated NECP.	
4.4 and phase out fossil-fuel subsidies, especially those related to coal mining.	No measures implemented.		No Progress
4.5 Improve climate adaptation governance, particularly policies focused on the management, protection, and sustainable use of water resources, incorporating current assessments of climate change impacts to ensure the long-term sustainability of sectors and activities dependent on water ecosystem services.	Poland is updating its national climate adaptation strategy, designing a process of regular updates for the future. Action on water resilience and pollution is lacking. Third River Basin Management Plans only contain limited information on the impacts of climate change on water management. The plans do not include much information regarding risk assessment and analysis of the impacts of climate change on environmental objectives. Also, water efficiency does not feature in the third RBMPs either. Water tariffs or water use fees do not provide specific incentives for sustainable water use (efficiency, re-use etc.) and pollution reduction. PL is incorporating green public procurement into the State Procurement Policy for 2026–2029.	Poland is yet to adopt its updated Climate Adaptation Strategy. The document was originally prepared in 2013 and has not been updated since. Poland aims to develop a new National Adaptation Strategy and National Adaptation Plan by the first half of 2027. Draft law on the revitalisation of the Oder River dropped from parliamentary agenda.	Limited Progress
5.1 Foster quality and inclusive education and skills relevant to the labour market, including green and digital skills,	Some progress has been made by Poland, but it varies between fields. In school education, a new subject of citizenship education was introduced in September 2025, no but no measures to address basic skills decline at large were reported. The implementation of the curricular reform remains to be conducted (to be launched in September 2026). In the area of inclusive education, some projects (on inclusion of Ukrainian students and students with disabilities) are ongoing, including under European Funds for Social Development 2021-2027 programme (FERS), but either remain at early implementation stage or have been commenced prior to the 2025 CSRs being issued. Implementation of multiple measures concerning digital skills and some in		Some Progress

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Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
	green skills (mainly under the RRP) is ongoing.		
5.2 step up participation in STEM fields in higher education,	Only limited progress has been made, as some measures, not catering directly for tertiary education, are expected to be implemented (e.g. C2.2.1 – delivery of AI/STEM laboratories – under Poland's RRP). A reference to STEM has also been made as part of the PL development strategy until 2035. Furthermore, a 2025 TSI project "Improving girls' and women's interest and participation in ICT in Poland", while focused on tertiary education, centres primarily on early stages of the policy cycle, such as identification of tools to monitor progress of prospective initiatives. Its implementation is also at early stages.	Strategy for development of Poland till 2035 refers to improving business and industry link in STEM education and increasing the number of students admitted in the fields, but no specific measures to be undertaken. Planning and continuation of campaigns to promote the teaching profession and improve its image	Limited Progress
5.3 and improve the quality of teacher education	Limited progress has been made, as solely measures not related directly to teachers' formal education, such as postgraduate degrees, training in digital skills, and counselling for teachers, are being implemented.		Limited Progress
5.4 and further strengthen the efficiency of vocational education and training	Some progress has been achieved, including through measures under Poland's RRP, such as creation of the network of Sectoral Skills Centres (ongoing and at an advanced stage). Review of VET curricula for certain professions is also ongoing (EFSD project "Industry agreement for vocational education and training. Increasing the involvement of industry representatives in the development of vocational education and workplace learning.") to improve their labour market relevance. Poland is also developing sectoral council system aimed at building cooperation between business, education and public administration.	Introduction of new professions to the vocational education classification and updates to core curricula to incorporate new technologies and green and digital skills.	Some Progress
5.5 Facilitate and increase adult participation in learning, including in non-formal learning and in areas key for Poland's competitiveness.	The progress is limited, as mainly already long-standing measures are reported by Poland (initiated visibly before 2025 CSRs) including: • Promotion and support of non-formal education, with broader access through quicker, more flexible activities suitable for adults. • Development and expansion of Local Knowledge and Education Centres (LOWE),		Limited Progress

(Continued on the next page)

Table (continued)

Recommendation text	**Main measures adopted or implemented** *By 30 April 2026*	**Preparatory steps/ credibly announced measures** *By 30 April 2026*	**Assessm. of progress**
	enabling schools to support adult education, especially in disadvantaged and rural areas. To some extent, the ongoing implementation of Sectoral Skills Centres (measures A3.1.1 and A3.1.1 of Poland's RRP) is also contributing to addressing this subpart, including through career guidance and new provisions on Regional Coordination Teams, under the Act of 27 February 2026 on Regional Coordination Teams for skills policy.		
5.6 Take steps to increase the participation of disadvantaged groups in the labour market, including through effective education to employment transitions	Poland introduced measures to increase the participation of parents (especially women) in the labour market: • 'Active Parent' programme (2024) contributes to childcare costs for parents • RRF and ESF+ supported 'Active Toddler' programme will deliver over 102 500 new childcare places for children under 3 by 2029, targeting municipalities without childcare institutions. • Introduction in 2024 of quality care and education standards in childcare provision for children below 3.	Poland announced reforms and investments supported under the Recovery and Resilience Facility aimed at improving access to LTC and increase participation of informal caregivers (especially women) in the labour market.	Some Progress

Source: Poland's reporting and Commission assessment

ANNEX 2: FISCAL DEVELOPMENTS AND DEBT SUSTAINABILITY

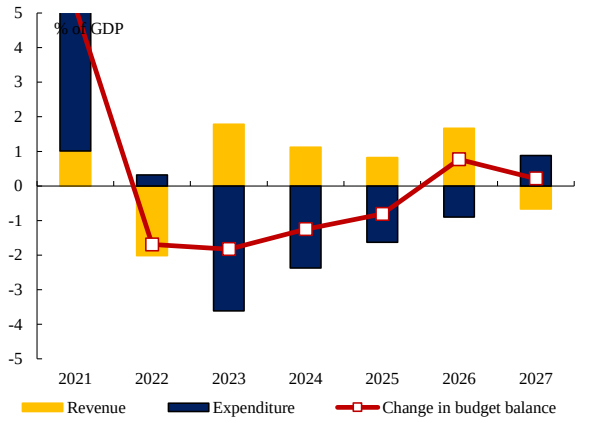
This annex discusses selected topics in public finance and developments in fiscal-structural country-specific recommendations (CSRs) addressed to Poland in July 2025. These CSRs include a call to strengthen defence spending and readiness while implementing a fiscal strategy in line with the Council Recommendation of 21 January 2025. Poland also received a recommendation to: (i) improve the efficiency of public spending; (ii) provide more transparency to investment planning; and (iii) front-load mature public investment projects while promoting private investment. In addition, Poland received a recommendation to ensure the adequacy of future pension benefits and strengthen the sustainability of its pension system.

On 21 January 2025, the Council adopted the recommendation endorsing Poland's medium-term fiscal-structural plan ([40]). The plan includes a fiscal adjustment over four years. On 8 July 2025, the Council also activated the national escape clause for Poland in order to facilitate its transition to higher levels of defence spending ([41])([42]).

Developments in the government balance, debt and public expenditure ([43])

Poland's government deficit was equivalent to 7.3% of GDP and the government debt-to-GDP ratio amounted to 59.7% at the end of 2025. Based on the Commission Spring 2026 Forecast, Poland's government deficit is projected to decrease to 6.5% of GDP in 2026 and then decrease to 6.3% of GDP in 2027. The increase in the deficit was largely driven by Poland's rising general government expenditure, which reached 50.9% of GDP in 2025, around 1.7 pps higher than in the previous year. Expenditure is expected to increase further, reaching 51.8% of GDP in 2026. Based on a no-policy-change scenario, a gradual fiscal consolidation is projected in 2027 ([44]).

Graph A2.1: **Contributions to the change in the general government balance (% of GDP)**



Source: European Commission Spring 2026 Forecast

Rising public investment is improving the quality of expenditure in Poland. After a decline in 2021-2022, public investment increased substantially in 2023. It is expected to reach 5.3% of GDP in 2026, up from 4.3% in 2019 (see Graph A2.2). It is set to rise further in 2027 despite the lower support from the Recovery and Resilience Facility (RRF), thanks to higher expected investment on defence financed by the national budget, including by loans from SAFE instrument. In 2026 and 2027, Poland is projected to spend more on nationally financed investment than it did before the COVID-19 pandemic.

([40]) OJ C, C/2025/642, ELI: EUR-Lex - 32025H00642 – EN – EUR-Lex.

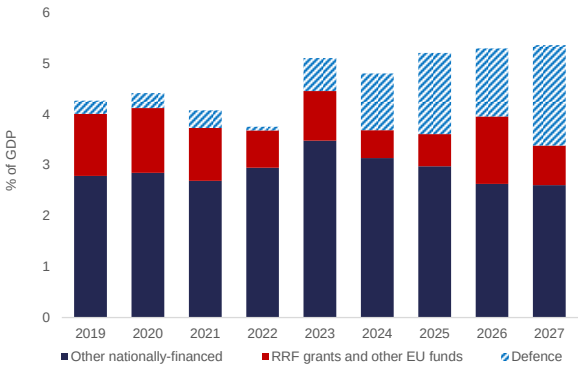
([41]) OJ C/2025/3971, ELI: EUR-Lex - 32025H03971 – EN – EUR-Lex.

([42]) Compliance by Poland with the maximum growth rates of net expenditure recommended by the Council is assessed in COM(2026)200.

([43]) Figures underpinning fiscal surveillance (net expenditure growth) are provided in the Fiscal Statistical Tables (SWD(2026)200) providing background data relevant for the assessment of the budgetary policies of the Member States.

([44]) Large amounts of RRF-financed expenditure and revenue in 2026 (estimated at 1.7% of GDP) impact the changes of total expenditure and revenue in 2026 and 2027 presented on the graph (the bars). Nationally-financed expenditure is estimated to contribute to improving the budget balance in 2026 and to worsening it in 2027, while nationally-financed revenue is estimated to contribute to improving the balance in both 2026 and 2027.

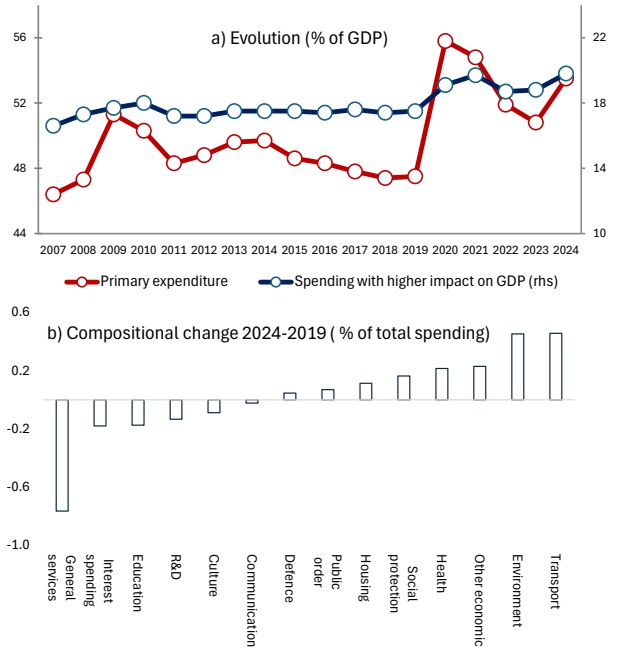
Graph A2.2: **Public investment evolution and composition (% of GDP)**



Source: European Commission Spring 2026 Forecast

The type of expenditure that has a greater impact on GDP had remained broadly stable over three decades, but has slightly increased since 2019. Zooming in on the composition of spending, social protection accounts for the largest share of total expenditure (37%), followed by health, economic affairs ([45]), general public services, and education (all four of which are above 10% of total spending). Since 2019, public expenditure on defence, other economic affairs and interest has increased strongly, with the rise in defence spending reflecting recent security developments. (See Graph A2.3). Spending on health, environment, R&D and housing has risen more modestly in that time, By contrast, spending on education and transport has declined. This trend deserves attention, as these categories (transport and education) are generally considered growth-friendly spending categories. In the case of education, the decline in spending is concerning due to Poland's declining performance in basic skills and equity. The country's upcoming curriculum reform will need to be appropriately resourced to achieve the necessary results (see Annex 13).

Graph A2.3: **Primary spending evolution and composition**



Source: Eurostat.

Note: Based on economic literature, the categories considered to have a greater growth impact include education, R&D, health, transport and communication (See Barbiero and Cournede (2013), Gemmel et al. (2016), Lupu et al. (2018), Cepparulo and Mourre (2020) and OECD (2025)).

Poland has relatively low tax revenues as a share of GDP and relatively high tax compliance gaps. In 2025 Poland's total tax revenues as a percentage of GDP (including compulsory social contributions) amounted to 36.7%, compared with an EU average of 39.9%. Total tax revenues are projected to edge up to 37.2% of GDP in 2026 and 37.7% of GDP in 2027 according to the Spring 2026 Forecast ([46]). Poland relies relatively heavily on consumption taxation, while tax revenues from labour taxation are relatively low. Meanwhile, Poland's shadow economy is estimated to be larger than the EU average, and available estimates point to large tax gaps in corporate and value added taxation (see Annex 3).

([45]) This refers to the set of government activities, policies, and expenditures aimed at regulating, supporting, and developing economic activity across major sectors, including general economic and labour policies, agriculture and natural resources, energy, industry, construction, and other economic functions not elsewhere classified. Although transport and communication, as well as research and development activities, are normally considered part of this function, they are treated separately in the graph presented

([46]) Data retrieved from the AMECO database (https://economy-finance.ec.europa.eu/economic-research-and-databases/economic-databases/ameco-database_en).

Table A2.1: **Supplementary pension schemes – scope for expansion**

	Assets in 2024 (% GDP)	Gross replacement rate at retirement: (pps change 2025-2040)	Participation in 2024 (% working-age population)	
PL	8.4	*-22.7*	61.7	**PL**
EU	32.4	*-2.8*	55.9	EU

Source: European Commission.

The costs of ageing

Total ageing-related spending in Poland is projected to remain stable in the medium term, rising by about 1 pp. of GDP in the long term (see Table A2.2). The broad overall stability in this spending category is due to a projected decline in pension spending with unchanged policy, which will partly offset an expected increase in healthcare and long-term care spending. At 21% of GDP in 2070, total ageing-related spending would remain below the EU average.

Public pension spending as a share of GDP is projected to decline by about 1 pp. in the long term. By 2070, public pension outlays in Poland are projected to be equivalent to 10% of GDP, compared with an EU average of about 12%. With unchanged policy, pension spending would decline, but so would pension adequacy. Therefore, Poland received a CSR in 2025 encouraging it to ensure the adequacy of future pension benefits and strengthen the sustainability of its pension system, including by taking measures on the effective retirement age and reforming preferential pension schemes. No progress was made over the last year to address this CSR.

Supplementary pension schemes can make the pension system more resilient by diversifying retirement income sources. In Poland, however, the uptake of these supplementary schemes remains limited. By the end of 2024, private pension assets amounted to around 8% of GDP while participation covered around 62% of the working-age population ([47]). This coincides with a projected decrease in the replacement rate ([48]) by around 23 pps between 2025 and 2040 (Table A2.1), which may lead to rising medium-term pressures from public pension spending.

Public healthcare expenditure is projected to be 4.5% of GDP in 2025 (below the EU average of 6.6%) and is expected to increase by 0.5 pps between 2025 and 2040 and by a further 0.5 pps between 2040 and 2070 ([49]). Public expenditure on long-term care is projected to be 0.5% of GDP in 2025 (well below the EU average of 1.7%) and is expected to increase by 0.3 pps of GDP between 2025 and 2040 and by a further 0.6 pps of GDP between 2040 and 2070 ([50]).

National fiscal framework

The CSRs addressed to Poland in 2025 include a call to improve the efficiency of public spending, including through: (i) better targeting of social benefits; (ii) improving the budgetary process; (iii) providing more transparency in investment planning; and (iv) the more widespread use of standardised procedures for project assessment and selection. Substantial progress has been made on the recommendations concerning the budgetary process and public investment. In line with its recovery and resilience plan (RRP), Poland has introduced a reform of its framework for managing public investment. The reform

([47]) Source: OECD Pension Market in Focus 2025. The highest participation rate in at least one supplementary pension plan is reported.

([48]) The (gross) replacement rate refers, depending on data availability, to both public and private pensions. It is based on projections from the 2024 Ageing Report.

([49]) Key performance characteristics, recent reforms and investments of the Polish healthcare system are discussed in Annex 15.

([50]) The adequacy and quality of the Polish long-term care system are covered in Annex 12.

Table A2.2: **Projected change in ageing-related expenditure in 2025-2040 and 2025-2070**

	ageing-related expenditure	change in 2025-2040 (pps GDP) due to: pensions	healthcare	long-term care	education	total	ageing-related expenditure	
PL	20.1	*-0.5*	*0.5*	*0.3*	*-0.2*	***0.1***	20.1	**PL**
EU	24.3	*0.5*	*0.3*	*0.4*	*-0.3*	***0.9***	25.2	EU

	ageing-related expenditure	change in 2025-2070 (pps GDP) due to: pensions	healthcare	long-term care	education	total	ageing-related expenditure	
PL	20.1	*-1.1*	*1.0*	*0.9*	*0.1*	***0.9***	21.0	**PL**
EU	24.3	*0.2*	*0.6*	*0.8*	*-0.3*	***1.3***	25.6	EU

Source: 2024 Ageing Report (EC/EPC).

comprises general and sectoral criteria and procedures for assessing investment projects. No progress has been made on better targeting of social benefits. In particular, Poland has taken no measures to expand the use of means-testing in family benefits.

The Ministry of Finance's legal mandate to carry out spending reviews was strengthened in 2025 and 2026 as part of the Polish RRP. While a number of spending review reports were published since 2024, these had limited impact in terms of spending reallocations or savings. Under the 2026 reform under the RRP, line ministries must now include the findings of spending reviews in the budget proposals they send to the Ministry of Finance.

Although Poland has taken steps to strengthen the assessment of investment projects, both transparency in investment budgeting and *ex post* reviews remain weak. The planning of public investment, including by state-owned enterprises, would benefit from an integrated and comprehensive document, anchored in a long-term strategy and aligned with Poland's medium-term fiscal-structural plan. Such a document, when made public and kept up-to-date, could offer transparency and predictability to the private sector. After sufficient time has passed since a public investment project was completed (e.g. three to five years), a comprehensive *ex post* review are justified to assess the strategic performance of the project. These reviews require careful planning and are resource intensive. In Poland, *ex post* reviews are neither systematically required, not frequently conducted.

Since 1 January 2026, Poland has a Fiscal Council, an independent fiscal institution which is in the process of building its capacity. When fully staffed, the Fiscal Council will have seven members supported by a secretariat. Its main tasks will consist of assessing macroeconomic forecasts, analysing draft state budgets, monitoring Poland's compliance with fiscal rules, and supporting transparency in the public finance debate.

Accrual accounting improves transparency over a public body's financial position and performance, and can support sustainability and intergenerational equity. Most (14) Member States have implemented accrual accounting across the general government sector and five are set to do so by 2030 ([51]). Poland is close to the EU average in terms of public accounting maturity (see Table A2.3) but has not yet implemented accrual accounting for social security funds. The ongoing reforms in Poland are not expected to improve its standing in this area in the medium term ([52]).

([51]) Report on public accounting in the EU (COM(2025)746 and accompanying Staff Working Document SWD(2025)396). Countries with an accounting maturity of 70% or more in relation to International Public Accounting Standards are deemed to apply accrual accounting.

([52]) Annexes 3.1 and 3.4 of SWD(2025)396.

Table A2.3: **Fiscal governance database indicators and public accounting maturity**

2024	Poland	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	14.58	14.81
Medium-Term Budgetary Framework Index (MTBFI)	0.33	0.72
2025 Public accounting maturity of general government	67%	65%

(1) "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.
The score for public accounting reflects the degree of maturity in relation to the International Public Sector Accounting Standards (IPSAS). Countries with an accounting maturity of 70% or more in relation to IPSAS are deemed to apply accrual accounting. For more information, see the report on public accounting in the EU (COM(2025)746 and accompanying Staff Working Document SWD(2025)396)."
Source: Fiscal Governance Database, European Commission

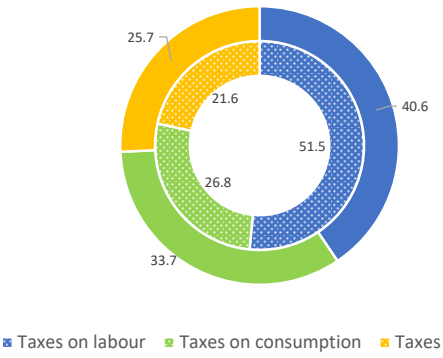
This Annex provides an indicator-based overview of Poland's tax system. It includes information on the tax mix, on competitiveness and fairness aspects of the tax system, and on tax collection and compliance. In the area of taxation, the 2025 country-specific recommendations for Poland highlighted challenges in energy pricing for households and industries with high prices of clean electricity generation relative to the fossil fuels (further details in Annex 9).

In Poland, tax revenues expressed as a percentage of GDP are considerably below the EU aggregate, despite the slight increase in 2024. In 2024, total tax revenues amounted to 36.6% of GDP, compared to the EU-27 average of 39.4%. Poland has a relatively low reliance on labour taxation - amounting to 14.8% of GDP compared with an EU average of 20.3% in 2024. Revenues from personal income tax (PIT) as part of GDP were significantly lower than the EU average (5% in Poland and 9.4% in the EU). Consumption taxes account for 12.3% of GDP (EU average: 10.6%) and capital taxes for 9.4% (EU average: 8.5%). Recurrent taxes on immovable property in Poland as part of GDP remain at the same level and are slightly above the EU average (1% vs 0.9%), but the total share of the property taxes in relation to GDP remains below the EU average (1.5% vs 1.8%).

Poland's revenues from environmental taxes as a percentage of GDP are above the EU average (3.4 % of Polish GDP in 2023 and 3% in 2024, compared with the EU average of 2.1%). Energy taxes account for the largest percentage of these environmental taxes making up 7.4% of total tax revenue in Poland (in comparison with the EU average of 4.1%). The effective carbon rate in 2023 was EUR 68 per tonne of CO_2 emission while the EU average was EUR 84.8. However, there is still some room for solutions that promote the 'polluter pays' principle, especially in the context of carbon taxes, transport taxes or pollution and resources taxes.

Low revenues from taxation of labour are particularly relevant in the context of persistent labour shortages, largely driven by a shrinking working-age population. While the lower tax burden can support employment, it also constrains revenue collection in a tax base that is already under demographic pressure, in the context of substantial fiscal consolidation needs (see Annex 2).

Graph A3.1: **Tax revenue by economic function in 2024, PL (outer ring) and EU-27 (inner ring)**



Source: Taxation Trends Data, DG TAXUD

Poland's labour tax burden is comparatively high at low earnings levels. Graph A3.2 shows that the labour tax wedge ([53]) in Poland in 2025 was above the EU average for single workers at low earnings levels (35.1% vs 31.6% for workers earning 50% of the average wage; see also Table A3.1), whereas other wage levels are closer to the EU average. Second earners at a wage level of 67% of the average wage, whose spouses earn the average wage, were also subject to a tax wedge (at 42.9%) that was above the EU average (38.5%) and higher than the tax wedge for single earners at the same wage level (38.2%). It is therefore possible that the current design of the tax-and-benefit system is having a negative impact on the share of low-skilled workers and women entering the labour market.

Although income inequality in Poland is modest, the tax-and-benefit system has a relatively small inequality-reducing effects in the EU. In 2024, the difference between the Gini coefficient ([54]) for market income before

([53]) The tax wedge is an indicator of the tax burden on labour that can be assessed at various levels of earnings. It is defined as the sum of personal income taxes, employee and employer social-security contributions, and other mandatory contributions, expressed as a percentage of total labour costs (the sum of the gross wage and social-security contributions paid by the employer). Tax wedge data in the 2026 country reports are calculated by the Joint Research Centre of the European Commission and based on the EUROMOD model, while in the past country reports they were based on the OECD tax and benefit model. While the underlying methodology is very similar, differences in the assumptions can lead to different results between both models.

([54]) The Gini coefficient measures the extent to which the distribution of income within a country deviates from a

Table A3.1: **Taxation Indicators**

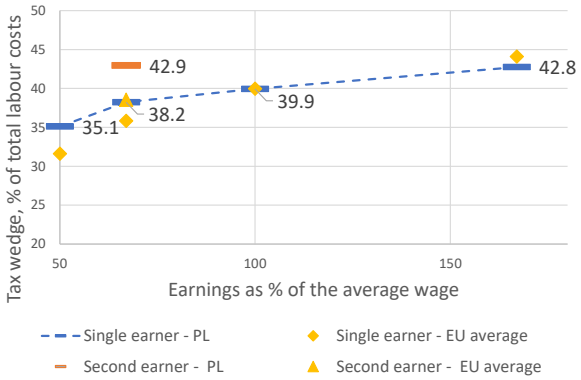
		Poland					EU-27				
		2019	2022	2023	2024	2025	2019	2022	2023	2024	2025
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	34.8	34.2	35.0	36.6		39.9	39.7	39.0	39.4	
By tax base	Taxes on labour (% of GDP)	14.1	13.4	13.5	14.8		20.6	20.1	19.9	20.3	
	of which, social security contributions (SSC, % of GDP)	13.2	12.8	13.4	14.3		13.0	12.7	12.7	13.0	
	Taxes on consumption (% of GDP)	12.2	12.0	11.7	12.3		11.2	10.9	10.5	10.6	
	of which, value added taxes (VAT, % of GDP)	7.9	7.2	7.3	8.0		7.1	7.4	7.1	7.1	
	Taxes on capital (% of GDP)	8.5	8.8	9.9	9.4		8.1	8.7	8.5	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	5.3	4.5	4.4	5.0		9.6	9.4	9.3	9.6	
	Corporate income taxes (CIT, % of GDP)	2.2	2.8	2.7	2.4		2.6	3.2	3.2	3.1	
	Total property taxes (% of GDP)	1.7	1.5	1.4	1.5		2.2	2.1	1.9	1.8	
	Recurrent taxes on immovable property (% of GDP)	1.1	1.0	1.0	1.0		1.2	1.0	0.9	0.9	
	Environmental taxes (% of GDP)	2.5	2.8	3.4	3.0		2.6	2.1	2.1	2.1	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	na	na	68.0	na		na	na	84.8	na	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	39.8	33.4	33.9	34.7	35.1	32.4	31.6	31.5	31.5	31.6
	Tax wedge at 100% of average wage (single person) (*)	41.0	38.8	39.3	39.7	39.9	40.1	39.7	39.9	39.9	40.0
	Corporate income tax - effective average tax rates (1) (*)	16.9	15.2	12.2	12.2		20.0	19.2	19.0	19.3	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	5.3	4.6	5.3	6.1		7.8	8.0	7.9	7.8	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)	29.8	21.9	19.2	na		31.8	32.6	30.7	na	
	VAT gap (% of VAT total tax liability, VTTL) (**)	14.9	11.2	16.0	10.9		10.5	7.3	8.2	na	

(1) Forward-looking effective tax rate (KPMG).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average.
(**) Forecast value for 2024. EU-27 refers to the median value. For more data on tax revenues as well as the methodology applied, see the Data on Taxation Trends webpage.
Source: European Commission, OECD, ISORA.

social transfers and total disposable household income was 6.1 percentage points in Poland (compared with an EU average of 7.8 pps). This indicates a lower effect of taxes and benefit transfers on reducing income inequality than in other EU countries, although somewhat higher than in previous years (see Table A3.1). At the same time, in terms of disposable income after taxes and benefits, Poland shows one of the lowest Gini indices (26.0%) against the EU average (29.1%), indicating lower income inequality in Poland than in other EU countries ([55]).

A reform adopted in 2025 will reduce taxation of families with children. The statutory PIT rate is 12% for income up to PLN 120 000 (about EUR 28 000) and 32% for income above this threshold. A tax reform adopted in 2025 and applicable from 2026 will reduce the tax burden of families with at least two children earning up to PLN 140 000 (EUR 32 973) a year to zero. Poland does not have a wealth tax, but people who earn over PLN 1 million a year must pay a solidarity contribution of 4% on the income over that amount (after the deduction of social security contributions). The revenues from the solidarity contribution are used to finance the Solidarity Fund for Persons with Disabilities. Poland levies inheritance and gift taxes with rates varying from 0% (for closest relatives) to 20%.

Graph A3.2: **Tax wedge for single and second earners as a % of total labour costs, 2025**



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

Poland is building a favourable tax environment for the growth of businesses.

perfectly equal distribution. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income.

([55]) European Commission based on EU-SILC.

The standard corporate income tax (CIT) rate in Poland is below the EU average (19%) and a reduced rate of 9% applies to new and small businesses. The forward-looking effective average tax rate dropped to 12.2% in 2024 (from 15.9% in 2022), reaching one of the lowest levels in the EU (EU average: 19.1% in 2024). Based on the available estimates, the effective average tax rate for SMEs is even lower (below 6% in 2023). At the same time, Poland's tax system is quite complex, which may impede development of businesses. Poland included a simplification of tax law on the list of key government priorities announced in September 2025.

Poland offers a wide range of tax incentives to encourage investments. Available tax incentives include accelerated depreciation, up to immediate expensing for certain fixed assets, investment deductions for new investments or jobs creation, and an investment reserve for future investments which is tax-deductible. To further stimulate retail investment, Poland announced that in 2026 it will introduce individual investment accounts featuring certain tax incentives. More investment from individuals would make the capital market deeper and improve its liquidity.

It also offers a wide range of tax incentives for R&D. To incentivise R&D, taxpayers may deduct an additional 100% of all qualifying expenses incurred in connection with R&D. As of 2022, Poland has also increased tax deductions for expenses incurred for robotisation, prototypes, expansion of sales market, consolidation and IPOs. An incentive for innovative employees allows their employers to reduce tax advance payments withheld from the employees' salaries by the qualifying R&D expenses that were not deducted in the previous year. Startups can benefit from several types of tax relief in Poland (such as reduction of withholding tax rate; immediate deduction of certain fixed assets; refund of R&D expenses that could not be deducted from the tax base).

Poland does not regularly report on tax expenditures. Its last detailed report on tax expenditures was published in 2021, covering 2016-2018 ([56]). Based on its results, the total amount of tax expenditures in 2018 related to PIT, CIT, VAT, excise tax, and local taxes (i.e. real estate tax, agricultural tax, forestry tax) was estimated at PLN 118.3 billion (about EUR 27.75 billion). This represented 5.6% of GDP and 27.7% of total tax revenues. The use of tax expenditures in PIT is limited. The Ministry of Finance is currently working to resume the tax expenditure reporting in 2026.

Foregone revenues from PIT are below the EU average. Based on the micro-simulations using the EUROMOD model, tax expenditures related to PIT in Poland reduce PIT revenues by 7% ([57]). These foregone revenues amount to about 0.4% of GDP, compared to the EU average of 1.2%. The tax expenditures are related to employment and family, each making up for about half of the total PIT revenue reduction. Their impact on households' disposable income is modest, giving an increase of about 0.5%, and even smaller for income inequality which remains almost unchanged.

Poland's shadow economy is estimated to be larger than the EU average and available estimates point to a large CIT gap. National sources estimate the CIT gap at around 30% of potential revenues ([58]), and its high levels are confirmed by the European Commission's estimates ([59]). Poland is using the Technical Support Instrument to build its tax gap estimation capacities ([60]). In 2025 Poland established the National Revenue Administration Competence Centre for Combating Aggressive Tax Planning in Corporate Income Taxation, to support audits in the field of combating aggressive tax planning.

([56]) Report on Tax Preferences in Poland (Raport – Preferencje podatkowe w Polsce).

([57]) Turrini, A., Guigue, J., Kiss, Á., Leodolter, A., Van Herck, K., Neher, F., Leventi, C., Papini, A., Picos, F., Ricci, M., Lanterna F.; (2024). Tax Expenditures in the EU: Recent Trends and New Policy Challenges. European Economy-Discussion Papers, (212).

([58]) Polish Economic Institute, based on 2019-2020 data

([59]) Based on a methodology developed by the Joint Research Centre (European Commission, 2025) which relies on a top-down approach using statistical data.

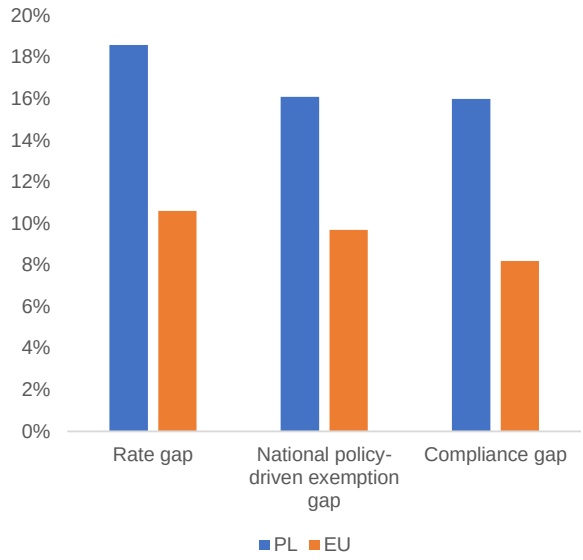
([60]) European Commission: Technical Support Instrument - Country Factsheet, Poland; European Commission: Directorate General for Taxation and Customs Union, Annual report on taxation 2025 – Review of taxation policies in the EU Member States, Publications Office of the European Union, 2025.

I**n 2023 the VAT compliance gap continued to increase up to 16% ([61]) of the VAT total tax liability**. This was the third largest compliance gap in the EU. VAT losses due to missing trader intra-community fraud were estimated over EUR 1.3 billion in 2023. Several factors are likely to have contributed to this increase, including a rise in bankruptcy declarations, an increase in the share of services in the economy and growing consumption of recreation services, restaurants and accommodation. However, this trend is expected to revert back to 2024 levels (VAT compliance gap estimated at 10.9% of VAT total tax liability). On the other hand, the VAT policy gap ([62]) was still among the highest in the EU, largely due to the widespread application of reduced VAT rates. In 2023 it was estimated at nearly 51% of the national ideal revenue, with the slight decrease in 2024 estimated at 49.8%.

The digital transformation is progressing well. The electronic payment of VAT obligations is compulsory, and the IT system used by the Polish tax administration to manage VAT arrears can prioritise cases based on their size and age and allow arrears to be collected via instalment plans. In 2026 the system of structured e-invoices registered in the national e-invoicing system (KSeF), introduced in 2022, became mandatory as of 1 February 2026 for the biggest companies and as of 1 April 2026 for other taxpayers. Its aim is to facilitate and tighten the collection of VAT and its control in real time ([63]).

New tools are helping fight fraud and tax evasion. In recent years Poland has implemented several new tools such as: SAF-T (the international standard for the electronic exchange of accounting data developed by the OECD); an account-monitoring platform (STIR), which enables real-time monitoring of company finances via bank integration or comparison of financial flow data with other data held by the National Revenue Administration (KAS), such as the JPK-VAT file, to effectively prevent undue VAT refunds. In 2022, an 'e-Tax Office' (*e-Urząd Skarbowy*) was established for electronic handling of all tax-related matters in the field of VAT, PIT and CIT, also through mobile application.

Graph A3.3: **VAT gap indicators**



Note: The rate gap and the national policy-driven exemption gap are measured as percentage of notional ideal revenues. Compliance gap is measured as a percentage of VAT total tax liability. EU refers to median values.
Source: European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2025 report.

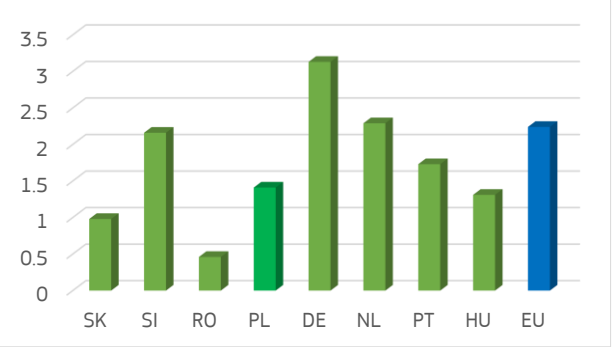
([61]) European Commission (2025), Mind the Gap report, Country fiche - Poland p. 299.

([62]) The VAT policy gap refers to the revenue lost due to the application of VAT exemptions and reduced, super-reduced, and zero VAT rates on selected products.

([63]) European Commission (2025), Mind the Gap report, Country fiche - Poland, p. 303.

Despite improvements, Poland still faces challenges in the research and innovation (R&I) ecosystem in areas such as translating scientific breakthroughs into impactful innovation, making research careers more attractive and increasing business investments in R&I. Poland is an emerging innovator according to the European Innovation Scoreboard (EIS)([64]), ranking 23rd among EU Member States and performing above the average of emerging innovators in the EU (65.9% vs 56.4% of the EU average in 2025). For Poland, the 2025 country-specific recommendations highlighted challenges in strengthening science-business links as well as improving and modernising the public research system and focusing on investment-related economic policy on innovation. Poland's investment in research and development (R&D) has shown steady improvement, with R&D intensity([65]) rising from 0.88% of GDP in 2012 to 1.41% in 2024. Despite this positive momentum, Poland still falls below the EU average of 2.24%, indicating a persistent gap with leading innovation economies. Additionally, the attractiveness of research careers and the strength of science-business links remain key weaknesses, holding back Poland's overall innovation capacity with fundamental institutional and market challenges. Despite improvement, Poland still trails behind the EU average in terms of the digitalisation of businesses and the adoption of advanced digital technologies. Despite this, the use of AI, cloud and data analytics in companies is on the rise.

Graph A4.1: **R&D intensity (gross domestic expenditure on R&D (GERD) as % of GDP), 2024**



Source: DG Research and Innovation - Chief Economist - Common R&I Strategy and Foresight Unit
Data: Eurostat, OECD, DG JRC, Science Metrix (Scopus), Invest Europe, European Innovation Scoreboard, 2024

Excellent science

Despite gradual improvements, Poland's public R&D sector remains underfunded and less internationally competitive than the EU average, underscoring the need for stronger public investment and policies to improve research excellence and global visibility. Public sector investment in R&D as a percentage of GDP in Poland stagnated from 2012 to 2023 (both 0.55%) but dropped in 2024 to 0.51%, even further below the EU average of 0.72%. This slight decline suggests that more public funding is needed to accelerate progress, confirming the 2025 country-specific recommendation on *raising public R&I investment.* In addition, highly-cited scientific publications([66]) were only 5.58% of total Polish research output in 2022, below the EU's average of 9.44%, indicating that research impact and international visibility require strengthening. International co-publications have grown, reaching 43.17% of total publications in 2024, albeit still below the EU average of 57.24%.

The attractiveness of research careers and the overall support system for researchers still require improvement. The number of researchers per thousand employed in the public

([64]) 2025 European Innovation Scoreboard, country profile: Poland. 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).

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

([66]) Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country.

sector slightly increased from 3.1 in 2012 to 3.6 in 2024 but remains behind the EU average of 4.3. This increase demonstrates a growing investment in human capital, demonstrated through programmes to incentivise the return of researchers to Poland, such as NAWA's programmes([67]), First Team([68]) and International Research Agendas([69]), in line with the 2025 country-specific recommendations on *improving and modernising the public research system by making research careers more attractive* and *supporting research institutions.* The number of PhD students per 1000 inhabitants remains among the lowest in the EU (0.5 vs 1.3 in the EU in 2022)([70]). This indicates research careers are relatively unattractive in Poland. It might also point to low financial and career incentives in academia compared with industry and abroad. The low intake reflects the perceived poor pay, instability and weak progression prospects. Despite the programmes listed above, Poland still lags behind in nurturing research excellence and career prospects for its scientists, specifically on the reform of the evaluation process of scientific activities, still seen as excessively focused on bibliometrics and not tapping sufficiently to the commercialisation side.

Poland's R&I system still faces significant challenges in inter-institutional cooperation. This situation is primarily due to fragmented R&D infrastructure and weak linkages between academia, public research organisations and industry. On the public administration side, the Ministry of Economic Development and Technology is responsible for innovation policy, while research policy falls under the Ministry of Science and Higher Education. The Ministry of Funds and Regional Policy, as well as agencies such as the Polish Agency for Enterprise Development([71]), the National Centre for R&D, the Foundation for Polish Science and the Polish Development Fund are involved in financing from EU and national sources, creating too many players in the R&I system. Poland's R&I governance is currently undergoing modernisation, aimed at strengthening ties between research, business, and technology, including those driven by reforms under the Recovery and Resilience Facility *(*Reform A2.4 *Strengthening cooperation mechanisms between science and industry)* aimed at enhancing science-business collaboration and the update of the national science policy. Additionally, to foster effective collaboration, improve the commercialisation and scaling up of research results, remove regulatory barriers to innovation and increase the efficient use of EU and private financing, Poland adopted new rules for the Council for Innovation (Order No. 62 of the Prime Minister of November 4, 2025). It also established, a new task force under the Prime Minister's office, aiming to identify gaps and provide long term solutions, launched an evaluation of the effectiveness of the system supporting science-business links([72]), and initiated preparations for a strategy for developing the start-up ecosystem for the years 2027-2035([73]).

Business innovation

Poland's innovation system is undergoing a dynamic transformation, but business R&D investment is still subdued. The main innovational sectors remain the ICT and the life sciences/health sector, with clean energy R&D surging as one of the main priorities. On the less innovational side the main issue continues to be domestically focused, smaller firms that invest little in R&D and digital technologies. According to the 2025 European Innovation Scoreboard, Poland underperforms in the adoption of product and business process innovation from R&D-intensive companies, when compared to other EU markets, limiting the country's international innovation visibility. Additionally, business enterprise expenditure on R&D (BERD) in Poland grew substantially from 0.33% of GDP in 2012 to 0.89% in 2024, with a peak in 2023 (1.0%), but still far from the EU average (1.49%). Likewise, BERD performed by SMEs has also risen quite strongly, from a mere 0.11% in 2012 to 0.37% in 2023, but still below the EU average (0.47%) This

([67]) Polish National Agency for Academic Exchange programmes for scientists and institutions.

([68]) First Team.

([69]) International Research Agendas.

([70]) Eurostat : educ_uoe_grad06.

([71]) Polish Agency for the Development of Businesses (PARP).

([72]) Ministry of Science and Higher Education, www.gov.pl.

([73]) Ministry of Development and Technology, www.gov.pl.

could be linked to the tax incentives implemented by the government and the increase in direct funding through the National Centre for Research and Development (NCBR) and Polish Agency for Enterprise Development (PARP). Patent applications filed under the Patent Cooperation Treaty (PCT) have decreased from 0.95 in 2012 to 0.63 in 2022 and remain well below the EU average of 2.81, reflecting a continued gap in high-value, internationally competitive inventions, despite the 621 patent innovations in 2025 with the European Patent Office, indicating a 58% rise since 2016([74]).

Public support for business innovation in Poland is provided through a mix of increasing direct grants and R&D tax incentives. Business enterprise expenditure on R&D (BERD) financed by the public sector in Poland rose noticeably, overtaking the EU estimated average (0.11% of GDP) throughout the period. The indicator increased from about 0.06% of GDP in 2012 to around 0.15% in 2023, showing a near three-fold rise in R&D tax incentives and signalling a stronger policy effort to stimulate private R&D, such as the Critical Technology Support Fund. R&D tax incentives as a percentage of GDP were 0.06% in 2023, up from 0.007% in 2017, but still well below the EU average of 0.102%. These incentives include measures such as tax relief for R&D in companies, which has had some success, offering consistent deductions on eligible costs. Direct public support, through both EU and national funds, such as the Innovate Poland scheme, remains vital for fostering innovation among firms, particularly those with riskier or higher-cost projects. Recent developments have also streamlined grant programmes, facilitated programme access and tailored support towards SMEs and high-tech sectors.

Science-business collaboration and the translation of academic research into business innovation are improving, yet in need of further progress. Scientific cooperation between the public and private sectors has improved slowly, with public-private research co-publications ([75]) rising to 5.78% in 2024 from 3.65% in 2012; however, this indicator is still below the EU average of 7.62%. Key public bodies such as the National Centre for Research and Development are tasked with awarding grants and fostering industry-university partnerships. Poland has mechanisms in place to support applied research (implementing research results in the economy and using them in industry) primarily financed by the National Centre for Research and Development (NCBR). Another example is the PRIME Project([76]) by the Foundation for Polish Science (FNP), an EU Cohesion funds programme aimed at improving business competences for scientists working in Polish research organisations. Technology transfer via spin-off companies has been on the rise in the past decade, reaching over 230 companies in 2023([77]). This is due to higher education reforms, like the Constitution for Science (Law on Higher Education and Science, 2018), greater EU funding, and the emergence of technology transfer offices in universities as part of the 'third mission' approach([78]) and the Excellence Initiative – Research University (IDUB). The Law on Higher Education and Science of 2018 further supports these links and the national science policy (2022) enhanced the strategic goals for quality research and stronger science-business ties. The national science policy is currently undergoing a revision to further align with parts of the 2025 country-specific recommendations, namely on *research careers attractiveness* and a *stable and clear legal framework*.

The digitalisation of SMEs and adoption of advanced digital technologies in Poland is progressing gradually, while remaining below the EU average. According to Poland's Digital Decade Report([79]), in 2024, 68.95% of Polish SMEs reached at least a basic level of digital intensity, an increase from 60.95% in 2022, but still well below the EU average of 72.91%. 8.36% of businesses adopted AI after a significant increase

([74]) EPO PL: https://www.epo.org/en/about-us/statistics/statistics-centre#/countrydashboards

([75]) As a proportion of the total number of publications.

([76]) PRIME Project – Science Commercialisation Support

([77]) with equity ties to universities in Poland https://www.researchgate.net/figure/Population-of-academic-spin-offs-with-equity-ties-to-universities-in-Poland-from-2010-to_fig3_385870741

([78]) This concept was institutionalised primarily through the Constitution for Science (2018), which mandated that higher education institutions contribute to the innovativeness of the economy and the development of culture as a core obligation.

([79]) 2025 Digital Decade Country Report Poland

of over 50% between 2023 and 2025, but below the EU average of 19.95%. On grassroot support for digital innovation, Poland has some support measures in place such as comprehensive digitalisation advice, including through the European Digital Innovation Hubs. In addition, Poland uses the RRF to provide loans covering the costs of investments in advanced digital technologies to businesses (measure C4.1.1). Poland is taking some measures to address the 2025 recommendation to focus investment-related economic policy on innovation through strengthening the country's AI ecosystem. Work is underway on establishing the AI Fund Council as a coordination mechanism for AI-related funding. Additionally, Poland is expected to launch two AI factories to develop, test and deploy state-of-the-art AI technologies and has submitted a proposal for a Baltic AI giga factory as the leader of a Baltic states' consortium. There are concerns about the effectiveness of existing support, with several operators citing regulatory instability and lack of access to funding opportunities as primary hurdles preventing SMEs from investing in innovative solutions. Moreover, Polish stakeholders are active in the IPCEI Next Generation Cloud Infrastructure and Services through the National Recovery and Resilience Plan (measure C3.1.1).

Entrepreneurial dynamism

Financing for startups and scale-ups continues to improve but is unable to reach its potential due to institutional investors' reluctance while also facing rising labour costs and difficulties in securing financing. According to the latest figures in Dealroom, over 2.9 companies in Poland received financing from external investors such as venture capital funds or business angels. Out of these, around 11 are unicorns([80]) companies established in Poland, with a combined valuation of over EUR 32 billion. Venture capital investment as a percentage of GDP in Poland surged from 0.004% in 2012 to a peak of 0.028% in 2022, only to drop in the last two years to 0.017% in 2024, a figure less than a third of the EU average (0.063%). To bridge this gap, Poland has deployed targeted initiatives since 2020, led by the Polish Development Fund's (PFR Ventures) funds-of-funds model and Poland's Development Bank (BGK), channelling EU resources (e.g. European Funds for a Smart Economy (FENG) 2021-2027) into more than 90 seed/venture capital/private equity funds and backing nearly 950 startups([81]). The Polish Agency for Enterprise Development (PARP) also supports early-stage startups through evolving programs that now include post-acceleration phases and dedicated tracks for sectors like social impact or deep-tech. Polish universities show an increasing pipeline of projects from science to sturt-ups, showing that Polish universities are around 50% of EU average in number of startups per EUR100m of public financing ([82]). Despite increasing activity, 56% of startups report difficulties in securing financing, and 50% highlight rising labour costs as a major challenge([83]). Participating in government and EU-funded schemes, startups are beginning to benefit from targeted public policies supporting early-stage innovation and entrepreneurship. This is being done with support from national funds, where the Ministry of Finance has launched in late 2025 the Innovate Poland scheme([84]), comprising start-up and scale-up financing from public and private sources in line with the 2025 country-specific recommendations *on focusing investment-related economic policy on innovation and implementing targeted funding schemes*.

Although regulatory sandboxes and targeted policies have been introduced, ongoing fragmentation and administrative complexity for innovation persist. Regulatory "sandboxes" have been launched, mainly for fintech and emerging sectors (e-health, smart manufacturing, dual use), but the coverage remains limited with only pilot and virtual environments in place by 2025. The national policy framework is evolving to align with EU digital and AI regulations, but practical implementation lags in terms of accessible and comprehensive support. New strategic policy document deriving from public procurement legislation, largely based on the ProcurComp EU framework([85]), will be in place in

([80]) Unicorn - a privately held company (not on the stock market) valued at over USD 1 billion

([81]) Our portfolio | Serwis Spółki PFR Ventures, accessed on 16.02.2026

([82]) Redstone University Index 2025: Poland

([83]) https://www.trade.gov.pl/en/news/polands-start-up-potential/

([84]) https://innovatepoland.pl/en

([85]) ProcurCompEU

early 2026. One of the objectives of the amended legislation is to increase accessibility for SMEs. As a result, startups still face moderate barriers to entry and scaling up due to administrative burdens, costs, and patchy infrastructure, in line with the 2025 country-specific recommendation on *reduction of administrative burden*.

Although growing, the supply of innovative talent in Poland lags behind its regional and international peers. According to the latest data from Eurostat, the number of new graduates in science and engineering per thousand population in 2024 is estimated to be about 12.30, below the EU average of 16.82. The number of researchers employed by business per thousand active population (in FTE) has risen from 0.9 in 2012 to 4.7 in 2024 yet is still below the EU average of 5.9. Despite this rise, the public and private sectors both point to persistent skill shortages as a constraint on innovation (see Annex 13 for more), particularly in the digital, engineering and high-tech fields([86]). The Skills Strategy 2030 initiative aims to rectify this gap, with policies supporting upskilling, re-skilling and the attraction of global talent.

Poland has a strong strategic framework promoting entrepreneurship skills, but they remain insufficient, limiting innovation in the business environment. Several national strategies seek to promote the entrepreneurial skills development, demonstrating a comprehensive approach to expand entrepreneurship competence. The primary curriculum aims to develop entrepreneurial competences, which appear across different subjects([87]). However, the current school curricula have been knowledge-centred, limiting creativity and enquiry, the values associated with entrepreneurial thinking. The upcoming curriculum reform, which is to be introduced in September 2026 in grades I and IV, aims to increase the focus on competences. At upper secondary level, entrepreneurship education is taught through the subject Business and Management, which was updated in 2023, adding many practical elements. Reference to entrepreneurship education is included in teacher competence frameworks, which are applicable to all teachers([88]). There have been also several initiatives promoting entrepreneurship among students, including the entrepreneurship competition for secondary school students. However, there is no monitoring of entrepreneurship education at tertiary level. Furthermore, the low proportion of students in STEM study programme (21.2% vs EU 26.9% in 2023), in natural sciences and mathematics (3.3% vs EU 6.8%) limits the innovation capacity of Poland's economy and contributes to the shortages of teachers of STEM subjects. Entrepreneurship opportunities are sought equally often by men and women, but they face same barriers to business development: too-high non-wage labour costs, problems with acquiring new customers, complicated financial formalities and procedures, and the volatility of labour laws. Despite the strong skills policy framework, research shows that lack of skills remains one of the barriers to enterprise development. No framework for monitoring and evaluating learning outcomes is in place and data collection is insufficient to provide robust evidence for shaping policies, while students are not given sufficient encouragement to enrol in STEM tertiary programmes.

([86]) European Innovation Scoreboard

([87]) European Commission / EACEA / Eurydice, 2025, Entrepreneurship education at school in Europe – 2025. Eurydice Report

([88]) European Commission / EACEA / Eurydice, 2025, Entrepreneurship education at school in Europe – 2025. Eurydice Report

Table A4.1: **Key innovation indicators**

Poland	2010	2015	2020	2022	2023	2024	2025	EU average (1)	US
Headline indicator									
R&D intensity (gross domestic expenditure on R&D as % of GDP)	0.72	1.00	1.37	1.44	1.56	1.41	:	2.24	3.44
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.53	0.53	0.51	0.49	0.55	0.51	:	0.72	0.64
Scientific publications of the country within the top 10% most-cited publications worldwide as % of total publications of the country	3.81	4.79	5.08	5.58	:	:	:	9.44	12.31
Researchers (FTEs) employed by public sector (Gov+HEI) per thousand active population	3.2	3.2	3.6	3.6	3.6	3.6	:	4.3	:
International co-publications as % of total number of publications	27.74	29.35	34.53	39.19	40.68	43.17	:	57.24	:
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	0.19	0.46	0.86	0.95	1.00	0.89	:	1.49	2.69
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.06	0.17	0.29	0.35	0.37	:	:	0.47	0.30
Researchers employed by business per thousand active population	0.7	1.7	3.7	4.6	4.6	4.7	:	5.9	:
Innovation outputs									
Patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €)	0.78	1.25	0.94	0.63	:	:	:	2.81	2.20
Employment share of high-growth enterprises measured in employment (%)	:	:	:	0.93	0.91	:	:	0.87	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	50.04	:	58.98	71.39	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	19.31	:	24.50	39.85	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	46.50	:	45.77	46.69	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	3.67	5.90	8.36	19.95	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	3.40	4.03	4.83	5.41	5.58	5.78	:	7.62	:
Public expenditure on R&D financed by business enterprises (national) as % of GDP	0.03	0.02	0.01	0.01	0.01	:	:	0.06	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.03	0.08	0.19	0.20	0.21	:	:	0.21	:
R&D tax incentives: foregone revenues as % of GDP	0.00	0.00	0.03	0.04	0.06	:	:	0.10	0.16
BERD financed by the public sector (national and abroad) as % of GDP	0.03	0.08	0.16	0.160	0.15	:	:	0.11	:
Financing innovation									
Venture capital (market statistics) as % of GDP (calculated as a 3-year moving average)	0.006	0.006	0.017	0.028	0.022	0.017	:	0.063	:
Seed stage funding share (% of GDP)	0.000	0.001	0.002	0.003	0.002	0.002	:	0.005	:
Start-up stage funding share (% of GDP)	0.001	0.003	0.007	0.014	0.013	0.009	:	0.030	:
Later stage funding share (as % of GDP)	0.004	0.002	0.009	0.011	0.007	0.007	:	0.027	:
Innovative talent									
New graduates in science & engineering per thousand population aged 25-34	:	16.47	12.02	12.58	12.33	12.30	:	16.82	:
Graduates in the field of computing per thousand population aged 25-34	:	2.61	2.86	3.53	4.14	4.58	:	3.84	:

(1) EU average for the last available year or the year with the highest number of country data. * break in series

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

Poland's business environment is characterised by strong entrepreneurial dynamism and a broadly favourable regulatory framework, but it continues to face structural constraints that weigh on productivity, investment and business growth. For Poland, the 2025 CSRs highlighted challenges in improving the public procurement processes, simplifying the regulatory framework, making it stable and clear for businesses, and fostering innovation (see Annex 4). While business creation and churn rates are above the EU average, the economy remains dominated by low-productivity micro-enterprises, with persistent difficulties in scaling up, limited innovation, and constrained access to long-term finance, which together contribute to subdued private investment levels well below those of peer countries. Foreign direct investment remains substantial and anchored in Poland's integration into EU value chains, yet it is still concentrated in medium-technology and assembly activities, with relatively limited R&D-intensive investment. On connectivity infrastructure, Poland has shown progress in very high-capacity networks and fibre to the premises coverage (FTTP). However, it lags in the rollout of 5G technology. Advances have been made on regulatory simplification, including deregulation initiatives, one-stop-shop procedures and strengthened SME support, but frequent legislative changes and short implementation periods continue to undermine predictability for businesses. Recent reforms in public procurement, aim to simplify procedures and improve SME access through contractor certification and streamlined appeals, but challenges persist in terms of high single-bid rates, limited competition and continued reliance on direct awards in certain sectors.

Business dynamics

Poland's economy is dominated by low-productivity micro firms, which constitute 95% of the business population. These micro firms contribute disproportionately little to value-added and turnover relative to their employment share. Small firms account for 4% of the total population and medium firms only 1%. The notable absence of medium-sized firms indicates systemic challenges in scaling up operations and fostering knowledge and technology transfers to smaller businesses, particularly in sectors crucial to the domestic economy that have attracted significant FDI levels. Overall, SMEs play a vital role in the lower technology manufacturing sector, accounting for 42% of employment and 37% of value-added, particularly in the textiles and wood sectors ([89]).

Poland has shown robust business dynamism in recent years, supported by its resilient economy and favourable business environment. The business churn rate was 23.9% in 2023, above the EU average of 19%, making Poland one of the most dynamic countries in Europe ([90]). Enterprise births in the business economy were 11.5% and deaths at 12.4%, also above EU averages. In addition, high growth businesses accounted for 9.3% of companies and 14.3% of employees (EU average is 10.5% and 12.9%, respectively). Higher churn rates might suggest dynamic business environments characterised by entrepreneurial activity, innovation and competitive pressure. Strengthening insolvency procedures, including by enhancing the capacity of courts for timely processing would also support higher dynamism ([91]).

Overall, productivity of Polish SMEs remains relatively low, with many lagging behind their peers in innovation, technology adoption, and global integration. In 2021, their productivity amounted to just 68% of that of large firms, compared with an OECD median of 78% ([92]). Polish SMEs tend to be more productive in the service sector, particularly in low-technology services, where their productivity is almost 87% of that of large firms. The productivity gap is wider in the manufacturing sector, where SME productivity is on average 60% of that of large firms. However, in high-technology activities, SMEs are more productive than their peers in lower technology manufacturing. This advantage may be due to the stronger presence of SMEs in these industries, as well as their greater flexibility in adapting to change.

([89]) Strengthening FDI and SME Linkages in Poland, OECD, 2025.

([90]) As defined by Eurostat, the business churn rate is the sum of enterprise births and death rates. High-growth enterprises are enterprises that have had at least 10 employees at the beginning of a 3-year period and an annual growth in the number of employees above 10% during that period.

([91]) IMF Article IV Consultation. Poland, IMF, 2025.

([92]) Strengthening FDI and SME Linkages in Poland, OECD, 2025.

Many companies struggle to scale up due to limited access to long-term financing for innovation, technology and R&D. The financial system is relatively small and dominated by banks and alternative sources of finance (for example, venture capital) are limited in use among Polish SMEs, posing challenges to them scaling up and accessing funding for innovative and riskier ventures (see Annex 6). There is also a low level of investment in intangibles, reaching 8.4% of GDP in 2024 (Germany: 10.5%, France: 15.6%) ([93]). In November 2025, Poland launched "Innovate Poland", a national investment programme designed to mobilise around EUR 900 million to support innovative Polish companies and bridge the financing gap for high-growth startups and scale-ups, combining public development capital with private institutional investment ([94]).

The degree of inter-firm collaboration in Poland is notably low. Only 14% of Polish companies report cooperation through strategic partnerships with other businesses, compared to 37% in Finland, 25% in Germany, 20% in Czechia and 19% in the Slovak Republic ([95]). The low levels of cooperation are especially prevalent among smaller firms as they face limited capacities linked to challenges in accessing knowledge, technology, skills and market knowledge. In this sense, clusters and innovation hubs may enhance Polish firms' possibilities to innovate and access new skills and technology, acting as accelerators that provide SMEs with access to the advisory and partnership network, global value chains, specialised knowledge and shared resources. A dedicated cluster policy at national level have created efficient agglomerations of businesses, research and specialised service providers, which are grouped in 82 cluster organisations with a strong focus on renewable energy, digital, construction, agri-food, transport, defence and health ([96]).

([93]) World Intangible Investment Highlights 2025, WIPO, 2025.

([94]) These measures address the 2025 CSR to focus investment-related economic policy on innovation.

([95]) Strengthening FDI and SME Linkages in Poland, OECD, 2025.

([96]) European Cluster Collaboration Platform, Clusters and Europe's Competitiveness, ECCP Summary Report 2025, ECCP Summary Report 2025.

Business environment

Higher private investment rates could boost Poland's long-term growth. Poland's investment to GDP ratio was 17% in 2024, considerably below the EU average (21.7%) and that of peer countries (Hungary: 23.1%, Czechia: 26.5%). The low level of business investment explains this considerable gap: while in Poland business investment remains below 10% of GDP (9.4% in 2023 and 8.8% in 2024), that rate is around 15% in comparable EU countries. This persistent investment gap reflects structural challenges in Poland's economy, which remains dominated by low-tech SMEs rather than high-tech industries. As a result, large-scale business investment and innovation-driven growth remain constrained, making Poland's private sector less dynamic than those of its regional peers ([97]). The perceived investment gap is higher in Poland than in the EU, as 20% of Polish firms report underinvestment in the last three years, compared to just 12% in EU. Furthermore, Polish firms invest less than the EU average in new products or services (19% vs 23% EU) ([98]).

The three main obstacles to Polish companies investing in 2025 were uncertainty about the future (86%, compared to an EU average of 83%), energy costs (86%, while EU average is 75%) and the availability of skilled staff (81%, in line with EU averages) ([99]). Reports confirm that uncertainty about future profitability and the macroeconomy had an impact on firm investment decisions, and weaker profit expectations contributed to lower investments following the global financial crisis ([100]). Polish firms are more optimistic about future investment: the net balance of firms expecting to increase investment is 8%, double the EU average. Over the next three years, 38% of Polish companies are prioritising the replacement of existing capacities (below the EU average: 43%), while 26% plan to prioritise expansion. A further 22% intend to develop new products, processes or services.

([97]) Strengthening FDI and SME Linkages in Poland, OECD, 2025.

([98]) EIB Investment Survey 2025, European Union overview, European Investment Bank, 2025.

([99]) EIB Investment Survey 2025: Poland overview, European Investment Bank, 2026.

([100])IMF Article IV Consultation. Poland, IMF, 2025.

Poland continues to attract substantial foreign investment, thanks to a generally good investment climate. In 2023, inward FDI stock was 40% GDP, slightly lower than in other regional peers, although higher than in Germany ([101]). FDI in Poland is primarily concentrated in medium-productivity industries (assembly and processing activities), while high-tech services investment remains limited – less than 2% of greenfield FDI projects between 2003 and 2023 involved R&D, a lower share than in peer EU economies (Czechia, Slovenia and Slovakia). Foreign investment comes predominantly from other EU Member States (86% in 2022), over 40% of which from the Netherlands and Germany, reflecting the country's strong position in European value chains. The development of battery production underpinned the increase in FDI in recent years. As labour becomes more expensive, boosting output and productivity will require further investment in automation and digitalisation ([102]). In general, Poland's economy is open to FDI, with a few market access restrictions concentrated in the real estate, transport and media sectors. Furthermore, Poland's foreign direct investment screening regime, originally introduced in 2020 was made permanent in 2025 for non-EU investors on the grounds of public security, order and health.

Poland is making notable progress in the rollout of connectivity infrastructure. By 2024 the coverage of high-capacity networks (VHCN) reached 83.84%, above the EU average of 82.49%, while the fibre-to-the-premises (FTTP) coverage reached 77.79%, also above the EU average (69.24% in 2024). However, Poland is lagging in the roll-out of 5G technology: overall 5G coverage in 2024 stood at 89.28%, below the EU average of 94.35%, while 5G coverage in rural areas reached 72.35% (below the EU's 79.57%). The growth rate for the roll-out of 5G both overall and in rural areas outstripped the EU average. Poland has relied on investment under the Recovery and Resilience Facility and cohesion policy to address the regional disparity in connectivity infrastructure. 5G deployment is expected to improve further after the auctions for the 3.6 GHz and 700 MHz pioneer bands, concluded in 2023 and 2025, respectively. Furthermore, the upcoming National Broadband Plan is expected to define specific measures to achieve 100% connectivity coverage in line with national and EU objectives by 2030.

Rail interoperability is improving. Poland is making efforts to deploy the European Railway Traffic Management System by providing another 134 km of equipped lines in recent years (2022-2024) to the already existing 603 km before 2022. Poland would need to continue these efforts as it aims to achieve the target of 4.894 km to be equipped by 2030 on the core trans-European rail network. This would ensure easy access of railway operators from other Member States to the Polish railway networks with the highest safety standards, increasing competition and supporting cross-border dual use of rail.

Poland has made important progress on regulatory simplification. It performs particularly well regarding regulatory impact evaluations and administrative burden on business, reflecting sustained efforts in recent years to streamline business registration procedures and lower associated costs for entrepreneurs ([103]). In 2025, Polish administration set up a Government Deregulation Team and launched a series of deregulation measures, with the tax law being one of the most important areas. For instance, the SprawdzaMY initiative collected regulatory barriers and deregulation proposals from businesses and sent a first wave of recommendations to the government. Recent reforms, including a six-month vacatio legis for business regulations, the "one-in, one out rule" or the mandatory ex-post regulatory impact assessment aim to streamline administrative processes ([104]). However, about 91% of Polish firms employ staff to deal with regulatory compliance. Around 19% of firms devote more than 10% of staff to regulatory requirements, well above EU average of 11%. Among exporting companies, 83% report that their product or service must comply with differentiated regulatory requirements across EU member states (significantly above the EU average of 62%) ([105]).

([101])OECD Economic Surveys: Poland 2025, OECD, 2025.

([102])Just over a third of entrepreneurs (36%) intend to increase robotisation/automation soon. NBP Quick Monitoring. Analysis of the situation of the business sector. July 2025.

([103])OECD Product Market Regulation (PMR) indicators, 2024.

([104])These measures address the 2025 CSR to simplify regulation, improve regulatory tools and ensure the legal framework is stable and clear for the business sector.

([105])EIB Investment Survey 2025: Poland overview.

Stability and predictability in law-making remain a challenge for Polish companies. Half of them believe they are not up to date with changes to laws and 85% complain about the excessive frequency of this. This uncertainty about future legislative changes may be holding back some investment decisions ([106]). In addition, although the vacatio legis in economic laws has slightly increased from 31 (two years ago) and 37 (in 2024) to 38 days ([107]), still around half of Polish companies complain about the short time to implement the changes. Poland is preparing the first Regulatory Programme for 2026-2028, that will define the actions to create a simpler and more predictable regulatory framework. Further simplification (especially for permitting and planning and environmental proceedings for investment), burden reduction through streamlined and digitalised procedures and the development of regulatory sandboxes would improve the business environment in Poland.

Strengthening public consultations could improve the quality of the law-making process. In 2025, there were no consultations for 29% of draft laws, and for another 46% the comments were not addressed by the legislator, indicating a lack of genuine dialogue between the legislative authorities and stakeholders ([108]). Expanding the role of bodies like the Council of Social Dialogue could facilitate stakeholders' engagement and promote structure consultations with businesses, the academic community and other public organisations. Nevertheless, Poland has introduced some changes aimed at strengthening and improving the use of public consultations, including in the Parliament, under the RRF.

Late payment is a growing concern for Polish companies. 72% of Polish companies in 2024 experienced difficulties because of this, the highest share in the EU. This percentage has been increasing since 2021, and it is back to 2019 levels. The average number of days for actual payment are 62 days for business-to-business transactions (up from just 50 days in 2020) and 69 days for the public sector (58 days in 2020 and around 70 days since then) ([109]). Polish companies estimate that 11.5% of their total revenues are typically paid late by customers, slightly above the European average of 11.4%. Micro companies have the highest percentage of invoices settled in due date, 89% in 2024 (up from 84% in 2023). On the other hand, large businesses only paid on time 49% of their transactions. To address this challenge, Poland is implementing a mandatory system for issuing structured invoices (National e-Invoicing System – KseF), included in the RRP. The relevant legislation is already adopted and enters into force in the first half of 2026. In addition, Poland is the only Member State, along with France, to have a national enforcement authority, the UOKIK, with a right to impose additional financial penalties to late payers.

Polish legislation makes transfer of assignments of credits conditional to the discretion of the public entities in the health sector. Transport and logistics are amongst the sectors more affected by late payments ([110]). Situation is particularly acute in the health sector, where Polish public hospitals chronically pay suppliers late, far beyond legal limits. Against the background of systemic payment delays in the public health sector, reassignments of credits could provide an additional form of external finance and liquidity which is vital for the survival of businesses. However, practices whereby the assignment of credits are systematically banned, despite the contractual obligations having been fulfilled by the creditor and accepted by the debtor, complicate the financial management of suppliers, and especially SMEs.

Single Market

Poland is well integrated into the Single Market. Around 70% of its foreign trade takes place within the EU (in 2025, over 75% of Poland's exports and 50% of imports involve other EU Member States), illustrating the importance of intra-EU economic integration. Poland's exports remain heavily specialised in low-technology

([106])Grant Thornton. The volatility and burden of the law. How do entrepreneurs assess the frequency and scope of changes in legal regulations affecting business operations? July 2025.

([107])Grant Thornton. Analysis of the stability of the legal environment in the Polish economy – 12th edition. April 2026.

([108])Ibid., page 24.

([109])European Payment Report 2025, Intrum, 2025.

([110])EU Payment Observatory: Annual Report 2025, European Commission, 2025.

goods and services, which made up 60% of total gross exports. This is significantly higher than neighbouring countries such as Czechia (42%) and Slovak Republic (38%), indicating potential for export sophistication. High-tech manufacturing, which constitutes 25% of Poland's exports, has slowed since the 2008-09 financial crisis. The automotive sector dominates Poland's high-tech exports and is very well integrated in global value chains, with over 90% of production exported to Europe, particularly Germany. Additionally, high-tech services exports have grown significantly, from 2% in 1995 to 10% in 2020 ([111]), driven by the installation of service centres that were subsidiaries of multinational companies and by business services outsourced to Poland.

Further efforts are needed to reduce transposition and conformity deficits, which are above the EU average ([112]), to improve the smooth functioning of the Single Market in Poland. The transposition deficit (the percentage of Single Market directives not transposed) reached 2.1% in December 2025, above both the EU average of 1.1% and the 1% target set by the EU Council. The average delay in transposing directives and the conformity deficit (the percentage of all directives transposed incorrectly) were also above the average EU figures. The number of pending infringements and the average time to solve infringement proceedings were also quite high, above the EU average. This persistent compliance gap may undermine the trust of firms and the public in the effective functioning of the Single Market. In 2025 Poland resolved 60.7% of the SOLVIT cases it handled as lead centre (the EU average was 84.6%).

Compliance of products circulating in the Single Market ([113]) is key to ensuring a level-playing field for law-abiding companies and the safety of consumers. In Poland, the number of market surveillance investigations has increased compared with 2019. In 2025, national authorities reported in the EU system for market surveillance (ICSMS) a total of 73.2 investigations per one million inhabitants, which is lower than the EU median of 136.2. The number of notifications remains limited in absolute terms, which may also be the result of insufficient IT national interoperability to the ICSMS system. The upcoming revision of the Market Surveillance Regulation will upgrade ICSMS to a fully interoperable EU digital platform.

Resource shortages in national standardisation bodies can hinder the Single Market and burden SMEs. In Poland, these constraints limit the ability of the Polish Committee for Standardisation (PKN) to offer SMEs clear guidance, easy access to standards, and effective implementation support. They also reduce PKN's capacity to ensure strong Polish involvement in developing European harmonised standards and to provide timely translations into Polish. As a result, businesses may face higher costs (for translations, expert advice, or conformity assessments) while struggling to keep pace with changing technical requirements. Strengthening Poland's standardisation system is therefore essential to improving access to standards, reducing market barriers, and enhancing the competitiveness of its industrial ecosystem within the Single Market.

Poland's regulatory framework is broadly favourable to competition. OECD's Product Market Regulation (PMR) indicates that the overall restrictiveness is below the average and like France and Spain and have significantly decreased over the past decade ([114]). Nevertheless, regulatory and administrative barriers to single market remain affecting goods and services trade as well as freedom of establishment. This includes regulatory barriers to competition affecting some services professions (e.g., notaries, lawyers, architects and civil engineers). The number of regulated professions in Poland is among the highest in the EU. Restrictions affecting professional services — including notaries, lawyers, architects and civil engineers — continue to limit competition and market entry. These restrictions include regulated fees, geographical restrictions and mandatory membership of professional bodies. Businesses also report that fragmented requirements for packaging, labelling and waste management can create additional compliance costs when operating across borders, including

([111])Strengthening FDI and SME Linkages in Poland, OECD, 2025.

([112])Part of the barriers highlighted in the 2025 Single Market Strategy ("Terrible 10"), Single market strategy. See also the Annual Single Market and Competitiveness Report 2026.

([113])*Part of the barriers highlighted in the* Single market strategy *('Terrible Ten') and the* 2026 Annual Single Market and Competitiveness Report.

([114])Product Market Regulation Indicators, OECD, 2024.

differences in waste classification and shipment requirements ([115]).

The unitary patent does not cover Poland. Although Poland participates in the enhanced cooperation on unitary patent protection, it has neither signed nor ratified the Unified Patent Court Agreement (UPCA). This has the following consequences: firstly, Polish and non-Polish companies remain burdened by the significant administrative costs of national validation and maintenance fees to obtain patent protection in Poland. Secondly, enforcing European patents in Poland can only take place before national courts, without benefiting from the advantages offered by the UPC as regards centralised litigation. By refraining from joining the unitary patent system Poland may be less attractive, in terms of innovation support, than the Member States already participating in that system. Finally, the fact that several Member States do not participate in the unitary patent system weakens the single market, making the EU less attractive for inventors and innovative entities.

Poland's public procurement system continues to face challenges in terms of transparency, efficiency and competition. Procedures remain relatively lengthy and complex, and bidder participation is limited in parts of the market. Key issues include persistently high single-bid tenders, concentration of awarded value, and continued use of direct awards in certain segments. In 2025, Poland is implementing changes in its public procurement system to streamline the process. New legislation has introduced non-mandatory contractor certification and streamlined appeal procedures through remote trials and hearings to make them more efficient. It has also restricted access to public procurement procedures for contractors from outside the EU and from third countries that do not have the relevant agreements with the EU ([116]).

Single-bid tenders remain very high in 2025 across Poland's public procurement. Single-bid rates exceed 60% in several sectors (which is well above the EU median of 27%), including medical, repair, laboratory and health-related services, and remain elevated even for higher-value contracts, at around 52–57% (above EUR 5 000 000). Concessions show the highest single-bid rates, while utilities remain the lowest. Large differences persist across contracting authority types, with central government comparatively lower than local/regional bodies and public-law organisations. Supplies remain particularly affected (56.6%), while works show very low single-bid levels (7.2%). In addition, the World Bank ([117]) highlights low bidder turnout and concentration of awarded value: 71% of contracts attracted only 1–3 tenderers (2021–2025), and around 8,000 tenderers received 9% of contracts but almost 59% of total awarded value.

Direct awards remain a relevant feature of Poland's procurement landscape in 2025 (7%). Services show the highest direct-award rate (13.0%), while supplies (3.4%) and works (2.4%) remain much lower. Direct awards are heavily concentrated in the lowest value band (60.5%), with rates falling sharply as contract values increase (12.7%). A recent European Commission evaluation study on transparency and integrity ([118]) flags that excessive use of accelerated procedures can deter participation and raise integrity-related risks. It reports that Poland's average use of accelerated procedures exceeds 2% and shows an upward trend, whereas in most Member States the share remains below 2%.

Challenges in certification and centralisation in public procurement persist. A national competency framework for public procurement professionals is still not in place, with professionalisation relying instead on guidance, training and standardisation initiatives, and the planned rollout of the ProcurCompEU framework under the forthcoming State Purchasing Policy 2026-2029. In parallel, a voluntary contractor certification system is expected to start applying from July 2026. Certification should facilitate access to public procurement for SMEs, reduce the number of formal obligations for contractors, the costs of participation in procedures and ensure the objectivity and transparency of the contractor's

([115])European Round Table for Industry (ERT), Single Market Compendium of Obstacles, 21 May 2025, Single Market Compendium of Obstacles

([116])These measures contribute to addressing the 2025 CSR to encourage competition in public procurement processes, making them more efficient and less cumbersome, especially for SMEs

([117])Study on Competition in the European Union's Public Procurement Markets (2018-2023), 2025.

([118])Evaluation of transparency and integrity - Publications Office of the EU

verification process. As regards purchasing organisation, the system remains largely decentralised, but the legal framework provides instruments for centralised and joint procurement. In practice, a gradual intensification of these tools is reported, with the Centre for Government Administration Service acting as the central purchasing body for government administration in standard purchasing categories and with increasing use of framework agreements and dynamic purchasing systems.

Progress has been made on strategic procurement and SME access. Poland monitors the uptake of green, social and innovation-related criteria through annual reporting and publishes results in the President of the Public Procurement Office annual report. Recent data points to increased use of green and social requirements, while innovation tools are used more selectively, notably through innovation-related award criteria, preliminary market consultations and pre-commercial procurement. To support SME participation, Poland has introduced the simplified below-threshold "basic procedure" as the main low-burden channel for tendering. This initiative will be complemented by the new certification system and by further guidance and training, aimed at reducing documentary requirements.

Businesses' views on corruption risks in public procurement are below the EU average level. In Poland, 43% of companies (EU average: 58%) consider tailor-made specifications for companies in public procurement procedures, and 40% (EU average: 51%) involvement of bidders in the design of specifications, 'very' or 'fairly widespread' practice. Among companies that have experience in and participated in a public procurement procedure, 12% think that corruption has prevented them from winning a public tender or a public procurement contract in practice (EU average: 25%) ([119]). Also 58% of companies perceive the level of independence of the public procurement review body (National Board of Appeal) as 'very' or 'fairly good' when it is reviewing public procurement cases ([120]). However, public procurement remains an area highly vulnerable to corruption and while public procurement data is publicly available, corruption risk monitoring is difficult due to scattered data ([121]).

Poland's fragmented eProcurement landscape and data quality issues highlight the need for interoperable systems, common standards, and stronger data governance. Given Poland's decentralised eProcurement landscape, with between two and five separate Procurement services in operation ([122]), economic operators must use several systems to access all public procurement procedures, creating complexity and barriers to participation. This fragmentation underscores the need for introducing interoperability and common standards. The once-only principle is only partially implemented at national level (see the Annex on Institutional Framework), and buyers across the EU still lack digital access to relevant evidence. Moreover, the country lacks a public procurement data strategy defining processes and objectives for managing procurement-related data. Therefore, the Polish system would benefit from a dedicated public procurement data collection and analysis service within the government to support data-driven oversight of the procurement lifecycle ([123]).

Industry and economic security

Poland's economic structure, while well-diversified, is characterised by a stronger inclination towards lower technology industries compared to many of its EU peers. The economy is predominantly service-oriented, with services comprising around 64% of Poland's total value added, comparable to other Eastern European countries but below the levels of Italy or Germany. Most of these services are primarily found in low-tech industries, such as retail, real estate, and transportation, which together account for around 30% of the economy. Despite this,

([119])Flash Eurobarometer 557 on Businesses' attitudes towards corruption in the EU (2025).

([120])Justice Scoreboard (2025), p. 53; Flash Eurobarometer 555, p. 39.

([121])Rule of Law Report- Country Chapter Poland (2025), p. 13.

([122])As reported on the eProcurement matrix.

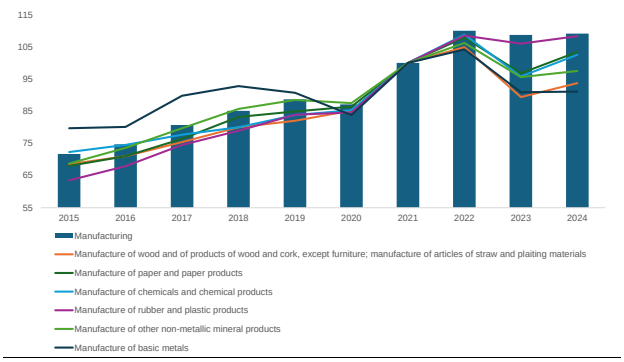
([123])European Court of Auditors, Special Report 28/2023: *Public Procurement in the EU. Less competition for contracts awarded for works, goods and services in the 10 years up to 2021*, 2023, Special report 28/2023: Public procurement in the EU.

high-tech services like IT and professional services have demonstrated encouraging growth, as their share of value added has risen to 8% in recent years, largely driven by progress in IT and computer programming ([124]).

Lower technologies industries remain dominant in manufacturing, highlighting a significant aspect of Poland's industrial landscape. Sectors such as food, rubber, and basic metals play a significant role in the manufacturing domain. High-tech manufacturing, including automotive and pharmaceuticals, contributes a modest 6%, a smaller share than in many peer countries, remaining constant over the last two decades. Expanding knowledge-intensive industries might boost productivity and elevate Poland's position in global value chains.

Energy-intensive industries face significant challenges due to the high energy costs, a carbon-intensive energy mix (notably on hard coal and lignite) and the transition required by EU climate policies. Steel, cement, and fertiliser production, highly energy-intensive industries, directly account for around 2.5% of gross value added and for around 2% of employment. While some industries show a negative trend in production like wood (-6.6% since 2021) or basic metals (-9.1%), others increased production like chemicals or rubber (increasing by 7.8% since 2021, see graph). The main obstacle for decarbonisation is the high cost of electricity, caused by power generation reliant on coal and the dependence on imported fossil fuels (see Annex 9). Supporting the decarbonisation of EIIs (for instance, steel, cement or chemicals) would require the development of pipeline infrastructure to transport hydrogen and carbon dioxide, and to ensure sufficient onshore storage. However, the geographical dispersion of industrial plants in Poland poses a major challenge to developing such pipeline networks ([125]) (see Annex 9).

Graph A5.1: **Manufacturing output: total and selected sector, index (2021=100), 2015-2024**



Source: Eurostat.

Poland has become a major clean technology manufacturing hub in Europe, driven by significant investments, a strategic location, government support and active role of industry clusters in advancing clean transformation. While the battery sector is a standout leader, the country is also seeing robust growth in solar photovoltaics (PV), 19 ongoing projects of offshore wind energy with a target of 12GW of installed capacity and is attracting new investment in heat pump manufacturing. Poland is the leading producer of lithium-ion batteries in Europe, holding a 60% market share and ranking second globally behind China. The value of Poland's battery exports has grown exponentially, cementing its role as a key contributor to Europe's electromobility sector. However, the sector faces challenges, including the need to decarbonize its energy grid and address supply chain vulnerabilities. In addition, Poland's hydrogen strategy is primarily defined by the Polish Hydrogen Strategy, adopted in November 2021. An update is expected in 2026 to align with the latest EU RED III mandates, which require industry to use at least 42% renewable hydrogen by 2030. In late 2025, Poland committed approximately EUR 500 million in non-repayable subsidies from the Recovery and Resilience Plan to five major projects totalling 343 MW of capacity, with the objective to transitioning from being one of the world's largest producers of "grey" hydrogen to a leader in "green" and low-carbon hydrogen to meet EU climate neutrality goals.

Poland has included two projects in the EU's list of 47 strategic raw materials projects. These are a rare earths separation plant in Puławy and a battery raw material (platinum group metals, PGMs) and copper recycling facility in

([124])Strengthening FDI and SME Linkages in Poland, OECD, 2025.

([125])Polishing the Pathway to Net-Zero Energy-intensive industries, Polish Economic Institute, 2025.

Zawiercie. These projects are considered crucial for diversifying the EU's supply, reducing reliance on imports, and bolstering the circular economy. In late 2025, Poland initiated discussions on a draft law to secure its national economy's access to critical raw materials. The new legislation will implement the EU's Critical Raw Materials Act (CRMA), including setting up a single point of contact for strategic projects. Those projects will be considered as public investment and will be subject to special rules for permit granting. The new legislation will require the adoption of a National Raw Materials policy, a strategic document in the field of raw materials. In 2025, Poland amended the special tax on extraction of copper and silver, decreasing its rate in 2026, 2027 and 2028. The tax could be a serious obstacle for the profitability of new projects and investment in Poland.

Table A5.1: **Single Market and Industry**

Poland								
POLICY AREA	**INDICATOR NAME**		**2021**	**2022**	**2023**	**2024**	**2025**	**EU-27 average**
Business environment and investment								
Productivity and investment	Labour productivity (GDP per hour worked in PPP terms), % of EU27[1]		61.9	63.7	63.5	66.4	68.6	100.0
	Business investment (share of GDP)[1]		9.0	9.0	9.4	8.8	-	12.6
	Public investment (share of GDP)[1]		4.1	3.8	5.1	4.8	-	3.9
Business environment and simplification	Impact of regulation on long-term investment, % of firms reporting business regulation as a major obstacle[2]		34.3	32.3	33.7	30.8	39.0	34.0
SME liquidity	EIF Access to Finance for SMEs index - loans[3]		0.65	0.53	0.49	0.52	-	0.43
	EIF Access to Finance for SMEs index - equity[3]		0.16	0.09	0.11	0.12	-	0.19
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[4]		10.1	17.1	15.9	18.1	17.3	17.4
	Payment gap - public sector, difference in days between offered and actual payment[4]		9.0	21.7	16.8	13.1	15.0	13.6
	Share of SMEs experiencing late payments, %[5]	from private entities in the previous or current quarter	-	-	-	65.3	65.2	47.1
		from public entities in the previous or current quarter	-	-	-	14.5	17.7	15.9
Single Market								
Integration	EU trade integration, average(intra-EU imports + intra EU exports)/GDP, %[1]		38.8	43.1	38.6	35.2	34.3	40.7
	EEA Services Trade Restrictiveness index[6]		0.052	0.052	0.052	0.052	0.052	0.050
Public procurement	Single bids, % of total contractors[7*]		50	52	54	56	53	27
	Direct awards, % of negotiated procedures[7*]		8	10	9	7	7	6
Compliance	Transposition deficit, % of all directives not transposed[8]		1.5	2.1	1.6	1.7	2.1	1
	Conformity deficit, % of all directives transposed incorrectly[8]		1.6	1.7	1.5	1.3	1.9	1.1
	SOLVIT, resolution rate per country, %[8]		88	91.3	80	97	60.7	84.6
	Number of pending infringement proceedings[8]		37	34	31	31	38	25
Industry and economic security								
Energy-intensive industries	Electricity prices for non-household consumers[1]		0.1203	0.1823	0.2351	0.1911	0.1904	0.1462
	Electrification (electricity as a share of total energy consumption in industry)[1]		29.8	30.3	26.4	-	-	32.7
	Share of energy from renewable sources (renewable energy generation as a share of overall energy consumption)[1]		15.6	16.6	16.7	17.8	-	25.2
Critical raw materials	Material import dependency, %[1]		19.7	20.8	20.6	21.0	-	22.4
	Circular material use rate[1]		7.0	6.7	7.8	7.7	-	12.2
Operational cleantech manufacturing capacity in 2025[9]	- Solar PV (c: cell, w: wafer, M:module), GW		0.439 (m)		- Electrolyzer, GW		-	
	- Heat pump assembly		0.87		- Battery, GW		86.0	

Source: (1) Eurostat, (2) EIB Investment Survey, (3) EIF SME Access to Finance Index, (4) Intrum Payment Report, (5) SAFE survey, (6) OECD, (7) data up to 2024: Single Market and Competitiveness Scoreboard, 2025: Commission calculation based on TED data, accessible at the Public Procurement Data Space (PPDS) (*) the value represented here under EU average is the median, (8) Single Market and Competitiveness Scoreboard, (9) European Commission calculations.

Table A6.1: **Savings and Investment Union summary diagnostic**

Topic	*Main features*	*Relative EU positioning*
Asset-backed pension schemes	Assets at 10.3% of GDP (32.3% in the EU) 10-year real return of -0.5 (1.4% in the EU)	The low asset-backed pension assets yield a low real return (despite mandatory equity investments).
Households' financial assets	EUR 19 664 per capita (EUR 85 090 in the EU) o/w 4.0% in listed shares and bonds (7.6% in the EU) o/w 6.1% in investment funds (11.0% in the EU) o/w 2.1% in life insurance (13.4% in the EU) o/w 9.9% in pension claims (13.6% in the EU)	Low level of financial assets. Low share of households' financial assets is invested into equity and in capital markets. No savings and investment account (SIA).
Venture capital (VC) **Private equity (PE)**	VC at 0.018% of GDP (0.064% in the EU) PE at 0.093% of GDP (0.487% in the EU)	Low venture capital and low private equity investments.
Capital taxation	Capital gains and dividends taxed at 19%.	No preferential tax treatment for equity investments. Preferential tax treatment for dwelling rental income at 8.5%-12.5%.
1-3 **4-10** **11-17** **18-24** **25-27**	Colours indicate the country's relative ranking based on five groups, ranging from the three best to the three worst performers. The relative ranking as regards an SIU diagnostic topic derives from a consistent cross-country comparison, the starting point of which is the average of the underlying main features.	

Source: OECD (pensions), Eurostat (households' financial wealth), FISMA CMU dashboard (VC and PE), national sources (capital taxation).

Poland has made progress along some of the key indicators of the Savings and Investment Union though the country trails behind western European peers. Within a business landscape that closely resembles the EU average, Polish companies rely more than their EU peers on internal funding. The domestic listed equity market remains modest from a European perspective, while debt markets primarily channel savings to the government and to banks. Households have a very conservative approach to managing their financial wealth and still have ample space to increase their level of direct and indirect participation in capital markets. Despite some country-specific challenges, the Polish banking sector remains robust. Lending to households has been more dynamic than lending to companies. Non-bank financial intermediaries, which have both the funds and the capacity to drive capital market progress, exhibit a very conservative asset allocation that does not favour equity. The insurance sector, which has been expanding steadily on the back of a growing economy, still has much room to develop. The 2025 CSRs for Poland highlighted between others the need for strengthening the sustainability of the pension system given the demographic challenges faced by the country. The gradually growing private pension funds are expected to contribute positively to future pensions. The venture capital ecosystem remains small due to systemic and regulatory reasons and is dominated by public funds channelled primarily by the various national development institutions.

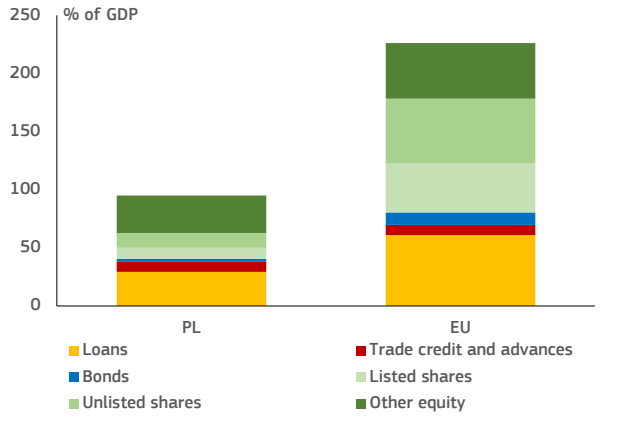
Business landscape and company funding

For local entrepreneurs, self-financing is the preferred option. Poland's economic structure, in terms of structure and size, represents well the European average. Poland's structure of non-financial corporations (NFCs) remains broadly in line with EU average with an overwhelming majority of microenterprises ([126]). The size structure of local NFCs is a key explanatory factor for the funding breakdown of firms. Internal funding is the dominant engine of investment with 72% of Polish firms financing their capital spending from retained earnings ([127]), above the EU average of 66%, and a clear signal of caution toward external financing. When external funding is tapped, the mix is very traditional. Owners' equity constitutes the largest share (at 33.7% of the total), followed closely by bank loans at 31.3%, above the EU's 27%. Market-based instruments (listed shares and corporate bonds) account for a modest 12.5%, about half the EU's 23.8% average, underscoring the fact that Poland's capital market is still behind the highly developed western European markets. On aggregate, NFC external funding stood at 93.6% of GDP in 2024, less than half the EU's level of 225.6%.

([126])See also Annex 5.

([127])European Investment Bank's 2024 Investment Survey.

Graph A6.1: **Composition of non-financial companies' funding**



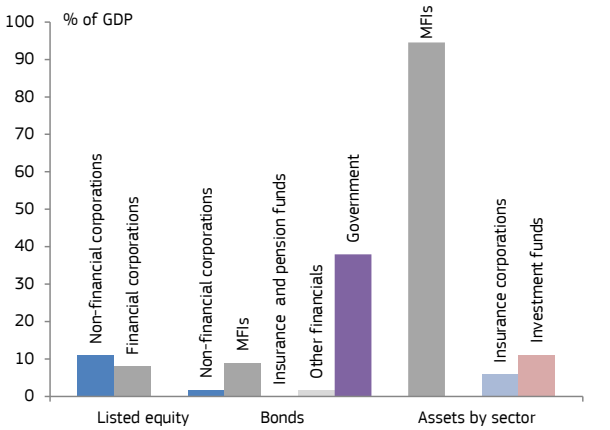
Source: Eurostat. End-2024.

Size and structure of the financial sector

Poland's financial sector remains predominantly bank-driven with non-bank financial intermediaries gradually expanding their footprint. By the end of 2024, the banking sector's assets reached 95.1% of GDP, far below the EU average of 253.2% but well above any other part of the Polish financial system (see Graph A6.2). The local banking system is moderately concentrated with the top five lenders owning 58.5% of total assets, while 58.6% of the sector is domestically owned with a large share (49.6%) held by state-owned or state-controlled banks within the system. The insurance sector, with assets below 6.1% of GDP in Q4-2024 is relatively small but it is an expanding segment of the domestic financial market. Pension funds, which come on top of the national pay-as-you-go system, are a mix between two key components – the second pillar legacy funds, known as OFE ([128]) and third-pillar employee capital plans, known as PPK ([129]). These funds' assets represent about 6% of GDP, while local asset managers have under management assets worth about 11.2% of GDP.

The domestic capital market is relatively modest by European standards. The Warsaw stock exchange (WSE) is the primary platform for equity trading in Poland. The exchange operates with its own CSD and CCP infrastructure, fully integrated under the same group. The market capitalisation remained fairly stable in 2023 and 2024 at about 20% of GDP, around a third of the European average of 68% of GDP. NFCs account for approximately 60% of the capitalisation, underscoring the stock market's role in supporting the largest Polish NFCs. The initial public offering (IPO) activity of the WSE remains overall rather subdued, with only a handful of companies listing on the main market in 2023 and 2024. The much smaller NewConnect segment is more dynamic but small and highly illiquid. The Polish government has launched several measures to bolster the capital market, The main one being the 2019 capital market development strategy ([130]). More recently, Polish authorities and market participants (including the WSE, business associations, banks etc.) are jointly working on a more comprehensive roadmap to further develop the financial market as part of Poland's medium-term 2035 development goals. Lastly, to stimulate regional markets, in 2025 the WSE signed a memorandum of understanding with seven other central and eastern European stock exchanges including Sofia, Bratislava, Bucharest, Budapest, Ljubljana, Zagreb and Skopje, together with the EBRD to foster joint development of national capital markets through closer cooperation, regulatory alignment, and increased market integration.

Graph A6.2: **Capital markets and financial intermediaries**



Source: ECB, EIOPA, EMACO. End-2024.

([128])*Otwarte Fundusze Emerytalne* (Open Pension Funds).

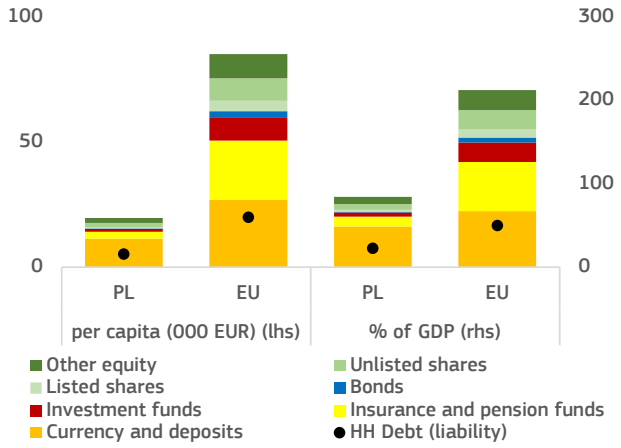
([129])*Pracownicze Plany Kapitalowe*, a relatively new form of retirement plans legislated back in 2019.

([130])This strategy was jointly developed with the EBRD and financed largely by EU's Technical Support Instrument.

Financing through debt securities is mostly undertaken by the sovereign and local MFIs. The outstanding volume of private sector debt securities stood at 12.7% (see Graph A6.2) of GDP in 2024, with monetary financial institutions (MFIs) contributing around 72% of this total, the rest being spread among the few biggest NFCs in the country and some real estate developers. General government bonds dwarf the rest of the bond market and were the equivalent of 38.1% of GDP in 2024, driven by increased public borrowing to fund infrastructure projects, energy transition initiatives and investments into defence amid geopolitical tensions. Private sector debt securities are almost exclusively denominated in the Polish zloty (PLN).

Households' participation in capital markets

Graph A6.3: **Composition of households' financial assets**



Source: Eurostat. End-2024.

Polish households are conservative when managing their financial assets. About 60% of household financial assets are held on current accounts and bank deposits ([131]), almost twice the European average of c. 32% (see Graph A6.3). The capital market participation of households trails other EU Member States. Polish households have about a quarter of their financial wealth invested in listed stocks, bonds, pension and investment funds. That figure is low when compared with the EU average of around 45% and reflects the cautious behaviour of local households and, their relatively low financial wealth compared with the EU average. On aggregate, Polish households have financial assets equivalent to 81% of Polish GDP, whereas the EU average stands at 210% of GDP. In 2023, the average monthly available income per capita in Poland stood at about EUR 620 and remains quite modest by European standards, whereas the saving rate in 2023 stood at 13.2%, the same as the EU average according to Eurostat.

There is still ample space to increase the level of direct or indirect retail investment. Boosting the weight of the capital market in Poland would be helped by education and increased investor confidence in the market, while making access to capital easier and cheaper for local NFCs. The authorities have already introduced measures to encourage greater household participation in the capital market, including tax incentives through pension investment accounts (such as the individual retirement account (IKE) or the individual pension security account (IKZE) allowing for tax-deductible contributions) and financial education programmes. The impact of these initiatives has been moderately successful so far but the onboarding of Polish households into the capital market is ongoing. Tax regime generally do not incentivise retail investors to hold bonds over equity products as the capital gains tax is the same on both products. The ambition of the future savings and investment account (known in Poland as *osobiste konto inwestycyjne* or OKI) is to continue spreading awareness about investing in the capital market. OKI is based on the Swedish model *Investeringssparkonto* (ISK) and is designed to let individuals invest up to PLN 100 000 (EUR 23 400) tax free, PLN 25 000 (EUR 6 850) of which can be allocated in low-risk deposits or government bonds. Anything above the PLN 100 000 (EUR 23 400) threshold faces a one-off flat tax on the value of assets held, calculated as 19% multiplied by the reference rate of National Bank of Poland. Additionally, the changes in the second pillar pension segment, in particular the major reform from 2014 that nationalised about half of the second pillar funds, have had a damaging effect both on the capital market itself as well as retail investors' confidence.

Low levels of financial literacy in Poland are one reason for low participation in the local capital market. Poland suffers from a financial literacy deficit. Since 2017, financial education has

([131])Eurostat.

been included in the curriculum for primary and secondary schools, aiming to equip students with basic financial skills and knowledge. Yet, uptake remains uneven, with just 25 per cent of schools fully integrating the modules by 2024, according to the central statistical office. According to the Eurobarometer survey, only 16% of the Polish public exhibit a high level of financial literacy, 65% a medium level, and 19% a low level (compared with the EU averages of 18%, 64%, and 18%, respectively). This results in an overall financial literacy score of 43.5, against the EU's average of 45.5 and a very conservative stance on investment decisions. The 2023-2030 national strategy for financial education focuses on several key objectives, which include increasing the ability of households to plan their finances responsibly, manage risks, and access unbiased financial information.

The banking sector: resilience and financing of the economy

The banking sector is resilient despite some country-specific challenges and is overall not constrained in its role of funding the economy. Local lenders are well capitalised with a Common Equity Tier 1 (CET1) ratio at 18% (Q3-2025), above the EU average of 16.8%. MREL (Minimum Requirement for Own Funds and Eligible Liabilities) and the combined buffer requirement in addition to MREL, are comfortably exceeding all regulatory requirements. Both liquidity and profitability metrics (in Table A6.2) are very strong, and all major domestic banks have navigated the EU-wide stress tests effectively. The loan-to-deposit ratio stood at just 68.8%, well below the EU average of 93%, reflecting a conservative funding model reliant on domestic deposits, which constitute 71% of total assets. The non-performing loans (NPL) portfolio (the NPL ratio at 3.9%) has been steadily decreasing in size and is not considered an issue for the sector, also given that the coverage ratio of close to 60% largely surpasses the EU's average of 42.6%. Holding on balance sheets NPL is a rational economic decision for Polish banks, not mismanagement. Given the NPL market is shallower than in some more developed EU markets and the relatively long judicial enforcement, selling NPLs often yields less cash than a patient internal workout, especially for secured exposures. This dynamic is a key structural reason that NPL ratios remain higher in Poland than in countries with deeper, more liquid secondary markets or faster judicial proceedings. The banks' asset quality outlook is subject to increased uncertainty due to the geopolitical uncertainty and its impact on energy prices and economic growth. Despite being profitable overall and well capitalised, the banking sector also has some weak spots. In particular, legacy FX mortgages as well as the more recent legal challenges over the fairness of the Polish interest rates benchmark, the Warsaw interbank offered rate (WIBOR), continue to pose a legal question for local lenders. While FX exposures where borrowers claimed unfair currency risk allocation are well provisioned for, the legal challenges to the WIBOR by consumer groups have escalated, which could lead to widespread contract revisions and additional financial strain on local lenders.

Corporate credit growth was volatile in the past few years. In 2024 demand for new corporate loans started to pick up again and accelerated in 2025 yielding 4.8% year-on-year in credit growth in Q3-2025. More importantly, in 2024, credit demand has been widespread across both large and small firms' segments. This credit recovery is expected to continue as policy rates have been steadily decreasing and banks have been easing their lending standards. Segment leaders include construction and real estate, and manufacturing, benefiting from robust infrastructure spending. Lending to households was relatively higher both in 2024 and the first quarter of 2025, with year-on-year growth of 5.2% in the Q3-2025, driven by mortgage credit. Overall, household credit is poised for more gradual growth, supported by economic expansion and generally positive consumer confidence data.

Role of non-bank financial intermediaries

Institutional investors have both the funds and the capacity to drive capital market development forward. Given the country's rapid GDP growth over the past decades and the increasing wealth of local economic agents, Poland's financial industry is in a favourable situation where assets under management (AUM) are steadily growing with constant inflows. However, the role of domestic institutional

investors in deepening the capital market remains restrained. The restrictive regulatory framework has been identified as an important factor shaping asset allocation patterns by investors. A recent study ([132]) showed that Polish pension funds accounted on average for only 6% of PE (private equity) and VC (venture capital) funds raised annually over the timeframe 2007-2023, a figure that falls substantially short of the 19% figure for the Baltic states or share of over 20% in Nordic Member States.

Poland's insurance sector is expanding on the back of the growing economy. Over the past decade the compound annual growth rate (CAGR) stood at 5.5%, outpacing the EU average of 3.8%. One of its key strengths is the strong performance of the non-life insurance segment, driven predominantly by rising risk awareness and the country's strong economic growth. A special domestic feature is the sector's reliance on state-owned insurers like PZU, which hold a significant market share and heavily influence pricing policies. While there are no major vulnerabilities in the sector, the high reliance on expected profits included in future premiums (EPIFP) within own funds persists, alongside the unregulated double gearing of capital. By end-2023, EPIFP in life insurance reached approximately EUR 2.7 billion, equivalent to over half of own funds. Meanwhile, non-life insurers held over EUR 6 billion in in insurance and banking entities by mid-2024, not deducted from own funds per regulations, and causing double gearing across parent and subsidiary risks. According to Poland's central bank, adjusting the solvency for these two items would slash the non-life solvency ratio by 60 percentage points down to 149%.

Polish institutional investors exhibit a very conservative asset allocation model. Insurers are part of the big institutional investors with a growing asset base. The sector's investment portfolio is dominated by fixed-income securities, with government bonds accounting for approximately 45% of total assets ([133]) compared with just 19% for the European Economic Area as a whole. This conservative approach ensures low risk and predictable stable returns. Corporate bonds make up around 15% of AUM whereas equities represent about 10% of the portfolio. Lastly, around 20% of AUM is invested in investment funds with a significant portion allocated to mixed and equity funds. Cash and deposits, held mostly for liquidity management are roughly 5% of the allocation. Insurers point towards Solvency II requirements penalising equity allocation as main culprit for choosing to invest into fixed-income instruments. Sovereign bonds provide a zero-capital charge alternative that matches the insurers' liabilities well. Moreover, equity returns, especially when invested in the domestic capital market, have historically performed in line with expected capital costs and proved to be volatile.

Poles remain underinsured with coverage lagging behind western European peers. Insurance penetration is relatively low in Poland. It reached 6% of GDP in 2023, below the EU average of 7.8%, suggesting a moderate protection gap, particularly in rural areas where agricultural insurance uptake lags. Property cover remains insufficient with close to half of surveyed agents claiming that home insurance sums are too low for current rebuilding costs ([134]), often leaving owners exposed to storms or floods risks. On the positive side, life insurance has been steadily expanding over the past decade reflecting rising financial awareness. Life insurance has been evolving from group policy contracts towards a more diversified portfolio emphasising individual and unit-linked products. In 2024 some 23 million Poles were covered through some form of life insurance, though as in other insurance segments penetration remains below EU averages.

The asset management industry continues to mature. The combined assets under management (AUM) of local asset managers in end-2023 [update] were equivalent to about 20% of Poland's GDP, very far from the EU average of 198% of GDP in 2023. Mutual funds continue to dominate the market, with a significant portion of investments channelled into bond funds (46.1% of the market) and equity (around 13.2%) ([135]). The market will continue expanding as households become aware of investment alternatives to low

([132])Source: Closing the gaping hole in the capital market for EU start-ups – the role of pension funds, A. Thomadakis, ECMI/CEPS

([133])Source: *Polska Izba Ubezpieczen*, Insurance in Figures.

([134])SW Research on behalf of the Polish Insurance Association, July 2022.

([135])Source: *Izba Zarządzających Funduszami i Aktywami* (Chamber of Fund and Asset Managers).

yielding bank deposits. Moreover, the introduction of the employee capital plans (PPK) – the voluntary third-pillar long-term savings programme – back in 2019 has also triggered more interest in the opportunities offered by the capital market. Local asset managers are hopeful for more inflows into the third pillar as the PPK gradually gains critical mass.

Polish pension funds are undergoing a major transformation. Poland's pension system mainly relies on the mandatory pay-as-you-go (PAYG) scheme. The PAYG is also backed by a relatively small Demographic Reserve Fund, worth about EUR 16 billion at end-2024 and mostly invested into fixed-income securities. The Open Pension Funds (known as OFE in Poland) are the remainder of the pension's second pillar that was reformed multiple times over the past decade and are heavily regulated through local legislation ([136]). Currently OFEs are still managing over EUR 50 billion worth of assets of future retirees, mostly allocated to listed equities (about 90% of the AUM) and a few fixed-income instruments as well as cash. By law, the rules governing OFEs asset allocation are very stringent and target predominantly investments into publicly listed equity at the Warsaw stock exchange. Other investments are mostly excluded given the mandatory requirement for regular fund transfers at the pace of one tenth per year into the PAYG, starting 10 years before retirement. Despite the impressive volume of AUM, OFEs do not currently participate in the development of the local corporate bonds or PE/VC markets given that they are legally mandated to invest most funds into equities. Changing the paradigm would require a complete revision of the legislation on OFEs including the slider mechanism (the 10-year rule for transfers into PAYG) and the very vast array of impractical concentration limits that make alternative investments effectively impossible. The more recent employee capital plans (PPK) – the future retirees' third pillar – are bound to play a crucial role in the future but currently their AUM are still not very sizeable (about EUR 7 bn in early 2024). PPK funds work with an autoenrollment system and have a diversified approach to investing with 40% of AUM invested into equities, about 35% into bonds, and a further 25% in mixed and other assets. However, in 2025 the local PPKs, given the regulatory requirements that define their investments policies, have not been able to invest into the VC or PE space, due in part to the concentration limits imposed. With their AUM focused on the long term and an increasing number of participants (currently some 55% of the working population), PPKs seem to be the appropriate institutional investors for investing in long-term projects and supplementing the PAYG system with a funded capital-based system.

([136])Dz.U. 1997 nr 139.

Venture capital ecosystem

The Polish VC market has been growing from a very low base. Both the PE segment (worth 0.093% of GDP in 2023) as well as VC (0.018% of GDP in 2024) ([137]) are gradually increasing. However, these figures are still significantly lower than the EU averages of 0.487% and 0.064% of GDP respectively and the number of VC/PE deals remains relatively low in Poland. Companies in the growth phase often require strong backing both through capital injections as well as management know-how transfer, which local investors are not always able to provide adequately ([138]). This suggests that while there is a solid foundation for VC in Poland, there is still a financing gap for early-stage firms. Yet just 20 years ago there was no real PE/VC market in Poland at all.

Boosting the VC ecosystem is part of the medium-term 2035 development strategy ([139])**.** The authorities are finalising the framework for the medium-term development goals, among others targeting the financial sector and capital market development. In that respect, increasing the availability of VC funds is one strategic target. The VC landscape remains dominated by public funds channelled into this niche market predominantly through Polish development institutions. Apart from the Polish Development Fund (PFR), Poland's Development

([137])Differences in VC/PE indicators across annexes reflect the use of distinct data sources. The Savings, Investment and Access to Finance Annex uses CMU Dashboard data for consistency across CMU indicators, while the Innovation to Business Annex uses InvestEurope data, which is disaggregated by investment stage. Variations in reported figures are therefore due to underlying source definitions.

([138])See also Annex 4.

([139])*Strategia Rozwoju Polski do 2035 r.*, *Ministerstwo Funduszy i Polityki Regionalnej* (MFiPR).

Table A6.2: **Financial sector indicators**

		2018	2019	2020	2021	2022	2023	2024	2025-Q3	EU
Banking sector	Total assets of MFIs, % of GDP	91.5	91.3	101.0	99.2	91.8	95.1	94.5	92.5	246.1
	Common equity Tier 1 ratio	16.1	15.9	17.5	16.1	16.3	18.0	17.9	18.0	16.8
	Total capital adequacy ratio	17.9	17.8	19.6	17.9	18.0	19.5	19.3	19.5	20.2
	Overall NPL ratio, % of all loans	6.2	6.1	6.0	5.0	4.3	4.1	3.9	3.7	1.9
	NPL ratio, loans to NFCs	8.4	8.1	8.0	6.5	5.7	5.2	6.2	6.1	3.5
	NPL ratio, loans to HHs	5.8	5.7	5.4	4.7	4.5	4.7	3.5	3.2	2.1
	Return on equity ratio[1]	7.0	6.9	3.1	4.8	7.3	11.6	14.6	16.2	9.6
	Loans to NFCs, % of GDP	16.5	16.0	14.4	13.5	12.8	11.8	11.2	11.1	29.3
	Loans to HHs, % of GDP	33.7	33.8	32.9	31.2	25.9	24.0	22.2	21.1	43.6
	NFC credit growth rate, %	6.6	2.9	-6.4	4.5	9.6	0.6	5.4	8.0	2.5
	HH credit growth rate, %	5.6	6.5	1.5	5.0	-4.4	1.0	4.2	3.9	2.6
Non-banking sector	Stock market capitalisation, % of GDP	-	-	20.5	24.0	17.8	22.0	19.1	22.6	69.9
	Initial public offerings, % of GDP	0.03	0.02	0.06	0.11	0.01	0.01	0.01	-	0.06
	Market funding ratio	45.9	44.7	47.8	47.5	46.1	45.3	44.1	-	49.7
	Private equity, % of GDP	0.307	0.278	0.134	0.144	0.130	0.114	0.093	-	0.487
	Venture capital, % of GDP	0.012	0.012	0.017	0.022	0.027	0.022	0.018	-	0.064
	Financial literacy, composite index	-	-	-	-	-	42.5	-	-	45.5
	Bonds, % of HHs' financial assets	0.6	0.7	0.5	0.4	0.8	0.8	0.7	-	2.8
	Listed shares, % of HHs' financial assets	2.6	2.9	3.8	4.0	3.6	3.8	3.2	-	4.8
	Investment funds, % of HHs' financial assets	6.0	6.6	5.8	5.7	4.5	5.1	6.1	-	11.0
	Insurance/pension funds, % of HHs' financial assets	15.3	14.6	13.0	13.8	12.5	14.3	13.8	-	27.8
	Total assets of insurers, % of GDP	8.8	8.4	8.4	7.3	5.9	6.5	6.0	6.1	53.9
	Pension assets, bn EUR	-	-	-	62.6	56.5	75.8	87.8	-	5813.8
	Pension assets, % of GDP	-	-	-	10.7	8.5	10.1	10.3	-	32.3
	10y real return average of pension assets, %	-	-	-	-	-	0.5	-0.5	-	1.4
	Pension funds assets, ECB (% of GDP)	-	-	-	-	-	-	-	-	-
	1-3 / 4-10 / 11-17 / 18-24 / 25-27	Colours indicate performance ranking among the 27 EU Member States.								

(1) Annualised data. EU data for credit growth and pension funds refer to the EA average.

Source: ECB, Eurostat, European Insurance and Occupational Pensions Authority, DG FISMA CMU dashboard, AMECO.

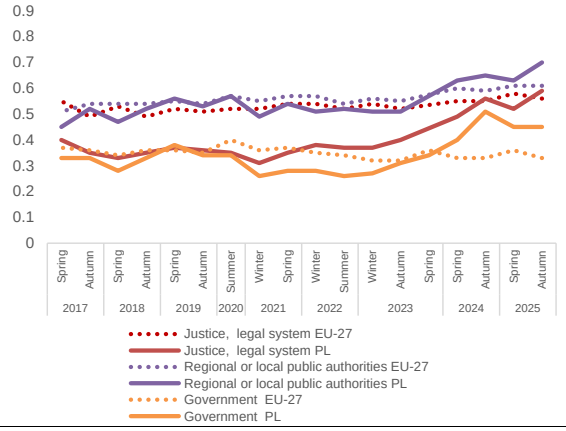
Bank (BGK) and the state-owned insurer PZU, all of which are mostly publicly owned, there is a lack of institutional investors such as commercial banks or pension funds and therefore insufficient liquidity to finance innovative projects. There is a set of systemic reasons behind this lack of interest on the investors' side. While it is possible to invest into funds of funds, Poland still does not have a proper investment vehicle to cater for the needs of small VC funds. Fund managers are therefore setting up relatively expensive funds under the Luxembourg legal regime, which ultimately increases their operational costs ([140]). Further, pension funds, despite being the natural long-term oriented group of potential investors, are at the current juncture structurally and legislatively not apt to invest into the VC space given liquidity, asset class and shareholding concentration limits. Local lenders mostly worry about excessive capital risk weights on exposures against the relatively illiquid and perceived as risky holdings in VC funds. A byproduct of the lack of market depth is the relatively small group of specialised VC asset managers. Lastly, local portfolio managers point to a lack of worthwhile projects (the demand side) ready to work with VC oriented investors. Most of these issues are being discussed in the 2035 development strategy, which also comes forward with a set of recommendation on how to tackle these systemic weaknesses to build a solid VC ecosystem.

([140])Legislative efforts are underway to enhance the framework for venture capital funds, in particular through the introduction of Qualified Investment Funds (Kwalifikowany Fundusz Inwestycyjny – KFI).

An effective institutional framework is essential for competitiveness. This requires public trust built on integrity, high-quality legislation, regulatory simplification and efficient services for people and businesses**.** The 2025 country specific recommendations (CSRs) highlighted challenges for Poland in the areas of on legislative complexity and ensuring an effective institutional framework (see also Annex 5).

Public trust

Graph A7.1: **Trust in the justice system, regional / local authorities and in government**



(1) EU-27 since 2019 ; EU-28 before
Source: European Commission, Standard Eurobarometer surveys.

Trust in public institutions in Poland remains strong (Graph A7.1). Regional and local authorities enjoy the highest level of public trust, while trust in government has seen a mid-term increase, well above the EU average. Both businesses (Poland 85%; EU 79%) and people (Poland 80%; EU 72%) have very strong confidence in the ability of public administration to protect their personal data and to handle their data securely and responsibly ([141]).

Quality of lawmaking

Poland has good lawmaking rules, and their application has improved laws. The proportion of companies that see fast-track legislation as an obstacle to making business has dropped by 16 percentage points over the past two years ([142]). There are comprehensive legal requirements for the impact assessment of all new primary and secondary legislation on competitiveness, small and medium-sized businesses, specific social groups and regions. The government is obliged to consider submitted comments when developing the final primary laws and secondary regulations, and to publish a response to comments made in all public consultations. All regulatory impact assessments (RIAs) are made publicly available online. The Chancellary of the Prime Minister reviews the quality of RIAs for both primary and secondary legislation and *ex post* evaluations ([143]). The oversight of better regulation tools is hampered by the lack of published assessments of the effectiveness of RIAs (Table A7.1).

In 2025 Poland introduced new rules to check the impact of laws related to the launch, operation and closing of business. Such assessmnt should be done two years after the entry into force, in case where pubilc consultaitons are not possible. Deregulation and simpleification measures address the 2025 CSRs and put forward proposals made by Polish companies. These aims to simplify regulations (Annex 5) and strengthen the regulatory quality in Poland. It also provides for a periodic evaluation of existing legislation to be adopted by a Resolution of the Council of Ministers every three years ([144]). To improve the quality of lawmaking, Poland has strengthened the rules governing consultations, but their effectiveness remains to be seen.

([141])European Commission, 2026, Flash Eurobarometer surveys 567 and 568 on satisfaction with administrative services.

([142])European Commission, 2026, Flash Eurobarometer surveys 567 and 568 on satisfaction with administrative services.

([143])For more details, see OECD, 2025, Better Regulation Practices across the European Union 2025, https://doi.org/10.1787/6f007516-en.

([144])Ustawa z dnia 21 maja 2025 r. o zmianie niektórych ustaw w celu deregulacji prawa gospodarczego i administracyjnego oraz doskonalenia zasad opracowywania prawa gospodarczego.

Table A7.1: **Poland. Selected indicators on better regulation practices for primary legislation**

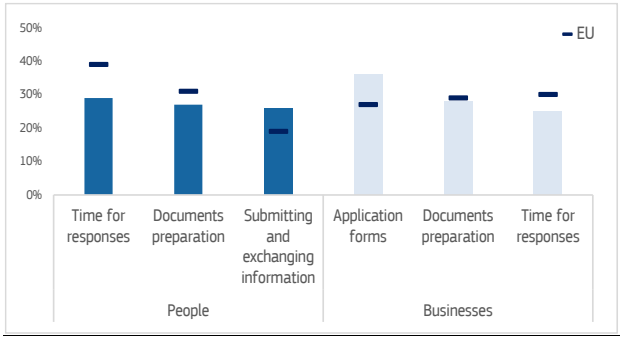
Tools for smart legislation:	
Share of possible impacts assessed for all primary laws when developing legislation	●
Regulators are required to identify and quantify the benefits of a new primary law	●
Regulators are required to identify and assess the impacts of alternative non-regulatory options	●
Tools for effective implementation: when developing laws, regulators are required to:	
Assess the level of compliance	●
Identify and assess potential enforcement mechanisms	●
Specify the methodology of measuring progress in achieving the law's goals	●
Oversight of better regulation:	
There is an external body responsible for reviewing the quality of RIAs and of ex post evacuations	●
There are publicly available assessments of the effectiveness of RIA in modifying regulatory proposals	●
There are reports on the level of compliance by government department with the requirements of RIA	●
There are indicators on the percentage of ex post evaluations that comply with guidelines	●
The effectiveness of ex post evaluations in improving the regulatory stock has been assessed in the last five years	●

● High / yes / for all primary laws ● Medium / in part / for major primary laws ● Low / for some primary laws ● Very low / no / never

Source: OECD, 2025, Regulatory Policy Outlook 2025 [https://doi.org/10.1787/56b60e39-en] and Better Regulation across the European Union 2025.

Public service delivery and digitalisation

Graph A7.2: **Most time-consuming aspects of service delivery**



Source: European Commission, 2026, Flash Eurobarometer surveys 567 and 568 on satisfaction with administrative services.

Regarding public-service delivery and digitalisation, Poland is making progress, but user friendliness is lagging behind. 40% of individuals and 55% of companies say they are satisfied with administrative services, compared with an EU average of 45% and 42%, respectively ([145]). At the same time, Poland has seen a sharp fall in the proportion of people who find public administration complex and burdensome, from 46% in 2023 to 37% in 2025. For people and companies, the longest delays stem from preparing documents and waiting for responses, though Poland performs better than the EU average in this regard: 29% of users report time-consuming processes versus 39% across the EU (Graph A7.2). While these challenges rarely cause operational disruption, there is clear demand for improvement: 69% of people want more user-friendly digital services, and 75% would like clearer step-by-step guidance.

The availability of digital public services for public remains lower than the EU average, despite a sharp increase since 2023 (Table A7.2). Poland also lags behind the EU average in terms of cross-border access to such services (Poland 50; EU: 71) but the trend is upward (7 points in Poland vs 3 across the EU). Poland continues to make progress in offering electronic health records exceeding the EU average with a score of 92 ([146]). This has been boosted by Recovery and Resilience Facility (RRF) funding (measure D1.1.2).

There is a wide range of digital public services and solutions available. These include:

– *mObywatel*, a Polish digital identity wallet, providing people with access to a range of digital documents including identity cards,

([145])European Commission, 2026, Flash Eurobarometer surveys 567 and 568 on satisfaction with administrative services

([146])European Commission, 2025, Digital decade e-health indicator study.

Table A7.2: **Digital Decade key performance indicators: availability of digital public services**

	Poland			EU-27
	2023	2024	2025	2025
Digital public services for citizens (0 to 100)	**60**	**64**	**71**	**82**
Digital public services for businesses (0 to 100)	**73**	**73**	**85**	**86**
Access to electronic health records (0 to 100)	**86**	**90**	**92**	**83**

(1) Digital Decade target by 2030: 100. (2) Publishing year, data was collected in the previous year
Source: European Commission, 2025, State of the Digital Decade report.

driving licences, e-prescription and public services, expanded using RRF measure C2.1.1 ([147]),

– ePUAP, a key platform enabling users to apply for public services across multiple public institutions, and even receive correspondence ([148]) and

– e-PIT/E-Tax Office, enabling individuals and legal entities to deal with all aspects of the tax system online, developed further with national recovery and resilience plan measure C2.1.1) ([149]).

However, challenges remain in terms of the lack of interoperability and skills gaps of the public administration ([150]). The draft Digitalisation Strategy for Poland 2035 proposed by the Ministry of Digital Affairs includes a number of key goals relating to public services, including ensuring that all key services are available via the mobile application and full interoperability of state systems and registers ([151]).

The availability of digital public services for businesses in Poland grew rapidly in 2024 (from 73 to 85) ([152]). Poland performs below the EU average for access of EU companies to such services (Poland 70; EU 74) but has had a significantly higher growth rate (19 p. in Poland vs 1 p. in the EU). Poland's online business registration systems allow entrepreneurs to register a business quickly and free of charge. The integration of the system with the tax authorities, social security and statistical offices significantly reduces administrative burdens for both users and officials. Using the RRF Poland launched a system ([153]) for obligatory use of structured e-invoices (measure 2.1.1).

Since 2020, Poland has been developing a robust digital permitting infrastructure, marked by initiatives such as the *e-Budownictwo* portal for electronic building-permit applications. However, Poland's fragmented regional and local government undermines the quality of service due to varying requirements, a low level of interoperability and limited data exchange. Following legal reforms from 2024, Poland is taking action to digitalise and standardise environmental permitting. Using the RRF funds, an IT platform for permitting procedures for renewable energy installations has been introduced. Furthermore, the Technical Support Instrument supports Poland in simplifying, accelerating and digitalising its industrial and environmental permitting framework, in line with the EU Directive on Industrial Emissions ([154]). Additonal investments in digital public servcies and syber security are mader under the Cohesion policy funding.

Poland is ready to enable the cross-border exchange of data and documents between authorities through the EU once-only technical system([155]). As once-only services ([156])

([147])Gov.pl, mObywatel.

([148])Gov.pl, Załatw sprawy urzędowe przez internet na ePUAP.

([149])Gov.pl, Your e-PIT/E-Tax Office - Ministry of Finance.

([150])European Commission, forthcoming, Simplification of key life events.

([151])Gov.pl, Strategia Cyfryzacji Polski do 2035 roku - Ministerstwo Cyfryzacji.

([152])European Commission, 2025, Digital Decade: eGovernment Benchmark.

([153])Krajowy System e-Faktur (KSeF).

([154])European Commission, 2026, Poland Technical Support Instrument - Country Factsheet.

([155])European Commission, *Once-Only Technical System Acceleratormeter*, Ec.europa.eu.

become accessible, people and businesses will no longer have to search for their data, download and upload documents manually across e-government portals in different Member States. Poland has yet to identify the types of documents and data to exchange through the system and explore ways to shift from the submission of documents to exchange of structured data.

Civil service

The proportion of civil servants in Poland under 50 continues to be well above the EU average (Poland 73% compared to EU average of 60%) ([157]). Nevertheless, as with other sectors, the civil service is affected by demographic changes and an ageing population. There is a high proportion of public-sector employees who have completed higher education (significantly above the EU average) ([158]), and increasing participation rates in adult learning ([159]). This produces skills that are valued in the private sector and contributes to the turnover of staff in the public sector.

Attracting and retaining talent in the public sector remains a challenge in Poland. HR and payroll policies are too complex (the system is regulated by over 200 legal acts) and lack transparency. Although the average civil-service salary is higher than the average salary in the national economy, there are significant pay discrepancies between central and local government, across central administration and between different groups of employees/job categories in the same type of work ([160]).

The head of the civil service has prepared a human resources management strategy for 2034 to ensure consistent modernisation of civil service in Poland, which was approved by the Council of Ministers on 16 January 2026 ([161]). Poland is working on a new concept for civil service pay that is expected to be presented 2027 ([162]). The objective is to introduce competitive pay and improve the management of human resources. The concept concerns the civil service only (approximately 120 000 employees), not all public-sector staff.

Integrity

Although the perception of corruption when doing business in Poland is relatively low, the reported level of experienced corruption is above the EU average. Overall, perceptions of widespread corruption are below the EU average (Poland 41%; EU 63%) and fewer firms see corruption as a barrier to doing business (Poland 19%; EU 35%) ([163]). However, concerns about overly close links between business and politics leading to corruption are considerably higher in Poland than the EU average (Poland 86%; EU 76%). Sectors particularly vulnerable to corruption in Poland are public procurement and construction ([164]) (see Annex 5). More firms (than in the EU as a whole) report being asked or expected to offer gifts or extra payments for permits, services or procurement (Poland 12%; EU 10%), while far fewer than the EU average believe that those caught bribing senior officials are appropriately punished (Poland 21%; EU 33%) ([165]), which suggests greater corruption pressure and weak deterrence.

([156])Procedure types under Annex II of the SDGR (2018/1724/EU) and directives 2005/36/EC, 2006/123/EC, 2014/24/EU and 2014/25/EU.

([157])European Commission, Eurostat, 2026, European Union Labour Force Survey, Employed persons by economic activity (NACE Rev. 2) (2008-2026).

([158])European Commission, Eurostat, 2026, European Union Labour Force Survey, Employees by educational attainment level and NACE Rev. 2 activity (2008-2026).

([159])European Commission, Eurostat, 2026, European Union Labour Force Survey, Participation rate of employees in education and training (last 4 weeks) by NACE Rev. 2 activity (2008-2026).

([160])2024 Annual report of the Head of Civil Service.

([161])Gov.pl, Rada Ministrów przyjęła projekt Strategii zarządzania zasobami ludzkimi w służbie cywilnej - Serwis Służby Cywilnej

([162])Mid-Term Strategy until 2035 available at Gov.pl, Strategia Rozwoju Polski do 2035 r. - Ministerstwo Funduszy i Polityki Regionalnej.

([163])European Commission, 2025, Flash Eurobarometer survey 557 on businesses' attitudes towards corruption in the EU and selected enlargement countries.

([164])European Commission, 2025, Rule of Law Report.

([165])European Commission, 2025, Flash Eurobarometer survey 557 on businesses' attitudes towards corruption in the EU and selected enlargement countries

Poland has taken no measures to improve the prevention and detection of corruption. The country has public registers for lobbyists, but major concerns persist about their effectiveness, with low registration numbers, even some deregistration and insufficient oversight and enforcement. In addition, Poland does not have lobbying rules in place for high-level executives to disclose their contacts with interest representatives. A new strategic, holistic government approach to corruption is not yet in place, with the last anti-corruption strategy and action plan covering the period from 2018 to 2020.

Poland is taking measures to improve the prosecution of corruption. The country has taken some steps to address shortcomings, hopefully leading to a more robust track record of corruption cases. There are several ongoing large-scale corruption investigations involving public officials and politicians. Further efforts have been made to ensure independent and effective investigations and prosecutions. There are persistent issues with immunity for top executives and impunity clauses. Furthermore, there is a shortfall in the asset declarations of public officials and politicians, and there is an absence of a central submission and monitoring system to help trace illicit wealth and undue influence. The effectiveness of enforcing the law against bribery of foreign officials is still rather low ([166]).

Justice

The Polish justice system has a reasonable level of digitalisation, and the overall efficiency of ordinary and administrative courts remains relatively stable. More could be done to ensure that the prosecution service increases efficiency by communicating electronically (on secure platforms). Poland lags behind in digital solutions to initiate and follow proceedings in civil/commercial and administrative cases, and in online access for the general public to published judgments. However, it performs well regarding arrangements for producing machine-readable judicial decisions. Steps have been taken to implement the action plan on the rule of law to address concerns regarding judicial independence. Further measures are being drawn up as regards i) the National Council for the Judiciary, ii) the Constitutional Tribunal, iii) the status of judges, iv) the separation of the function of the Minister of Justice from that of the Prosecutor General and v) the functional independence of the prosecution service from the government ([167]).

([166])European Commission, 2025, Rule of Law Report.

([167])For a more detailed analysis of the performance of the justice system in Poland, see the upcoming 2026 EU Justice Scoreboard and the 2025 Rule of Law Report.

Industrial emissions are decreasing, but Poland still faces challenges in decarbonising industry. Poland has a stable and diverse industrial base and an above-average share of industry in GDP. While industrial emissions have been decreasing since 2005, most of the reduction since 2018 has resulted from decreased output and slightly increased efficiency. Moreover, the implementation of low-carbon and sustainable technologies faces significant limitations and constraints. The main challenges that Poland faces in decarbonising industry include: (i) barriers to the deployment of renewable energy sources (RES); (ii) the absence of coordinated fossil fuel phase-out trajectories and lack of coordination for industry; (iii) the slow pace of development of the country's carbon capture and storage (CCS) potential; (iv) infrastructural constraints for the deployment of sustainable transport; (v) the low innovation rate for circular economy solutions; and (vi) unsustainable usage of water and air resources.

Industry decarbonisation

Greenhouse gas emissions from industry

Greenhouse gas (GHG) manufacturing emissions in Poland have decreased by 19% between 2019 and 2024 ([168]). Manufacturing contributed 15% of emissions in 2024 ([169]). Between 2019 and 2024, emissions fell by 17% in the non-metallic minerals industry (NACE division C23), remained broadly stable in the manufacture of chemicals (C20), and declined by 28% in the iron and steel industry (C24).

The decrease of industrial emissions in Poland was partially due to decreased energy consumption in manufacturing as a result of increased efficiency and reduced output. Energy consumption fell by 16% between 2018 and 2023, from 189.9 TWh/y to 159.6 TWh/y ([170]). The RES share in final energy consumption by Polish industry increased to 11.2% in 2024, nearing the EU-27 average of 11.7%. However, the overall share of renewables in energy consumed by industry in 2024 remained significantly lower than in the EU as a whole, given the lower share of renewable and zero-emission energy in heat and electricity generation (17% in Poland and 32% in the EU as a whole). As heat and electricity consumption accounted for 36% of energy consumption by Polish industry, compared with 39% in the EU as a whole, the overall share of renewable energy in Poland's industrial energy consumption in 2024 remained significantly lower (18% in Poland, 23% in the EU as a whole).

Among Poland's energy-intensive industries, the production of cement clinker is the most significant emitter of greenhouse gases ([171]). Among the over 200 Polish industrial installations covered by the EU ETS, emissions decreased by 10% between 2018 ([172]) and 2023 ([173]). However, in many emission-intensive industries, the observed reduction of emissions was in many cases partially a result of the decline in production output and not only a result of decarbonisation ([174]): between 2018 and 2023, annual raw steel production in Poland decreased

([168]) This Annex discusses the transition of Poland's manufacturing industry, specifically its energy-intensive industries, to low-carbon and net-zero modes of production, which is key to preserving competitiveness on the path towards climate neutrality as mandated by the European Climate Law. A broader perspective on the current competitiveness challenges facing Poland's manufacturing industry is provided in Annex 5. For a more detailed description of greenhouse gas emissions from industry, see European Commission (2025), 2025 Country Report - Poland, Commission staff working document, SWD (2025) 205 final, Brussels, 4.6.2025, Annex A7. Clean industry and climate mitigation.

([169]) In 2024. Data on the manufacturing sector exclude the NACE division C19 manufacture of coke and refined petroleum products, for better match of the sectoral data from Eurostat (gross value added) with those from the UNFCCC under the Common Reporting Format. Also see further indicators on industry decarbonisation, as well as the annotation for further information, in table A8.1 at the end of this Annex.

([170]) See Eurostat, Energy balance flow diagram - Poland, year 2024.

([171]) https://union-registry-data.ec.europa.eu/report/eu-registry-compliance.

([172]) https://stat.gov.pl/obszary-tematyczne/przemysl-budownictwo-srodki-trwale/przemysl/produkcja-wyrobow-przemyslowych-w-2018-roku,8,2.html.

([173]) https://stat.gov.pl/obszary-tematyczne/przemysl-budownictwo-srodki-trwale/przemysl/produkcja-wyrobow-przemyslowych-w-2023-roku,8,7.html.

([174]) https://unfccc.int/sites/default/files/resource/NID%202025%20POL%2015.04.2025.pdf.

by 37% (from 10.3 Mt to 6.5 Mt), fertiliser production decreased by 33% (from 2.9 Mt to 1.9 Mt) and cement production decreased by 11% (from 19.0 Mt to 16.8 Mt).

Policies to promote industry decarbonisation

In Poland, industry decarbonisation is constrained by the lack of a coherent policy framework, even though, in the other economic sectors, Poland combines strong economic growth with falling GHG emissions from manufacturing production. Key challenges are the lack of clarity about strategic coordination and financial support for industry decarbonisation, low access to affordable clean energy for industry, and barriers to the development of carbon capture utilisation and storage.

Poland has not submitted the final updated draft of its national energy and climate plan for 2021-2030. That document is essential to gain clear signals regarding Poland's ambitious industry transformation targets for 2030 and also contains projections for 2040. It models emission reduction trajectories in different energy-intensive sectors and sets out applicable policies to support industry decarbonisation. The plan should facilitate coordination, although responsibilities for industrial transformation remain fragmented and there is a need for strategic oversight of the industrial decarbonisation process.

Poland's industrial decarbonisation trajectory has not yet been explicitly mapped out, although it is partially set out in strategic documents such as Poland's 2050 national development concept ([175]), its 2030 productivity strategy ([176]), its 2030 hydrogen strategy and its nuclear power programme, as well as in analytical documents such as the white papers on transformation for 2025-2049 ([177]) and on industrial development ([178]).

Poland's strategic documents fail to provide a vision for phasing out coal and fossil fuels and achieving carbon neutrality in industry. The industry aspects of the transition are expected to be set out in Poland's 2035 development strategy ([179]) and 2040 district heating transformation strategy (regarding waste heat from industry), which are expected in 2026. The 2023-2025 clean industry strategy (containing projections for 2030) ([180]) was drawn up by the Industrial Development Agency and has a specific focus on renewable energy and offshore wind, as well as hydrogen. However, it has not been updated, and although it was envisioned as part of the Polish Development Fund (PFR) Group's 2026-2030 strategy ([181]), it was reformulated in the context of the modernisation, rather than transformation, of industry.

Important framework conditions for phasing out coal and decarbonising industry are missing. On phasing out coal, Poland received a country-specific recommendation in 2025 to reduce the reliance on fossil fuels by accelerating the phasing-out of coal in the heating sector by transitioning to decarbonised systems that integrate renewable energy, improve energy efficiency and phase out fossil fuel subsidies, especially those related to coal mining. The Just Transition Fund supported training of over 100 000 workers and decontamination of 2 800 ha of post-mining areas, helped to increase energy efficiency and mitigated some of the socio-economic consequences of the transition process ([182]). However, in Poland, there is currently no authority tasked with managing the just transition. Nor are there any strategy documents about the process. This is a significant challenge as regards the predictability and acceptance of the coal phase-out process. Realisation of the potential for industrial decarbonisation, with renewables, CCS and hydrogen ([183]), would require

([175]) https://www.gov.pl/web/fundusze-regiony/koncepcja-rozwoju-kraju-2051.

([176]) https://www.gov.pl/web/rozwoj-technologia/strategia-produktywnosci-2031.

([177]) https://www.gov.pl/web/energia/biala-ksiega-transformacji.

([178]) https://www.gov.pl/attachment/63b14b68-1ec8-4748-8f7c-a3c74e87a4ca.

([179]) https://www.gov.pl/web/fundusze-regiony/strategia-rozwoju-polski-do-2035-r-.

([180]) https://arp.pl/documents/265/Czysty_Przemysl_strategia_ARP.pdf.

([181]) https://pfr.pl/artykul/strategia-grupy-pfr-na-lata-2026-2030-wspolna-wizja-rozwoju-polski-i-wsparcie.

([182]) https://commission.europa.eu/strategy-and-policy/eu-budget/performance-and-reporting/programme-performance-statements/just-transition-mechanism-performance_en.

([183]) https://www.gov.pl/web/klimat/ccus-korzysci-transformacja.

the financial support framework to become effective.

Barriers to renewable energy deployment and affordable clean energy significantly impact the pace of industry decarbonisation. The barriers identified Annex 9 are limiting the scope for electrification of industrial processes. Severe constraints to the development of renewable energy in Poland include legal constraints, difficulties obtaining connection agreements, environmental permitting constraints and national defence-oriented restrictions, covered in Annex 9: Affordable energy transition. The introduction of renewable acceleration areas, as required under the Recovery and Resilience Facility (RRF), is supposed to partially address these issues by reducing the cost of the solidarity tariff for direct lines within those areas. Addressing connection agreement constraints requires reforms to the legal framework. Such reforms could aim to introduce mandatory milestones in the connection process, increase connection fees, introduce new types of connection agreements, expand cable pooling, increase access to information about available grid capacity and speed up dispute resolution. Reforms of taxes and tariffs relating to fossil fuels and electricity could further encourage the electrification of industry, but no plans or actions are currently envisioned in these areas.

The development of CCS is hampered by legal, environmental and transport constraints, including the lack of locations for new facilities. According to the Ministry of Climate and Environment, those constraints are supposed to be addressed. No structured national financial instruments (such as contracts for difference) have been implemented to support full-scale CCS applications. The GO4ECOPLANET CCS project at the Kujawy cement plant (annual capacity: 10 Mt CO_2eq) has received EUR 228 million of support from the Innovation Fund, with project implementation planned in 2027. ([184]). At present, the most significant drivers of CCS development in Poland are the legal obligations imposed on obligated entities following Commission Decision (EU) 2025/1479, which have impacted the corporate strategies of those entities. The National Centre for Research and Development has a mechanism to support applied research programmes, such as the NEON project, which provides 200 mln PLN of support for the areas of decarbonisation (including CCS/CCU and low- and zero-emission hydrogen), circular economy solutions and digitalisation of industrial processes.

([184])https://climate.ec.europa.eu/document/download/5c3a41d2-5c3b-40f6-92c4-712a04cdffc4_en?filename=if_pf_2022_go4_en_0.pdf.

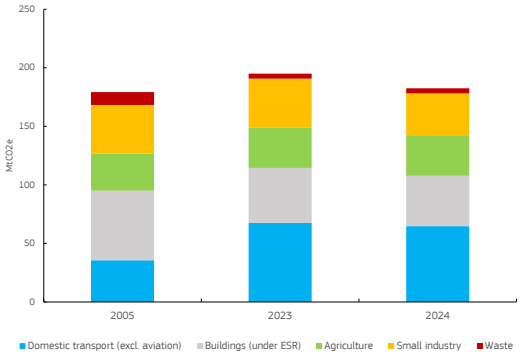
Reduction of effort sharing emissions

Compliance with effort sharing limits with domestic measures

For 2030, Poland is projected to overachieve its effort sharing target ([185]). In 2024, GHG emissions from Poland's effort sharing sectors are expected to have been 5% below those of 2005. By 2030, with current and planned policies and measures, these emissions are expected to decrease by 18.2%, resulting in a surplus of 0.5 percentage points relative to the 2030 target of −17.7%. Poland is projected not to exceed its effort sharing emission limits in any year in the 2021-2030 period. Poland still has not yet submitted its final updated energy and climate plan, which negatively impacts the accuracy of the assessment.

([185])The national GHG emission reduction target is set out in Regulation (EU) 2018/842 (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). The emissions from effort sharing sectors for 2024 are based on approximated inventory data. The final data will be established in 2027 after a comprehensive review. Projections about the impact of current policies ('with existing measures', WEM) and additional policies ('with additional measures', WAM) as per Poland's 2025 reporting under Article 17 of Regulation (EU) 2018/1999 (the Governance Regulation). Also see European Commission (2025), Climate Action Progress Report 2025 – Technical Information, Commission staff working document, Brussels, Chapter 9 (pp. 111ff.), and in particular Tables 25 and 26.

Graph A8.1: **Greenhouse gas emissions in the effort sharing sectors, 2005, 2023, and 2024**



Source: European Environment Agency.

Sustainable transport

Poland has recently seen a dramatic increase in the number of electric vehicles, but their market share is still very small. In 2025, the number of battery electric vehicles (BEVs) registered in Poland increased by 73% year-on-year, while the number of plug-in hybrid vehicles grew by 75([186]). By the end of 2025, there were over 237 000 passenger electric vehicles in Poland, accounting for 1.8% of the total passenger cars fleet ([187]), including over 121 000 BEVs and 116 000 plug-in hybrids. The share of hydrogen-powered passenger cars remained low (561 by the end of 2025). Since the end of 2019, the number of electric vehicles has increased more than 27-fold. Between 2020 and 2024, the share of consumers considering buying an electric car increased from 7% to 26%. Nevertheless, by the end of 2025, only around 11% of newly registered vehicles were electric. Growth was limited by poor access to charging infrastructure. Moreover, the public support programmes which had significantly fuelled the uptake of electric vehicles, such as My BEV (*Moj Elektryk*) ([188]) and the RRF-cofinanced OurEcar ([189]) programme, were being phased out.

The uptake of electric and zero-emission vehicles is higher in public transport than in the private sector. In 2024, zero-emission vehicles made up 1.8% of the fleet of coaches and buses, although this was much less than the EU average of 3.3% ([190]). Between 2019 and 2025, the number of electric zero-emission and hydrogen buses increased from 167 to 1 731 and from 57 to 123 respectively. This increase is expected to continue. Under its recovery and resilience plan (RRP), Poland introduced a reform requiring large cities to purchase zero-emission buses for public urban transport, which entered into force on 1 January 2026 and is expected to further increase the share of electric vehicles in public transport. Under its RRP, Poland also supports cities and rural areas in purchasing zero-emission buses. In addition, railway transport capacity is growing in Poland, with zero-emission/electric regional rolling stock units and locomotives being purchased with support from the RRF. The RRF remained one of main drivers of decarbonisation of public transport: by April 2026, 493 of the planned 1 044 zero-emission buses and 285 of the planned 381 zero-emission rolling stock units had already been delivered ([191]).

Poland faces challenges in decarbonising freight transport. The modal shift of freight transport away from rail to trucks is contributing negatively to decarbonisation. The share of rail freight in inland freight transport fell by 3.7% between 2018 and 2022. Poland is not counteracting this, as it does not yet encourage the uptake of zero-emission trucks by exempting them from the infrastructure charge component of road tolls ([192]), which is a demand-side economic incentive allowed under EU law until 30 June 2031.

Poor access to fast-charging stations remains a significant limiting factor for electromobility in Poland – both for light- and heavy-duty vehicles. By the end of 2025, the number of charging stations in Poland reached 14 521, after a 52% increase relative to the previous year ([193]). However, at 13.5, the number of light electric vehicles per public charging point was still above the EU average of 12.8. The power capacity of charging points in Poland is 2.4 kW per

([186])https://www.pzpm.org.pl/pl/Elektromobilnosc/Licznik-Elektromobilnosci/Grudzien-2025.

([187])https://bdl.stat.gov.pl/bdl/dane/podgrup/temat

([188])https://www.gov.pl/web/elektromobilnosc/aktualne-ogloszenia-o-naborach.

([189])https://www.gov.pl/web/nfosigw/program-naszeauto-do-40-tys-zl-doplaty-do-samochodu-elektrycznego.

([190])https://ec.europa.eu/eurostat/databrowser/view/road_eqs_busmot__custom_19787051/default/table.

([191])https://www.kpo.gov.pl/strony/o-kpo/energetyka-i-mobilnosc/.

([192])https://etoll.gov.pl/en/e-toll-system/rates-and-payments/.

([193])Infrastructure | European Alternative Fuels Observatory

electric vehicle, which is below the EU average ([194]). By the end of 2024, about 76% of the highway network had a charging point for every 50 km, which is less than in other EU Member States ([195]). The challenges in deploying charging infrastructure are illustrated by the fact that less than 15% of the mandated infrastructure for 2030 had been deployed by the end of 2025. The lack of such infrastructure, especially for trucks, risks becoming a significant bottleneck for the uptake of electric trucks and for truck manufacturers' ability to meet their legally binding sales targets. The issue is supposed to be partially addressed by programmes to develop the power grid for future electric car charging stations and by support for the construction or expansion of publicly accessible charging stations for heavy transport. That support is being coordinated by the National Fund for Environmental Protection and Water Management (NFOŚ) and financed from the Modernisation Fund ([196]).

The current electromobility support programmes struggle with low prioritisation for public spending. The most important programmes supporting the development of electromobility in Poland were 'My electric car' (2021-2025), managed by NFOŚ, followed by the 'My e-car' programme (from 2025 to April 2026), financed by the RRF, which supported the acquisition, lease or rental of M1, M2 or N1 BEVs, with higher support granted to larger families. The 'My electric bike' programme (managed by NFOŚ), which is aimed at supporting the acquisition of electric bikes, was subject to public consultation in 2024-2025, but has not been implemented yet in 2026 and remains in the 'project' stage. The 'Green public transport' programme (managed by NFOŚ and financed by the RRF) supports the purchase of zero-emission buses for public transport in municipalities as well as purchase or leasing of zero-emission vehicles of categories N2 and N3. NFOŚ has organised a series of calls for proposals for local governments to support the deployment of charging infrastructure, including for heavy-duty vehicles.

([194])https://www.iea.org/data-and-statistics/charts/number-of-electric-light-duty-vehicles-per-public-charging-point-and-kilowatt-per-electric-light-duty-vehicle-2024.

([195])https://iea.blob.core.windows.net/assets/7ea38b60-3033-42a6-9589-71134f4229f4/GlobalEVOutlook2025.pdf.

([196])https://www.gov.pl/web/funduszmodernizacyjny/Programy-Priorytetowe.

Sustainable industry

Circular economy industry

In 2019, Poland adopted a road map for the transition to a circular economy ([197]), which focused on four areas of action: sustainable industrial production, sustainable consumption, bioeconomy and new business models. The road map provided a set of tools aimed at creating the conditions for implementing a new economic model in Poland. The actions mainly concerned analytical and conceptual work, information and promotion, and coordination in areas falling within the remit of individual ministries. Implementation of the road map has been slow, but the first actions included setting up a government information platform for the circular economy and developing a system of indicators to assess progress towards a circular economy. The road map was intended to run until the end of 2023 and has not been updated. Therefore, from 2024, the only planning document for waste management at national level is the 2028 national waste management ([198]).

Despite recent improvement, Poland ranks below the EU average as regards the circular economy indicators. The country's circular material use rate ([199]) was 7.7% in 2024 ([200]) (EU average: 12.2%), while its resource productivity ([201]) reached EUR 1.38 per kg (EU average: EUR 2.99 per kg)([202]). Raw material consumption has remained quite stable since 2015, reaching 15.3 tonnes per capita in

([197])Mapa drogowa GOZ - Gospodarka Obiegu Zamkniętego w Praktyce, Link.

([198])Krajowy plan gospodarki odpadami 2028, Link.

([199])Circular material use rate (CMUR) is the share of the total amount of material used in the economy that is accounted for by recycled waste. A higher CMUR value means that more secondary materials were used as a substitute for raw materials, thus reducing the environmental impact of extracting primary material.

([200])Eurostat - Circular material use rate, Link.

([201])Resource productivity measures the total amount of materials directly used by an economy in relation to gross domestic product (GDP).

([202])Eurostat – Resource productivity, Link

2023 ([203]) (EU average: 13.7), underscoring a persistent reliance on primary resources.

On the other hand, **Poland continues to generate less municipal waste per capita (387 kg in 2024) ([204]) than the EU average (517 kg) and, since 2016, its waste generation has decoupled from economic growth.** In 2024, 31% of municipal waste was recycled (EU average: 48%), while as much as 30% was still landfilled (EU average: 21%). This means that, despite improvement, Poland is not on track to reach the 2025 EU target of preparing 55% of municipal waste for reuse and recycling. Nor is it on track to meet the 2035 target of landfilling a maximum 10% of municipal waste. Municipal waste incineration has increased over time and reached 22% of the municipal waste generated in 2024. On a positive note, Poland's recycling rate for plastic packaging improved significantly and reached 46% in 2023 (EU average: 42%) ([205]). On 1 October 2025, a mandatory deposit-refund system was launched for beverage packaging, aimed at boosting recycling of this waste stream. Consumers pay a deposit on PET bottles and metal cans (PLN 0.5 or around EUR 0.11) and reusable glass bottles (PLN 1 or around EUR 0.23), which is refundable without a receipt.

Poland is not very innovative when it comes to circular economy solutions. In 2021, the country filed only 14 patents for climate change mitigation technologies relating to wastewater treatment or waste management and is on a downward trend (in 2012, Poland filed 53 such patents). Although the number of people employed in the circular economy sector increased by 8% ([206]) between 2014 and 2023, the sector's share in the overall employment rate fell slightly from 2.4% to 2.3% in the same period (EU average: 2%).

Poland applies fiscal tools for circular practices, but there is room for improvement. Poland has a landfill tax of PLN 270 per tonne (EUR 60 per tonne). Landfilling of separately collected biodegradable waste was banned in 2013. In addition, since 2016, there has been a ban in place on the landfilling of combustible waste with a total organic carbon content above 5%, a loss of ignition value above 8% and a calorific value exceeding 6 MJ/kg ([207]). However, the country has no incineration tax.

Poland has a mandatory pay-as-you-throw system and an extended producer responsibility system in place. The pay-as-you-throw system is targeted only at non-household sources of municipal waste. The extended producer responsibility system covers all packaging waste fractions from both household and non-household sources, but there is no system of advanced fee modulation in place to discourage the use of difficult-to-recycle plastic types or combinations of materials. Poland has a tax on plastic carrier bags and fees for single-use plastic products. The country has achieved a noticeable reduction in the consumption of plastic carrier bags per capita – from 23 in 2019 to less than 7 in 2023, which is the second-best result in the EU ([208]).

To meet its environmental objectives for the circular economy and waste, Poland would need to increase investment in the circular economy by an estimated EUR 979 million per year in 2021-2027, with an additional EUR 272 million for waste management action not linked to the circular economy. Combined, this amounts to EUR 1 251 million per year, representing 0.19% of Poland's GDP. Of this circular economy gap, EUR 256 million is covered by recent initiatives, such as: (i) eco-design for sustainable products, packaging and packaging waste; (ii) labelling and digital tools; (iii) critical raw material recycling; and (iv) measures proposed under the amended Waste Framework Directive. EUR 723 million constitutes further investment needed to unlock Poland's circular economy potential ([209]).

Bioeconomy industry

([203])Eurostat – Material footprint., Link.

([204])Eurostat – Municipal waste by waste management operations, Link.

([205])Eurostat – Packaging waste by waste management operations, Link.

([206])Eurostat, Persons employed in circular economy sectors, Link.

([207])EEA, Early warning assessment related to the 2025 targets for municipal and packaging waste – Poland, 2022.

([208])Eurostat – Consumption of lightweight plastic carrier bags, Link.

([209])European Commission, Environmental Implementation Review (2025), Poland country report, Link.

In Poland, bioeconomy value added has grown significantly in recent years (7.9% between 2018 and 2023), driven in particular by the food and beverages and bio-based chemicals and plastics subsectors. The food and beverages subsector registered the highest growth in value added (7.9% on average between 2018 and 2023) ([210]).

Overall bioeconomy employment has fallen slightly. However, the bio-based chemicals and plastics as well as wood products and furniture subsectors bucked that trend, recording growth in total employment between 2018 and 2023 (3.9% and 0.1% on average respectively) ([211])([212]).

Labour productivity in the bioeconomy – measured as value added per person employed – stood at 62.0% of the national average and has grown from 53.0% in 2018 ([213]).

R&D business expenditure from bioeconomy-relevant subsectors has grown slightly more than the overall R&D business expenditure in Poland (13.3% compared with an average of 11.3% between 2018 and 2023) ([214]). Poland has several technology parks focusing on the bioeconomy, such as the Kutno Agro-industrial Park in the Lodzkie region; the Wrocław Technology Park (coordinator of the Nutribiomed cluster) in the Dolnoslaskie region; and Łódzki Regionalny Park Naukowo-Technologiczny (coordinator of BioNanoPark) in the Lodzkie region. In addition, the International Centre for Research on Innovative Bio-based Materials. (ICRI-BioM) in Lodz is a cooperation between the Lodz University of Technology and the Max Planck Institute in Mainz, Germany ([215]). The Wrocław University of Environmental and Life Sciences (UPWr) in the lower Silesia region is a highly specialised university with a research centre specialising in environment, agri-business and innovative technologies in the food sector.

The Polish National Hub for Bioeconomy is currently developing a bottom-up contribution to the roadmap for the circular bioeconomy in Poland. This work is intended to provide a structured and practical basis for future national action and will be subject to consultations with key ministries. The development of a national Bioeconomy Strategy would be the next step, in which the National Hub for Bioeconomy could play a supportive role. However, such a process requires a political decision and leadership from a responsible ministry. The current bottom-up effort is therefore aimed at creating a strong foundation and momentum for such a strategic process.

Zero-pollution industry

Over the past two decades, Poland has made progress in reducing key air pollutants, but challenges remain. Emissions of several air pollutants have decreased significantly in Poland since 2005, while GDP growth has continued ([216])). In 2024, emission levels above the limit values set by the Ambient Air Quality Directive (2008/50/EU) were still recorded for NO_2([217])two air quality zones and for PM10 in five air quality zones ([218]).

Despite this progress, Poland continues to grapple with significant air pollution costs. For 2023, the European Environment Agency (EEA) points to an estimated 1 191 years of life lost per 100 000 inhabitants at risk attributable to air pollution due to PM2.5 concentrations that exceed the World Health Organization's air quality guideline levels ([219]).

A recent OECD study ([220]) on the impact of air pollution on labour productivity suggests that improvements in air quality contributed significantly to labour productivity growth in

([210])Joint Research Centre, Developments of Economic Growth and Employment in Bioeconomy Sectors across the EU, Link.

([211])Ibid.

([212])Bioeconomy subsectors: food and beverages; bio-based textiles; wood products and furniture; bio-based chemicals and plastics.

([213])Joint Research Centre, Developments of Economic Growth and Employment in Bioeconomy Sectors across the EU, Link.

([214])Joint Research Centre, Business expenditure in Research and Development (R&D) in the EU bioeconomy, Link.

([215])ICRI-BioM — Międzynarodowe Agendy Badawcze, Link.

([216])European Commission, Environmental Implementation Review (2025), Poland country report, Link.

([217])Strefa Dolnośląska, Aglomeracja Krakowska, Strefa Malopolska., Aglomeracja Górnośląska and Strefa Śląska.

([218])EEA, Eionet Central Data Repository, Link.

([219])EEA, 2025, Harm to human health from air pollution in Europe: burden of disease status, 2025, Link.

([220])Dechezleprêtre, A. and Vienne, V., 2025, The impact of air pollution on labour productivity (EN), Link.

Europe since 2000 and could further contribute to economic development in the future. This positive contribution has been unequally distributed geographically, with Poland being one of the countries with the biggest air pollution reduction and hence the biggest labour productivity gain. Poland may have experienced a 4.8% increase in labour productivity since 2000 thanks to cleaner air.

On the other hand, over the last decade, Poland has consistently been in the top five EU Member States whose facilities contributed the highest external costs of industrial air emissions. In 2021, the external cost aggregated over all pollutants was EUR 50 billion in Poland, following the value of a statistical life (VSL) methodology. This underscores the potential benefit of action to reduce emissions, particularly in industrial regions and urban transport corridors.

Water pollution from industry also remains a critical challenge. In 2022, Poland had the third highest emissions of heavy metals to water and was in fourth position for emission intensity, above the EU average intensity of 0.86 kg/EUR 1 billion GVA ([221]). The main industrial contributors to emissions to water in Poland are the waste management sector (total organic carbon, phosphorus and heavy metals) and the chemical sector (nitrogen and hydrocarbons). However, nitrogen pollution also results from atmospheric deposition from burning fossil fuels. Water pollution by industry imposes direct and indirect costs of EUR 19 million annually ([222]), not yet sufficiently borne by the polluters. On a positive note, industrial heavy metal releases (cadmium, mercury, nickel and lead) were down by 83% in Poland compared with 2010, while total organic carbon emissions to water decreased by 55% since 2010, as reported under the Industrial Emissions Directive ([223]).

Investment in pollution reduction still falls short. To meet its environmental objectives for pollution prevention and control, Poland would need to invest an additional EUR 1.6 billion per year (0.24% of GDP), mostly in relation to clean air and noise ([224]).

([221])European Environment Agency (EEA) – Industrial pollutant releases to water in Europe, Link.

([222])European Commission: Directorate-General for Environment, IEEP, Green taxation and other economic instruments – Internalising environmental costs to make the polluter pay (p. 35, Table 5), 2021, Link.

([223])EEA, Water pollutant releases changes from 2010 to 2022 for the EU Member States, 2024, Link.

([224])European Commission, Environmental Implementation Review (2025), Poland country report, Link.

Table A8.1: **Key clean industry and climate mitigation indicators: Poland**

Climate mitigation	Poland							Trend	EU	
Industry decarbonisation	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**		**2018**	**2023**
GHG emissions intensity of manufacturing production, g/€ (1)	648	599	603	614	507	0	-	↘	330	-
Share of energy-related emissions in industrial GHG emissions (2)	55.8	55.8	54.5	55.5	54.3	57.4	-	↗	55.5	57.9
Energy-related GHG emissions intensity of manufacturing and construction, g/€ (3)	377.9	349.9	343.4	355.4	290.7	262.2	-	↘	203.9	163.0
Share of electricity and renewables in final energy consumption in manufacturing, % (4)	39.8	40.5	41.6	39.1	40.6	37.7	42.3	↗	42.8	43.9
Energy intensity of manufacturing, GWh/€ (4)	2.13	2.02	2.07	2.12	1.74	1.50	1.59	↘	1.27	1.05
Share of energy-intensive industries in manufacturing production, % in GVA (5)	16.86	16.20	16.39	17.74	17.39	-	-		-	-
GHG emissions intensity of production in sector [...], g/€ (6)										
- paper and paper products (NACE C17)	791	825	725	684	613	549	-	↘	722	619
- chemicals and chemical products (NACE C20)	3 549	3 418	3 366	3 744	3 223	2 709	-	↘	-	-
- other non-metallic mineral products (NACE C23)	3 574	3 823	3 787	3 867	3 596	3 834	-	↗	2 495	2 352
- basic metals (NACE C24)	4 696	4 193	3 905	4 156	4 084	3 371	-	↘	2 842	3 099
Reduction of effort sharing emissions	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**		**2018**	**2023**
GHG emission reductions relative to base year, %				7.5	2.0	1.7	-5.0			
- domestic road transport	80.2	83.0	74.9	89.2	91.8	89.4	81.9	↗	-1.4	-5.6
- buildings	-2.6	-12.7	-11.2	-8.8	-20.5	-21.0	-27.8	↘	-20.3	-33.5
	2005			**2021**	**2022**	**2023**	**2024**	**Target**	**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %	192.5			206.9	196.4	195.7	182.9	-17.7%	-14.3%	-18.2%
Sustainable road transport	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**		**2018**	**2021**
New zero-emission vehicles, electricity motor, % (7)	0.13	0.26	0.85	1.57	2.68	3.58	2.99		↗	1.03	8.96
Number of publicly accessible AC/DC charging points (8)	-	-	1586	2510	3449	6091	9555	14521	↗	446956	n/a
Share of electrified railways, % of total (9)	61.77	61.89	62.49	62.74	62.71	62.46	62.25		↘	55.47	56.49

Sustainable industry	Poland							Trend	EU-27	
Circular economy transition	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**		**2018**	**latest data**
Material footprint, tonnes per person	17.2	16.2	16.2	16.7	16.3	15.3	15.0	↘	14.8	13.7
Circular material use rate, %	10.5	9.2	7.4	7.0	6.7	7.8	7.7	↗	11.6	12.2
Resource productivity, €/kg	0.7	0.8	0.8	0.9	1.0	1.2	1.4	↗	2.1	3.0
Employees in circular economy	2.5	2.5	2.5	2.5	2.3	2.3	-		2.1	2.0
Patents in circular economy	28.71	23.8	29.4	14.5					12.3	12.0
Recycling rate	34.3	34.1	38.7	40.3	40.9	27.6	31.1		46.40	48.1
Plastic recyling	36%	32%	-	-	-	46%	-		41%	42%
Construction and demolition waste (CDW) recovery	84	-	74						88	89
Bioeconomy industry	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**CAGR 2018-2023**	**2018**	**2023**
Value added, million EUR	34 828	37 014	38 412	39 619	49 439	55 067	-	7.9%	642 438	863 436
Employment, total number of people employed	2 436 669	2 309 028	2 362 136	2 393 910	2 378 938	2 291 714	-	-1.0%	17 649 040	17 085 642
Productivity										
Valued added per worker, thousand EUR	14.3	16.0	16.3	16.6	20.8	24.0	-	9.0%	36.4	50.5
Valued added per worker, % of national average	53.0	56.8	58.3	56.4	61.7	62.0	-	-	62.2	70.7
R&D business expenditure										
Total bioeconomy (biomass producing and converting sectors)	313	417	370	435	500	664		13.3%	15 672	23 335
Total R&D business expenditure	3 978	4 428	4 582	5 207	6 286	7 549	-	11.3%	196 587	259 525
Zero pollution industry	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**		**2018**	**2021**
Damage cost for industrial pollution	53.1	44.9	34.2	50.0	-	-	-		414.9	352.7

Water industrial pollutants releases	Cd, Hg, Ni, Pb		nitrogen		TOC		Phosporus			
	2021	change (2010)	2021	change (2010)	2021	change (2010)	2021	change (2010)		
	10 911	-83%	9 855 200	-55%	-	-37%	424 080	-36%		
Water chemical status		Good	1 050	Good (%)	0.2		Poor	2268.0	Poor (%)	54%

Sources and notes: **Industry decarbonisation:** All data are from Eurostat; data following the UNFCCC Common Reporting Format (CRF) are from the European Environment Agency (EEA), republished by Eurostat. (1) Sectors covered: all divisions of section C - Manufacturing - of the NACE Rev. 2 statistical classification of economic activities, except C19 (manufacture of coke and refined petroleum products). (2) GHG emissions as per UNFCCC Common Reporting Framework (CRF) categories 1.A.2 - fuel combustion in manufacturing in industries and construction (that broadly correspond to the broadly correspond to the NACE sections C - Manufacturing and E - Construction, excluding C-19), and CRF2 - industrial processes and product use. The figures shows the emissions in the 1.A.2 category as a share of the sum of CRF1.A.2. and CRF2 emissions. (3) Sectors covered: CRF 1.A.2 as described above. Gross value added (GVA) data in the denominator aligned in sectoral coverage, in 2020 prices. (4) Sectors covered: NACE section C excluding C19. (5) Nominator: NACE divisions C17, 20, 23, 24; denominator: NACE section C excluding C19 (see above). (6) GVA (denominator) in 2020 prices. **Reduction of effort sharing emissions:** Data source: European Environment Agency, greenhouse gas data viewer; European Commission, Climate Action Progress Report, 2025. For details, see the footnote in the "Reduction of effort sharing emissions" section. **Sustainable road transport:** (7) Source: Eurostat; (8) Source: European Alternative Fuels Observatory; (9) Source: Eurostat. For all climate mitigation indicators, the trend arrows compare the latest available data (year t) with the data four years earlier (t-4). **Sustainable industry**: Bioeconomy value added, employment and productivity: JRC, Developments of Economic Growth and Employment in Bioeconomy Sectors across the EU. Bioeconomy R&D business expenditure: JRC, Business expenditure in Research and Development (R&D) in the EU bioeconomy. Damage cost for industrial pollution: EEA, The costs to health and the environment from industrial air pollution in Europe, 2024. Water industrial pollutants releases: EEA, Industrial releases of pollutants to water and economic activity in the EU-27, 2024. Water chemical status: WISE, Surface water bodies: Chemical status, 2024 and WISE Groundwater bodies: chemical status, 2024. Other indicators: Eurostat. For circular economy indicators, the trend arrows compare the latest available data (year t) with the data two years earlier (t-2).

This annex outlines the progress made and the ongoing challenges faced in increasing energy affordability, while advancing the transition to net zero. It reflects the implementation of past energy-related country specific recommendations (CSRs).

The 2025 energy-related CSR highlights the need for Poland to: promote balanced electricity price signals that support investments in clean electricity generation by adjusting taxes and levies on electricity for households and industry relative to those on fossil fuels; promote and increase grid capacity, flexibility and cross-border electricity trade while limiting market restrictions to those justified under EU rules; accelerate the phaseout of coal in heating by adopting decarbonised, energy-efficient systems powered by renewables; and phase out fossil fuel subsidies, particularly for coal mining.

The decarbonisation of the Polish energy system is progressing, but challenges persist. Although progress has been made in deploying solar PV installations, the Polish system is still dominated by fossil fuels. Moreover, district heating remains largely reliant on coal. Grid bottlenecks hinder further penetration of renewable energy, with curtailment of renewables becoming more prevalent. Further integration of the electricity and heat sectors is one way of addressing grid congestion while promoting decarbonisation. Power-to-heat technologies (such as heat pumps and e-boilers) in district heating systems can operate cost-effectively during periods of high generation from renewable energy sources (RESs) and falling electricity prices, but only few demonstration projects exist in Poland. Additional capacity has been promoted through instruments rewarding flexibility and lowering network charges. Significant investment in non-fossil grid flexibility and the reinforcement of internal grids have yet to bear fruit in a context of increasing RES curtailment. Industry pays some of the highest electricity prices in the EU. Electrification is progressing slowly, due in part to the unfavourable electricity-to-gas price ratio, exacerbated by higher taxation on electricity than on gas. Both industrial and household consumers pay around three times as much for electricity as for gas. Poland remains the only EU Member State that did not submit its updated national energy and climate plan.

Energy prices and costs

Although government action has kept household energy bills below the EU average in recent years, industrial consumers in Poland have faced above-average prices. The disproportionately skewed tax burden on electricity in Poland undermines affordability and distorts accurate price signals for electrification. In the first half of 2025, household electricity prices in Poland remained below the EU average, at EUR 0.2559/kWh, largely due to([225]) the price cap introduced in 2023). The cap stopped being applied in early 2026. Although retail energy prices for industrial consumers (EUR 172/MWh) fell slightly in the first half of 2025, they remain above the EU average (EUR 164/MWh). While 40% of the electricity price for industry is accounted for by the wholesale cost, network cost, carbon cost and taxes represent 19%, 24% and 17% respectively of the electricity bill.

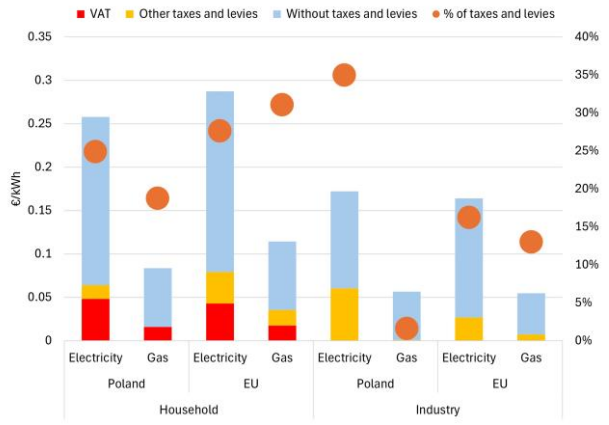
Final energy prices in Poland are unbalanced, mainly due to disproportionately skewed taxation on electricity. For large businesses, electricity was 3.1 times more expensive than gas in first half of 2025 (up from 2.9 in the second half of 2024), primarily due to the tax structure. For non-household consumers, taxes and levies account, on average, for 35% of electricity bills, but for only 2% of gas bills. Excluding taxes and levies, the electricity-to-gas price ratio would have fallen to 2. A similar, though smaller, effect is visible for households, where the ratio decreases from 3.1 to 2.8 once taxes are excluded ([226]). It is,

([225])The same trend can be observed in household gas prices, where October estimates remained below the EU average. Source: Household Energy Price Index.

([226])Analysis based on Eurostat data for industrial consumers (first half of 2025). Since Poland did not report any household gas prices to Eurostat, VaasaETT data were used instead for household consumers (with October 2025 estimates as a proxy for the first half of 2025). An alternative data source was used for household consumers because Poland had not disclosed its household gas prices to Eurostat. The data are sourced from VaasaETT, which collects prices from capitals and large cities across the EU. For non-household consumers, the consumption band is ID

however, important to note that the Polish Excise Duty Act allows certain energy-intensive businesses to obtain partial relief from excise duty on consumed electricity.

Graph A9.1: **Electricity and gas prices for household and non-household consumers, S1 2025**



(i) For household consumers, the consumption band is DC for electricity and D2 for gas.
(ii) For non-household consumers, the consumption band is ID for electricity and I4 for gas. VAT and recoverable charges are not displayed for non-household consumers as these are typically recovered by businesses. This also applies to the '% of taxes and levies', which is shown excluding VAT and recoverable charges for non-household consumers.
(iii) 'Without taxes and levies' indicates the retail price excluding all taxes and levies. It always includes the energy/supply and network cost components, which are not disaggregated in Eurostat's six-monthly price dataset.
Source: Eurostat

Due to a combination of reliance on expensive fossil fuels for electricity generation and a lack of non-fossil flexibility and interconnectivity, Poland's wholesale electricity prices averaged EUR 105/MWh in 2025 ([227])**, the ninth highest in the EU (the EU average was EUR 85/MWh in 2025).** Fossil fuels still accounted for 67.3% of electricity generation (54% coal) - third-highest fossil fuel share in the electricity mix, maintaining their structural role as the dominant, and costly, marginal price-setting technology (83% of price-setting hours for 67.3% electricity generation)Average day-ahead electricity prices in Poland increased by 8% in 2025 amid rising natural gas costs and structurally expensive coal. Short-run marginal costs ([228]) of gas and coal in the EU increased from EUR 96/MWh and EUR 94.50/MWh in 2024 to EUR 103/MWh and EUR 95.80/MWh respectively in 2025. Although daytime prices have fallen in recent years owing to the growing penetration of solar power, Poland remains vulnerable to severe price spikes during peak-demand hours. This is because falling solar output in the evening and early morning, combined with limited non-fossil flexibility, leads to a significant ramp-up of thermal plants to cover the supply–demand gap. As a result, price spreads ([229])) in Poland averaged EUR 135/MWh in 2025, a 12% increase compared to 2024 and above the EU average of EUR 121/MWh.

Graph A9.2: **Low-carbon electricity generation vs. electricity wholesale prices, 2025**

Unavailable data for Cyprus and Malta. Wholesale price is given as average of day-ahead electricity prices over 2025. EU-27 average is calculated as consumption-weighted. EU low-carbon share is calculated out of total EU electricity generation. Low-carbon share by country is calculated out of total public electricity generation. Low-carbon includes renewables and nuclear.
Source: Eurostat

for electricity and I4 for gas. The term 'non-household consumers' refers to large consumers, providing insight into international competitiveness. (The price used for the calculation excludes VAT and other recoverable taxes, levies and fees as non-household consumers are usually able to recover VAT and some other taxes).

([227])Ember.

([228])Short-run marginal costs (SRMCs) are the sum of the variable costs associated with producing electricity using hard coal and fossil gas. These are fuel costs, carbon costs and variable operating and maintenance costs. Estimates are provided by Ember.

([229])'Spread' refers to the difference between the highest and lowest hourly day-ahead electricity prices in a single day.

Flexibility and electricity grids

The level of interconnection of the Polish electricity system with the neighbouring Member States remains low. Poland is a slight net electricity importer (1% of its own consumption), exporting significant volumes to Slovakia, while importing from Germany and Sweden. At 4.3% in 2025, the level of interconnection is well below the 2030 target of 15%. The situation has not improved in recent years, due to various factors. Increasing deployment of new power generation has led to a further reduction in the level of interconnection. Capacity allocation constraints are one of the factors negatively affecting interconnectivity and are to be resolved mainly by internally reinforcing the grid. The fact that there are no plans for new interconnectors in the longer run is also a point of concern. The only cross-border electricity project of common interest at the moment is the Harmony Link with Lithuania. The project has faced some delays in the past due to a change in design, but it is now advancing and is planned to be commissioned in 2030. At the same time, additional efforts are being made to increase transfer capacity to Ukraine by modernising the existing lines.

Despite some progress in 2024, available estimates suggest that Poland has not yet reached an adequate level of technical cross-border capacity, following the 2025 CSR to 'increase cross-border electricity trading, and limit restrictions to cases justified under EU energy market rules, particularly in cases involving constraints in allocating national capacity' ([230])**.** Member States are to ensure that at least 70% of technical cross-border capacity is available for trading. Poland has declared allocation constraints limiting total exchanges to and from the Polish bidding zone and benefits from a derogation on the grounds of excessive loop flow from neighbouring Member States. In June 2024, as part of Poland's recovery and resilience plan, the Polish transmission system operator implemented a significant reform of the balancing market to eliminate allocation constraints. Despite this, the TSO's reliance on redispatching shows that the long-term goal of fully removing cross-border constraints is still highly dependent on further grid reinforcement.

Planned investments in the grid focus more on addressing the internal constraints, following the 2025 CSR to 'boost grid capacity'. The 2025 national network development plan, which runs until 2034, makes provision for PLN 64 billion in investments to modernise transmission networks and enable further integration of renewables, marking a significant increase from the previous plan. The Polish transmission system operator has also already started to make investments that will allow energy to be collected from offshore wind farms and from a nuclear power plant to be built in the future. The Recovery and Resilience Facility (RRF) is providing substantial support for the construction or modernisation of distribution networks.

Although some action has been taken to follow the 2025 CSR to 'boost flexibility', non-fossil flexibility, including storage and demand-side response, remains underutilised. Demand-response solutions, such as independent aggregators, face market access barriers. While demand response can participate in the capacity market and has been awarded contracts representing 4-8% of the total capacity awarded between 2021 and 2028, it is currently not allowed access to wholesale energy markets. Access to the balancing market is possible, but barriers remain, such as the long prequalification time or the high minimum bid. The Polish capacity market has also awarded contracts to non-fossil flexibility assets, such as battery storage or pumped hydro storage (2 GW and 1.15 GW respectively) for 2028. About 2 GW of installed storage capacity is currently operational in Poland and a further 2.7 GW has been announced. The recovery and resilience plan includes investment in battery energy storage systems and a pumped hydroelectric energy storage facility. A recent amendment to the Building Law introduced more favourable conditions for the development of small-scale energy storage systems, removing the requirement for building permits to construct energy storage facilities with capacity of up to 30 kWh.

In the past few years, Poland has had an increasing level of curtailments and occurrences of negative electricity prices. This has taken on greater significance due to the

([230])2025 Monitoring Report, ACER.

lack of non-fossil flexibility and the growth of renewables in the mix, leading to periodic electricity surpluses when weather conditions are favourable. Poland's large fleet of coal-fired plants have limited operational flexibility and struggle to adapt output to the varying production of renewable energy sources. Negative prices occurred 53 times in 2024, representing 197 hours. Between January and June 2025, Poland had more hours of negative electricity prices than it had done in all of 2024. The year-on-year increase reached 50%. In terms of curtailment, the volume of RES energy redispatched between June and September 2025, was almost double that from summer 2024, reaching almost 500 GWh, with solar PV installations accounting for 75% of the total) Although in 2023 Poland amended its energy law to require compensation for generators affected by redispatching, the process for calculating fair payments remains unclear.

Consumer empowerment continues to progress steadily. To benefit from price signals, since August 2024, customers have had the right to enter into dynamic-price contracts with any supplier serving more than 200 000 customers. This has increased the household switching rate by one fifth since 2023 (although, at 0.4%, it is still very low) ([231]), with the vast majority of households still on regulated tariffs (63%) or fixed-price contracts (26%) with no incentives for flexibility. By the end of 2025, about 50%([232]) of Polish household had access to smart meters, a substantial progress compared to 2023, but still below the EU average of 63% and the 2030 target of 80%. The accelerated roll-out of smart meters could further accelerate off-peak demand management. The number of consumers participating actively in the electricity market though prosuming is rising (9% of households in Poland, an increase of 14% compared to 2023). The development of energy communities is accelerating quickly: over 600 energy communities were registered as of February 2026, with a total capacity of almost ([233]) MW, compared to about 60 energy communities in February 2025) This trend is supported by the Recovery and Resilience Facility, which invested in setting up 20 energy communities. However, near-real-time energy sharing between multiple consumers is not yet possible. Closing retail markets to new actors limits flexibility and may increase the scale of new network investments and thus, in turn, consumer costs.

In 2024, electricity accounted for 17.4% of Poland's final energy consumption, below the EU average of 23.4%, and this share has remained largely stagnant in the past decade ([234]), partly due to an extremely unfavourable electricity-to-gas price ratio. Further progress in electrification across sectors is required in order to cost-effectively decarbonise the economy and bring the benefits of affordable renewable generation to consumers. When it comes to households, electricity accounts for 14.2% of final energy consumption, while in industry it represents 31.6% (see also Annex 8). For the transport sector, this share remains negligible, at 1.4%.

Renewables and long-term contracts

Poland took some measures to address the 2025 CSR relating to 'transitioning to decarbonised systems that integrate renewable energy'. By December 2025, for the first time ever, the share of renewable energy sources in the installed capacity in Poland had exceeded 50%. Hydropower represented 1.6%, biomass 4.6%, wind 14,5(% and solar 12.6% of the electricity mix. Solar power continued to increase, but at a slower pace. In 2025, RES total installed capacity grew above 38 GW (+ 4.2 GW compared to 2024). Whilst total solar installed capacity grew above 25,4 GW (+ 17% compared to 2024), the potential of wind energy in Poland remains largely untapped: in 2025, total onshore wind installed capacity barely increased, reaching 10.6 GW (+450 MW compared to 2024). Poland has provided a clear picture of auctions of offshore wind in the coming years on the Union Renewables Development Platform, with 4 GW

([231])All data on consumer empowerment are from the 2025 ACER Market Monitoring Report and ACER: Electricity country sheets – 2025 Monitoring Report, July 2025.

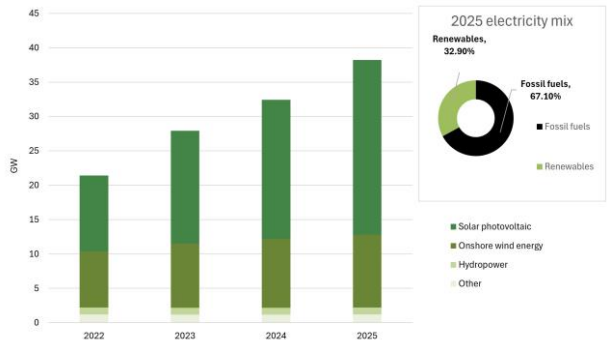
(232)Economic Weekly 8/2026, February 27, 2026 – Polish Economic Institute

([233])https://www.gov.pl/web/kowr/wykaz-spoldzielni-energetycznych.

([234])CAGR (compound annual growth rate) of −0.43% between 2015 and 2024 and minimum/maximum share of 16.5% and 18.1% respectively (source: Eurostat).

being auctioned in 2025, 2027 and 2029. Poland also pledged to boost onshore wind generation, albeit by comparatively modest amounts. In 2025 renewable energy sources accounted for 32.7% of the electricity mix, stagnating compared to 2024([235]) (EU overall RES share of 47%).

Graph A9.3: **Poland's installed renewable capacity vs electricity generation mix**



Electricity mix is given as net electricity generation (gross electricity production minus consumption of power stations' auxiliary services). Electricity produced in pumped hydro plants is excluded from total net electricity production, as it was previously counted as electricity produced from another source.
"Other" includes renewable municipal waste, solid biofuels, liquid biofuels, and biogas.
Source: IRENA, Eurostat

Poland has made some progress towards speeding up permitting, but challenges remain. These include efforts to improve internal coordination, digitalise procedures and ease conditions for grid connection. Progress made includes reforms under the RRF on cable pooling and coordinated grid development as well as the identification and planning of locations for projects. Several significant initiatives have been undertaken, such as identifying necessary priority investments in grid expansion and modernising the law on spatial planning. In particular, the law setting the basis for the identification of renewable energy acceleration areas was adopted in November 2025 as part of the Polish recovery and resilience plan (RRP). However, the reform reducing the minimum distance between buildings and onshore wind installations (from 700 m to 500 m) was not adopted following the President's veto. This reform would have significantly increased the area available for wind power. On the other hand, there is still no unified process for the single contact point, and there are no established rules for wind repowering. Moreover, more personnel will be required to deal with the expected increase in permitting procedures. There is thus room for further improvement to shorten the permit-granting procedure for RESs, especially in the light of the guidance on speeding up such procedures.

Regarding power purchase agreements (PPAs), Poland is among the top five EU countries, ranking third, with a contracted volume of 1.5 GW in 2025. This was a slight increase in contracted capacity (from 0.7 GW) compared to the previous year, driven by solar PPAs.

This progress needs to be offset against the fact that the Polish energy mix is still dominated by fossil fuels, which cover 85% of total available energy. Poland remains the most coal-dependent country in the EU: although the share of coal has continued declining, by more than seven percentage points, from 40.2% in 2020 to 32.7% in 2024, the share of RESs is still 15%([236]).

Although there are currently no nuclear power reactors in operation in Poland, the country has been working intensively on launching a nuclear programme. Poland is considering constructing two large-scale nuclear power plants with a total capacity of 6-9 GWe. Following the Commission's approval of PLN 60.2 billion in public support in December 2025, the first reactor is planned to be launched in 2036 with units 2 and 3 coming online in 2037 and 2038 respectively at the Lubiatowo-Kopalino site, after which the other reactors will follow. By 2040, the total installed capacity of the nuclear fleet is expected to reach 7.4 GWe. To ensure security of nuclear fuel supplies, Poland plans to conclude long-term supply contracts with reliable suppliers. Polish entities are pursuing an ambitious multi-site deployment of Small Modular Reactors (SMRs), necessitating substantial capital and risk-mitigation frameworks. Meeting timelines will depend on streamlining administrative procedures, fostering collaboration between domestic suppliers and international developers, and strengthening human resources and stakeholder engagement.

([235])Eurostat (nrg_cb_pem).

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

Energy efficiency

Poland has made insufficient progress in energy efficiency. In 2024, final energy consumption (FEC) stayed the same as 2023, to 69.8 Mtoe, plateauing after the declining trend since 2019. In industry, FEC increased slightly compared to 2023, partially reversing the positive downward trend since 2019 (– 11.9%). In the residential and services sectors, FEC has decreased (by 8.5% and 3.4% respectively since 2019). In transport it has increased (by 7.9%) since 2019.

Poland's national financing framework for energy efficiency is dominated by non-repayable financing schemes, primarily grants, but also involves mixed schemes, in particular through its white certificates market and, to a lesser extent, financial instruments. Poland is in the process of setting up its national hub under the European Energy Efficiency Financing Coalition, which aims to foster cooperation with financial institutions and leverage private investments.

The observed reduction in residential final energy consumption is primarily due to improvements in energy efficiency ([237]), indicating progress in implementing Poland's 2020 long-term renovation strategy. Successful programmes are being implemented, such as the clean air programme, a key instrument to accelerate the replacement of coal-based heating sources and improve energy efficiency in households. Since 31 March 2025, significant improvements have been made, including mandatory energy audits and verification of building energy standards before and after renovation. Since 1999, the TERMO programme, which has served as the primary initiative supporting thermal modernisation and energy efficiency in multifamily buildings, has also benefited from RRP funds. Nevertheless, given the share of energy consumed in Poland used in buildings, Poland is encouraged to submit its draft national building renovation plan pursuant to the recast EPBD in order to ensure a clear and predictable pathway towards an energy-efficient and decarbonised building stock.

Structural challenges persist in heating decarbonisation, despite coal reliance in this area declining from 61% in 2023 to 57.4% in 2024. Poland has put in place policies to phase out individual coal-based heating and set targets to eliminate the installation of gas boilers in new buildings. However, the national heating strategy is still being prepared. The share of households using coal-based individual heating and hot water is declining steadily, from 39% in 2015 to 15% in 2025([238]). At the same time, households' energy consumption for heating and hot water is also sourced from district heating, with nearly 50% of households connected to district heating networks. The Polish district heating sector still relies largely on coal, but is fast transitioning to gas combined heat and power. These investments in gas-based heat generation must consider the post-2035 Energy Efficiency Directive (EED) rules, which require a progressive reduction in the share of high-efficiency cogeneration in the heat baseload. As of 2025, only 22% of district heating is considered energy-efficient, and RESs, chiefly biomass, account for only 14.7% of gross final energy in district heating. Despite technical and financial challenges, decarbonisation efforts can leverage district heating as a key enabler of system flexibility, using power-to-heat technologies to stabilise([239]) the electricity grid, integrate renewable energy sources and unlock the potential of geothermal and solar thermal heating. Although Renewables for district heating and other

([237]) https://op.europa.eu/en/publication-detail/-/publication/9f833801-5c6e-11f0-a9d0-01aa75ed71a1/language-en.

([238]) Economic Weekly 5/2026, February 6, 2026 – Polish Economic Institute

([239]) In district heating in Gdańsk, e-boilers operate as controllable electricity loads, providing ancillary services to the Polish transmission system operator (PSE). Year-on-year, the need for dispatch orders is increasing – in 2024 there had been 83, while in 2025, by September alone, there were already 100. Almost all of them are executed using e-boilers (84% in 2024), which clearly shows the potential for synergies. Since 2022, e-boilers have consumed 16 017 MWh, which enabled renewable energy sources to operate within the energy system – sources that would otherwise have had to be curtailed. In so doing, they produced 580 230 GJ of heat and reduced CO_2 emissions by 5 926 tonnes and coal consumption by 2 830 tonnes. If the full potential of the boilers had been utilised under favourable regulations, they could have produced up to 16 times more energy (226 000 MWh) during this period, covering around 30% of Gdańsk's heat demand. Source: PGE Energia Ciepła, stakeholder consultation event for the EU heating and cooling strategy, 7.11.2025.

support programs by the National Fund for Environmental Protection and Water Management (NFOŚiGW) provide support for district heating, the lack of clear visibility and investment for small and medium-sized district heating to invest in modernisation and electrification, combined with a lack of incentives from a tariff perspective, remains a key bottleneck. In that context, the RRF is supporting 23 new clean combined heat and power systems.

Heat pump deployment fell by 35% in 2024 due to an unfavourable electricity-to-gas price ratio and increased popularity of gas and biomass boilers. Heating and cooling account for 81% of residential energy consumption, with renewables supplying only 21% of the total energy used for heating and cooling in all sectors. Income-based incentives exist for heat pumps. However, their impact is likely to be offset by the fact that electricity is more expensive than fossil solutions.

Fossil fuel subsidies

In response to rising energy prices following the regional crisis in the Middle East, Poland has imposed price caps on profit margin of specific downstream products in the supply chain. For instance, ORLEN S.A. has significantly reduced its retail margin on diesel fuel, supporting a temporary promotion at its stations that helped lower fuel prices during March and April. Poland has proposed the "CPK Package" to combat rising fuel prices amid the Middle East crisis, including cutting VAT on fuels from 23% to 8%, reducing excise duties to EU minimums, imposing daily maximum retail prices, and taxing oil companies' excess profits. Poland has also introduced fines up to 1 million PLN for non-compliance and is implementing structural reforms, including dynamic pricing contracts and smart grid digitalisation. Poland also contributed to the IEA collective action to release 400 million barrels of emergency oil reserves.

Poland has taken no measures to address the 2025 CSR on *phasing out fossil fuel subsidies, especially those related to coal mining.* In 2024, environmentally harmful ([240]) fossil fuel subsidies without a planned phaseout before 2030 accounted for 0.28% ([241]) of Poland's GDP ([242]) – below the EU weighted average of 0.32%. Ongoing subsidies for the coal mining industry, tax exemptions for coal and fuel oil ([243]) and excise duty refunds on diesel used in agriculture remain in place as fossil fuel subsidies without a planned phaseout before 2030 which do not specifically address, in a targeted way, energy poverty or genuine energy security concerns. Additionally, Poland's 2023 effective carbon rate ([244]) averaged EUR 68 per tonne of CO_2 – below the EU weighted mean of EUR 84.80 ([245]).

The overall value of support for the coal mining sector (in the form of both budget subsidies and capital support) has increased in recent years. The 2025 state budget earmarked PLN 8.94 billion for the hard coal mining sector (in the form of both budget subsidies and capital support), and the 2026 state budget earmarks PLN 5.50 billion in subsidies. The only phaseout of subsidies remains correlated to the closure of coal mining.

In December 2025, Poland adopted a law introducing a package of benefits for workers at companies that are closing mines, including tax-free severance payments of PLN 170 000 (EUR 40 000). The plan provides for the closure of five mines within the next decade and a complete phaseout of thermal coal mining by 2049, the latest phaseout date in the EU.

([240])Explicit fossil fuel subsidies (e.g. direct transfers) and implicit fossil fuel subsidies (i.e. tax expenditures linked to forgone tax revenues that have an identifiable fiscal impact for the central budget) that support fossil fuel energy production, transmission and/or consumption.

([241])European Commission calculation based on underlying data from the *Study on energy subsidies and other government interventions in the EU – 2025 edition,* Enerdata.

([242])2024 gross domestic product at market prices, Eurostat.

([243])Fuel oil used for the following purposes is exempted from excise duty: the production of electricity and heat in cogeneration or in agricultural, horticultural, greenhouse and forestry activities.

([244])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.

([245])OECD (2024), Pricing Greenhouse Gas Emissions 2024.

Table A9.1: **Key energy indicators**

	Poland				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1628**	**0.1651**	**0.2222**	**0.2393**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	28.1%	32.2%	25.1%	25.1%	36.6%	54.3%	55.6%	47.8%
Network costs	29.5%	29.8%	26.9%	28.3%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	42.3%	38.0%	48.0%	46.6%	36.7%	20.3%	19.6%	25.0%
VAT	18.7%	5.9%	18.7%	18.7%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.0427**	**0.0551**	**0.0750**	**0.0839**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	55.3%	78.0%	64.0%	63.3%	43.7%	61.0%	64.5%	53.9%
Network costs	24.8%	20.9%	16.5%	17.3%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	19.9%	1.1%	19.5%	19.4%	33.8%	21.7%	18.4%	27.8%
VAT	18.7%	0.2%	18.7%	18.7%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.0973**	**0.1534**	**0.2080**	**0.1859**	**0.1242**	**0.1895**	**0.1971**	**0.1661**
Energy & supply	35.9%	48.7%	41.0%	36.9%	43.0%	66.5%	63.0%	55.8%
Network costs	15.1%	11.4%	12.2%	14.1%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	37.2%	35.4%	34.7%	37.2%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0330**	**0.0839**	**0.0858**	**0.0590**	**0.0328**	**0.0722**	**0.0672**	**0.0517**
Energy & supply	70.0%	93.2%	74.6%	71.1%	66.2%	77.3%	77.3%	68.7%
Network costs	9.6%	5.3%	6.0%	9.1%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	2.1%	1.1%	0.9%	1.4%	12.5%	6.1%	7.3%	11.6%
Wholesale electricity price (EUR/MWh)	86.8	166.3	111.9	96.4	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)	**170,465**	**170,039**	**163,989**	**158,043**	**179,631**	**179,748**	**167,362**	-
Combustible Fuels	152,295	154,428	145,269	137,254	156,279	148,579	127,848	-
Nuclear	-	-	-	-	-	-	-	-
Hydro	3,034	2,387	2,665	2,937	3,101	3,018	3,734	-
Wind	14,909	12,799	15,107	15,800	16,234	19,780	24,176	-
Solar	165	300	711	1,958	3,934	8,310	11,107	-
Geothermal	-	-	-	-	-	-	-	-
Other Sources	62	125	237	94	84	61	497	
Gross Electricity Production [%]								
Combustible Fuels	89.3%	90.8%	88.6%	86.8%	87.0%	82.7%	76.4%	-
Nuclear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Hydro	1.8%	1.4%	1.6%	1.9%	1.7%	1.7%	2.2%	-
Wind	8.7%	7.5%	9.2%	10.0%	9.0%	11.0%	14.4%	-
Solar	0.1%	0.2%	0.4%	1.2%	2.2%	4.6%	6.6%	-
Geothermal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Other Sources	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	-
Net Imports of Electricity (GWh)	**2,287**	**5,695**	**10,623**	**13,267**	**888**	**-1,677**	**3,737**	-
As a % of electricity available for final consumption	1.6%	3.8%	7.0%	8.9%	0.6%	-1.1%	2.5%	-
Electricity Interconnection [%]	**4.0%**	**4.0%**	**4.0%**	**3.9%**	**7.0%**	**6.8%**	**5.5%**	**5.1%**
Share of renewable energy consumption - by sector [%]								
Electricity	13.1%	13.0%	14.4%	16.2%	17.2%	21.0%	25.8%	-
Heating and cooling	14.8%	21.5%	22.0%	22.1%	21.0%	22.1%	20.4%	-
Transport	4.2%	5.7%	6.2%	6.6%	5.7%	5.8%	6.0%	-
Overall	11.1%	14.9%	15.4%	16.1%	15.6%	16.6%	16.6%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**42.8%**	**40.5%**	**46.0%**	**48.0%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	0.3%	-3.6%	8.0%	5.0%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	96.9%	96.4%	98.4%	96.8%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	78.3%	83.6%	81.2%	81.3%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	54.9%	56.6%	19.6%	0.0%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	72.0%	63.4%	43.0%	2.0%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	73.6%	66.1%	12.4%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**20.1**	**20.2**	**20.8**	**21.3**	**22.8**	**19.6**	**20.2**
Gas Consumption year-on-year change [%]	4.4%	0.5%	2.9%	2.6%	7.2%	-13.9%	2.9%
Gas Imports - by type (in bcm)	**15.7**	**15.8**	**17.5**	**17.4**	**18.5**	**15.2**	**15.9**
Gas imports - pipeline	14.0	13.0	14.0	13.6	14.4	9.0	9.2
Gas imports - LNG	1.8	2.7	3.5	3.8	4.1	6.2	6.7
Gas Imports - by main source supplier [%]							
Germany	22.7%	18.8%	22.6%	21.0%	17.7%	28.9%	7.3%
Ukraine	0.0%	0.0%	0.0%	0.6%	2.0%	0.5%	3.5%
United States	0.6%	0.5%	5.4%	5.7%	8.6%	22.6%	0.0%
Russia	65.6%	61.6%	55.0%	54.9%	56.6%	19.6%	0.0%

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

While Poland has made progress in climate adaptation policies, some challenges remain. Poland received a CSR in 2025 to improve climate adaptation governance, in particular as regards water resources, to ensure the long-term sustainability of sectors and activities dependent on water ecosystem services. Over the last year, progress has been made in developing local and sectorial investment, partially improving climate resilience, applying pilot nature-based solutions in climate adaptation and improving wastewater management. The main challenges include a lack of integrated, up to date planning and a coordinated strategic approach to climate adaptation between regional and national level, and climate adaptation financing mainly depending on EU funds. Additionally, the insurance gap and continuous ecosystem degradation remain significant issues. Without an overarching framework and up to date risk assessment, the investments crucial for Polish infrastructure, ecosystem, and agriculture resilience might not be implemented. Environmental challenges result from eutrophication of rivers, lakes and the Baltic Sea, driven by excessive nutrient loads. Hydro-morphological pressures aggravate the situation, largely causing failure to achieve good ecological status/potential of water bodies. Finally, Poland faces a serious risk of missing the LULUCF target, increasing the gap and lacking the adequate response in particular in the areas of urban settlements, wetland and agriculture management.

Climate adaptation and preparedness

Poland faces serious risks related to climate change impacts which require significant, coordinated actions and investments across sectors. In the Central and Eastern Europe region, Poland faces one of the greatest increases of average and extreme temperatures and decreases of heating degree days and total precipitation in Europe in recent decades([246]). Poland observes persisting dry periods (with the daily sum of precipitation below 1 mm) and wet periods (>10 mm/d)([247]). As such, Poland is particularly exposed to floods, droughts and heatwaves, as well as extreme winds and landslides. This increasingly affects critical sectors, including water management, agriculture aquaculture and energy. Climate change also affects coastal areas in Poland, including tourism and sectors such as fisheries. If current levels of coastal protection are not raised, direct economic damages and social impact from coastal flooding in Poland are projected to rise sharply this century.

The environmental crisis in the Oder, Poland's second largest river, remains one of the most urgent climate change challenges in recent years. Increased salinity caused by wastewater discharge from coal mining and other industrial sources, combined with increased temperatures caused by climate change and influx of biogens from agriculture create conditions in which *Prymnesium parvum* (golden algae) blooms. This poisons waters, destroys natural habitats and endangers people's safety([248]). Efforts have been made to monitor the risk of golden algae blooms and to strengthen preparedness to address this threat, such as developing effective crisis procedures. Other measures are envisioned, focusing primarily on increasing water retention and conducting R&D to create desalination technologies that are less energy-intensive and more cost-effective. Nevertheless, legal incentives for industry to invest in desalination plants remain weak, including low fees for wastewater discharge.

A recent study([249]) commissioned by the Directorate-General for Climate Action estimates that Poland will need to invest over EUR 3 550 million in climate adaptation per year up to 2050 (0.3% of annual GDP, which is below the EU average of 0.5%). This investment would be first and foremost in ecosystems (around 37% of the total), followed by infrastructure (around 36% of the total) and food production (around 17% of the total). Between 2005 and 2023, annual Polish climate-related economic losses were estimated at over EUR 390 million([250]). Over 90% of climate-related

([246])https://www.iea.org/articles/poland-climate-resilience-policy-indicator.
([247])https://www.gov.pl/web/klimat/adaptacja-do-zmian-klimatu.
([248])https://www.nature.com/articles/s41598-024-66943-9.
([249])European Commission (2026), Assessment of EU and Member States adaptation investment needs, Table 25, Link. The study provides detailed estimates of adaptation investment needs at the level of the EU and individual Member States per type of measure. It relies on a common methodology that makes estimates comparable across the EU. Four accompanying methodological reports provide a detailed description of how the results were estimated to ensure full transparency.
([250])https://www.eea.europa.eu/en/europe-environment-2025/countries/poland/climate-related-economic-losses.

losses in Poland between 1980 and 2023 have been attributed to hydrological disasters, such as floods and droughts([251]). One study estimates the annual GVA loss at EUR 0.35 bn and warns that those costs may triple in Poland by the end of the decade([252]). Without sufficient adaptation measures, in 2100, the annual cost of direct damage from coastal flooding alone might vary between EUR 2.3 and 9.3 billion, with the number of people expected to live in areas facing very high risk of flooding between estimated 24 000 and 47 000([253]).

The Ministry of Climate and Environment of Poland has been developing the updated national strategy for climate adaptation. Poland received in 2025 a CSR to improve climate adaptation governance, and only some partial progress is observed. The strategy is supposed to update the existing strategic adaptation plan 2020 with a perspective to 2030 adopted in 2013([254]). It is supposed to be submitted by June 2027 and updated every four years.

Coordination is lacking between local, regional and national authorities to address acute challenges of climate resilience and preparedness and finance adaptation efforts. Moreover, the share of Poland's population covered by the EU Covenant of Mayors was 14% in 2024 and remained significantly lower than in the EU (34%)([255]). However, 73% of signatories submitted a 2030/2050 action plan. The regional adaptation strategy of the Małopolskie region is under preparation. However, the relation between the national, regional and municipal levels remains unclear. At the municipal level, cities with more than 100 000 inhabitants implemented adaptation plans([256]). Investments are supported by the Polish Development Bank (BGK) via a dedicated loan programme financed from the RRF (B3.4.1. Investments in a green transformation of cities), supporting the climate adaptation of Polish cities([257]). The amendment to the national Environmental Protection Law of November 27, 2024, introduced an obligation that any Polish city/town with a population above 20,000 inhabitants must adopt a Municipal Adaptation Plan (MPA) by January 2028.

Allocating resources to climate adaptation might be not sufficient, given that Poland's vulnerability in climate preparedness remains one of the highest in the EU([258]). In the water management sector, adaptation management is enacted by the State Water Holding Polish Waters, which combines both operational and regulatory capacities and implements river basin management plans, drought effects counteracting plans([259]). The National Fund for Environmental Protection and Water Management provides for climate adaptation projects, with EUR 163 million designated for medium-sized cities (20 000-100 000 inhabitants), losing their socio-economic functions in East Poland([260]). Implementation of new technology is coordinated under Biostrategy([261]) and Hydrostrategy([262]) by The National Centre for Research and Development. In 2025, the Ministry of Climate and Environment launched an advisory project, financed by the European Funds for Eastern Poland 2021-2027, entitled 'Support for Adaptation Measures in Eastern Poland.' The project is addressed to medium-sized cities and health resort municipalities in six Polish voivodeships. Preparation of regional and municipal adaptation strategies and plans is partially financed through the FEnIKS 2021-2027 programme by the National Fund for Environmental Protection and Water Management. The adaptation funding gap was partially alleviated by some investments under recovery and resilience plans, in particular B 3.4.1. Investments in increasing biologically active

([251])https://sdi.eea.europa.eu/catalogue/srv/eng/catalog.search#/metadata/7bab0fee-9353-45ff-b2b5-35a2973b07d9.

([252])https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5484206.

([253])https://www.nature.com/articles/s41467-020-15665-3.

([254])https://www.gov.pl/web/klimat/strategiczny-plan-adaptacji-2020.

([255])https://eu-mayors.ec.europa.eu/en/node/1684.

([256])https://www.gov.pl/web/klimat/mpa-44.

([257])https://www.bgk.pl/produkty/pozyczka-wspierajaca-zielona-transformacje-miast/?__cf_chl_tk=ujCuAzuvYe1A7yNpFhFJ6z3Wij4khn7DeTWMP8kAoRA-1769164558-1.0.1.1-1GyicdNo%209zvErfkG2k6TA_dDTKivarz8kUxtVYAt4Iw#c33424.

([258])https://www.clientearth.pl/media/cdynvfyt/co-polacy-my%C5%9Bl%C4%85-o-klimacie-raport.pdf.

([259])https://www.gov.pl/web/nfosigw/harmonogram-naborow.

([260])https://www.gov.pl/web/nfosigw/fepw0202-iw01-00225.

([261])https://www.gov.pl/web/ncbr/biostrateg.

([262])https://www.gov.pl/web/ncbr-en/hydrostrateg.

surfaces in urban and functional areas and reducing soil sealing; sustainable rainwater management systems involving green-blue infrastructure and nature-based solutions (760.9 mn EUR).

Climate risks have a direct and significant effect on Poland's economy, while the insurance coverage remains low. Between 1980 and 2024, Poland recorded EUR 27.9 billion in economic losses and faced over 6 700 fatalities([263]) caused by weather- and climate-related extreme events. Only 6% of those loses were covered by insurance. Latest studies show that extreme weather events are likely to have prolonged and intensifying impact on economic activity in Poland([264]). The Polish insurance market remains insufficiently developed to respond to this impact. In 2024, the insurance penetration rates in Poland (2.2% GDP) were over three times lower than the EU average (6.7% GDP) and the OECD average (6.2% GDP). In particular, the penetration rate of life insurance (0.6% GDP) was over six times lower than the EU average (4.0%)([265]), and a negative trend has been observed from 2014-2022([266]). While the insurance coverage of single-family houses for extreme weather events is significant (71% for hurricanes and strong winds, 63% for floods), the coverage of all residential buildings (including blocks of flats) remains significantly lower (40% for strong winds and 36% for floods). The high coverage for privately owned single-family houses results from mortgage loan requirements in the Polish banking sector, whereas blocks of flats are not covered by the mandatory insurance requirement([267]).

Transport infrastructure is highly vulnerable to climate risks when it comes to preparedness, economic and social capacity and quality([268]). The total Polish TEN-T infrastructure adaptation costs in the transport sector have been estimated to be as high as EUR 2.2 billion by 2050, particularly in rail (EUR 1.60 billion) and road transport (EUR 0.47 billion). Against that background, only EUR 0.2 billion was invested and EUR 0 048 billion was under consideration for TEN-T adaptation investments implemented or considered by authorities by 2023.

In the road transport sector, the adaptation to climate change is included in the policies of the General Directorate for National Roads and Motorways, with EU funds playing a central role. Financial support (500 million EUR) and technical assistance of European Investment Bank is intended to support the renovation of up to 125 km of national roads, including repairing bridges and adapting drainage systems to heavier rainfall to prevent flooding([269]). Total EIB involvement in transport infrastructure in Poland reached EUR 35 billion([270]). For the railway sector, the Polish railway infrastructure manager (PKP Polskie Linie Kolejowe SA) published the rail infrastructure climate adaptation plan([271]) in 2024.

The exposure to the crucial identified risks for the rail infrastructure (heavy rainfall, flooding) were localised (southern Poland) and addressed with organisational, design and investment measures. While river transport in Poland is among the most heavily affected by drought risk in the EU([272]), it remains below 0.1% of the total Polish freight transport on land([273]).

A nationwide systemic approach to reduce the climate-related vulnerability of energy

([263])EEA, 2024, *Economic losses and fatalities*, Link.

([264])Usman, Parker & Vallat (2025), Dry-roasted NUTS: early estimates of the regional impact of 2025 extreme weather, Link.

([265])https://www.oecd.org/en/publications/global-insurance-market-trends-2025_0d11ecf4-en/full-report/component-3.html.

([266])https://piu.org.pl/raport-roczny-piu/.

([267])https://piu.org.pl/wp-content/uploads/2023/11/PIU-raport-klimatyczny-2023_final_druk_eng_lekki.pdf.

([268])European Commission: Directorate-General for Mobility and Transport, *Support study on the climate adaptation and cross-border investment needs to realise the TEN-T network*, Publications Office of the European Union, 2024.https://data.europa.eu/doi/10.2832/7839720

([269])https://www.gov.pl/web/gddkia/europejskie-srodki-na-przebudowy-drog-krajowych.

([270])https://www.eib.org/en/press/all/2025-547-eib-invested-nearly-eur1-38-billion-in-2025-to-develop-poland-s-road-network.

([271])https://www.plk-sa.pl/files/public/user_upload/pdf/Ochrona_srodowiska/29.8.2024/Plan_adaptacji_infrastruktury_kolejowej_do_zmian_klimatu_-_wersja_WCAG.pdf.

([272])https://publications.jrc.ec.europa.eu/repository/handle/JRC135215.

([273])https://transport.ec.europa.eu/facts-funding/studies-data/eu-transport-figures-statistical-pocketbook/statistical-pocketbook-2025_en.

infrastructure is missing in Poland. Structured steps are observed at TSO for electricity level. Polish TSO for electricity (PSE) in the PSE 2040 strategy([274]) (published December 2025) envisions the preparation of the PSE climate policy, which is scheduled for the first half of 2026. The climate adaptation risk and policies are not directly addressed in the Polish TSO for gas (GAZ-SYSTEM) strategies and development plans.

Nature-based solutions are being developed in Poland, but the scope of their application remains limited. Between 2023 and 2030, 4 nature-based solution projects in climate adaptation are financed with LIFE, with a total budget of EUR 18.5 million (59% EU contribution). The project focuses on Małopolska([275]), monitoring, spatial planning([276]) and vulnerability assessment([277]). In its updated drought effects counteracting plans, Polish Waters plans to give priority to nature-based solutions to enhance water retention, biodiversity conservation and agricultural production stability. The draft will be subject to nationwide public consultation in the first half of 2026. The implementation of measures set out in the plan will aim to reduce drought risk and minimise economic, social and environmental losses. Responsibility for the implementation of the document will rest with central and local government authorities, as well as Polish Waters. There is scope for more significant action and funding in Poland to implement nature-based solutions, in particular to manage rainwater where infiltration into the ground at the place of precipitation exceeds losses due to evaporation and surface runoff, so as to decrease the drought and flooding risks.

Water resilience

Water resources in Poland are very scarce compared to other countries, earning it a reputation as the 'dry man of Europe'. Some 97% of resources come from rainfall, but much of it is lost to leakages and waste([278]). Electricity cooling, public water supply and agriculture are the most water-dependent sectors([279]). The national water exploitation index plus (WEI+)([280]), a measure of how much water is being used compared with the total renewable freshwater resources available for a given territory and period, was at 5.16 in 2023, very close to the EU-27 average (5.15). However, Poland has the fourth lowest renewable freshwater resources per 1 000 habitats in the EU at 1.6 million m^3/year, showcasing water scarcity risks. Moreover, according to the third river basin management plans (RBMPs), water abstraction is mainly estimated based on available permit data, while abstractions exceeding the permitted volumes or non-permitted abstractions are not captured, most likely causing an underestimation of abstracted volumes and the associated pressure([281]).

Water productivity in Poland([282]) stood at EUR 64 per m^3 of abstracted water in 2023, which is far below the EU-27 average of EUR 153 per m^3. This reflects inefficiencies in abstraction-heavy sectors like energy and agriculture, despite the upwards trend. These inefficiencies pose competitiveness risks, especially during peak seasons. In 2023, electricity cooling was responsible for nearly 54% of freshwater abstraction, with public water supply at 29%([283]). Water efficiency does not feature in the

([274])https://strategia.pse.pl/Strategia_PSE_2040.pdf.

([275])https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE23-CCA-PL-LIFE-DREAM-CITIES-101158113/life-dream-cities-designing-and-realisation-of-exemplary-adaptation-among-medium-sized-cities-malopolska-ready-for-adaptation.

([276])https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE24-CCA-PL-LIFE-RIVEREASE-101213967/application-of-nbs-to-ease-agricultural-impact-on-water-resources-in-the-face-of-climate-change.

([277])https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE20-CCA-PL-001573/solution-for-climate-change-vulnerability-risk-assessment-and-adaptation-planning-in-large-commercial-architecture.

([278])Poland - Environment - European Commission.

([279])EEA, Water abstraction by economic sector, 2000-2023, 2025.

([280])Eurostat, Water Exploitation Index, plus.

([281])Commission Staff Working Document SWD (2025)19 accompanying the 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), Link.

([282])Water productivity is a metric that is calculated by dividing GDP (in chain-linked volume) by total water abstraction. It indicates the average economic value (GDP) a Member State creates for each unit of water it takes from nature.

([283])EEA, Water abstraction by economic sector, 2000-2023, Link.

RBMPs. Water efficiency does not feature in the RBMPs. Measures related to water efficiency were implemented in the second RBMPs (for 2015-2021), but they are not planned in the current ones (for the 2022-2027 period). Water tariffs, regulated by the Polish Water Law (*Prawo Wodne*), do not provide specific incentives to use water efficiently.

The ecological status/potential of Poland's surface water bodies as well as their chemical status have deteriorated between the second (covering 2015-2021) and third RBMPs (2022-2027). The share of surface waterbodies with at least good ecological status/potential has decreased from 31.2% to 8.4% since the second RBMPs, although this is partially due to a very high proportion (27.9%) of water bodies reported as having unknown status. Furthermore, none of the transitional and coastal waterbodies have a good ecological status. A striking example is the deterioration of the Oder, which in summer 2022 and to some extent in the following summers, experienced an uncontrolled blooming of an intrusive gold algae, poisoning water and destroying habitats. Failure to take appropriate measures, such as review of water permits for saline discharges (from industry, especially coal mines) or renaturalisation of the river has left the Oder vulnerable to potential recurrence of the algae bloom and further deterioration.

Hydro-morphological pressures are among the dominant pressures in Poland causing failure to achieve good ecological status/potential. According to the electronic reporting, 50% of all surface water bodies and 64% of rivers are subject to significant hydro-morphological pressures, such as physical alterations of channel, bed, riparian area and shore or creation of dams, barriers and locks. In the river basin districts of the Vistula and the Oder, 90% of rivers and 60-70% of lakes are at risk because of anthropogenic pressures, including those due to hydro-morphological alterations.

Nutrient pollution remains one of Poland's most persistent water-quality challenges. Diffuse pollution from agriculture due to nutrient leakage and pesticide use is identified as a significant pressure and impact for 43% of surface water bodies and 51% of groundwater bodies([284]). The excess of nitrogen and phosphorus leads to eutrophication, causing proliferation of algae blooms and oxygen depletion. As indicated by the 2020-2023 data reported by Poland under the Nitrates Directive, eutrophication is a severe problem across Poland, with around 76% of monitoring stations in rivers, all monitoring stations in transitional and coastal waters and 75% of monitoring stations in lakes being eutrophic or at risk of becoming eutrophic (a total of 76% of eutrophic surface water bodies, higher than the EU average). A 2026 report by Poland's Supreme Audit Office (NIK) found national measures to control nutrient pollution from agriculture to be mistargeted and ineffective([285]).

Eutrophication is a major issue in the Baltic Sea. The latest HELCOM assessment in 2023 reveals little progress in improving the Baltic Sea's environment with no significant reduction in nitrogen input in Baltic coastal areas since 1997-2003([286]). The Baltic Sea's poor environmental status clearly impacts a wide range of ecosystem services and affects different sectors, like fisheries and coastal tourism. Moreover, pollution and oxygen-deprived dead zones in Baltic Sea contribute to the collapse of stocks of some fish species (e.g. Baltic cod)([287]).

Poland's drinking water infrastructure is ageing and access to drinking water of adequate quality is uneven between urban and rural areas. A 2022 audit report by NIK, covering water management in rural areas, revealed significant water loss (up to a third of treated water) from old, failing pipeline networks, with many companies lacking funds for repairs and inspections. The NIK auditors also found water quality problems in 80% of units([288]). Despite overall significant improvements in access to drinking water and sanitary services over the last

([284])Commission Staff Working Document SWD (2025)19 accompanying the 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), Link.

([285])Polska bezradna wobec zanieczyszczenia wód azotanami z rolnictwa – Najwyższa Izba Kontroli, Link.

([286])HELCOM-Thematic assessment of eutrophication 2016-2021, Link.

([287])State of the Baltic Sea 2023 in brief, Link.

([288])Zmarnowane miliardy litrów wody na wsiach - Najwyższa Izba Kontroli, Link.

years, the situation is much worse in rural areas compared to cities.

Wastewater treatment is a persistent cause for concern. Although 93.1% of the generated wastewater load in Poland was compliant with the Urban Wastewater Treatment Directive according to the EEA 2022 data, which is an improvement compared to 2020, still only 19 out of 36 big cities were compliant. Further efforts are needed to provide collection of additional urban wastewater and biological treatment, including with nitrogen and phosphorus removal.

Impacts of climate change are not systematically taken into account in water management planning. Third RBMPs do not include much information regarding risk assessment and analysis of the impacts of climate change on environmental objectives of water bodies. This would need to be improved to better incorporate current assessments of climate change impacts into policies focused on the management, protection and sustainable use of water resources.

To address some of the issues described above, Poland is implementing investments in sustainable water and wastewater management. Under the recovery and resilience plan (RRP), the investments support the construction, extension or modernisation of water supply or wastewater disposal systems in rural areas. The cohesion policy programmes support investments in wastewater infrastructure in agglomerations non-compliant with UWWTD.

The annual water investment needs reach an estimated EUR 4.3 billion (in 2022 prices) in 2021-2027 in Poland, both for the water industry and for the protection and the management of water. Of the total annual need, EUR 2.4 billion relates to the management of wastewater. A further EUR 1.5 billion is necessary for drinking water-related investments and around EUR 435 million for the protection and management of water. Considering current investments, which are estimated to be around EUR 2.8 billion per year, the financing gap reaches EUR 1.5 billion per year, corresponding to 0.23% of the national GDP([289]).

Nature restoration

Nature degradation creates significant risks to the country's economy and competitiveness. Poland has a supply chain dependency on ecosystem services of 26% of its gross value added (EU average: 22%). Overall, 40% of Poland's economy is dependent on ecosystem services to produce its gross value added (EU average: 44%)([290]). Several sectors such as agriculture, forestry and water utilities have 100% of their gross value added directly dependent on ecosystem services. Estimates from 2023 analysis put the annual costs of ecosystem restoration and maintenance in Poland at EUR 0.54 billion, while the annual benefits are expected to be as high as EUR 5.98 billion([291]).

Despite Poland's exceptionally rich biodiversity – reflected in 39.6%([292]) of its territory designated as protected areas – habitat degradation continues. Natural water bodies are subject to artificial modification, while wetlands delivering essential water retention and climate regulation functions are among the most threatened ecosystems. According to the latest available report submitted by Poland, for 2013-2018, as much as 78.26% of habitats and 46.69% of species have a bad or poor conservation status.

Under the Nature Restoration Regulation, Poland, along other Member States, should contribute to the achievement of the EU target to make at least 25 000 km of rivers free flowing by 2030. The aim is to restore freshwater ecosystems and the natural function of

([289])2025 Environmental Implementation Review – Country Report POLAND, Link.

([290])Dataset from Commission/JRC, based on Hirschbuehl *et al*, 2025, The EU economy's dependency on nature, Link.

([291])European Commission: Directorate-General for Environment, IEEP, IUCN, Trinomics and UNEP-WCMC, Impact assessment study to support the development of legally binding EU nature restoration targets – Final report, Publications Office of the European Union, 2023, Link.

([292])Eurostat, Protected Areas Indicator, Link.

rivers and to mitigate the impact of floods. Free-flowing rivers also generate broader socio-economic benefits, including enhanced rural landscape quality, new recreation and tourism opportunities, strengthened local job creation, improved water quality, and better sediment transport that protects deltas and coastal areas against erosion and rising sea levels. In 2020**,** Poland produced the national programme for surface waters renaturalisation([293]) and a handbook on restoration that outlines objectives and examples of measures (including nature-based solutions), but the implementation of those documents is lagging. Some measures are being implemented, including actions to increase water retention and ecosystem resilience, as well as forest-related initiatives aimed at strengthening the environmental functions of ecosystems.

Nature degradation is further amplified by invasive alien species, with 36 recorded in Poland in 2025 (as compared to 27 in 2023 and 33 in 2024), inflicting estimated damages of EUR 80 million up to 2020, primarily affecting agriculture and public health([294]).

Sustainable agriculture and land use

Carbon removals in Poland fall considerably short of the level of ambition needed to meet its 2030 target for land use, land-use change and forestry (LULUCF). In Poland, net carbon removals in the LULUCF sector have been declining. While the forest and grassland sectors removals have increased, the land use in settlements contribute to the negative trend in net removals observed in Poland. The main drivers impacting LULUCF stock identified by Poland include intensifying climate-related disturbances, most notably reduced tree growth caused by prolonged droughts and heat stress – compounded by ageing forest stands with declining regeneration capacity. Increasingly frequent droughts and prolonged heat stress significantly constrain tree growth. To meet its 2030 LULUCF target, additional carbon removals of 3.3 million tonnes of CO_2 equivalent (CO_2eq) are needed([295]). The latest available projections show a gap to target of 5.4 Mt of CO_2eq for 2030([296]). Thus, additional measures would be needed in the land sector to reach the 2030 target. In addition to increasing LULUCF net removals, further investments in healthy forests and soils are key to building resilient bio-based product value chains and enabling a growing, competitive EU bioeconomy. In particular continued improvements in the monitoring system of net removal data and will be crucial in supporting timely and effective action in the sector. Finally, the synergies between climate adaptation, increasing carbon removals, military defence potential (East Shield programme),([297]) and biodiversity([298]), suggested by research institutions([299]) could be explored and implemented.

Existing Polish LULUCF policies focus mainly on forestry, with less emphasis on wetland, agriculture and urban settlements management. In the forestry sector, current policies aim to prioritise biodiversity-oriented forest management, including longer rotation periods, selective harvesting systems and increased retention of deadwood. Planned actions focus on further scaling up close-to-nature forestry practices – longer rotations, mixed-species stands, and increased deadwood retention – to stabilise removals and reduce forest vulnerability to droughts, pests and extreme weather events. Expansion of afforestation and restoration of degraded forest land and peatlands is envisaged where feasible, subject to land-availability and cost constraints.

The Polish Supreme Audit Office found in 2025 that State Forests did not take correct, reliable and adequate measures to adapt forest management to the climate change

([293])Krajowy program renaturyzacji wód powierzchniowych - Państwowe Gospodarstwo Wodne Wody Polskie, Link.

([294])Neobiota, Economic Cost of invasive alien species across Europe (2021). Link. European Commission: Directorate-General for Environment, EMRC, Logika Group and RPA Europe; Update of the costs of not implementing EU environmental law (2025). Link.

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

([296])Climate action progress report 2025. Link.

([297])https://tarczawschod.wp.mil.pl/en/about-the-programme/.

([298])https://www.sciencedirect.com/science/article/pii/S0016328725002149.

([299])https://academia.pan.pl/zielona-tarcza-wschod-bagna-w-sluzbie-obronnosci/

([300]). The corrective actions, namely drawing up the national forest programme and amending the Forests Act and the Nature Conservation Act, were initiated but not finalised. The new State Forests' 'Forests for Climate' programme, launched in 2025, will cover more than 50 000 ha and will include afforestation of non-forest land, underplanting, diversification of species composition (including a higher share of broadleaves and Douglas fir) and soil-improving practices that enhance CO_2 uptake. The programme is intended to promote natural regeneration and sound silvicultural practices as core sequestration tools. Additional subsidies are available under the rural development programme (PROW) for private forest owners (0.1-40 ha) to support regeneration.

For settlements, Polish policies focus on compact urban development, green infrastructure and renaturation measures to limit emissions from land conversion and soil sealing. Pressures from investment activity and urban expansion are to be addressed through biodiversity-aligned land use planning that prioritises co-benefits. A pilot project launched in 2024 by the Ministry of Climate and Environment has created 14 'community forests' around major urban areas such as Warsaw, Kraków and Wrocław, providing access to nature for approximately 13 million residents. In the agriculture sector, under the CAP strategic plan for 2023-2027 ([301]) a total of EUR 66.52 million has been allocated for investments in afforestation/creation of woodland. The planned amount of the Carbon Farming and Nutrient Management eco-scheme is approximately EUR 2.63 billion.

Poland faces environmental, climate and public health risks due to persistent soil sealing and agricultural pollution pressures. Poland's functional urban area (FUA) has considerably expanded in the last years, with a yearly net land take increasing from 923 ppm of the total urban surface of the country in 2012-2018 up to 1 298 ppm in 2018-2021 (the third-biggest land take in the EU-27 and far above the EU average of 670 ppm/year in 2018-2021). This ongoing land take and the associated soil sealing causes less resilient ecosystems, decreased carbon sequestration and impaired flood protection ([302]). The greatest contributor to Poland's unhealthy soils is loss of soil organic carbon in mineral soils ([303]), which affects 29% of land and 58% of total cropland and grassland areas. 17% of the national territory experiences unsustainable soil erosion by water, wind, tillage and harvest, mainly in the southern part of the country. 8% of soils contain nitrogen concentrations above 50 kg/ha, and 8% of the national territory is highly or very highly susceptible to topsoil compaction.

Organic farming is not very widespread in Poland, accounting for an estimated 4.88% of the country's land area. Although the figure has increased significantly over the last two decades, it is still among the worst results in the EU. Poland is above the EU average for the frequency of pesticide residues in topsoil samples, with 14.5% of soil samples having more than 10 distinct pesticides residues (EU-27 average 11%) and for pesticide residues concentrations, with 70% of soil samples presenting pesticide concentration above 0.05 mg/kg (EU-27 average 57%) ([304]).

On a positive note, Poland has met its emission reduction commitments for 2020-2029 and is on track to reach its commitments from 2030 onwards ([305]). Ammonia emissions reported for the year 2023 indicate that with 21.1 kg/ha in 2023 ([306]), the agriculture sector is responsible for 96% of the total national emissions.

([300])https://www.nik.gov.pl/aktualnosci/ochrona-srodowiska/adaptacja-gospodarki-lesnej-do-zmian-klimatu.html

([301])https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/poland_en.

([302])EEA, Land take and land degradation in functional urban areas, 2022, Link.

([303])De Rosa, D., Ballabio, C., Lugato, E. et al., 'Soil organic carbon stocks in European croplands and grasslands: How much have we lost in the past decade?', Global Change Biology, Vol. 30, No 1, 2023, e16992, Link.

([304])Vieira et al. (JRC), Pesticides residues in European agricultural soils - Results from LUCAS 2018 soil module, Publications Office of the European Union, 2023. Link.

([305])2025 Environmental Implementation Review – Country Report POLAND, Link.

([306])Eurostat – Ammonia emissions from agriculture, Link.

Table A10.1:**Key Adaptation Indicators**

Climate adaptation and preparedness:							EU-27
	2019	2020	2021	2022	2023	2024	latest data
Drought impact on ecosystems *[area impacted by drought as % of total]*	14.51	2.57	1.82	7.16	7.96	-	2.76
Forest fires burned area [1] *[burned area in ha. per year]*	60	5 383	40	465	47	30	354 510
Economic losses from extreme events *[EUR million at constant 2022 prices]*	-	451	33	1	1	2 938	40 452
Insurance protection gap [2] *[composite score between 0 and 4]*	-	-	-	2	2	2	-
Sub-national climate adaptation action *[% of population covered by the EU Covenant of Mayors for Climate & Energy]*	6	8	13	15	18	18	34

Water resilience:							EU-27
	2019	2020	2021	2022	2023	2024	latest data
Water Exploitation Index Plus, WEI+ [3] *[total water consumption as % of renewable freshwater resources]*	6.83	6.22	5.11	6.33	5.16	-	4.53
Water productivity *[EUR per m^3]*	52	54	54	57	64	-	151
Water abstraction							
Water abstraction by source (% from surface water)	73.88%	72.75%	74.16%	75.18%	72.67%		-
Water abstraction by sector	Agriculture	Electricity cooling	Manufactu-ring	Public water supply	Mining and Quarrying	Constru-ction	
	10.40%	54.18%	5.42%	29.37%	0.61%	0.01%	
Status of water bodies [4] *[% of water bodies in a good status]*							
Surface water bodies (ecological)	-	-	-	-	-	8%	38%
Groundwater bodies (quantitative)	-	-	-	-	-	91%	93%

Nature restoration:							EU-27
	2019	2020	2021	2022	2023	2024	latest data
Ecosystem dependency *[% of direct dependency]*	-	-	-	40%	-	-	44%
Protected area *[% of terrestrial protected areas]*	39.6	39.6	39.6	39.6	39.6		26.4
Invasive alien species (IAS) *[number of IAS of Union concern]*	-	-	-	-	-	33	29.2
Damage cost of IAS *[EUR billion]*	-	-	-	-	0.08		1.69
Eutrophication *[AAE of area at risk of euthrophication]*				200	200		295

Sustainable agriculture and land use:							EU-27
			2012-2018		2018-2021		latest data
Yearly net land taken by Member State *[ppm of total urban surface per Member State]*			923		1 298		670
Land conversion in functional urban area *[% of total land taken from 2018-2021]*							
Arable land					49%		
Complex and mixed cultivation					0%		
Forests					8%		
Herbaceous vegetation associations					1%		
Open spaces with little or no vegetation					0%		
Pastures					41%		
Permanent crops					0%		
Water					0%		
Wetlands					0%		
	2019	2020	2021	2022	2023	2024	latest data
Nitrates in groundwater [5] *[$mgNO_3/l$]*	12.6	11.6	10.3	9.1	8.6		
Livestock density *(number of livestock units per hectare of utilised agricultural area)*		0.69			:		0.75
Ammonia emissions *[% of total utilised agricultural area]*	96%	96%	96%	96%	96%	-	94%
Pesticide contamination on rivers and lakes water bodies *[% of monitoring sites with pesticides exceeding thresholds, 2018-2023]*				rivers	13%		27%
				lakes	0%		18%
Pesticide contamination in soil *[% of samples with a concentration over 0.5 mg/Kg^{-1}]*					70%		57%
Net greenhouse gas removals from LULUCF [6] *[$ktCO_2$-eq]*	-23227.3	-24057.6	-24875.1	-36449.8	-32656.2	-	-198 421

(1) EFFIS (European Forest Fire Information System). Link.

(2) The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters, based on modelling of the risk from floods, wildfires and windstorms and on the insurance penetration rate. Scale: 0 (no protection gap) – 4 (very high gap). EIOPA, 2025, Dashboard on insurance protection gap for natural catastrophes.

(3) This 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 to or greater than 40% indicate severe water scarcity.

(4) European Commission, 2024, *Seventh 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).*

(5) Indicator refers to concentrations of nitrate (NO_3) in groundwater, measured as milligrams per litre ($mgNO_3/L$). Nitrate 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 is limited to 50 $mgNO_3/L$ to avoid threats to human health.

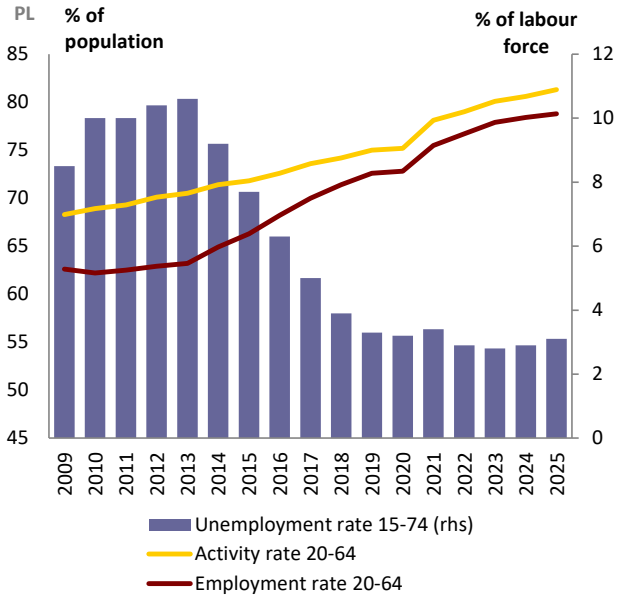
(6) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2025 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 – Annex IIa.

Source: Eurostat, EEA and JRC

ANNEX 11: LABOUR MARKET

Poland's labour market remains robust, with strong headline outcomes, but participation gaps continue to constrain labour supply and exacerbate labour shortages. Unemployment is among the lowest in the EU, and the national employment rate target of 78.3% has been met. Meanwhile, the reported labour shortages remain high, also driven by demographic trends and persistently low participation among several groups, including women, persons with disabilities and older people. Insufficient availability of childcare, and issues undermining work-life balance and inclusive employment support continue to constrain labour supply. These structural weaknesses limit the labour market's capacity to address current and future shortages, while also holding back progress on social inclusion, quality jobs and competitiveness. The 2025 country-specific recommendations for Poland highlighted the need to foster education and skills relevant to the labour market, including green and digital skills and increase the participation of disadvantaged groups in the labour market, including through effective education-to-employment transitions.

Graph A11.1: **Activity, employment and unemployment rates (annual)**



Source: Eurostat, LFS [lfsi_emp_a, une_rt_a][307]

[307] Note: Some indicators contain breaks and other flags. See Eurostat-LFS for further details on the dataset.

Employment continues to rise, and unemployment remains at record lows, but strong regional disparities in labour market outcomes persist. The employment rate among people aged 20-64 increased to 79.2% in Q4-2025 and was 78.8% for the whole year 2025, while the unemployment rate has hovered around 3% since 2022, matching pre-pandemic lows and remaining well below the EU average (6% in Q3-2025). Labour market slack stood at 5% in Q2-2025, slightly up from 4.8% in Q2-2024 but still significantly below the EU average of 10.9% ([308]). Labour force participation among people aged 15-64 grew from 66.4% in 2014 to 74.7% in 2024, reaching a level close to the EU average of 75.3% but around 15 pps lower than the top-performing Member States. Labour force participation rates vary substantially across regions. In 2024, the gap between the highest and lowest regional labour force participation rates reached 9.3 pps, up from 8.1 pps in 2023 (ranging from 77.7% in Dolnośląskie in the west to 68.4% in Podkarpackie in the south-east). Similar regional disparities are observed in employment and unemployment rates (with gaps of 9.2 pps and 2 pps respectively). Boosting the economic activation of groups who remain outside the workforce is essential to alleviate shortages and ensure sustainable employment growth. The implementation of activation measures is largely financed by the European Social Fund Plus (ESF+), including through regional programmes supporting personalised counselling, training and labour office services.

Despite recent improvements, gender disparities in employment remain high. The 2025 country-specific recommendations for Poland noted the barriers disadvantaged groups encounter when trying to enter the labour market. The gender employment gap has fallen by 3.2 pps since 2020 but is still at 11.6 pps, 1.6 pps above

[308] Labour market slack is the sum of the following: unemployed people, underemployed part-time workers, people seeking work but not immediately available for work, and people available for work but not seeking a job. Labour market slack is expressed as a percentage of the extended labour force. The extended labour force is the total number of all employed and unemployed people (the labour force), plus those seeking work but not immediately available for work, plus those available for work but not seeking a job.

the EU average([309]). The gender pay gap widened from 4.5% in 2020 to 5.9% in 2023 but then fell to 4% in 2024. In 2025, women's labour force participation stood at 70.1.%, compared to 80.3% for men, reflecting persistent barriers linked to care responsibilities, limited availability of institutions and services providing care for dependants, inflexible and relatively long working hours and lower job quality in sectors where women are over-represented. Participation in formal early childhood education and care for children under three years of age increased by 3 pps to 15.1% in 2024 but is still far below the EU average (39.2%) ([310]). In 2024, Poland launched the 'Active Parent' programme, which involves a subsidy to childcare costs, while the 'Active Toddler' programme, supported by the ESF+ and the Recovery and Resilience Facility (RRF), will further support positive labour market participation trends with the creation of over 102 500 new places in childcare institutions for children under three years of age by 2029, targeting municipalities without childcare institutions). Support to address the lower quality of jobs more commonly done by women is financed under the ESF+ gender equality objectives, including projects promoting equal opportunities and reducing barriers to women's employment.

Labour market outcomes for persons with disabilities remain weak. The disability employment gap slightly dropped from 35.6 pps in 2024 to 35.0 pps in 2025 (EU: 24.2 pps). For persons with severe disabilities, the gap reaches 61 pps (EU: 45.5 pps). Labour force participation among persons with disabilities is just above 50%, as disability or illness remains a leading cause of inactivity. Poland has met its interim 2025 employment target for persons with disabilities (32.5%), but further progress is constrained by limited access to tailored labour market support. Regional disparities are also significant. In Q2-2025, the employment rate of persons with disabilities aged 16–64 ranged from 42.5% in Dolnośląskie and 37.0% in Lubuskie and Pomorskie to 25.0% in Warmińsko-mazurskie and 26.0% in Kujawsko-pomorskie, compared with a national average of 30.2%, which points to uneven labour market integration across regions ([311]). The ESF+ supports measures to reduce the disability employment gap by promoting labour market inclusion. Poland also increased wage subsidies for persons with disabilities in 2025 and now offers reimbursement of recruitment and training costs. A pilot 'supported employment' scheme has potential, but existing labour market instruments remain insufficiently effective.

Stronger labour market integration of third-country nationals (TCNs) is needed to better harness the available skills and help tackle labour shortages. On 1 January 2024, around 699 900 TCNs resided in Poland (making up 1.9% of the population). By end-January 2025, 993 015 non-EU citizens who fled the war in Ukraine were in Poland under temporary protection([312]). Labour market indicators for foreign-born nationals are robust: 81% participation (OECD: 77%) and 3% unemployment (OECD: 8%)([313]). However, their skills are underused: in 2023, 48% of TCNs worked in jobs below their qualifications. Among the Ukrainian migrants, this number rose from 35% in 2021 to 68% in 2024([314]). Poland scores 44/100 on the Migrant Integration Policy Index (EU: 54/100), rated 'halfway favourable', with labour market mobility at 43/100, also below the EU average([315]).

Employment rates among older workers remain below the EU average. The employment rate for workers aged 55-64 stood at 60.1% in 2025(EU: 66.4%). Older people account for over 35% of the economically inactive population of working age ([316]). Early exit patterns, health limitations and insufficient access to life-long learning hinder labour market participation. The employment rate among older women (55-64) remains particularly low at 48.3%, compared with

([309])Values refer to the 20–64 age group

([310])C_2022484EN.01000101.xml.

([311])Statistics Poland, https://bdl.stat.gov.pl/bdl/dane/podgrup/temat#.

([312])https://home-affairs.ec.europa.eu/policies/migration-and-asylum/migrant-integration/migrant-integration-hub/eu-countries-updates-and-facts/migrant-integration-poland_en.

([313])https://www.oecd.org/en/publications/2025/11/international-migration-outlook-2025_355ae9fd/full-report/poland_9206f6b3.html.

([314])https://home-affairs.ec.europa.eu/news/poland-almost-half-foreign-workforce-overqualified-2024-08-26_en.

([315])https://www.mipex.eu/Poland.

([316])https://ec.europa.eu/eurostat/databrowser/view/lfsa_igan__custom_19518898/default/table.

59.4% at EU level, while the rate for older men is 70.7% (EU: 71.4%). This gap is largely explained by the lower statutory retirement age for women (60, compared with 65 for men). To increase labour market participation, Poland introduced subsidies for employers hiring workers above the retirement age under the new Act on Labour Market and Employment Services.

Working time patterns are among the most intensive in the EU, which has a negative impact on job quality and labour market inclusiveness. Over 76% of workers work more than 40 hours per week (EU: 47.5%), the fifth highest share in the EU, while only 5% work part-time (EU: 17%). Remote work in Poland remains comparatively rare (14% vs 22% in the EU in 2023) ([317]). Although flexible schedules are more common in small firms, they are far less widespread in larger companies. These patterns may discourage people with care responsibilities, persons with disabilities and older workers from entering the labour market.

Labour market instruments to increase participation rely heavily on the EU Cohesion Fund and RRF funding. In response to the 2025 country-specific recommendation regarding the participation of disadvantaged groups in the labour market, Poland has reformed its public employment services by expanding their proactive outreach to economically inactive people, piloting 'supported employment' schemes for people with disabilities, and refocusing training and activation measures towards groups furthest away from the labour market. Better targeting of measures is crucial for activating vulnerable groups. At the same time, the sustainability of these instruments remains a concern due to their heavy reliance on EU funding. Moreover, the budget of the national Labour Fund used to finance Poland's active labour market policies has been decreased substantially for 2026. Ensuring sustainability is also a concern for social economy entities, whose potential in labour market integration of disadvantaged groups is still largely untapped.

The working-age population continues to shrink, further tightening labour supply. Between 2023 and 2024, the population aged 15-64 decreased by around 0.8%, and demographic pressures are expected to intensify over the medium term. Although the rate of young people neither in employment nor in education and training (NEETs) in Poland is below the EU-27 average (9.4% and 11.1% respectively in 2024), it is unevenly distributed across regions([318]). In Podkarpackie, Łódzkie, Warmińsko-mazurskie and Świętokrzyskie regions, the NEET rate exceeds the average for Poland by 28% or more, while the lowest level is recorded in the Warszawski Stołeczny region (about 30% below the average for Poland). This may translate into growing regional disparities, since high NEET rates undermine the supply potential of the regional and local labour markets. According to projections by Polish Economic Institute, employment is expected to decline by around 2.1 million by 2035, or 12.6% of the employment level in 2024([319]). Assuming that the statutory retirement age remains unchanged (65 for men and 60 for women), around 3.8 million workers are projected to leave the labour market by 2035, while the projected inflow of new cohorts would amount to only 1.7 million people, further exacerbating labour shortages. Demographic decline has a strong regional dimension. These trends may further reduce regional labour supply and exacerbate labour shortages, particularly in regions which already face structural challenges.

Poland faces labour market challenges related to the green transition, with significant regional implications. Despite a considerable (7.4%) decrease since 2019, the proportion of workers in emission-intensive industries is the third highest in the EU (4.9% vs EU: 3.5% in 2024). While most of these workers are employed in vehicle manufacturing (which accounted for 1.8% of total employment in 2024), employment in the non-metallic minerals manufacturing sector and in chemicals is well above EU average (1% vs EU: 0.5% and 0.7% vs EU: 0.5% respectively). With lignite and hard coal sectors highly concentrated in western regions such as Silesia and Greater Poland, the country employs four times as many workers in mining as the EU average (with employment in mining accounting for 0.9% of total employment in Poland vs EU: 0.2% in 2023), or over 190 000

([317])https://eures.europa.eu/living-and-working/labour-market-information/labour-market-information-poland_en.

([318])Data refers to 15-29 age group

([319])Polish Economic Institute, 2024 https://pie.net.pl/przy-obecnych-trendach-demograficznych-do-2035-r-zatrudnienie-w-polsce-moze-spasc-o-ponad-12-proc/.

workers in 2024. Also, employment in the environmental goods and services sector was only 2% in Poland in 2022, compared with 3.1% in the EU. Managing the transition requires targeted support, upskilling and reskilling, as well as regional development measures to safeguard workers' job transitions, as industries such as mining undergo significant changes or structural decline. In this regard, Poland reports a relatively high number of active policies to support quality employment in the context of the green transition.

Labour shortages remain a significant challenge for companies. While the job vacancy rate remains comparatively low (0.8% in Q2-2025, below its pre-pandemic level of 1.1% in Q4-2019), the share of managers reporting labour shortages as a factor limiting production remains very high, with 62.4% of businesses in industry (compared to 17.5% in the EU), 67.5% in construction (EU: 27.5%) and 56.5% in services (EU: 23.1%) in Q4-2025 reporting such problems. A breakdown of labour demand ([320]) by occupation shows a particularly strong demand for manufacturing staff, teaching professionals and certain categories of social workers. Considering the green transition, shortages are also reported among construction workers and the related professions of electrician, welder and flame cutter, which can impact the deployment of cleaner energy sources and green construction works. Furthermore, the ICT sector remains underdeveloped, with ICT specialists accounting for 4.5% of total employment in 2024, compared to 5% in the EU. Poland also lags behind the EU in terms of digital skills levels among the broader population, with only 50.4% of individuals aged 16-74 having at least basic digital skills in 2025 (compared to 60.4% in the EU).

Wage growth has been robust but poses a risk to competitiveness, while in-work poverty is rising. Wages grew relatively fast, at 13% in 2024, translating into strong real wage growth (8.8%). Looking ahead, wage growth is projected to have moderated to 8% in 2025 and to slow to 6.7% in 2026, while real wage growth is expected to continue (at a pace of 4.8% in 2025 and 3% in 2026), being driven primarily by continued nominal wage growth coupled with continued disinflation. The statutory minimum wage rose by 55% between January 2022 and July 2025, an increase of nearly 21% in real terms ([321]). Since 2020, the real effective exchange rate has grown much faster than the EU average ([322]). At the same time, rising in-work poverty (9.3% vs EU: 8.2%) and a large share of low-wage earners (19% vs EU: 14.7%) in 2024 give rise to concerns regarding job quality.

Social dialogue continues to face systemic challenges, which limits its role in shaping labour market policies ([323]). Despite the new government's explicit commitment to improving social dialogue, employers' and workers' representatives report no tangible progress. The Social Dialogue Council's powers are still restricted, and government participation in meetings is limited. Irregularities in the consultation processes persist, including bypassing or shortening the mandatory consultation periods, as was the case during the preparation of Poland's medium-term fiscal-structural plan.

Both collective bargaining coverage (11.6% in 2023) and trade union density (9.4% in 2022) are among the lowest in the EU, impeding meaningful social dialogue. Employer organisation density was at 56.3% (2022)([324]). Social partners have insufficient capacity for effective social dialogue. Wage bargaining is largely confined to company level, and no sectoral agreement has been concluded for a decade. Multi-employer agreements are rare, and their prevalence is decreasing. Poland introduced a new Act on Collective Agreements and Collective Bargaining in November 2025, which aims to increase the use of collective agreements. The Act creates a mandatory national register of collective agreements, introduces an open list of matters governed by collective agreements, and simplifies the process for concluding such agreements, and allowing mediators to be involved in collective bargaining. In addition, it also simplifies the process for

([320])Cedefop Skills-OVATE, EURES - Demand for occupations, data from 1 July 2024 to 30 June 2025.

([321])Eurofound, Industrial relations and social dialogue. Minimum wages in 2025: Annual review, 2025. Note: Calculations based on national currency and purchasing power standards.

([322])Výškrabka, M. and A. Bodea, 2026, 'After the Inflation Shock. Taking Stock of Price Competitiveness in the EU', European Economy Discussion Paper 240, DG ECFIN, European Commission, see in particular pp. 25-26.

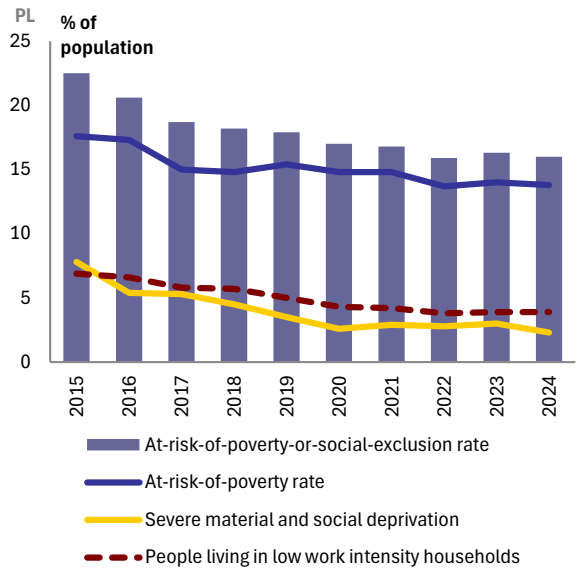
([323])https://www.ituc-csi.org/poland.

([324])OECD/AIAS ICTWSS v2.0.

company-level agreement extension at the request of social partners. Moreover, since 2023, the Polish government and the two Chambers of the Polish Parliament have adopted resolutions to improve the methods for consulting social partners. The correct transposition of the Directive on Adequate Minimum Wages is essential to encourage promoting collective bargaining as well as improving enforcement mechanisms.

The social situation in Poland has continued to improve, but some challenges remain. Poverty and income inequality have declined, thanks to a strong labour market, increases in the minimum wage, higher child-rearing benefits and lower inflation. However, as many family benefits are not means-tested, their impact on poverty reduction is less targeted, which suggests that there is a need to improve the targeting and efficiency of social benefits , as highlighted in the 2025 country-specific recommendation. At the same time, the risk of poverty or social exclusion continues to display significant regional and socio-economic disparities, with pronounced urban–rural differences and high risks for certain population groups. Gaps in coverage and effective access to social protection services persist for non-standard workers and self-employed and unemployed people, limiting the overall impact of social benefits on poverty reduction. An ageing population is further increasing the demand for long-term care, while service provision remains limited and workforce shortages persists, resulting in a heavy reliance on informal care. The 2025 country-specific recommendations called on Poland to ensure the adequacy of future pension benefits and strengthen the sustainability of the pension system, including by taking measures on the effective retirement age and reforming preferential pension schemes.

Graph A12.1: **At-risk-of-poverty or social exclusion rate and its components**



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

The number of people at risk of poverty or social exclusion (AROPE) in Poland has decreased, reflecting reductions in poverty and material deprivation. Between 2019 and 2024, this number fell by 760 000, representing just over half of the targeted reduction of 1.5 million by 2030. In 2024, the AROPE rate declined marginally by 0.3 percentage points (pps) compared with 2023, to 16%, which is broadly in line with the level recorded in 2022. This overall improvement reflects small but consistent reductions in two of the three AROPE components. The at-risk-of-poverty (AROP) rate([325]) decreased from 14% in 2023 to 13.8% in 2024, while severe material and social deprivation fell more noticeably, from 3.0% to 2.3%, over the same period. However, the proportion of people living in households with very low work intensity remained unchanged, indicating persistent labour market attachment challenges among certain population groups. Measures addressing the risk of poverty or social exclusion are primarily supported through the European Social Fund Plus (ESF+), which finances active inclusion policies, access to social services and community-based activities, with a strong focus on disadvantaged regions and vulnerable groups. In addition, with a total budget of around EUR 583 million, the 2021-2027 European Funds for Food Aid programme aims to combat material deprivation by providing food assistance to people most severely affected by deprivation, including children, alongside accompanying measures that support social inclusion. The EU anti-poverty strategy could help address the multiple dimensions of poverty and achieve the national anti-poverty target.

Despite the overall decline, poverty and social exclusion remain unevenly distributed across regions. In 2024, AROPE rates in some regions were more than double those in others, pointing to significant regional disparities. Rates were highest in the more rural north-eastern regions of Podlaskie (26.4%) and Warmińsko-Mazurskie (23.6%), and substantially lower in the more urbanised and industrialised south-western regions of Śląskie (10.3%) and Opolskie (13.9%) . These regional differences reflect a persistent urban–rural divide. In 2024, the AROPE rate in rural areas stood at 20.9%, which was 8.7 pps higher than the rate in cities (12.2%). This gap

([325])AROP, like other income related indicators for 2024, refers to income earned in 2023.

highlights ongoing challenges related to access to employment opportunities, services and social support in rural areas, which contribute to higher poverty risks and social exclusion outside urban centres.

Regional disparities are particularly evident in rural and more remote areas, where vulnerable population groups suffer from transport poverty. Effective public transport infrastructure is often insufficient in rural and peripheral areas and in the regions located along Poland's borders (see Annex 19), which exacerbates access to services([326]). According to the 2024 EU-SILC ad hoc module on access to services, 9.6% of the population reported using public transport daily, which is slightly below the EU average of 10.7%.

Poverty rates among children continue to decline. Between 2023 and 2024, the AROPE rate among children decreased by 0.8 pps to 16.1% (vs the EU average of 24.2%). As part of its national child poverty-reduction commitment, Poland aims to reduce the number of children at risk of poverty of social exclusion by at least 300 000 by 2030 compared with 2019. However, as the reduction between 2019 and 2024 amounted to only 19 000 children, further efforts are needed to achieve this target. To mitigate the impact of poverty on children, Poland is implementing the European Child Guarantee, which is also supported by the ESF+.

Low participation in early childhood education and care among children under three disproportionately affects children from disadvantaged backgrounds and remains a barrier to parents' participation in the labour market. The share of children under three participating in formal childcare increased by 6 pps between 2024 and 2025, to 21. However, it still remains well below the EU average of 40%. Furthermore, participation is much lower for children at risk of poverty or social exclusion, both under and over the age of three (3% vs 24% for the EU and 67% vs 82% for the EU respectively). There are also significant regional disparities remain, with the number of available childcare places per 1 000 children under three ranging from 343 places in Dolnośląskie to 187 in Warmińsko-Mazurskie in 2024([327]). With support from the Recovery and Resilience Facility and the ESF+, Poland has implemented a comprehensive reform to improve the accessibility, quality and affordability of early childhood education and care for children under three 3 (Reform A4.2 and measures A4.2.1 under the Facility). Over 100 000 new childcare places are planned, and mandatory quality standards were introduced in January 2026. The 'Active Parent' programme, launched in 2024, contributes towards parents' childcare costs. Effective implementation, monitoring and evaluation of these measures will be necessary to inform policy.

Non-standard workers face substantial gaps in formal social protection coverage. Temporary employees account for 15.1% of total employment (EU: 12.8%), while self-employed people without employees represent 14.4% (EU: 9.3%), one of the highest rates in the EU. Large groups of non-standard workers lack access to social protection. For example, around 1.4 million workers on 'contracts of mandate' - flexible civil-law agreements for performing specific tasks, distinct from standard employment contracts under the Labour Code – do not have access to unemployment benefits. Fewer than 40% of all non-standard workers have access to sickness and maternity or paternity benefits. Among self-employed people, around 1.75 million individuals below the income threshold are not covered by unemployment insurance. Self-employed people eligible for start-up relief are exempt from contributions for the first six months and are therefore not covered during this period. Although broad gaps remain, some progress has been made. Following a 2025 amendment to the Labour Code, introduced by the Act of 26 September 2025 amending the Act – Labor Code and certain other acts (Journal of Laws of 2025, item 1423), contracts of mandate and periods of self-employment now count towards employment history and seniority. Moreover, following a 2026 amendment to the National Labour Inspectorate Act, the possibilities of verifying civil law contracts

([326])No data on public transport accessibility in Poland are available on the Commission's Transport Poverty Hub, because the data on Poland's national access point set up under Delegated Regulation (EU) 2017/1926 (the Multimodal Travel Information Services Regulation Regulation)) are incomplete.

([327])https://stat.gov.pl/obszary-tematyczne/dzieci-i-rodzina/dzieci/opieka-nad-dziecmi-w-wieku-do-lat-3-w-2024-r-,3,12.html

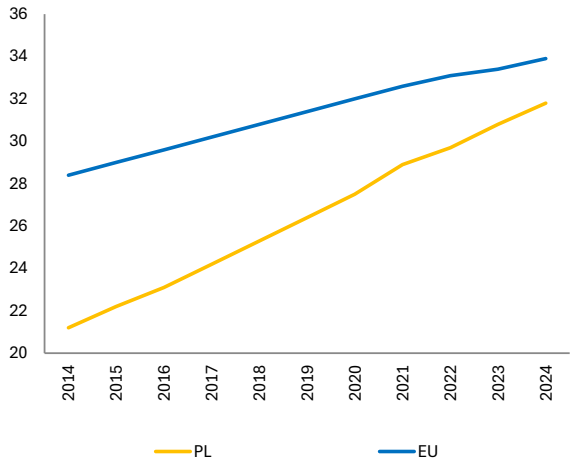
in the context of the existence of an employment relationship will be increased. The new Labour Market and Employment Services Act (Journal of Laws of 2025, item 620) adopted in June 2025 now allows all farmers to register as unemployed and potentially access benefits, subject to general eligibility conditions.

Effective access to social protection is very limited for several groups. Only 3.5% of self-employed people at risk of poverty (before social benefits) receive social cash benefits (EU: 11.5%). Coverage is also low for temporary workers at risk of poverty (5.3% vs 38.3% for the EU) and unemployed people (13.9% vs 52.8% for the EU). Only 16.6% of those unemployed for less than 12 months report receiving unemployment benefits compared with 36.8% in the EU. In 2024, around 44.2% were at risk of poverty or social exclusion, compared with 48.8% in the EU. In-work poverty has increased in recent years, exceeding the EU average (9.1% vs 8.2%). Overall, social benefits have a comparatively limited poverty-reducing effect on unemployed people and temporary workers.

Social protection spending in Poland has increased further but remains unevenly distributed. The 2025 country-specific recommendations emphasised the need to increase the efficiency of social spending. Total expenditure on social protection benefits rose from 22.1% of GDP in 2023 to 24.0% in 2024 (compared with 27.3% in the EU). Between 2023 and 2024, spending on disability benefits increased from 0.96% to 1.06% of GDP (compared with 1.92% in the EU), while expenditure on old-age benefits rose from 10.28% to 10.83% of GDP (compared with 11.34% in the EU). By contrast, spending on unemployment benefits remained at a very low level of 0.18% of GDP in 2024 (compared with 1.08% in the EU). The structure of social protection spending continues to rely heavily on non-means-tested cash benefits, which accounted for 70.1% of total social benefit expenditure in 2023 (compared with 58.0% in the EU), thereby limiting the system's redistributive capacity.

Many low-income households do not receive minimum income support, leading to significant coverage gaps. In 2024, the benefit recipient rate – measured as a share of the population aged 18–64 at risk of poverty and living in jobless and quasi-jobless households – stood at 70%, compared with an EU average of 83.2%. In addition, minimum income benefits in real terms have been eroded by inflation, resulting in very low adequacy levels. Low pension contributions among many self-employed workers raise concerns about future pension adequacy. Many may not accumulate sufficient pension capital to be entitled to a minimum pension([328]). In 2024, the adequacy rate was just 29.5% of the poverty threshold, compared with an EU average of 56.3%([329]). Increasing adequacy and ensuring active inclusion, in line with the Council Recommendation on minimum income, would support the most vulnerable.

Graph A12.2: **Old-age dependency ratio**



Source: Eurostat, [demo_pjanind]

Demographic ageing continues to challenge the future adequacy of the pension system. In 2024, the proportion of people aged 65 and over at risk of poverty or social exclusion declined to 16.3% (from 18.0% in 2023), which is below the EU average of 19.2%. However, labour market participation among older workers remains comparatively low. The employment rate for

([328])https://www.zus.pl/documents/10182/24154/Raport+-+Dobrowolne+ub%C3%B3stwo.pdf/7456a747-c715-44ef-9431-d5c082e974cd?t=1737752803323.

([329])European Commission: Directorate-General for Employment, Social Affairs and Inclusion, The 2025 minimum income report – An overview of the implementation of the 2023 Council recommendation on adequate minimum income ensuring active inclusion across EU Member States – Joint report prepared by the Social Protection Committee and the European Commission, Directorate-General for Employment, Social Affairs and Inclusion. Part 2, Country analyses, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2767/3005188.

people aged 55–64 stood at 59% in 2024, compared with 65.2% in the EU. Participation is particularly low among women (48.3% v 59.4% in EU), partly reflecting the lower statutory retirement age. At the same time, the effective retirement age remains close to the statutory threshold, averaging 65.1 years for men and 60.6 years for women in 2024([330]). The pension system is fragmented, with separate schemes for farmers, officers of uniformed services and professional soldiers, judges and prosecutors. Long-term projections indicate a marked decline in pension adequacy, with net replacement rates expected to fall from 76.3% to 54% for single men and from 63.3% to 45% for single women between 2022 and 2062.

Population ageing is accelerating the demand for long-term care, putting additional pressure on an already constrained system. According to population projections for 2023–2060, Poland is expected to experience rapid population ageing, with an increasing proportion of people aged 65 and over, and a significant decrease in the number of children and young people ([331]). Between 2020 and 2024, the old-age dependency ratio rose from 27.5 to 31.8, a significantly faster increase than in the EU over the same period (from 32.0 to 33.9, see Graph A12.2). Due to the age structure of the population, this trend is expected to continue. In 2019, 35.9% of people in Poland aged 65 and over were in need of long-term care - defined as having at least one severe difficulty with personal care or household activities -. This was well above the EU average of 26.6%. Of those in need of long-term care, only 18.8% of people aged 65 and over used home care services (compared with 28.6 % in the EU)([332]). Administrative data show that, in 2022, only 2.6% of the population aged 65 and over received care at home (compared with 5.5% in the EU)([333]). Reforms and investments in long-term care are supported under the Recovery and Resilience Facility and complemented by ESF+ measures to strengthen service provision and workforce capacity at national and regional levels.

Formal provision of long-term care remains insufficient relative to needs and is heavily skewed towards residential care. Public social protection in Poland is strongest for people with low needs but limited for those with moderate or severe needs. This results in higher out-of-pocket costs than the EU average. For long-term home care, public social protection covers only 20% of total costs for people with moderate needs and 27% for those with severe needs, compared with an EU average of 62% and 68% respectively. As a result, out-of-pocket costs for older people are much higher, amounting to 59% of their median income for moderate needs and 99% for severe needs in Poland, compared with 44% and 67% respectively in the EU. Poverty risks linked to home care remain above the EU average for people with moderate and severe needs([334]). Public expenditure on long-term care remains low, at 0.5% of GDP in 2022, compared with an EU average of 1.7%, accounting for only 2.8% of total age-related public spending (7.1% in the EU)([335]). In 2022, public expenditure on long-term care was predominantly directed towards residential care (65.4% in Poland vs 46.2% in the EU), while spending on cash benefits was negligible (0.5% vs 25% in the EU)([336]). This reflects limited system capacity, continued reliance on unpaid, informal care, and a lack of formal long-term care provision. To expand home and community-based services, it would be beneficial if Poland adopted measures to strengthen social enterprises active in long-term care, encourage the creation of new providers, and facilitate access to public procurement for social economy entities. Although Poland has comprehensive formal coverage of LTC needs and a standardised needs-assessment

([330])https://lang.zus.pl/benefits/old-age-pensions.

([331])Statistics Poland, 2023 https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5469/11/1/1/1-prognoza_ludnosci_na_lata_2023-2060_.pdf.

([332])Share of people aged 65+ with severe difficulties in personal care or household activities who used home care services for personal needs in the past 12 months, EHIS, hlth_ehis_am7ta, 2019

([333])European Commission, https://economy-finance.ec.europa.eu/publications/2024-ageing-report-economic-and-budgetary-projections-eu-member-states-2022-2070_en

([334])OECD 2025 Adequacy of social protection for long-term care. Poland country fiche.

([335])European Commission, https://economy-finance.ec.europa.eu/publications/2024-ageing-report-economic-and-budgetary-projections-eu-member-states-2022-2070_en

([336])European Commission, https://economy-finance.ec.europa.eu/publications/2024-ageing-report-economic-and-budgetary-projections-eu-member-states-2022-2070_en

procedure, key parameters such as maximum waiting times for services are not regulated, which limits system responsiveness.

Severe workforce shortages and widespread informality further undermine access to long-term care services. In 2024, Poland had an extremely low ratio of 0.4 long-term care workers per 100 individuals aged 65 and above, compared with 3.3 in the EU. A substantial proportion of long-term care is provided through undeclared domestic work, often by migrant workers. Poland has not ratified the International Labour Organization's Domestic Workers Convention, and lacks specific legislation regulating domestic long-term care workers or live-in carers. Although formal employment is possible under general labour law, existing regulations are perceived as complex and burdensome, which encourages informal arrangements. These factors risk further limiting access to care and increasing the burden on informal carers, particularly women.

Poland continues to face gaps in quality and inclusive education as well as in skills and adult learning, posing challenges for sustainable and inclusive growth and competitiveness. The 2025 country-specific recommendations for Poland highlighted challenges in quality and inclusive education, skills relevant to the labour market, participation in science, technology, engineering and mathematics (STEM) fields in higher education, the quality of teacher education, the efficiency of vocational education and training (VET), digital and green skills, and adult participation in learning, including in areas key for the country's competitiveness. Pressures on the education and training system have intensified, reflected in falling learning outcomes, declining STEM enrolment, underfunding and gaps in quality in higher education, and acute teacher shortages. Despite past improvements, recent evidence points to growing skills shortages, persistently high mismatches and a decline in basic skills among young people and adults. Gaps in the quality assurance and evaluation systems in higher education continue to affect the quality of educational and scientific outcomes. Digital proficiency remains among the lowest in the EU, constraining innovation and the capacity of firms, in particular small to medium-sized enterprises (SMEs). Adult participation in learning remains insufficient to support the green and digital transitions, while fragmentation in lifelong learning governance and weaknesses in skills intelligence limit the effectiveness of policy interventions. These structural challenges risk constraining competitiveness and human capital formation.

Decreasing basic skills levels raise concerns about quality and equity in education and human capital development. While still performing above the EU average, Poland has experienced one of the largest declines in basic skills since 2018 ([337]). Fewer than 1 in 5 disadvantaged 15-year-olds (19.4%; EU average: 16.3%) performed well in at least one domain in PISA 2022, compared with 28.7% in 2018 (EU average: 20.7%). The decrease among advantaged students was similarly high as only 64.8% of them performed well in at least one domain in 2022, compared to 72.1% in 2018 (EU average: 59% and 62.5%, respectively). Top performance has also fallen steeply to below 10% in all areas. The urban-rural disparities in basic skills are higher than the EU average (see Annex 18), pointing to challenges in the quality of teaching. Learning outcomes are especially weak in vocational pathways, where more than 60% of learners in stage I sectoral vocational schools underachieve across all three domains. Widespread teacher shortages further exacerbate the deterioration of basic skills.

Inclusive education remains a challenge. Education outcomes for persons with disabilities lag significantly behind those of their peers: early school leaving stands at 17.4% (vs 2.8% for persons without disabilities), and students with disabilities constituted only 1.8% of the total tertiary student population in 2023 ([338]). Students from Ukraine are often taught in segregated classes and tend to drop out before completing upper secondary education ([339]). According to TALIS 2024, many young teachers do not feel prepared to teach diverse classrooms, and 26.9% of teachers indicated a need for training in teaching students with special educational needs. The number of students placed in special schools continues to grow (e.g. in special primary schools, it grew from 47 099 in 2019/2020 to 53 094 in 2024/2025 ([340]) despite the decreasing overall number of students. Several European Social Fund Plus (ESF+) projects on inclusive education are under way and are expected to be finalised by 2027; monitoring and evaluation of their implementation will be necessary to inform policy. A long-term strategic approach to inclusive education and better stakeholder engagement could enhance the implementation and sustainability of measures. Recent national analysis indicates the need to enhance intercultural education in schools, individualised approaches, teachers' competences ([341]), and

([337])PISA 2022 (OECD, 2023). Compared to 2018, the proportion of low achievers has increased by 8.3 percentage points (pps) in mathematics (EU average: 6.6 pps), 7.5 pps in reading (EU average: 3.7 pps) and 4.8 pps in science (EU average: 2 pps).

([338])EC report on disability equality 2025-2026 - Poland.

([339])Uczniowie-cudzoziemcy w polskich szkołach w roku szkolnym 2024/2025.

([340])Statistics Poland (2025). Education in the 2024/2025 school year, and earlier editions.

([341])Dolińska, A. (red.). (2025). Uczniowie i uczennice z doświadczeniem migracji i uchodźstwa w polskich szkołach 2004–2024.

recognition of learning outcomes achieved abroad. A national project supporting the inclusion of refugee children from Ukraine was launched in July 2025.

Poland is preparing a curriculum reform, which will require substantial support and training for teachers. Announced in 2024, the reform aims to boost students' key competences, modernise teaching content and increase curriculum flexibility ([342]). The full new curriculum for pre-primary and primary education (grades I to IV) will be implemented from September 2026, and the one for upper secondary education from September 2027. The draft curriculum has been sent out for public consultation. The reform has been prepared by educational experts and overseen by a monitoring committee. Its sustainable implementation could be facilitated by providing substantial teacher training, updating initial teacher education programmes, providing support for schools, and ensuring continuous monitoring and evaluation from an early stage.

Poland has exceeded the EU-level target for early childhood education and care (ECEC) above three; however, participation of younger children remains below the EU average. In 2024, the participation rate of children aged three and above was 97.2%, up by 0.6 percentage points (pps) from 2023. The participation rate of three-year-olds has also increased (by 21.4 pps) since 2015 but remains below the EU average (86.6%; EU average: 91%). The upcoming curriculum reform aims to improve the teaching of basic skills also at pre-primary level. In January 2026, new quality standards were introduced in ECEC for children under three. They aim to improve education and care from the early years onwards; however, participation in formal childcare remains low (see Annex 12).

Teacher shortages may deepen as the challenges in attracting and retaining new staff persist. In 2024, shortages were estimated at 15 000 teachers ([343]) (around 3% of the workforce). According to TALIS 2024, only 4% of lower-secondary school teachers are under 30 (EU average: 7.3%), and over a quarter of them (29%) plan to leave the profession within five years, double the EU average. TALIS 2024 and national surveys highlight insufficient preparedness of novice teachers to manage student behaviour and teach diverse classrooms, and inadequate practical training during initial teacher education ([344]). Poland's 2026 Occupational Barometer continues to indicate shortages across nearly all types of teachers, including those teaching in general education, VET, apprenticeships, pre-primary education and special needs education. Schools increasingly rely on retired teachers. Significant salary increases were implemented in 2024 (of 30%, and 33% for new teachers) and 2025 (5%); however, their impact is still to be evaluated as only 20.5% of teachers were satisfied with their salaries (EU average: 37.3%) at that time. Furthermore, only 10.4% (EU average: 15.4%) feel valued by society, a drop by 7.6 pps since 2013. Poland has amended the Teachers' Charter to improve work arrangements and remuneration for overtime; however, low pay, high workload and low perceived social value continue to discourage young talent from pursuing the teaching profession.

Participation in VET remains strong, but labour market outcomes for VET graduates **have weakened.** Enrolment in medium-level VET has been fairly stable since 2014, standing at 57.9% in 2024, above the EU average (52.9%). Exposure to work-based learning is relatively high: in 2024, 62.0% of recent VET graduates participated in work-based learning during their studies, exceeding the EU-level target (at least 60% by 2025), although remaining slightly below the EU average (65.2% in 2024). Despite this, the employment rate of people who have recent VET graduates has declined, reaching 75.4% in 2024, below both the EU average (80.0%) and the EU-level target (at least 82% by 2025). While the reasons for this decline have not yet been fully analysed, it may be linked to low basic skills among VET graduates and low relevance of VET programmes, reflecting persistent inefficiency of the VET system. Since 2023, Poland has been implementing Sectoral Skills Centres with Recovery and Resilience Facility (RRF) support. Supported by the ESF+, a national team of sector consultations

([342])https://reforma26.men.gov.pl/.

([343])https://www.pap.pl/en/news/poland-lacks-15000-teachers-says-education-minister.

([344])Dobkowska, et al., (2024). Young teachers leave schools: Report on the reasons for leaving the teaching profession by Warsaw teachers during the first five years.

has been set up to improve the VET system and adapt curricula.

Tertiary educational attainment remains in line with the EU-level target, but the higher education sector poorly supports social mobility. In 2025, tertiary educational attainment in Poland was 45.2% a decrease by 0.5 pps since 2024 and by 1.1 pps since 2023. The gender gap in favour of women is, however, among the highest in the EU (18.2 pps vs EU average: 11.3 pps). Also, the urban-rural gap is wider than the EU average (32.1 pps vs 22 pps) (see Annex 18). A significant majority (79%) of 25-34-year-olds with at least one parent holding a tertiary qualification have attained tertiary education, compared to only 11% among those whose parents did not complete upper secondary education. This tertiary attainment gap is one of the largest among OECD countries (44 pps) ([345]). Also, around half of disadvantaged top-performing mathematics students lack academic ambition ([346]), which limits their career possibilities and undermines the competitiveness of Poland's economy.

Participation in STEM at tertiary level has dropped while there is unlocked potential, also among disadvantaged students. In 2024, 42.9% of medium-level VET students were enrolled in STEM programmes, exceeding the EU average (36.9%) and approaching the proposed 2030 EU-level target (45%). By contrast, only 21.2% of tertiary students were enrolled in STEM programmes in 2023 (EU average: 26.9%), a decline of 5.6 pps since 2015. Participation in natural sciences, mathematics and statistics is particularly low (3.3%; EU average: 6.8%). The gender imbalance in information and communications technology (ICT) is among the highest in the EU as women accounted for only 17% of ICT tertiary students in 2023. The proportion of female students in STEM VET (15.7%) is also below the EU average (15.9%). The number of STEM tertiary graduates per 1 000 inhabitants aged 20-34 remains below the EU average (11.9 vs 14.3). As shown by PISA 2022, over half (58%) of disadvantaged 15-year-olds aspire to high-skilled jobs, but do not plan on attending tertiary education([347]). The low proportion of STEM tertiary students, including at doctoral level, risks exacerbating skills shortages, including shortages of STEM teachers, and constraining innovation and the capacity to support the green and digital transitions. Poland has been implementing RRF investments to improve the digital infrastructure in schools, including by providing ICT equipment and setting up artificial intelligence and STEM laboratories (measure C2.2.1).

Gaps in the higher education quality assurance system jeopardise higher education outcomes. In 2024, close to 3 000 study programmes (29%) did not have the accreditation of the Polish Accreditation Commission, while 2 209 of the programmes that had not been followed up were attended by students ([348]). Government expenditure per tertiary student amounts to USD 12 558, far below the EU-25 average of 15 830 USD ([349]). Long-term underfunding contributes to low academic quality and weak scientific performance (see Annex 4). In October 2025, the Ministry for Science and Higher Education presented a draft strategy for higher education for 2035, which also focuses on excellence in science and teaching ([350]). The rules for evaluating on academic performance for the 2026-2030 cycle are to be made more reliable. An internationalisation strategy is to be presented in 2026. Better outcomes could be achieved by addressing quality assurance challenges, ensuring sufficient funding, and implementing effective monitoring and evaluation of systemic measures.

([345]) Education at a Glance 2025. Country note: Poland.

([346]) OECD (2024). Challenging Social Inequality Through Career Guidance: Insights from International Data and Practice.

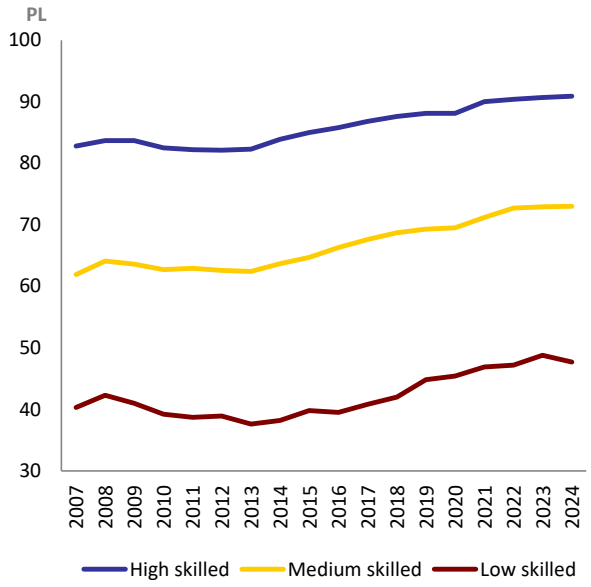
([347]) OECD (2023), PISA 2022 Results.

([348]) https://pka.edu.pl/wp-content/uploads/2024/12/Analiza-wersja-do-publikacji.pdf

([349]) Education at a Glance 2025. Country note: Poland.

([350]) Strategia rozwoju szkolnictwa wyższego.

Graph A13.1: **Employment rate by educational attainment**



Source: Eurostat, labour force survey [lfsa_ergaed]([351]).

Skills shortages and mismatches remain a significant constraint on Poland's economic performance. In 2023, 82% of SMEs reported difficulties in filling vacancies, reflecting persistent shortages across both high-skilled and elementary occupations. Labour market tightness has been partially mitigated by the inflow of refugees from Ukraine, 78% of whom were in employment in 2024([352]). However, half of those employed work in low-skilled jobs and 46% report working below their qualification level. Cedefop's Skills Forecast 2025 indicates that among professionals, the most acute shortages arise due to structural demand growth, while among technicians and associate professionals, shortages are driven by replacement needs. Hiring difficulties are concentrated at both ends of the skills spectrum, with comparatively fewer shortages in skilled manual and non-manual occupations. Lack of basic skills hampers upskilling and reskilling, and the 2023 PIAAC([353]) results for Poland show a sharp increase in the share of adults performing at the lowest proficiency levels compared with 2012: 39.5% (up from 19%) in literacy and 38% in numeracy (up from 23%). The macroeconomic skills mismatch stood at 23.1% in 2024, well above the EU average of 19.2%, 0.8 pps higher than in 2023 and only slightly below the record high of 24% in 2013. This underscores the need for further efforts to improve the quality, equity and labour-market relevance of education and training.

Digital skills remain a key bottleneck for innovation and productivity. The proportion of young people aged 16-24 with basic or above-basic digital skills grew from 68.6% in 2021 to 73.6% in 2025 but remains below the EU average (74.5%). In 2025, only 50.4% of the population aged 16-74 had at least basic digital skills, 10 pps below the EU average. Low levels of digital proficiency also hold back Polish SMEs, only 59% of which had a basic level of digital intensity in 2025 (EU average: 71%). To address, this Poland pursues RRF investments to increase digital skills in society via training (measure C2.1.3). Poland has also set out to digitalise school education with the Digital Transformation of Education Policy to 2035. In line with this policy, Poland aims to expand the use of digital technologies in teaching and learning via RRF investments (measures C2.1.2 and C2.2.1). The 2020-2030 Digital Competence Development Programme aims to equip 80% of citizens with at least basic digital skills by 2030. Efficient implementation and monitoring of these measures could help achieve the expected results. However, a lack of strategic approach to digitalisation in higher education hinders comprehensive digital transformation.

Adult participation in learning remains significantly below the EU average. According to the adult education survey, 20.3% of adults participated in education and training in 2022, around half the EU average of 39.5%, and well below both the national 2030 target of 51.7% and the EU-level target of 60%. Participation varies markedly by educational attainment (see Country Report 2025). Place of residence also plays an important role, with participation rates of 16% in rural areas and 18.7% in towns, compared to 26% in cities([354]). More recent data, from the labour force survey, suggest a possible increase in participation rates between 2022 and 2024. Public funding for adult learning remains heavily

([351])Despite methodological changes in 2021, the data are still comparable.

([352])International Migration Outlook 2025, OECD based on data from the Polish Central Bank.

([353])OECD Programme for the International Assessment of Adult Competencies (PIAAC). Poland's results should be interpreted with caution due to high share of respondents with unusual response patterns.

([354])Education and Training Monitor 2025 - Poland.

dependent on the ESF+ and other EU instruments. This includes the planned piloting of individual learning accounts. Despite new measures introduced under the 2025 Act on Labour Market and Employment Services, including enhanced support for disadvantaged groups, the system remains fragmented and lacks strong national-level coordination.

The green transition increases pressure on upskilling and reskilling. Poland has one of the largest shares of workers in emission-intensive industries, at 4.9% of total employment in 2024 (EU average: 3.5%). At the same time, employment in these sectors has declined by 7.4% since 2019, and the phase-out of hard coal is expected to accelerate this structural change. With highly regionally concentrated lignite and hard coal sectors, Poland employs four times the EU average number of workers in mining (see Annex 11). Between 2017 and 2022, the environmental goods and services sector expanded considerably, increasing from a 1.4% to a 2% share of total employment, although it remained below the EU average of 3.1%. There is a clear need to advance upskilling and reskilling efforts, as these industries are experiencing significant changes or even structural declines in activity, such as in mining. However, in 2024, adult participation in training in emission-intensive industries remained one of the lowest in the EU, at 7.8% (EU average: 12%), raising concerns about workers' preparedness for reallocation into emerging green sectors. Under the Just Transition Fund, investments support the reskilling and upskilling of workers in coal and lignite regions, equipping those working in fossil fuel and energy-intensive industries with skills for employment in renewable and climate-neutral sectors. Under the Polish RRP, Poland is envisaged to adopt an act incorporating the sectoral qualification frameworks for construction, water management, waste management and energy into the Integrated Qualifications System.

Skills intelligence remains fragmented, limiting evidence-based policymaking. Poland's skills intelligence system is fragmented, with its main instruments administered by different institutions and based on distinct methodologies. These include the Polish Labour Market Forecasting System (long-term projections to 2050), the Occupational Barometer (annual shortage and surplus forecasts), separate annual forecasts for vocational education occupations published in Monitor Polski, and the Data Blender tool integrating administrative labour market data. Apart from limited exceptions, results from one instrument are not systematically used by the others, reducing coherence and synergies. Moreover, the limited integration of these outputs into curricula, career guidance and training provision constrains their impact on workforce planning and human capital development. Poland's Occupational Barometer condenses information on the current labour market situation for public employment services' counsellors by processing data collected by various public institutions on the demand for specific occupations and qualifications ([355]). The barometer has now been implemented nationwide and is updated annually, as part of Poland's broader strategy to refine labour market forecasting by 2050. The 2025 edition identified 23 deficit occupations at national level and no surplus occupations, pointing to continued labour market tightness. Its county- and regional-level forecasts are increasingly used to inform career guidance, training provision and short-term workforce planning.

([355])https://employment-social-affairs.ec.europa.eu/news/helping-pes-anticipate-emerging-challenges-and-future-skills-needs-role-labour-market-and-skills-2025-05-23_en, p. 25.

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

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)	20.3
	Early leavers from education and training (% of the population aged 18-24, 2025)	4.0
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2025)	50.4
	Young people not in employment, education or training (% of the population aged 15-29, 2025)	9.2
	Gender employment gap (percentage points, population aged 20-64, 2025)	11.3
	Income quintile ratio (S80/S20, 2025)	3.63
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2025)	78.8
	Unemployment rate (% of the active population aged 15-74, 2025)	3.1
	Long term unemployment (% of the active population aged 15-74, 2025)	0.8
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2024)	166.1
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2025)	15.0
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2025)	15.6
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2025)	38.9
	Disability employment gap (percentage points, population aged 20-64, 2025)	35.0
	Housing cost overburden (% of the total population, 2025)	4.1
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2025)	21.0
	Self-reported unmet need for medical care (% of the population aged 16+, 2025)	2.9

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

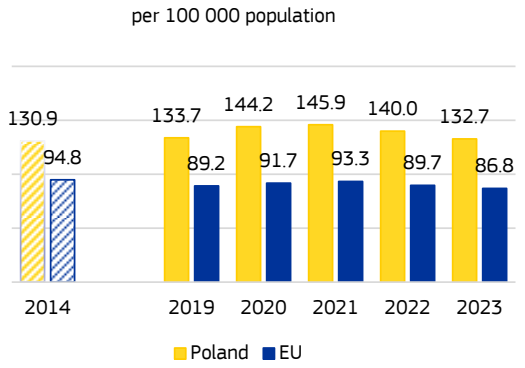
Update of 4 May 2026. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2026 for details on the methodology (https://employment-social-affairs.ec.europa.eu/joint-employment-report-2026_en).

Source: Eurostat

Poland's health system faces challenges that negatively affect the health of its population, social fairness and productivity. Challenges include low life expectancy, resulting from high preventable and treatable mortality, and unmet needs, with regional disparities. These issues are mainly caused by: (i) suboptimal cost-effectiveness and funding of the health system; (ii) an insufficient focus on disease prevention and outpatient care; and (iii) shortages of healthcare workers.

Life expectancy at birth in Poland was still low compared with the EU average in 2024, and 2022 avoidable mortality – preventable or treatable – was high. In 2023, treatable mortality was high compared with the EU average, suggesting shortcomings in the effectiveness of the health system. Moreover, Poland is the only EU country where mortality from treatable causes has deteriorated over the last 10 years (see Graph A15.1). Diseases of the circulatory system – cardiovascular diseases (CVDs) – and cancer are the leading causes of death, with the former accounting for around 36% of all deaths in Poland in 2023, the latter 21%. Deaths from cancer in Poland were among the highest in the EU.

Graph A15.1: **Treatable mortality**



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

Preventable mortality was also high in 2023 and has only decreased slightly over the past 10 years. In view of these health outcomes, expenditure in disease prevention is critically low in Poland, and has fallen over the last 10 years, from 2.7% of spending in 2014 to 1.7% in 2023. Poland participates in several joint actions funded by EU4Health aimed at reducing the burden of cancer, CVDs, diabetes and respiratory diseases, such as the joint actions JACARDI, EUnetCCC JA, JANE-2 and SOLACE ([356]). Poland also benefits from EU4Health grants for the prevention of non-communicable diseases (NCDs), the establishment of networks for cancer infrastructure and expertise, and innovative approaches to cancer screening. Poland is also rolling out a national oncology and cardiology network with support from the Polish recovery and resilience plan (RRP), improving patient access and quality of diagnostics and care. Strengthening health promotion and prevention is an integral part of the national programme for cardiovascular diseases (NPChUK) (2022-2032) ([357]).

Preventable mortality in Poland is closely linked to environmental factors such as air pollution (see Annex 8) **and behavioural risk factors.** Behavioural and environmental risk factors accounted for 35% of all deaths in Poland in 2021, which was higher than the EU average of 29% ([358]). Mortality linked to air pollution is one of the highest in the EU. Smoking rates among adults have fallen over the past two decades, though less so among adolescents. The use of e-cigarettes among adolescents has risen particularly sharply. In 2022, close to one in three 15-year-olds reported smoking e-cigarettes in the past month, a much higher proportion than the EU average. Average alcohol consumption among adults was slightly above the EU average. The proportion of 15-year-olds in Poland classified as overweight or obese has increased in recent years, from 16% in 2018 to 20% in 2022, with boys twice as likely to be affected as girls. Poor diet was the leading cause of death from behavioural risk factors in Poland in 2021 ([359]). Since 2020, Poland has strengthened tax measures targeting alcohol and tobacco consumption. Excise taxes on tobacco and alcohol, which had previously been frozen or reduced, are now subject to regular annual

([356]) JACARDI - Joint Action on CARdiovascular diseases and DIabetes, EUnetCCC JA - The European Comprehensive Cancer Centre Network, JANE-2 - Joint Action on Networks of Expertise on Cancer, SOLACE - Strengthening the screening of Lung Cancer in Europe.

([357]) Narodowy Program Chorób Układu Krążenia na lata 2022-2032 - Ministerstwo Zdrowia.

([358]) OECD/European Observatory on Health Systems and Policies (2025), *Country Health Profile 2025: Poland*. State of Health in the EU.

([359]) OECD/European Observatory on Health Systems and Policies (2025), *Country Health Profile 2025: Poland. State of Health in the EU*.

Table A15.1:**Key health indicators**

	2020	2021	2022	2023	2024	10-year change**	EU average* (latest year)
Cancer mortality per 100 000 population	279.7	259.9	268.0	274.0	n.a.	0.94	233.1 (2023)
Mortality due to circulatory diseases per 100 000 population	523.8	541.4	489.6	451.0	n.a.	0.76	313.0 (2023)
Current expenditure on health, purchasing power standards, per capita	1 633	1 765	1 967	2 240	2 658	2.01	3834.9 (2023)
Public share of health expenditure, % of current health expenditure	72.3	72.5	74.3	77.6	78.0	1.11	80.6 (2023)
Spending on prevention, % of current health expenditure	1.9	2.1	1.9	1.7	n.a.	0.62	3.7 (2023)
Available hospital beds per 100 000 population***	563	578	567	564	n.a.	0.94	440 (2023)
Doctors per 1 000 population*	3.4	3.5	3.6	3.9	n.a.	1.67	4.3 (2023)*
Nurses per 1 000 population*	5.6	5.8	5.8	5.9	n.a.	1.12	7.6 (2023)*
Mortality at working age (20-64 years), % of total mortality	21.4	20.9	20.5	19.9	19.1	0.74	14.3 (2023)
Consumption of antibiotics in the community and hospital sectors, defined daily doses per 1 000 inhabitants	18.5	20.2	23.6	23.2	22.6	0.94	20.3 (2024)

*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 2023 data (or latest available). 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 Portugal (licensed to practice) and Slovakia (professionally active). Latest data update on nurses for Belgium and Sweden: 2022; for France: 2021; for Luxembourg: 2017.
** latest available 10-year trend: ratio 2023/2014 or 2024/2013; a factor of 2.00 means that it has doubled in 10 years.
***'Available hospital beds' covers somatic care, not psychiatric care.
Source: Eurostat

increases, covering both traditional and newer products ([360]).

Poor health outcomes negatively affect Poland's workforce and hence its productivity and competitiveness. In Poland, mortality at working age as a proportion of total mortality is high compared with the EU average (19% vs 14%), exacerbating the effects of population ageing on a shrinking labour force (see Annex 11). Gains in health status from further prevention investment could alleviate this impact. As regards NCDs, it is estimated that up to 80% of CVDs and type 2 diabetes in the world, up to half of cancer cases, and most chronic lung diseases can be prevented ([361]). As an illustration, preventing all deaths from NCDs in Poland would result in a 1.2% gain in working-life years from 2022 to 2040 (vs 0.9% for the EU, see Graph A15.2). Cancer in particular has a large impact, accounting for more than 53% of the potential prevention gains in working-life years. The gain in working-life years is one of the highest potential increases across Member States and would save about 4 290 500 life years in Poland over 2022-2040. This increase would mitigate an otherwise expected 7% reduction of the workforce due to demographic ageing of the 2022 population (7% for the EU).

Poland's health system is strongly hospital-centred. Although health spending per inhabitant in Poland increased over the preceding decade, it was among the lowest in the EU in 2023. Over a third of Poland's health spending – the largest share – goes on hospital services, while less than a third goes on outpatient care. Medical goods (retail pharmaceuticals and therapeutic appliances) accounted for less than a fifth of health spending. Private spending plays a prominent role, as 16% of spending is accounted for by out-of-pocket (OOP) payments. The largest share of OOP payments is made up of pharmaceuticals (63%) and outpatient medical care (14%). Poland's relatively large hospital capacity has historically proved difficult to consolidate. Various initiatives under the Polish RRP seek to repurpose some excess acute care beds for long-term care services. An amendment to the law on publicly funded healthcare services allows local governments to consolidate public healthcare institutions and requires recovery programmes to be prepared for indebted hospitals to strengthen their efficiency.

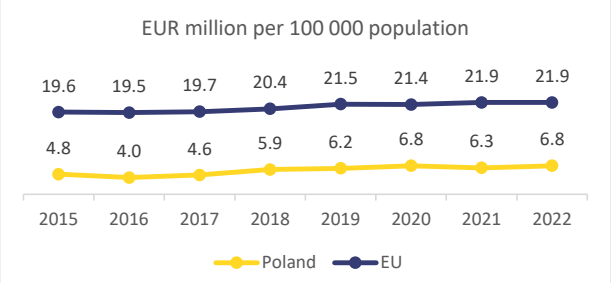
Poland's pharmaceutical sector is of relatively modest economic significance. Employment in pharmaceutical manufacturing remains among the lowest in the EU. The number of clinical trials is moderate, but three quarters are multi-country studies, showing Poland is part of international pharmaceutical R&D networks. The industry has a consistently low share of extra-EU exports (2.2% in 2024 vs 13.9% for the EU average) (see Annex 4).

([360])*Country Health Profile 2025: Poland* – see earlier footnote.

([361])NCD Alliance, 2025: Noncommunicable Diseases (NCDs) overview | NCD Alliance.

Relative to population size, Poland's hospital capacity is high, but investment in health infrastructure remains well below the EU average. Polish hospitals had among the highest numbers of hospital beds in the EU in 2023. However, the occupancy rate is relatively low. Meanwhile, the trend of low investment in the health sector continued. Poland recorded less than half of the EU's average level of health infrastructure investment per capita in 2023. This is reflected in the low availability of key diagnostic technology: Poland has one of the lowest rates of medical imaging devices per capita in the EU. The EU cohesion policy (2021-2027) currently dedicates EUR 1.17 billion (EU co-financed share) to healthcare for Poland's health infrastructure. Poland's estimated domestic spending per capita on prevention, preparedness and response is in the low EU range. Another significant challenge, which affects hospitals in particular, is antimicrobial resistance and related multi-resistant infections. Poland is one of the countries that has set targets to reduce high antibiotic use, due to concerns over antimicrobial resistance ([362]). The consumption of antibiotics in Poland fell only slightly between 2023 and 2024. Continued efforts are needed to keep on track with the 2030 recommended national target. Poland participates in the EU4Health-funded joint action EU-JAMRAI 2 addressing antimicrobial resistance and healthcare-associated infections ([363]).

Graph A15.2: **Healthcare infrastructure investment by year**



Source: Country Health Profiles - Dashboard

Challenges in accessing healthcare persist, particularly in rural areas. In 2025, the proportion of the Polish population reporting unmet needs for medical care was higher than the EU average (2.9% vs 2.4%). The main reasons reported are long waiting times; other reasons include cost and travel time. The share of people with medical needs who reported unmet needs is also higher than the EU average (4.1% vs 3.6% at EU level). High unmet needs for medical examination are reported in rural areas. Only 18% of the population in rural areas of Poland lived within a 10-minute drive of a hospital in 2023 (see Annex 18). Unmet needs for primary care in particular are more than double the EU average (7.1% vs EU 3.1% in 2024) ([364]). Potentially avoidable hospital admissions in Poland are one of the highest in the EU for congestive heart failure and diabetes. Unmet needs for mental healthcare are also high, reaching 11.8% compared with the EU average of 7.2%. Poland is attempting to address long waiting times through a new cost-based tariff structure. It is designed to increase payments and align them more closely with actual expenses for service providers ([365]).

Shortages of health professionals limit the provision of healthcare. In 2023, the number of practising nurses per 1 000 population was below the EU average. Moreover, more than a third of nurses are 50-59 years of age. Poland also had a comparatively low number of nursing graduates in relation to its population. Also, fewer than 1% of 15-year-olds aspire to become nurses ([366]). Some regions may face challenges in workforce renewal. These factors combined pose a significant challenge to the long-term accessibility of health services and, more broadly, to the care system. For several years, the density of doctors in Poland (see Table A15.1) has been below the EU average. The number of general practitioners per inhabitant is one of the lowest in the EU, and their share is very low compared with specialists. Primary care services, however, can be provided by physicians specialising in family medicine, internal medicine and paediatrics, as well as by physicians without a specialisation who hold the appropriate licences. Around a fifth of doctors are 55-64 years of age. Moreover, healthcare workers in Poland report one of the highest rates of depression, with nearly half of respondents meeting the threshold for probable major depressive disorder and 32% reporting

([362])National target set by the Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach, 2023/C 220/01.

([363])EU-JAMRAI 2 - Joint Action Antimicrobial Resistance and Healthcare-Associated Infections 2.

([364])*Country Health Profile 2025: Poland* – see earlier footnote.

([365])*Country Health Profile 2025: Poland* – see earlier footnote.

([366])OECD (2025), *Health at a Glance 2025: OECD Indicators*.

anxiety ([367]). Shortages of health workers have been reported in specific specialisations and regions, particularly in the small counties around large cities and in rural areas.

Systemic solutions are being introduced by the government to develop the competences and legal rights of nurses and midwives. As of July 2025, authorised nurses and midwives can prescribe additional medicines and refer patients for new diagnostic tests, enabling them to provide a new service called 'My Health – Adult Health Check-up'. The Ministry of Health also provides annual funding of specialist training for nurses and midwives and has adjusted the curriculum standards. Salary increases have been implemented to boost nursing workforce numbers, but higher salary costs have had collateral effects on the finances of community hospitals ([368]). Regarding doctors, medical student loans have been made available since 2022. The NPChUK also plans to strengthen the role of doctors, particularly primary care doctors. Through the RRP, Poland is also implementing reforms to incentivise students to pursue medical studies and is increasing the capacity of teaching facilities. Poland participates in the HEROES joint action ([369]) under EU4Health, through which EU countries share knowledge and experience on health workforce planning.

The digitalisation of Poland's health system has matured but suffers from a digital divide in the population. The shares of people accessing their personal health records online and using online health services (excluding phone) instead of in-person consultations increased between 2020 and 2024, but are close to or below EU average. Despite the above-average overall technical deployment of electronic health records, their use by patients is comparatively low (see Annex 7). The use of online health services is particularly low. Moreover, Poland has one of the widest digital divides in the EU: major differences were observed in patient use according to people's socio-economic background. This relates both to accessing health services online and to using electronic health records. Also, digital literacy in Poland – people's basic digital skills – is one of the lowest in the EU, which could explain the low uptake of e-Health tools by patients (50.4% of people with at least basic digital skills in 2025 vs an EU average of 60.4% – see Annex 13).

Investments to boost the digital transformation of Poland's health sector are planned. These investments have the potential to improve the effectiveness and accessibility of healthcare and are planned under the 2021-2027 cohesion policy or as part of the Recovery and Resilience Facility and EU4Health-funded projects (e.g. Patient Summary Poland ([370])). The government has set up a central e-registration system, which standardises the process of booking appointments and improves access to services. From January 2026, the system is mandatory for selected services and will gradually be expanded. Through the Polish RRP, innovative digital solutions, including tools using artificial intelligence (AI), are being developed. The 'e-Health KPO' project, launched in April 2025, provides new digital services such as a patient health analysis tool, a decision-making support tool for doctors based on AI algorithms, and a medical data repository. In the first half of 2026, an intelligence services platform will be launched. Hospitals and their security systems will also receive funding to develop AI services supporting diagnostics. Through these actions, Poland is implementing a comprehensive digital reform, resulting in a data-driven healthcare system that uses AI to support clinical decisions, accelerate diagnostics and optimise processes.

([367])WHO Regional Office for Europe (2025), *Mental Health of Nurses and Doctors survey in the European Union, Iceland and Norway*.

([368])*Country Health Profile 2025: Poland* – see earlier footnote.

([369])JA HEROES I Health workforce planning project.

([370])Patient Summary Poland.

Housing supply has slowed down considerably and the level of investment in housing is one of the lowest in the EU. The number of building permits for new dwellings decreased considerably, although less than the EU average. The construction producer prices for new residential buildings exceed the EU average. There is untapped potential for using vacant buildings and transforming them into housing. There are no sufficient, stable, impactful and long-term financing schemes to help local authorities support the development of social housing solutions.

Housing affordability in Poland has deteriorated over the last decade. Since 2015, house prices and rents (including existing and new rental contracts) have massively increased, especially in urban areas, far exceeding the EU averages. The housing affordability challenges are unequally spread across the regions (see Annex 18) and income groups.

Housing conditions remain challenging, particularly with regard to overcrowding and quality. In 2024, one third of the population lived in overcrowded dwellings, which is double the EU average. The housing stock in Poland is old and characterised by low energy efficiency, making it even more unaffordable (see Annex 9).

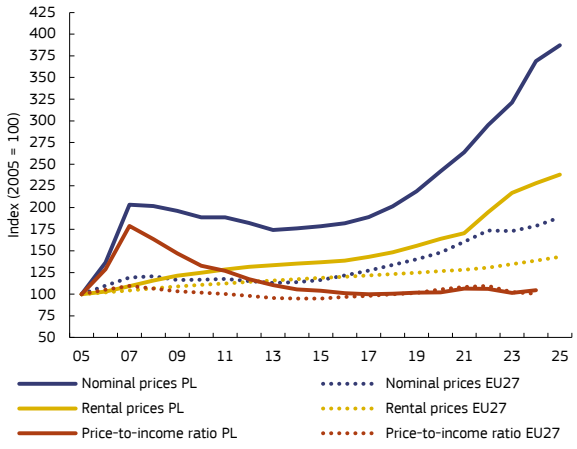
Complex social challenges affect access to housing. There is a relatively limited municipal and social housing stock. One third of households fall into the rental gap (between social and private market conditions) ([371]). Moreover, the arrival of over one million displaced persons from Ukraine has had an impact on the level of demand, while homelessness remains a persistent social challenge. People with some or severe disabilities and women suffer levels of discrimination that are above the EU average.

The strategic and governance framework is limited. There is no mechanism to coordinate housing policies between administrations at the central level and local authorities. There is currently no strategic approach to ensuring a sustained and holistic engagement of public authorities and a coherent framework for measures and investments in the longer term.

Housing market developments

Housing shortages are causing house prices and rents to rise in Poland. Poland is faced with an acute housing shortage, especially in urban areas, which has resulted in spiralling house price and rental inflation. Since 2015, house prices and rents have increased by 117% and 74% respectively, far exceeding the EU averages (62% and 21%) and total cumulated inflation in Poland and the EU (49% and 30% respectively as regards the harmonised index of consumer prices (HICP) ([372]).

Graph A16.1: **House prices, rents and price-to-income evolution in PL and EU27 since 2005**



Source: Eurostat

Given the high prices combined with relatively high mortgage interest rates since 2022, the situation on the market does not support people – and, in particular, young people – who wish to buy a property. After an significant increase of 15% in 2024, nominal house prices growth decelerated to 4.9% in2025. The price-to-income ratio was 10 percentage points below its long-term average. However, it takes 11.8 years of income to buy a 100 m^2 apartment, while the long-term EU median is 8 years, suggesting that house prices are high

([371])Effectiveness of housing policy assessment through the lens of the housing affordability gap in Poland between 2010 and 2022, A. Czerniak, J. Kroszka and A. Twardoch Ruch Prawniczy, ekonomiczy I socjologiczny, zeszyt 4, 2025, p 220.

([372])Housing in Europe – 2025 edition; Eurostat housing statistics. Eurostat: https://ec.europa.eu/eurostat/web/interactive-publications/housing-2025#housing-cost.

relative to average income. ([373]). Mortgage rates roughly doubled following the COVID-19 pandemic ([374]). While mortgage rates have been decreasing since their peak in August 2022, they remain higher than the pre-pandemic average ([375]). As a result, Poland's housing market situation is especially challenging for first-time buyers and renters – primarily young people – decreasing their mobility and making planning for the future more difficult.

Housing costs absorb a growing proportion of household disposable income, although headline affordability indicators remain below the EU average. In 2024, total housing costs in households' disposable income amounted to 16.7% slightly below the EU average of 19.2%. For rents, the percentage increased steadily from 18.8% in 2021 to 20.2% in 2024, vs the EU average of 22.3% in 2024. Over the same period, the average housing cost overburden rate for both homeowners and tenants declined slightly (from 5.9% in 2023 to 5.2% in 2024), remaining below the EU average (8.2% in 2024) ([376]). These indicators indicate rising cost pressures despite a comparatively lower housing cost overburden rate ([377]).

Graph A16.2: **House supply indicators in PL since 2005**

Source: Eurostat

Since 2022, investment in housing in Poland has remained low, while construction costs have grown. In Poland, investment in housing is the lowest in the EU (2.2% of GDP compared with an EU average of 5% in 2025). Structural challenges remain to address high level of needs of various parts of the population. Despite Poland being among the frontrunner countries in the EU regarding the number of completed dwellings yearly per 1,000 citizens (5.3 per 1,000 citizens in 2024) ([378]), housing construction needs remain high - the housing construction gap is estimated at 124 000 dwellings above the forecasted constructions([379]), and the overall number of dwellings per thousand inhabitants is relatively low (402 per 1000 inhabitants in 2021 compared to the EU average of 514 in 2022) ([380]). Since 2022, Poland has seen a slowdown in the construction of new housing, which may have contributed to higher nominal house prices and warrants closer monitoring. Between 2021 and Q3 2025, construction producer prices for new residential buildings increased by 36%, exceeding the EU average of 24%, while the number of building permits for new dwellings between 2021 and 2023 decreased by 30% (compared with the

([373])Alert Mechanism Report 2026 – European Commission.

([374])OECD Economic Surveys: Poland 2025.

https://www.oecd.org/en/publications/oecd-economic-surveys-poland-2025_483d3bb9-en.html.

([375])Statystyka stóp procentowych, NBP.

https://nbp.pl/statystyka-i-sprawozdawczosc/statystyka-monetarna-i-finansowa/statystyka-stop-procentowych/.

([376])The overburden rate should be read together with the tenure structure (homeowner, tenants), that may differ across country and regions.

([377])It is important to note here that the housing cost overburden indicator is based on income data for 2023 (EU SILC 2024); and, therefore, does not take into account the most recent developments in housing and rental prices.

([378])Deloitte Property Index 2025 https://www.deloitte.com/be/en/Industries/real-estate/research/property-index.html

([379])Balouktsi et al. (2026) *Housing investment needs in the EU*, JRC Technical Report 144419.

([380])OECD Affordable Housing Database https://www.oecd.org/en/data/datasets/oecd-affordable-housing-database.html

EU average decrease of 23%). While the number of new building permits rebounded in 2024, rising by 22% compared with 2023 ([381]), it remains below 2021 levels (86% of annual building permits in 2021).

Structural policies

Polish housing policy is fragmented, with no coordinated approach to governance on the national and subnational levels. The national housing programme *(Narodowy Program Mieszkaniowy)* adopted in 2016 was repealed in the 2025. The government is currently working on a medium-term strategy for Poland that will include housing. The proposed measures include increasing the availability and affordability of housing together with improving housing conditions. The strategy sets a 10% target for social housing. However, the draft made available for public consultation does not cover all social aspects such as people leaving institutional care, homelessness and housing for older people. As reported by the OECD ([382]), housing governance in Poland is highly fragmented and lacks a body to oversee and coordinate the complex policy area of housing. Coordination between the at least seven ministries and government agencies with some degree of responsibility for housing policy remains limited. The lack of coordination also concerns multilevel governance, where no mechanism exists to coordinate the local and regional authorities.

So far, no holistic programme for monitoring and analysing housing stock and needs has been created. No coordinated and harmonised monitoring of housing data or analysis of housing needs is being performed at the national level. This prevents a clear overview of the housing situation being gained and hinders efficient use of the existing stock. According to census data from 2021, 1 789 000 houses were uninhabited ([383]) in Poland, including 10% of the municipal stock ([384]). Additionally, there is no definition of a vacant building in the Polish legal system, which makes it difficult to identify all vacant dwellings.

There is still insufficient social and municipal housing in Poland to cover demand, while the affordable housing solutions are still limited. Social rental housing consists of four categories designed to serve different needs and income levels: (i) subsidised social housing; (ii) communal housing; (iii) social housing; and (iv) rental cooperatives. The construction of social housing has not caught up with the demand. Since 2024, 117 805 households have been on the waiting list for municipal housing. There is no system to monitor the beneficiaries of the social housing and whether they fulfil the requirements to benefit from it. Meanwhile, there is no legal definition of affordable housing in Poland, and the system is underdeveloped. The Social Rental Agency (*Społeczne Agencje Najmu*) programme was created in 2021 to tackle the problem. So far, however, the uptake has been limited: as of 31 December 2025, a total of 14 social rental agencies are in operation, providing housing for 395 people. At the end of 2025, the Ministry of Development Funds and Regional Policy signed a contract with the National Real Estate Stock Agency to develop the programme further with funding from the European Social Fund Plus and to double the number of social rental agencies.

Public financing for social housing will increase in the years to come. Poland's housing policy involves several financing programmes. The preferential loan programme for investors in social rental housing, available since 2015, offers preferential financing to social housing initiatives, housing cooperatives and municipal companies for constructing rental flats or drawing up cooperative tenant rights. Bank Gospodarstwa Krajowego provides the financing, backed by state subsidies to reduce the interest rate costs. The programme was extended in 2025, and in 2026, over PLN 2 billion will be made available to finance up to 9 500 rental flats. Financing for another programme, the municipal and social housing programme, which is supported by the Subsidy Fund, has been also increased. In 2026-2030, dedicated expenditure amounts to PLN 39 454 billion, with annual allocations rising each year. The government also provides subsidies under a number of programmes such as the *Flat for Start (Mieszkanie na start)* programme for first-time tenants. The programme "A flat without own

([381])Eurostat, https://ec.europa.eu/eurostat/databrowser/view/STS_COBP_A__custom_19802593/default/table.

([382])OECD (2025), Housing Reforms in Czechia and Poland, OECD Publishing, Paris, https://doi.org/10.1787/4988c473-en.

([383])As the data were gathered during the COVID-19 pandemic, they may not correspond to the post-lockdown reality.

([384])Questionnaire sent to PL for the European Semester mission.

contribution" (Mieszkanie bez wkładu własnego) allows people with sufficient creditworthiness to take out a mortgage even if they do not have the down payment required by the bank.

There is a need for innovative instruments, such as revolving funds and blending operations (a combination of subsidies and financial instruments), to be implemented.

The 2% Safe Mortgage programme (B*ezpieczny Kredyt 2%*) programme, which was launched to help prospective homeowners buy their first home, led to a further increase in housing prices. In 2023, the previous government introduced two programmes for first-time buyers under the Act on State Aid for Saving for Housing Purposes (U*stawa o pomocy państwa w oszczędzaniu na cele mieszkaniowe*). The first one, the Contract Saving System (*Konto Mieszkaniowe*) involves regular monthly deposits, which are used later for purchasing a home. Key benefits include an annual premium, accelerated savings for a down payment on a home, and tax-exempt interest. In July 2023, 2% Safe Mortgage programme programme, with subsidised loans and interest capped at around 2% for the first 10 years, was launched for first-time buyers. While there was huge demand for the programme and 91 000 loans were signed, the increased demand pushed house prices up quickly. The programme was closed after six months and has not been continued. No further programmes are planned at the moment.

Some tax measures are in place to support first-time buyers, discourage financialisation and increase the social housing stock. Fiscal measures were introduced in 2023 to help more people become homeowners, including an exemption from the civil law transaction tax on the purchase of a first dwelling. In parallel, measures to limit speculative demand and financialisation were strengthened. Those measures include the introduction in January 2024 of a 6% tax on the purchase of a sixth and subsequent residential property from the same developer on the same plot of land. Homeowners are exempted from: (i) VAT when letting their properties for residential purposes or to social rental agencies; and (ii) VAT tax when letting their properties to a local government unit and their associated entities for the purpose of further letting or leasing for residential purposes.

In 2023, Poland started to reform its spatial planning system but the results of the changes have not yet been evaluated. The Spatial Planning and Development Act is the main national regulation for planning. Coordination between land use and related policies is performed at national level by the Ministry of Economic Development and Technology, while local governments draw up specific spatial plans. In 2023, Poland reformed the spatial planning system with the aim of simplifying and accelerating planning procedures. Given the short period of time since the reform was adopted, it is too early to draw conclusions on the results. However, some stakeholders indicate that the new reform has brought complexities and administrative burdens for practitioners. Preparing the environmental assessment can be a lengthy process. In 2025, it took 47.5 days on average to obtain a building permit, but this can vary considerably across regions and cities. There is a need for a better approach to land development and management.

The Polish rental market is underdeveloped, while the rights of tenants and landlords in the Polish rental market are perceived as unbalanced. The Polish rental market is underdeveloped, with only 13% of the population renting an accommodation. In Poland, the regulation of the rental market does not adequately protect either landlords or tenants. On the one hand, landlords have limited possibilities to effectively terminate contracts and recover the premises if there are disputes with the tenant. On the other hand, tenants face legal instability and difficulties in planning their long-term lives. In 2024, 7 000 households were evicted, while 2 000 were awaiting eviction. The Act on the Protection of Tenants' Rights sets a minimum level of protection for tenants while upholding the right of landlords to derive benefits from their property. The Act lays down three types of rental agreements: (i) the civil law contract (strong tenant protection); (ii) occasional tenancy agreements with natural persons (with an end date); and (iii) institutional tenancy agreements with legal persons (low tenant protection). The two latter types are the result of a recent reform that gives greater freedom to both parties in shaping the content of the contract and balances their rights more evenly.

Graph A16.3: **Housing affordability selected indicators**

		EU27				PL							
	unit	2000-25 avg.	2023	2024	2025	2000-25 avg.	2023	2024	2025	unit	2023	2024	2025
House price to income ratio	*2000-25 avg = 100*	100.0	102.0	100.2		100.0	86.7	89.3		YoY%	-4.4	3.0	
Rent to income ratio	*2000-25 avg = 100*	100.0	85.1	83.5	84.5	100.0	85.4	80.4	78.3	YoY%	-2.0	-5.9	-2.6
Overburden rate, total	%	9.9	8.8	8.2		7.6	5.9	5.2	4.1	PPS/y	0.3	-0.7	-1.1
Overburden rate, tenant with market rent	%	23.8	20.3	19.2		24.8	17.1	15.1	14.4	PPS/y	-1.6	-2.0	-0.7
Overvaluation gap	%					-0.2	-3.0	3.5	1.8				
Deflated construction production price	*2010 = 100*	102.2	112.2	111.8	110.5	96.5	92.0	93.5	93.6	YoY%	-0.7	1.5	0.1
Building permits	*m^2 per ths persons*	483.5	376.9	362.9	379.9	551.6	539.5	636.9	623.2	YoY%	-22.2	18.1	-2.2
Residential construction investment	*% GDP*	5.5	5.8	5.1	5.0	2.8	2.2	2.1	2.2	YoY%	0.0	-4.5	4.8
Share of ownership	%	70.0	69.1	68.4		81.6	87.3	87.1	87.2	PPS/y	0.1	-0.2	0.1
Share of people living in overcrowded homes	%	17.7	16.8	16.9		42.8	33.9	33.7	30.9	PPS/y	-1.9	-0.2	-2.8

Source: Eurostat and European Commission calculations. The overburden rate should be read together with the tenure structure (homeowner, tenants), that may differ across country and regions.

Vulnerable groups

Homelessness remains a persistent social challenge, with overall numbers remaining broadly stable over time. The 2024 National Homeless Survey identified 31 042 people experiencing homelessness, which is within the range observed over the past seven years (e.g. around 30 000 in 2019 and 33 000 in 2017). Men accounted for around 80% of the homeless population, women for 20%, while children and young people under 18 represented around 5% of the overall homeless population and 95% of them were located in institutions such as houses for mothers with young children and pregnant women.

Responses to homelessness are primarily implemented at the local level and focus on temporary and supported housing solutions. In 2024, around 80% of people experiencing homelessness were residing in temporary shelters, training apartments or assisted living apartments. Municipalities are responsible for providing shelter under the Social Assistance Act, and these forms of accommodation are delivered within broader frameworks for developing social services, including housing-led approaches.

Vulnerable groups face specific barriers to accessing housing, including discrimination and accessibility constraints. In 2024, 6.2% of the population reported feeling discriminated against when seeking housing (EU average: 5.8%), with higher proportions among people with some or severe disabilities (12.7% vs the EU average of 8.2%) and among women (7.1% vs the EU average of 5.9%). Housing support for people with disabilities is provided through the State Fund for Rehabilitation of Persons with Disabilities, including subsidies for exchanging dwellings for barrier-free housing.

The ageing population puts further pressure on the availability of the adequate housing stock. In 2024, the housing cost overburden rate among people aged 65 and over was higher than for the total population (5.8% vs 5.2%), and older people reported a markedly higher incidence of perceived discrimination when looking for housing (4.9% vs the EU average of 1.9%). At the same time, older people are more likely to live in underoccupied dwellings (19.8% among those aged 65+ vs 17.3% for the total population in 2024), indicating potential mismatches between housing size, accessibility and changing household needs in an ageing society.

Housing policies increasingly reflect demographic ageing and the need for accessible housing solutions for older people. Social housing programmes support the construction and modernisation of accessible dwellings and common spaces, with allocation criteria favouring older applicants. Legislative proposals prepared in 2023 aim to introduce senior lease agreements, allowing older people living in upper-floor dwellings without elevators to move to accessible municipal housing while enabling municipalities to reallocate their former dwellings within the municipal housing stock.

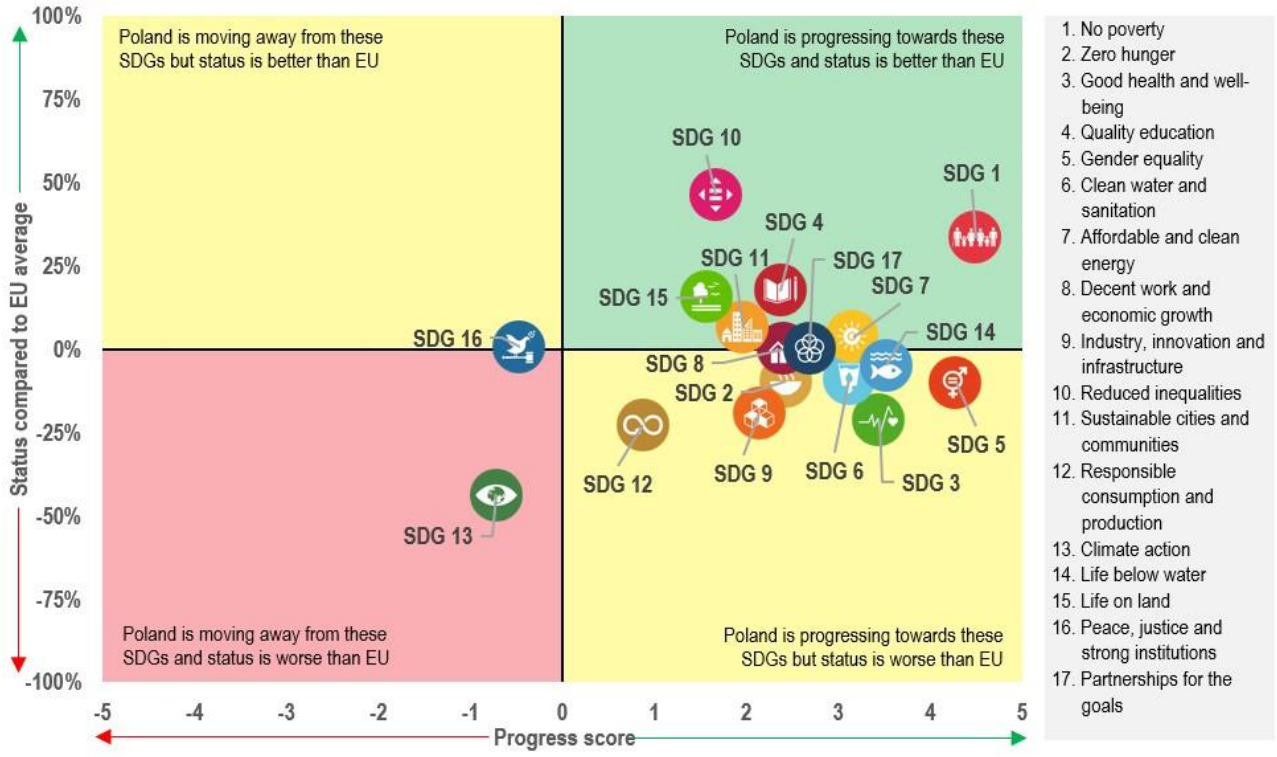
Young adults also face constraints in accessing independent housing. In 2024, over half (51.6%) of young adults aged 18–34 in full-time employment in Poland continued to live with their parents, well above the EU average (36.8%), reflecting delayed residential independence and persistent barriers to young adults – even those with jobs – entering the housing market.

This annex assesses Poland'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 historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in the EU.

Poland is improving on SDGs related to *competitiveness* (SDGs 4, 8 and 9). Poland performs well on its employment rate among people aged 20-64 (SDG 8; 78.8% in 2025, vs 72.6% in 2019; EU average of 76.1% in 2025). Poland also performs well on tertiary educational attainment among people aged 25 to 34 (SDG 4; 45.2% in 2025, vs 44.6% in 2019; EU average 44.8% in 2025)On the downside Poland is moving away from the EU average on the indicator for the investment share of GDP (SDG 8; 17% in 2024, vs 19.2% in 2019; EU average of 21.6% in 2024). The Polish recovery and resilience plan (RRP) includes several measures to improve the investment climate.

Poland performs well but still needs to catch up with the EU average on other indicators for industry, innovation, and sustainable infrastructure (SDG 9), including gross domestic expenditure on R&D (1.41% of GDP in 2024, vs 1.31% of GDP in 2019; EU average of 2.24% in 2024). The same is true of air emissions intensity of fine particulate matter (PM2.5) from industry (0.09 g per euro in 2023; EU average: 0.05 g).

Graph A17.1: **Progress towards the SDGs in Poland**



For a detailed progress assessment towards the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for extensive data on the short-term SDG progress of EU countries, see Key findings – Sustainable development indicators; for an interactive visualization of SDG progress of EU countries, see SDG country overview. 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 or six 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 29 April 2026. Data refer mainly to the period 2019-2024 or 2019-2025. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

Poland is moving away from some of the targets for SDG 2 (Zero hunger). The area under organic farming in Poland (4.9% of the utilised agricultural area in 2024) is below the EU average (10.9% in 2024). Government support for agricultural R&D was only EUR 0.2 per inhabitant in Poland in 2024, significantly below the EU average of EUR 8.5.

Poland is improving on some of the SDGs related to *sustainability* (SDGs 6, 7, 9, 11, 12, 13, 14, 15). For SDG 6, the percentage of inland water bathing sites with excellent water quality in Poland rose from 18.7% in 2019 to 57.4% in 2024 but needs to catch up with the EU average of 78.3% (2024). Poland has made some progress on energy consumption indicators, increasing the percentage of renewable energy in gross final energy consumption (SDG 7) from 15.4% in 2019 to 17.8% in 2024 (against the EU average of 25.2% in 2024).

However, it needs to catch up with the EU average on per capita net greenhouse gas (GHG) emissions (SDG 13), where its 8.7 tonnes in 2024 were above the EU average of 6.5 tonnes. Moreover, Poland is rapidly losing carbon sinks, with net GHG emissions (emission and removals) from the land use and forestry (LULUCF) sector increasing from -99.3 tonnes CO_2 eq. per km² in 2019 to -78.9 tonnes in 2024 (EU average: -54.7). In addition, Poland's energy import dependency (SDG 7) increased from 45.3% in 2019 to 45.7% in 2024 (EU average: 57.3% in 2024). As for affordable energy, the percentage of the Polish population unable to keep their homes warm enough was lower than the EU average (3.3% against 9.2% in 2024). Poland's RRP includes measures to address some of the energy-related challenges, namely the energy renovation of buildings, energy efficiency of business and the decarbonisation of energy production.

Poland is improving on several indicators related to SDG 11 (Sustainable cities and communities). However, its share of buses and trains in total passenger transport has fallen but remains above the EU average (from 19.6% in 2018 to 18.0% in 2023; EU average 16.9% in 2023). The country is improving on the number of premature deaths due to exposure to fine particulate matter (PM2.5) but is still performing below EU average (a decrease of 121 per 100 000 in 2018 to 69 in 2023; EU average: 41).

Poland is also progressing on SDGs 14 and 15. The percentage of coastal water bathing sites with excellent water quality rose from 29.4% in 2019 to 60.3% in 2024, but is below the EU average (88.8%). It is also performing well in the percentage of marine protected areas (22% in 2023) (the EU average 13.7%). The country is improving in the targets for SDG 15 (Life on land). In particular, it reduced the area of the country impacted by drought on ecosystems from 16.2% in 2019 to 2.6% in 2024, which is below the EU average on this (3.7% in 2024).

Poland is improving on most SDGs related to *social fairness* (SDGs 1, 3, 4, 5, 7, 8, 10). It performs well on the indicators for: (i) people at risk of poverty or social exclusion (SDG 1; 16.0% in 2024, vs 17.9% in 2019; EU average of 21.0% in 2024); (ii) the severe material and social deprivation rate (SDG 1; 2.3% of the population in 2024, vs 3.5% in 2019; 6.4% EU average in 2024); and (iii) income distribution (SDG 10; 3.85 in 2024, vs 4.37 in 2019; EU average of 4.66 in 2024). In addition, the long-term unemployment rate fell (SDG 8; 0.8% in 2025 vs 0.7% in 2019; EU average of 1.9% in 2025). Poland also improved and performed better than the EU average on participation in early childhood education for children aged 3 and over (SDG 4), with 97.2% in 2024 against the EU average of 95%.

It needs to catch up on some indicators for SDGs 3, 4 and 5. For SDG 3, Poland needs to take measures to significantly reduce avoidable mortality (341.5 deaths per 100 000 in 2023 against the EU average of 237.7). On SDG 4 (Quality education), the percentage of the population aged 16-74 with at least basic digital skills increased from 42.9% in 2021 to 50.4% in 2025 and is getting closer to the EU-level 2030 target, even though it is still lower than the EU average (60.4% in 2025). Poland also needs to catch up with the EU average on gender equality in employment, in particular on positions held by women in senior management (SDG 5). Only 23% of positions in senior management were held by women in 2025 against an EU average of 33.6%.

Poland is improving on SDGs related to *macroeconomic stability* (SDGs 8, 16, 17),. It has improved on SDG 8 (Decent work and economic growth), although real GDP per capita (up from EUR 14 310 in 2019 to EUR 17 170 in 2025) remains below the EU average (EUR 34 110 in 2025). Poland made considerable progress

increasing the percentage of households with a high-speed internet connection (SDG 17), from 60.3% in 2019 to 83.8% in 2024, above the EU average of 82.5% in 2024.

However, it still needs to catch up with the EU average on some indicators for SDG 16 (justice and strong institutions). Poland has increased its general government total expenditure on the law courts from EUR 72.3 in 2019 per capita to EUR 120.7 per capita in 2024, but it still lags behind the EU average of EUR 131.4. Meanwhile, perceptions of the independence of the justice system have deteriorated, with the percentage of people who consider it to be fairly good and very good sharply dropping from 39% in 2019 to 24% in 2025 (the EU average in 2025 was 54%). Poland's Corruption Perceptions Index score has also fallen from 58 in 2019 to 53 in 2025 (EU average: 62 in 2025). The Polish RRP includes measures on the independence of the justice system.

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

Regional development trends

Over the past two decades, Polish regions have undergone rapid economic development, narrowing the gap with other EU regions, albeit at different speeds. Between 2004 and 2024, all regions in Poland recorded improvements in GDP per head (in PPS) relative to the EU average. Warszawski stołeczny was the only region above the EU benchmark in 2004, with GDP per head at 107% of the EU average. It was also the only Polish region to exceed the EU average in 2024, reaching 157% of EU average GDP per head. For all other regions in the country, GDP per head ranged between 55% and 83% of the EU average in 2024, with two regions exceeding 80%. These were Dolnośląskie and Wielkopolskie (both of which have benefited from strong growth in manufacturing and tradable services, high foreign investment and strong regional centres). Despite continued growth in the past 20 years, more than half of Polish regions continue to rank among the bottom 20% of EU regions in terms of GDP per head (PPS). The eastern regions – Podlaskie, Podkarpackie, Lubelskie, Warmińsko-mazurskie, and Świętokrzyskie – remain the most lagging, though all have made progress over the past two decades.

The gap between Poland's eastern regions and the rest of the country remained substantial throughout 2004-2024. Over this period, eastern regions —excluding Mazowiecki regionalny — recorded the lowest levels of GDP per capita (in PPS) among all Polish regions with no change in their relative standing by 2024. In that year, their GDP per capita levels did not exceed 61.3% of the EU average, placing them among the lowest 20% of all EU regions. In terms of growth dynamics, over the period of 2014–2024, the highest average annual growth rate of real GDP among the eastern regions was recorded in Podkarpackie (3.5%), while the lowest was observed in Warmińsko-Mazurskie (2.7%). By comparison, the average annual growth rate of real GDP for Poland in that period was 3.7%, with the highest rates recorded in Warszawski stołeczny (4.8%) and Pomorskie (4.3%). Overall, these trends suggest that the benefits of economic growth in Poland remain unevenly distributed.

Map A18.1: **GDP per head compared with the EU average**

(1) 2021-2023 average GDP per head in purchasing power standard compared with the EU average

Source: Commission calculations based on Eurostat 16 July 2025 data.

Regions in the south-western part of the country and major urban outperform the rest of the country in terms of productivity. These regions benefit from the presence of high-value added economic sectors, modern industry, and integration into global value chains, and they therefore outperform the other regions in terms of productivity. Warszawski stołeczny, Śląskie and Dolnośląskie reached 104.3%, 67.6% and 67.3% of EU average productivity in 2023, respectively. However, the eastern regions are characterised by narrower, less diversified economic structures and limited integration into high-value segments of value chains, and therefore continued to lag behind the national average. In 2023, none of these eastern regions, except for Mazowiecki regionalny, exceeded 51.1% of the EU average in terms of labour productivity, with the lowest values in Warmińsko-mazurskie and Lubelskie (45.9% and 46.5% of the EU average respectively). Higher levels of productivity in Warszawski stołeczny, Dolnośląskie, and Wielkopolskie are driven by a combination of modern industry, strong inflows of foreign direct investment (FDI), and growth in business services. In Śląskie, the greater productivity is driven by capital-intensive industrial activities undergoing restructuring.

Table A18.1:**Main development trends, challenges and allocation of resources**

	Main development trends
Less developed regions (population 20.8 million). Minimum allocation EUR 47.2 billion.	Most Polish regions qualify as less developed regions (with a GDP per head in PPS below 75% of the EU average) based on 2021-2023 data. Their structural weaknesses go beyond GDP and productivity indicators, reflecting also gaps in industrial restructuring capacity, innovation ecosystems and connectivity. The economies of these regions are often concentrated in lower value added sectors such as agriculture or basic manufacturing, which generate relatively limited productivity growth and smaller fiscal revenues. In parallel, the absence of strong metropolitan hubs in these regions reduces opportunities for innovation spillovers, advanced services and investment diffusion. In 2023, more than half of Poland's regions ranked among the 20% least developed within the EU. Data indicate that transport infrastructure in Poland's less developed regions is improving, unlocking regional development, improving mobility, and helping to attract investments and reduce the isolation of peripheral areas. Some regions are trying to diversify their economies, leveraging special economic zones. At the same time, these less developed regions face demographic pressures (outmigration from rural and small cities, ageing populations, and a shrinking labour force) that constrain the labour market, increase pressure on social services and the healthcare system, and weaken investment prospects.
Transition regions (population 12.8 million)	Wielkopolska, Dolnośląskie, Śląskie and Pomorskie have GDP per head (in PPS) between 75% and 100% of the EU average based on 2021-2023 data. These regions are gradually diversifying beyond dependency on a single industry, and are attracting more business services, light manufacturing, automotive supply chains (Śląskie) and ICT and digital services. Pomorskie, has a unique economic ecosystem compared with other regions, with a large share of GVA and employment in the 'blue economy' (i.e. a more dominant role for port activities, shipbuilding, costal tourism, and marine living resources, including fisheries and processing). At the same time, Poland's coal-dependent regions are making an effort towards the energy and green transition, by planning the closure or phase-out of coal mines. Wielkopolska is focusing on an early exit from coal mining and the expansion of renewables. These structural shifts require large-scale reskilling and upskilling of the workforce.
More developed regions (population 3.3 million)	Poland's capital Warsaw (Warszawski stołeczny) is in a league of its own, having consistently exceeded the EU average for GDP per head (PPS) since Poland's accession to the EU, rising from 107% of the EU average in 2004 to 155% in 2023. It is characterised by high-value services, hosting the headquarters for major domestic and international firms and attracting the highest levels of FDI. A strong higher education base has driven the rapid growth of start-ups, innovation and technology. Warsaw's strong labour market and educational opportunities make it one of only two Polish regions – alongside Pomorskie – to record population growth, suggesting positive growth spillovers. At the same time Warszawski stołeczny is facing increasing pressure in its housing market.
Specific territories	Because they are eastern regions, Podlaskie, Warmińsko-mazurskie, Lubelskie and Podkarpackie were particularly affected by the Russian war of aggression against Ukraine, with lasting socio-economic consequences. These regions were already lagging behind before the war. Their main challenges include: (i) a weak labour market (with Poland's lowest employment rates in high-technology sectors and knowledge-intensive services); (ii) limited educational opportunities; (iii) a low level of competitiveness and innovation; and (iv) lower connectivity and accessibility. Moreover, these regions also have the highest outmigration rates in the country, compounding their existing demographic pressures. At the same time, regions bordering Ukraine (Podkarpackie or Lubelskie), could serve as hubs for post-war reconstruction efforts, attracting investment in logistics and supply chains. Pomorskie (adjacent to the Kaliningrad exclave) is also exposed to a higher level of threat, including hybrid threats in the Baltic Sea, and is impacted by increased freight and logistics costs in its ports.
National cohesion aspects	Poland's transport infrastructure needs are focused on modernisation, improving regional accessibility and decarbonisation. Important aspects of the transition include: (i) making zero- and low-emission public transport more competitive with road transport; and (ii) supporting the shift towards a more sustainable urban transport model, including through more digitalised urban transport systems. Parts of the TEN-T network, including the core network, remain incomplete, as do efficient traffic management systems. Further improvements are also needed on Poland's three freight corridors (North Sea-Baltic, Baltic-Adriatic and Amber) to support freight traffic. These challenges remain relevant for reducing territorial disparities, increasing competitiveness and supporting the green transition. Polish regions, which have scarce water resources compared with other EU regions, are also increasingly exposed to the impacts of climate change, especially droughts, water scarcity and floods. These trends point to persistent investment needs in water management, climate adaptation, disaster resilience and environmental infrastructure.

Source: European Commission based on Eurostat data; categories of regions base on Map A.18.1

Higher investment intensity in metropolitan regions located in both the south-western part of the country and the capital region is also driven by: stronger profitability; the presence of higher education institutions; better accessibility, including via the dense railway network; and greater optimism about future demand and labour supply.

Russia's war of aggression against Ukraine has exacerbated the many structural weaknesses of Poland's eastern border regions, most of which were already the economically weakest territories in the country before the war. In particular, Lubelskie, Podkarpackie, Warmińsko-mazurskie and Podlaskie are affected by: (i) the depopulation of already poorly inhabited areas; (ii) low levels of economic activity; (iii) the declining attractiveness of local housing; (iv) rising security concerns; and (v) underexploited natural potential. These challenges have highlighted the need to reallocate funds within the current programmes towards new strategic priorities in cohesion policy to strengthen regional civil preparedness, protect critical infrastructure and increase innovation in dual-use technologies and defence.

Key challenges for regional competitiveness

R&D and innovation is very limited in Poland's eastern and north-western regions. Many regions located in the eastern and north-western part of the country rely on fragmented policy interventions, constraining their productivity growth. These eastern and north-western regions are characterised by inadequate infrastructure, limited ICT staffing in local administrations, and fragmented e-service provision. Smart specialisation strategies ([385]) in these regions are often not developed to give due consideration to regional specificities, or these strategies are too broad in thematic scope resulting in limited development effects ([386]). Taken together, these factors not only reduce the competitiveness of the enterprises, but also the possibility of residents to stay in their home regions ('the right to stay'). In contrast, the metropolitan regions Warszawski stołeczny, Pomorskie, Dolnośląskie and Małopolskie are leading in this area, with Warszawski stołeczny the only region to approach the EU average in the technological readiness index (99.4% of EU average) in 2022. These regions form a group in which smart specialisation strategies are well aligned with existing economic structures, business activity, R&D assets and labour-market profiles. In 2025 Mazowieckie had the highest share of enterprises with a high or very high level of digital intensity (39%), followed by Małopolskie and Pomorskie. By contrast, the lowest shares are observed in Świętokrzyskie and Warmińsko-mazurskie (18.3% and 20.3%, respectively)([387]).

Regional disparities in innovation are further strengthened by the spatial concentration of FDI. Poland's growth model remains strongly anchored in FDI, with investment concentrated in a small group of better-performing regions. Dolnośląskie and the Warsaw capital region attract the bulk of technologically advanced FDI, with Warszawski stołeczny alone accounting for around 40% of Poland's total FDI between 2010 and 2024. Beyond these leading regions, Śląskie, Wielkopolskie, and Pomorskie have also developed significant high-tech manufacturing clusters alongside expanding knowledge-intensive business services, embedded in global value chains. By contrast, some regions in northern Poland along with some eastern regions, such as Warmińsko-mazurskie and Podlaskie, remain less integrated into global value chains and attract investment oriented towards lower-technology and less

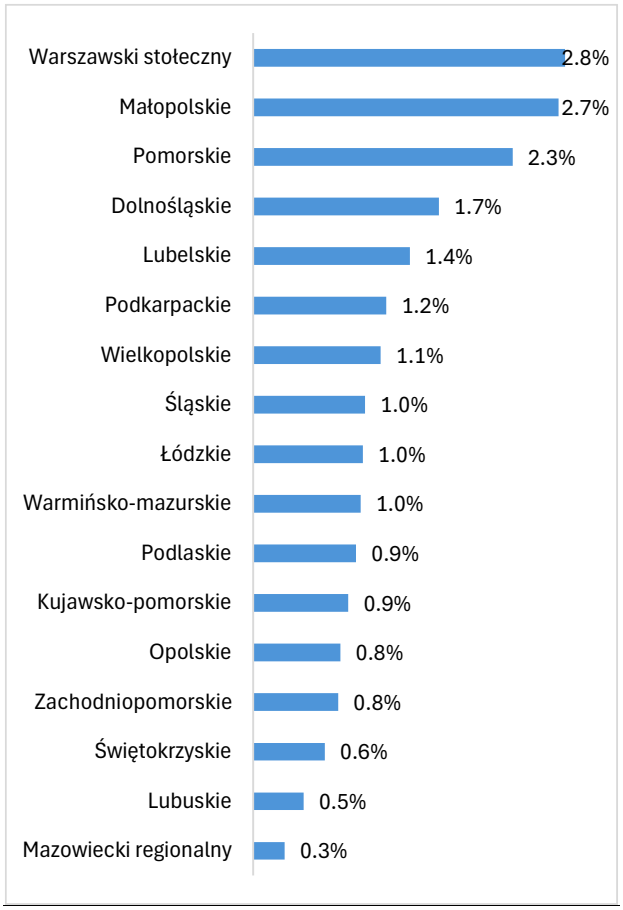
([385]) Smart specialisation strategies are strategic, territorially based frameworks for innovation and industrial policy that help Member States and regions identify and leverage their unique comparative advantages to address structural challenges, foster economic transformation and increase competitiveness.

([386]) Kogut-Jaworska, M., Ociepa-Kicińska, E. (2023). Do Regional Smart Specialization Strategies Affect Innovation in Enterprises? Sustainability; Sabal M. (2023). *Regional Smart Specializations and Sustainability*: *The Challenges of the European Green Deal*. AGH w Krakowie. Barometr Regionalny;. Wiatrak A. (2021). Regionalne Inteligentne Specjalizacje jako narzędzie rozwoju obszaru. Uniwersytet Warszawski. Zagadnienia Doradztwa Rolniczego.

([387]) *Statistics Poland (2025). Społeczeństwo informacyjne w Polsce w 2025 r.* https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2025-r-%2C1%2C19.html

knowledge-intensive activities, limiting their capacity for innovation-driven upgrading([388]).

Graph A18.1: **R&D expenditure (GERD, 2023) at NUTS 2 level**

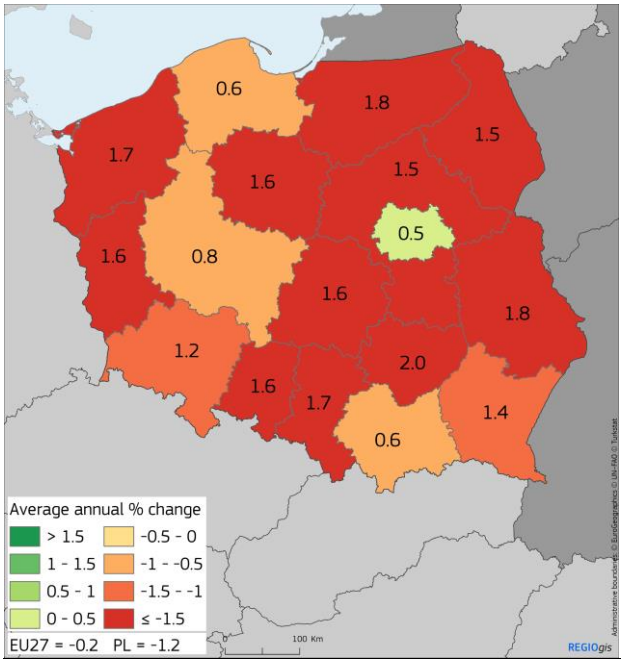


Source: Eurostat

The 2025 country-specific recommendation for Poland underscores the importance of focusing investment-related economic policies on innovation. Through the regional programmes, Poland's regions use cohesion funds to increase research and innovation by direct support to enterprises or by developing strategic innovation hubs. These innovation hubs provide advisory services and analysis capacities, and can also help start-ups and advise companies on how to expand internationally.

The population is declining in many less developed regions of Poland. Demographic trends are further deepening disparities between some less developed Polish regions on the one hand and major metropolitan regions on the other, for example, Warszawski stołeczny, Kraków, Gdańsk and Poznań continue to attract residents owing to their stronger labour markets and educational opportunities. At the same time, less developed regions, lacking comparable opportunities, face the highest outmigration rates nationally. In 2024 Warszawski stołeczny recorded a net population increase of 5.3 inhabitants per 1 000, while Świętokrzyskie and Lubelskie experienced significant declines, with population decreases of 9.4 and 7.2 inhabitants per 1 000, respectively. As a result, the working-age population has been gradually shrinking in weaker peripheral territories, such as Lubelskie or Warmińsko-mazurskie in the east or Zachodniopomorskie and Lubuskie in the west, further reinforcing the territorial divide. Over the long term, these demographic trends pose a structural challenge to the growth potential of less developed regions, as the contraction of the working-age population constrains labour supply and productive capacity.

Map A18.2: **Average annual % change in working-age population (20-64) in Poland (2015-2024) (NUTS 2)**



Source: Eurostat

Differences in regional competitiveness are further shaped by low transport accessibility in peripheral areas and in regions located along Poland's borders. The quality and density of local road networks, as well as the availability of public transport, remain highly uneven within regions. This contributes to transport exclusion in

([388]) OECD. (2025). Strengthening FDI and SME linkages in Poland. OECD Publishing, p. 23.

many rural and peripheral municipalities ([389]) in eastern border regions and some western regions. In these regions, poor-standard local roads and an absence of upgrades still weaken daily accessibility to labour markets, education and services, particularly for rural municipalities. High-density rail networks are an advantage for industrialised and economically developed regions, notably Śląskie, Warszawski stołeczny and Dolnośląskie, with 13 Polish regions exceeding the EU average of 49 km of railroad per 1 000 km². In contrast, most eastern regions, (with the exception of Podkarpackie and Świętokrzyskie) remain below the EU average on this score, with Podlaskie reaching just 38.5 km per 1 000 km². In 2025, 25.8% of Poland's population lived in areas where the public transport accessibility index was below 30% of the national average([390]) (mainly the eastern border regions of Warmińsko-mazurskie, Podlaskie, Podkarpackie and Lubelskie, and the western regions of Lubuskie and Zachodniopomorskie).

Climate change affects regions differently depending on their geography and exposure. In Poland's southern and mountain regions, the main climate-related threats are intense rainfall, flash floods and landslides ([391]). In 2024, southern Poland experienced severe flooding, resulting in damage to more than 10 000 buildings ([392]). Although significant investments have been made in recent years to strengthen resilience in vulnerable regions, the 2024 floods revealed the limited effectiveness of the measures implemented so far. In particular, the 2024 floods revealed the limited effectiveness of the work previously undertaken to modernise flood-protection systems and expand nature-based water-retention capacity in high-risk regions such as Dolnośląskie, Lubuskie, Opolskie and Śląskie ([393]). At the same time, in Polish coastal regions (Zachodnio-pomorskie, Pomorskie and Warmińsko-mazurskie), climate change and the deteriorating environmental state of marine and inland waters significantly limit fish stocks and negatively impact the livelihoods of local communities ([394]).

Access to healthcare is difficult in many less developed regions of Poland. The regions' relatively large hospital capacity does not translate into equal access to healthcare. Ambulatory and primary care infrastructure, like hospital infrastructure, remains dense in cities and functional urban areas ([395]). However, many rural and peripheral municipalities rely on sparse networks of clinics, often with high staff workloads and difficulties in securing specialists (see also Annex 15). In 2024, the highest number of ambulatory care consultations per capita (including consultations from admission rooms in hospitals) was recorded in Mazowieckie and Lubelskie, whilethe lowest in Lubuskie, Opolskie, Warmińsko-Mazurskie and Podkarpackie ([396]). Difficult access to healthcare is a major obstacle to attracting and keeping people in regions which are already facing a significant demographic challenge. The lack of staff and underfinancing of outpatient care translate into territorial inequalities in waiting times, access to specialists and quality of care in the regions.

There is a significant urban-rural divide in access to education, which is more prevalent in some regions. Education in Polish regions is characterised by significant geographical inequalities, reflected in both access to schooling and educational outcomes (see also Annex 13). In 2023, 27% of children under the age of 15 in Poland's rural areas lived within a 15-minute walking distance of a primary school, compared with the EU average of 34%. The lowest levels are recorded in the Łódzkie and Mazowiecki regionalny. The regions closest to the EU average

([389])Taylor Economics (2025). Wpływ polityki spójności na rozwój obszarów wiejskich.

([390])Piotr Rosik and Patryk Duma, "Transport Poverty in Poland – A Spatial Approach to Public Transport Demand and Supply," Geographia Polonica 98, No. 3 (2025): 255–76.

([391])Instytut Meteorologii i Gospodarki Wodnej – Państwowy Instytut Badawczy (IMGW-PIB). (2025). Klimat Polski 2024. IMGW-PIB

([392])Państwowe Gospodarstwo Wodne Wody Polskie. (2025). Raport z przeglądu i aktualizacji wstępnej oceny ryzyka powodziowego w 3 cyklu planistycznym. *Załącznik nr 7: Powódź we wrześniu 2024*, p.30.

([393])The indicated regions were affected by the September 2024 floods and are eligible for support under the RESTORE Regulation (Regulation (EU) 2024/3236 of 19 December 2024).

([394])Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2025 Annual Economic Report on the EU Fishing Fleet (STECF 25-03 & 25-07).

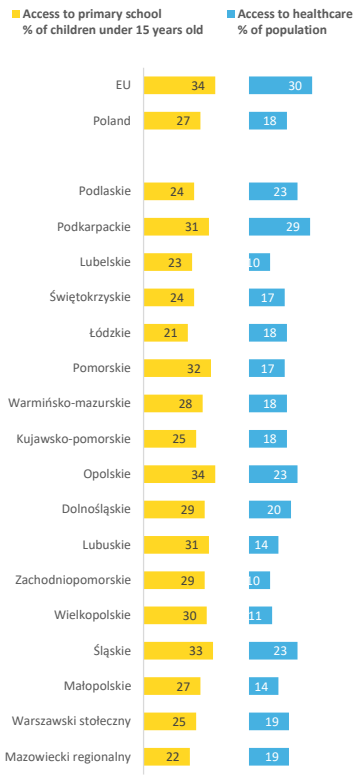
([395])Statistics Poland (2025). Zdrowie i ochrona zdrowia w 2024 r. Główny Urząd Statystyczny.

([396]).Statistics Poland (2025). Zdrowie i ochrona zdrowia w 2024 r. Główny Urząd Statystyczny.

were Opolskie (34%) and Śląskie (33%). According to the 2022 PISA results, students in Poland's rural areas achieve lower scores than their peers in urban agglomerations across all three assessed domains (reading, mathematics, and science)([397]). In 2025, the national urban-rural gap in tertiary educational attainment was 32.1 pps, higher than the EU average of 22 pps. Kujawsko-pomorskie (32.3%) and Warmińsko-mazurskie (33.5%) continued to have the lowest tertiary educational attainment rates compared with the national rate of 45.2%. In contrast, Warszawski Stołeczny (69.6%) and Dolnośląskie (50.5%) both had tertiary educational attainment rates greater than the national average. High education attainment is corelated with subsequent higher productivity employment activities, which is a critical factor for sustained long-term growth. Lubuskie, Warmińsko-mazurskie, Kujawsko-pomorskie, and Opolskie have limited capacity to attract knowledge-intensive investment and retain university graduates ([398]). This translates into limited capacity to improve their productivity and growth prospects over the long term.

Pressure on the housing market is strongest in regions with dynamic labour markets. It is particularly acute in major urban centres such as Warszawa, Kraków, Wrocław, Poznań and Trójmiasto (Gdańsk, Gdynia and Sopot), where gentrification, but also tourism-driven speculation, have intensified affordability constraints. The demand for municipal dwellings or temporary accommodation is particularly high in urban areas of Śląskie, Dolnośląskie and Mazowieckie([399]). Meanwhile, many rural areas continue to face depopulation and an underutilised housing stock. The cost overburden rate varies across regions. In 2025 Kujawsko-pomorskie, Łódzkie, Dolnośląskie, Pomorskie and Warszawski Stołeczny recorded the highest housing cost overburden rates, exceeding 5%, whereas less developed regions, including Podlaskie, Podkarpackie, Lubuskie, and Świętokrzyskie exhibited substantially lower rates, not exceeding 2.6%. Existing housing programmes have so far insufficiently targeted the needs of lower-income and vulnerable households (see also Annex 16). Housing quality and energy performance of social dwellings are a challenge especially in depopulating regions. In growth regions and metropolitan areas, the central priority is to expand the supply of stable, affordable rental housing in locations well connected to labour markets and services.

Graph A18.2: **The share of children with a primary school within a 15-minute walk and the share of population with a hospital within 10 minutes by car in rural areas, (NUTS 2), 2023**



Source: Eurostat

Household energy efficiency is a key challenge in some regions. Many dwellings in Poland have low energy efficiency and rely on carbon-intensive heating systems instead of high-performing insulation (see also Annex 9). This is especially the case in the country's industrial and post-industrial regions, and in its shrinking cities and rural areas. Prefabricated multi-family buildings and older single-family houses are often the least energy efficient. The highest shares of households unable to keep their homes adequately warm are found in Lubuskie, Świętokrzyskie,

([397]) According to PISA methodology, in each test subject, there is theoretically no minimum or maximum score in PISA; rather, the results are scaled to fit approximately normal distributions, with means for OECD countries around 500 score points and standard deviations around 100 score points.

([398]) Statistics Poland (2023). Narodowy Spis Powszechny Ludności i Mieszkań 2021. Ludność. Stan i struktura demograficzno-społeczna w świetle wyników NSP 2021. Główny Urząd Statystyczny.

([399]) Główny Urząd Statystyczny. (2025). Gospodarka mieszkaniowa i infrastruktura komunalna w 2024 r. Główny Urząd Statystyczny.

Table A18.2:**Key regional indicators for Poland (NUTS 2 level)**

	GDP per head (PPS, index)	Population growth	Net migration	Real GDP growth	Productivity: GDP (PPS) per hour worked (index)	Change in working age population (20-64)	Energy poverty	R&D expenditure	R&D expenditure in business enterprise sector (BERD)
	EU27=100	Average annual change per 1000 residents	Average annual change per 1000 residents	Average annual % change	EU27=100	Average annual % change	% of total population	% of GDP	% of GDP
	2024	2015-2024	2015-2024	2014-2024	2023	2016-2025	2025	2023	2023
EU	100	1.8	3.5	1.6	100	-2.6	9.2	2.26	1.5
Poland	78	-4	-1.8	3.7	64	-13.1	3.4	1.56	1
Małopolskie	70	-0.2	-0.1	4.1	58	-6.9	2.5	2.73	1.72
Śląskie	79	-7.9	-4	2.9	68	-18.5	2.9	1	0.69
Wielkopolskie	82	-0.4	0	3.8	63	-8.6	3.7	1.14	0.49
Zachodniopomorskie	64	-7.2	-3.7	3	53	-18.5	3.1	0.76	0.37
Lubuskie	63	-6.5	-3.6	2.8	53	-17.4	5.1	0.45	
Dolnośląskie	83	-2.5	0.7	3.5	67	-12.3	4.2	1.66	1.04
Opolskie	63	-7.8	-4	2.8	55	-17.5	2.5	0.78	0.51
Kujawsko-pomorskie	63	-7.3	-4.5	3.1	52	-17.2	4.8	0.85	0.49
Warmińsko-mazurskie	56	-9.8	-7.1	2.7	46	-20.8	3	0.96	
Pomorskie	75	1.1	1.1	4.3	60	-6.6	2.2	2.32	1.66
Łódzkie	74	-7.4	-2.4	3.3	62	-17.4	4.3	0.98	0.47
Świętokrzyskie	60	-11.5	-6.4	3	50	-23	5.3	0.64	0.43
Lubelskie	55	-10.2	-6.8	2.9	47	-20.3	4.1	1.4	0.55
Podkarpackie	57	-6.8	-5.6	3.5	51	-16.3	5.1	1.19	0.97
Podlaskie	61	-7.9	-5.3	3.4	47	-17.6	3.8	0.92	0.38
Warszawski stołeczny	157	10.8	10.8	4.8	104	6.6	1.8	2.79	2.02
Mazowiecki regionalny	71	-7.3	-4.8	3.8	65	-16.9	2.8	0.28	0.23

(1) Dark green - the indicator is 120% or more of the EU average.
Light green - the indicator is 100% or more, but less than 120% of the EU average.
Yellow - the indicator is 90% or more, but less than 100% of the EU average.
Light red – the indicator is 75% or more, but less than 90% of the EU average.
Dark red – the indicator is below 75% of the EU average.
This colour scale applies to 'positive' indicators, where higher values are favourable.
For 'negative' indicators (where higher values are unfavourable), the colours are reversed.
Source: Eurostat and JRC

Podkarpackie and Warmińsko-mazurskie, where the indicator exceeds 5%. In contrast, in Mazowieckie, Małopolskie and Podlaskie the share oscillates around 2%. Low energy efficiency and outdated heating systems generate high operating costs ([400]).

The energy and industrial transition, particularly the phase-out of coal, poses a major challenge for many polish regions that remain highly reliant on coal and heavy industries. Five of them (Dolnośląskie, Małopolskie, Wielkopolskie, Śląskie and Łódzkie) receive support from the EU's Just Transition Fund. Poland accounts for nearly 97% of the EU's hard-coal extraction, with around 80% of national reserves concentrated in Śląskie and Małopolskie. Although the mining industry remains highly important for the demographic and economic situation of these regions, its profitability continues to fall. Śląskie is the most exposed region. Hard-coal mining, coal-based power, steel and related activities still underpin Śląskie's local labour markets and municipal finances, while legacy industrial sites and dense urban structures amplify social and environmental risks. The industrial transformation of Śląskie is also impacting: the neighbouring region of Western Małopolska (the home of both many coal miners who travel to work in Silesian mines); and SMEs in the supply chains dependent on the coal mines in Śląskie. The socio-economic impact of the imminent phasing out of lignite extraction and combustion-related activities will be significant for

([400])Projekt Krajowego Planu w dziedzinie Energii i Klimatu do 2030 r. z perspektywą do 2040 r. - wersja opracowana przez ME do zatwierdzenia rządowego - Ministerstwo Energii - Portal Gov.pl

local communities in the small towns of Konin in Wielkopolska, where the local economy and labour markets are highly dependent on these fossil-fuel activities. Although it will be challenging to ensure a just transition (especially in reskilling the older cohorts of the labour force), the phase-out of coal mining simultaneously presents an opportunity for regional innovation and growth. Mining technologies and skills can be repurposed into specialised engineering and technical services, such as underground engineering works or land reclamation, enabling the regions to maintain their competitiveness, capitalising on lessons learned from the ongoing Just Transition Fund ([401]).

Poland's energy transition is placing mounting pressure on its power grid, with clear regional implications. As the share of renewables becomes higher in the country's electricity production, the northern regions, such as Pomorskie and Zachodniopomorskie, are becoming increasingly important thanks to their favourable conditions for offshore and onshore wind, large-scale solar photovoltaic, and planned nuclear power plants. Some regions, such as Łódzkie and Opolskie, have high levels of electricity self-sufficiency, but rely predominantly on large, fossil-fuel plants with very low shares of renewables in generation. By contrast, several regions in the north and north-west, including Pomorskie, Zachodniopomorskie, Wielkopolskie, Warmińsko-mazurskie and Podlaskie, record high – or rapidly growing – shares of renewable energy in electricity production, but their overall generation and local grid capacity often remains insufficient to make the most of this potential. However, an increase in a country's share of renewables in its energy mix does not automatically translate into regional energy autonomy, security or competitiveness gains. The existing transmission grid infrastructure, historically oriented toward the coal regions of the south, including Śląsk and Małopolska, will become progressively less capable of meeting the system's evolving needs. These developments create the need for substantial grid reinforcement and a stronger investment planning and coordination framework for distribution networks. This will help enable the territorially balanced integration of renewable energy and electrification as the energy transition becomes a competitiveness condition for regional economies. Reliable access to competitively priced, low-carbon electricity in industrial regions would make them more attractive places to invest. The potential of these less industrialised areas to become producers of green energy could also be increased by targeted grid reinforcement and the introduction of grid investment planning, aligning distribution system operators on the one hand with spatial development plans, storage and smart-grid solutions on the other (see also Annex 9)([402]).

According to the European quality of government index ([403]), in 2024 the quality of governance in Poland remained below the EU average, with Dolnośląskie, Świętokrzyskie Podkarpackie and Warszawski stołeczny the weakest performers. The constraints on governance in Poland are uneven and tend to be most binding in peripheral, shrinking, rural and border territories, while large metropolitan areas face different coordination challenges. Many regional authorities in eastern border regions (and many authorities in peripheral areas and areas with falling populations) are hampered by limited administrative capacity, fragmented coordination and unstable and limited financing capacity. These problems force authorities in the affected areas to focus on formal compliance rather than effective service delivery. In rural and border areas, complex procedures and weak planning frameworks, combined with a high reliance on discretionary transfers, undermine institutional trust and the ability to pursue strategic action. At the same time, metropolitan areas typically have stronger administrative capacity but face different challenges such as coordination and governance across functional areas and across multiple institutions.

The local finance system in Poland remains exposed to central decision-making through shared-tax rules. Poland's 2024 reform of local government revenues aims to reshape the way resources are distributed and improve the

([401])Territorial Just Transition plans for Silesia, Commission decision of 4.3.2026 C(2026)1524, Territorial Just Transition plans for Eastern Wielkopolska, Commission decision of 04/03/2026 C(2026)1596

([402])Projekt Krajowego Planu w dziedzinie Energii i Klimatu do 2030 r. z perspektywą do 2040 r. - wersja opracowana przez ME do zatwierdzenia rządowego - Ministerstwo Energii - Portal Gov.pl

([403])European Commission, Directorate-General for Regional and Urban Policy, European Quality of Government Index, accessed 17 December 2025.

predictability of own contribution and multi-annual planning. The outmigration of younger people and the shrinking working-age population weaken the tax base of the rural and peripheral areas, impacting the delivery of public services ([404]).

([404])Strategia Rozwoju Polski do 2035 r. - Ministerstwo Funduszy i Polityki Regionalnej - Portal Gov.pl.

This Transport Annex presents the state of play and the challenges Poland faces with the implementation of the trans-European transport network (TEN-T), the European railway traffic management system (ERTMS) and road safety.

Three European transport corridors cross Poland (North Sea – Baltic, Baltic Sea – Adriatic Sea and Baltic Sea – Black Sea – Aegean Sea). The TEN-T in Poland comprises 10 259 km of railway lines (4 894 of which are on the core network) and 8 079 km of roads (3 702 of which on the core network), while its TEN-T inland waterways comprise just 54 km. In addition, Poland has 13 airports (including nine core airports), five ports (including four core ports) and 30 urban nodes on the TEN-T network ([405]).

The country made significant progress in upgrading its rail infrastructure to ensure network compliance with TEN-T parameters and improve rail transport competitiveness. Nevertheless, some bottlenecks and missing links still exist.

The core and extended core network are not yet completed with modernisation, expansion, and revitalisation of railway lines and sidings needed to meet TEN-T parameters. Other issues to address include improving capacity of certain sections (especially those connecting seaports and urban areas), eliminating level crossings, the gradual realisation of the high-speed rail programme and the deployment of ERTMS.

The ongoing construction of the first high-speed Warsaw-Łódź-Poznań/Wrocław line with speeds above 300 km/h and the cross-border sections Poznan-Berlin and Warsaw-Vilnius, are essential for the North Sea – Baltic corridor, connecting the Baltic states to central Europe via Rail Baltica. It is important to strengthen the connectivity with neighbouring countries to create a level playing field for railway undertakings operating across borders.

The railway lines leading to the major seaports, in particular Gdynia, Gdańsk, and Szczecin-Świnoujście have not yet been modernised according to the TEN-T requirements. Also, rail resilience in the border area with Czechia has yet to be improved on the Kędzierzyn Koźle-Chałupki section as the line does not meet TEN-T parameters and is not fit for current and anticipated traffic volumes. Further critical bottlenecks need to be removed to enhance railway connectivity and ensure dual use parameters along the eastern flank of the EU and NATO, notably on the Rzeszów-Lublin-Bialystok sections. Substantial investments are also needed to enhance the country's rail network for military mobility, in particular smaller upgrades to accommodate 740 m trains with higher axle loads.

Implementing the ERTMS is essential to digitalising the railways and to modernising and harmonising railway operations across Europe. The ERTMS ensures the safety of rail networks by providing a unified signalling system that significantly reduces the risk of accidents. It also provides interoperability between national rail systems, improving cross-border train movements. Finally, the ERTMS enhances network capacity and operational efficiency, increasing the competitiveness of the rail sector.

To meet its national plan's ERTMS roll-out target by 2035 ([406])**, Poland aims to deploy ERTMS on an additional length of 4 552 km for estimated cost of at least EUR 1.1 billion.** No plan for the decommissioning of the legacy signalling system is in place yet.

The timely delivery of major infrastructure projects is affected by complex and lengthy land acquisition and permitting procedures. Reviewing and streamlining these procedures could accelerate the implementation of projects. Poland does have a TEN-T strategic framework in place. However, it dates to 2019 and has not been updated. Finally, a stable long-term financing framework is required to ensure a smooth roll-out of high-speed rail in Poland. Moreover, harmonising technical and operational rules with

([405])TENtec Information System, according to Reg. 2024/1679.

([406])Based on ERTMS – Third work plan of the European Coordinator Matthias Ruete.

the minimisation of national rules in line with the EU directives on rail interoperability and safety remains critical to ensuring seamless cross-border rail transport.

Map A19.1: **TEN-T cross-border & national priority sections in Poland.**

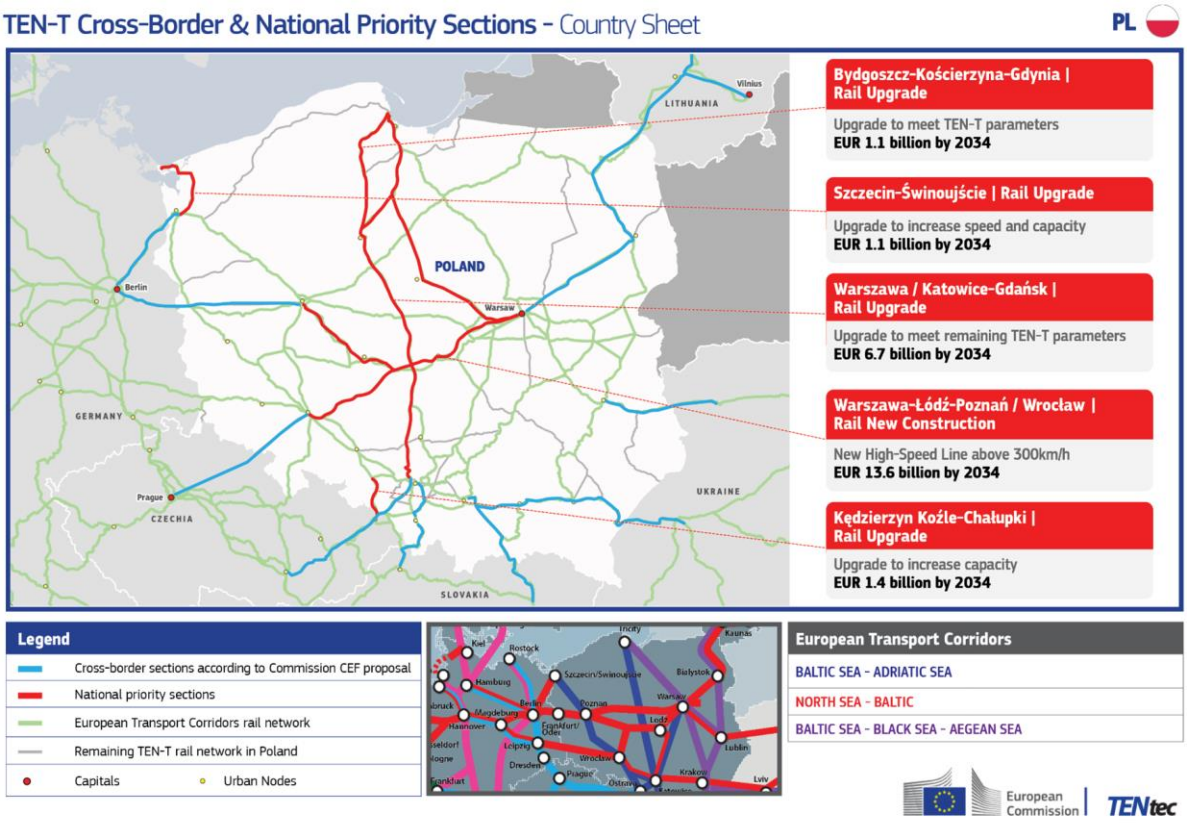


Table A19.1:**ERTMS deployment in Poland.**

ERTMS in Poland				
TEN-T rail network	ERTMS (trackside) in operation			Min. estimated cost of additional deployment until 2035
10261 km	year	length	% of total TEN-T	
	end 2024	737 km	7 %	
	by 2035	5 289 km	52 %	EUR 1.1 billion

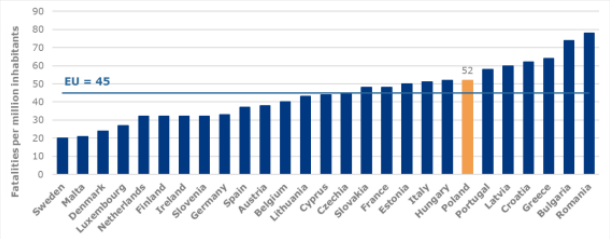
Source: Based on ERTMS – Third work plan of the European Coordinator Matthias Ruete.

Road crashes impose an enormous social, economic and health burden on the EU economy. The external socio-economic costs of fatal, serious and minor injuries have remained persistently high despite the progress made in reducing crash frequency and severity. These resources could otherwise fuel innovation, education, healthcare and other crucial public investments ([407]).

In 2024, Poland was above the EU average (45), with 52 fatalities per million inhabitants. Based on the data, a decrease of 35% in road fatalities was recorded between 2019 and 2024. The number of serious injuries decreased by 27% over that period. Road crash fatalities and serious injuries also declined for all groups examined over this period. Compared with the EU average, the distribution of fatalities in Poland showed a high proportion of pedestrians and fatalities within urban areas. There was also a high number of crashes deemed as extremely serious, which points to the consequences of excessive driving speeds.

The implementation of road safety actions is progressing smoothly, without any particular gaps being reported. All planned measures in the current strategy are well on track, which is also reflected in the progress made in terms of road safety outcomes (fatalities and serious injuries). Poland is well on track to meet both 2030 targets([408]).

Graph A19.1: **Poland's road fatalities per million, 2024**



Source: Report at the Mid-Point - Poland, SWD(2026) 53 final.

The map below presents the roads where the safety of the infrastructure is poor and thus where urgent action is required.

Map A19.2: **Poland's road safety map**

Source: TENtec Information System and TEN-T map library – European Commission

([407]) Report on the implementation of the EU Road Safety Policy framework at the Mid-Point, COM(2026) 77 final.

([408]) More details in Report on the implementation of the EU Road Safety Policy framework at the Mid-Point – Poland, SWD(2026) 53 final.