Council of the European Union

Brussels, 13 June 2025
(OR. en)

9886/25
ADD 1

ECOFIN 698
UEM 231
SOC 367
EMPL 237
COMPET 478
ENV 461
EDUC 210
ENER 201
JAI 764
GENDER 80
JEUN 110
SAN 285
ECB
EIB

COVER NOTE

From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
date of receipt:	4 June 2025
To:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
No. Cion doc.:	SWD(2025) 219 final
Subject:	COMMISSION STAFF WORKING DOCUMENT 2025 Country Report - the Netherlands Accompanying the document Recommendation for a COUNCIL RECOMMENDATION on the economic, social, employment, structural and budgetary policies of the Netherlands

Delegations will find attached document SWD(2025) 219 final.

Encl.: SWD(2025) 219 final

EUROPEAN
COMMISSION

Brussels, 4.6.2025
SWD(2025) 219 final

COMMISSION STAFF WORKING DOCUMENT

2025 Country Report - the Netherlands

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

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

{COM(2025) 219 final}

European Commission

Netherlands

2025 Country Report

ECONOMIC DEVELOPMENTS AND KEY POLICY CHALLENGES

Higher wages drive economic growth amid geopolitical uncertainty

The Dutch economy returned to modest growth in 2024, with GDP adjusted for inflation increasing by 0.9%. Following economic stagnation in 2023, the Dutch economy was supported by real wage growth picking up substantially. This resulted in an increase in consumer spending especially in the second half of 2024. Furthermore, government spending and investment spending increased significantly. However, lagging investments still contributed negatively to economic growth as they did not fully recover following the slump in 2023.

Economic growth is set to increase further in 2025 before moderating slightly in 2026. Annual growth is forecast at 1.3% in 2025 and 1.2% in 2026. Strong real wage growth is set to lead to a recovery in households' disposable income and strong consumption growth. Growth in 2025 and 2026 is also expected to be supported by increased government investment in among others defence and the green transition. Private investment is set to recover somewhat by the second half of 2025 as the outlook for construction improves, but growth is expected to be modest due to persistent labour shortages. Net trade is expected to have a negative contribution to GDP growth in 2025 as the tariffs imposed by the US result in lower exports growth. At the same time, strong domestic demand – driven by consumer spending and public investment – is forecast to result in import growth being higher than export growth.

Risks to global trade could negatively impact economic growth. The Netherlands' open economy yields significant benefits, including productivity gains and economies of scale, due to its strong international trade links. However, this openness also renders the economy vulnerable to external risks, such as trade tariffs and supply chain disruptions.

While inflation in the Netherlands has receded, it remains well above the euro area average. Inflation in the Netherlands, as measured by the Harmonised Index of Consumer Prices, was 3.2% in 2024 (euro area 2.4%). While it initially continued to fall in 2024, increases in excise duties on gas, tobacco and alcohol in the second half of 2024 led to a surge in inflation in the processed foods category. In addition, wage growth and significant rent increases resulted in services inflation above the euro area average. Inflation is set to decline gradually throughout 2025 (3.0%) and 2026 (2.0%) as wage growth is expected to come down gradually and the increase in excise duties only raises inflation temporarily.

The Dutch jobs market remains strong. It is performing well overall, with an employment rate of 83.5% in 2024 – one of the highest in the EU and above the 2030 employment target of 82.5% (see Annex 13). The unemployment rate stood at 3.8% in April 2025, slightly up from 3.6% in Q2-2024 but still historically low and well below

pre-COVID levels (4.5% in 2019). Unemployment is expected to increase slightly in 2025 and 2026 due to slower employment growth as new people entering the jobs market take longer to find a job. Wage growth accelerated to 6.4% in 2024, driven by higher wage demands due to past inflation and the shortage in workers. Wage growth is set to remain robust in 2025 and 2026, though it is expected to slow somewhat as wages have now largely caught up to price increases of the past years.

The Netherlands currently has sound public finances but faces risks due to increases in ageing-related costs in the medium to long term. The government deficit in 2024 stood at 0.9% of GDP and is expected to rise to 2.1% in 2025 and 2.7% in 2026. Government debt fell to 43.3% of GDP in 2024 and is expected to increase to 45.0% in 2025 and 47.8% in 2026. As in previous years, the deficit was significantly smaller than planned. Previously, this was driven by weak execution of spending plans and higher-than-expected revenue. In 2024, the main factor was the postponement of government spending to later years, while revenue was only slightly higher than expected. In the longer term, costs linked to the ageing population are expected to lead to a significant increase in spending on pensions, health and long-term care (see Annex 1). As a share of GDP, spending on long-term care in the Netherlands is the highest in the EU. It is expected to increase by 1.5% of GDP by 2050, raising potential concerns about long-term fiscal sustainability (see Section 4).

Net expenditure growth is expected to breach the maximum rates recommended by the Council in the coming years. In 2024, net expenditure ([1]) in the Netherlands grew by 6.8% (see Annex 1). This increase is mainly driven by strong growth of intermediate consumption and compensation of public employees as high inflation in the Netherlands affected the government budget with a lag. In 2025, net expenditure is forecast by the Commission to grow by 7.0%, which is above the maximum growth rate recommended by the Council ([2]). The cumulative growth rate of net expenditure in 2024 and 2025 taken together is projected at 14.3%, which is also above the maximum rate recommended by the Council. The strong increase of net expenditure in 2025 is driven by structural cuts in personal income taxation, with a budgetary impact of 0.3% of GDP as well as continued growth on compensation of employees as well as social payments.

Macroeconomic challenges remain

The Netherlands faces vulnerabilities relating to a large current account surplus together with high household debt and high house prices. An in-depth review was carried out as part of the Macroeconomic Imbalance Procedure earlier this year ([3]). It highlighted long-

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

([2]) Council Recommendation of 21 January 2025 setting the net expenditure path of the Netherlands (OJ C, C/2025/648,10.2.2025,ELI: http://data.europa.eu/eli/C/2025/648/oj).

([3]) European Commission 2025, In-Depth Review 2025 - The Netherlands (Institutional Paper 313 2025)

Box 1: **UN Sustainable Development Goals (SDGs)**

The Netherlands performs well across most SDGs related to macroeconomic stability (SDGs 8 and 17) and productivity (SDGs 4, 8 and 9), achieving results that are better than or comparable to the EU average.

The Netherlands also performs well on most SDGs related to fairness (SDGs 3, 4 and 5), outperforming the EU average in most indicators related to health, education, gender equality, and decent work and growth. However, in the area of environmental sustainability, the Netherlands still falls behind the EU average (SDGs 7 and 11, 14 and 15), highlighting the need for further progress in increasing the share of affordable and clean energy and reducing net greenhouse gas emissions

standing vulnerabilities, and policy progress has been limited.

The current account surplus stands above 10% of GDP and is expected to remain high, **on the back of a substantial surplus of trade in goods and services.** Excess savings in the Dutch economy are largely driven by the corporate sector. The main contributors are small and medium-sized enterprises and Dutch multinationals. The latter receive profits from their worldwide operations and largely use them to reinvest in their foreign affiliates. This increases the firms' retained earnings and with it the net lending of the Dutch economy.

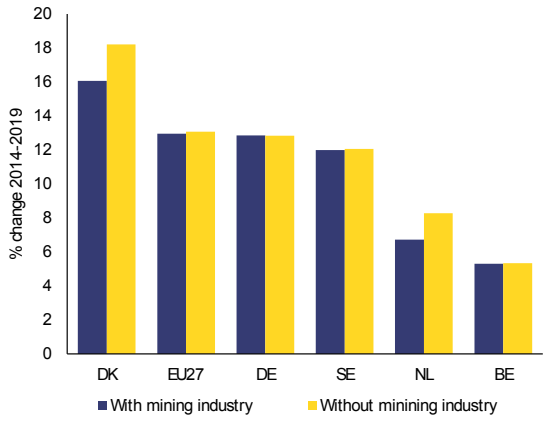
Household debt and house prices remain high. The household debt-to-GDP ratio decreased significantly, from 125% in 2010 to 92% in 2024, but remains high compared to the fundamental benchmark (71%) and is the highest in the EU ([4]). The high debt levels make households vulnerable to economic downturns, particularly in the context of an overvalued housing market, even though immediate risks appear under control.

Preserving the competitiveness edge amid years of low productivity growth

The Netherlands remains a top EU performer in terms of productivity and competitiveness, but there are challenges to address. Several factors risk holding back productivity growth and competitiveness, including the persistent growing shortage of workers and labour market segmentation (the division of the jobs market into different categories of workers with different levels of job security and/or access to social and other benefits), movement of labour towards less productive sectors, and underinvestment in innovation, infrastructure and human capital.

([4]) Household debt as a share of GDP stood at 92% in 2024, significantly below its peak of 125% in 2010.

Graph 1.1:**Change in labour productivity 2009-2019 with and without mining industry**



Source: Eurostat

In 2023, the Netherlands was the fourth most productive EU Member State, but productivity growth lags the EU average. Cumulatively, Dutch labour productivity per hour worked rose by only 4.3% between 2009 and 2019, about half the EU average ([5]). This places the Netherlands 22nd among EU Member States when it comes to productivity growth in this period, and well below peers such as Denmark, Germany and Sweden (see Graph 1.1). A major factor explaining its relative underperformance since 2014 is the phasing out of gas production from the Groningen field (due to earthquake risks). The Netherlands Bureau for Economic Policy Analysis estimates that the reduction in gas production has lowered overall annual productivity growth by about 0.3 percentage points on average since 2014 ([6]). Excluding the gas sector, the underlying productivity trend is slightly better than the headline numbers, though there is still a clear slowdown.

Employment growth in low productivity sectors suggests an inefficient allocation of scarce labour resources. In the last two decades, overall sectoral reallocations in the composition of value added resulted in positive growth in average labour productivity. Nevertheless, when looking at the structural shifts between sectors without accounting for their growth, employment in low productivity sectors has grown faster than employment in high productivity sectors. From a macroeconomic perspective, this unfavourable sectoral mix has been detrimental to Dutch productivity growth ([7]), with the structural impact being significantly worse than in peers such as Germany, Sweden and Denmark ([8]). The relatively stronger employment growth in low productivity sectors is partly the result of population ageing, requiring an increase in employment for example in the healthcare sector. However, it is also likely the result of policies that make it easier to hire relatively low-wage, flexible labour. This has benefited mostly low productivity sectors, often heavily reliant on flexible employment and migrant workers. Supporting high productivity sectors requires the availability of an adequately skilled workforce, continued investment in R&D and access to finance for innovation-driven companies, in particular scale-ups, to maintain the innovative capacity of the Dutch economy (see Section 2).

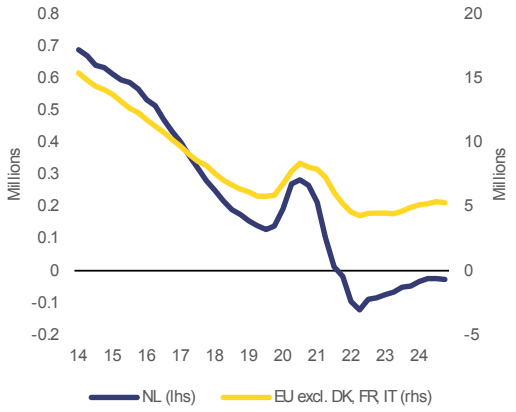
([5]) Labour productivity in 2020-2023 was 0.9% (and very volatile), slightly higher compared to the previous decade

([6]) CPB (2025). National Productivity Board 2024 annual report.

([7]) CBS (2024). Achtergrond bij de daling van de arbeidsproductiviteitsgroei van Nederland.

([8]) ESB (2024). Lage groei productiviteit mede door ongunstige structuur economie.

Graph 1.2: **Unemployed labour force minus number of open vacancies (seasonally adjusted)**



(1) EU aggregate excludes Denmark, France and Italy, who report incomplete vacancy statistics
Source: Eurostat

Pervasive labour and skills shortages limit the productive capacity of the economy. In Q4-2024, there were 108 vacancies for every 100 unemployed in the Netherlands (see Graph 1.2), with companies consistently reporting worker shortages as the largest factor by far holding back their businesses ([9]). The effectiveness of the labour force is also hindered by labour market segmentation, as reflected in the high share of flexible contracts and self-employed without employees. Firms with many short-term or part-time workers tend to underinvest in human capital development and automation. Furthermore, the Netherlands faces specific skills shortages in key sectors such as engineering, IT, education and healthcare. A worsening of education outcomes and a relatively small share of students enrolled in tertiary science, technology, engineering and mathematics (STEM) and IT subjects could pose further risks to future competitiveness. These shortages not only reduce productivity growth but also make it more difficult to realise investments in order to for example advance the energy transition and address housing shortages (see Section 4).

Bottlenecks in energy infrastructure and high energy prices risk affecting competitiveness. The limited capacity of the electricity grid has delayed access to power for some firms and slowed down the roll-out of renewable energy projects. Congestion on the Dutch grid is expected to intensify in the coming years, slowing down decarbonisation and limiting the increase of renewables in the energy mix. Significant investments will be needed to resolve these issues. The Netherlands stands out as one of the EU Member States with relatively high electricity and gas prices. This is partly because the costs of grid investments are passed on directly to consumers (see Section 3).

The Netherlands' current situation is therefore one of both abundance and shortages. It remains one of the most productive and competitive in the EU with a strong knowledge base and one of the highest per capita incomes. However, to maintain this position, the Netherlands will need to address and make effective use of increasingly scarce production factors such as labour, available land and energy. This will require clear choices on how to allocate production factors as well as the appropriate social, labour and tax policies to ensure the workforce is employed and educated in the most effective way. In addition, significant investments in the electricity grid will be needed to lower energy costs and expand grid connections, alongside investments in education, research and innovation to maintain the competitive edge of the economy. Lastly, firms would benefit from more long-term regulatory stability, as policy shifts over recent years have created uncertainty for long-term investment planning.

([9]) CBS (2025). Conjunctuurenquête Nederland, eerste kwartaal 2025.

Box 2:

Barriers to private and public investment

Several structural factors in the Netherlands hold back public and private investment, constraining both **private gross fixed capital formation** (which has stagnated at around 10% of GDP since 2010) and leading, among others, to historically high levels of **underspending** of the government budget (0.7% of GDP in 2023).

- Dutch firms in different sectors report the **lack of skilled workers** as their main barrier to production, which hampers private investment and public projects.
- The complexity of **planning and permitting procedures for construction** significantly delays the building of new dwellings, exacerbating **land scarcity**.
- Congestion on the Dutch **electricity grid** is a significant bottleneck in increasing renewables in the energy mix, a barrier to new economic activity, and one of the causes for relatively **high electricity prices**.
- Excessive **nitrogen deposition** has limited the issuance of new permits for the construction of dwellings, renewable energy and industrial infrastructure since 2019.
- **Distortions in the tax system**, including the preferential tax treatment of residential properties and pension savings, can prevent private investments from being allocated efficiently, favouring tax-incentivised activities over productive ones.

These challenges also act as a bottleneck to the implementation of EU funds. The implementation of the Netherland's RRP is significantly delayed. At present, the Netherlands has fulfilled 40% of the milestones and targets in its RRP. Despite barriers in public investment, the Netherlands is not facing issues in the absorption of EU funds. Nevertheless, the government's plans to reduce public funding and the already implemented budget cuts, such as regarding the National Growth Fund, are concerning.

It remains important to accelerate the implementation of cohesion policy programmes. The mid-term review offers opportunities to speed up progress and better address EU strategic priorities related to competitiveness, defence, housing, water resilience and the energy transition.

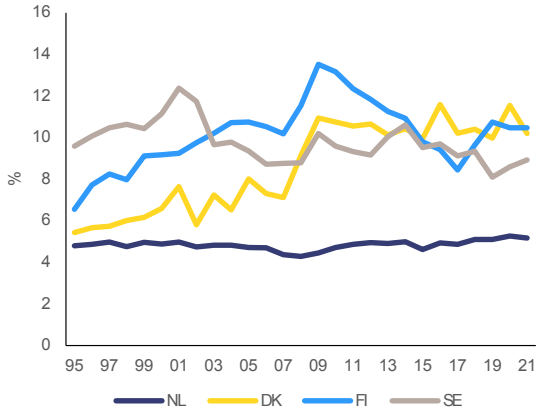
While the Netherlands has leveraged the Strategic Technologies for Europe Platform to reallocate some Cohesion Policy resources towards this priority, it can further support the development or manufacturing of critical technologies in the areas of digital and deep tech, clean and resource efficient technologies, and biotechnologies.

INNOVATION, BUSINESS ENVIRONMENT AND PRODUCTIVITY

Boosting R&D investment

The Netherlands' strong innovation leadership position starts to show signs of deterioration. The Netherlands' leadership in innovation is eroding, as public R&D support has been reduced in recent years and corporate investment in many industries lags behind the euro area (see Graph 2.1). The Netherlands ranks fourth among EU Member States in the Summary Innovation Index, but both overall and public R&D intensity are below the EU average (see Annexes 3 and 17). Recent budget cuts, for example to the National Growth Fund, together with historically high levels of underspending of the government budget in recent years (0.7% of GDP in 2023), have further reduced public funding for innovation ([10]). At the same time, gross fixed capital formation by the non-financial corporate (NFC) sector has stagnated since 2010 and is below the EU average in key sectors like manufacturing ([11]). This can be detrimental to long-term competitiveness as R&D supports sustainable growth by driving innovative products and services and improving efficiency. Targeted public support to key competitive areas ([12]), including by investing in research and testing facilities ([13]), would therefore boost the innovation landscape and ensure the Netherlands keeps its position as a European leader.

Graph 2.1: **R&D investment as a share of gross value added in sectors C, M and P by country**



(1) C: Manufacturing. M: Professional, scientific and technical activities. P: Education
Source: EU KLEMS

Improving access to finance for innovation-driven businesses

The Netherlands performs well on access to finance overall, but certain groups require further attention. The country's financial markets provide a stable source of funding to the economy due to a well-

([10]) Public R&D investment stood at 0.67% of GDP in 2023, well below the EU average of 0.72%, while in 2021 it was on a par with the EU average (0.75% of GDP).

([11]) Investment as a share of value added in manufacturing, information and communication and transport and storage is between 3 and 6 percentage points lower than in the euro area. For a more detailed analysis, see the In-depth review (2025).

([12]) The National Technology Strategy (2024) outlines 10 priority technologies such as quantum technology, semiconductors, AI and data science.

([13]) National Technology Strategy (2024).

capitalised banking sector and stock market, with the largest pension funds in the euro area playing a crucial role in providing long-term investment capital (see Annex 5). However, some companies, especially small and medium-sized enterprises (SMEs) with funding needs of up to EUR 1 million and late-stage start-ups and scale-ups, face difficulties in accessing funding. Access to finance for these two groups can be key to boosting innovative investment and long-term competitiveness.

While loans to SMEs have been growing strongly, smaller SMEs face challenges in accessing finance. Dutch SMEs have access to a solid source of available funding (see Annex 5). However, firms seeking smaller loans cannot access external finance as easily as larger SMEs, even though the need for new external finance of small businesses has grown over the last year. Overall, access to finance is seen as an obstacle for 51% of Dutch SMEs with financing needs, while only 21% of large companies see it as an obstacle ([14]). This may be partially explained by the interest spread between small and large loans, which was the highest in the Netherlands in 2023 compared to other Eurozone countries ([15]). This is especially detrimental for small businesses, as they are more often in need of smaller loans. Furthermore, small businesses are more disadvantaged by high fixed costs and information asymmetry (where one party has more or better information than the other). Policies aimed at lowering information asymmetries can reduce these problems and thereby increase financing possibilities for SMEs.

SMEs are increasingly turning to alternative financing methods, but the market needs professionalisation to help them access viable financial options. The importance of alternative (non-bank) financiers is growing. Small loans in particular are increasingly financed in alternative ways, such as crowdfunding or factoring ([16]), accounting for 27% of loans under EUR 1 million and 45% under EUR 250 000 in 2022 ([17]). Nevertheless, the market could benefit from professionalisation to ensure transparency in relation to costs, conditions and risks. Without disclosure requirements, suitability assessments or risk disclaimers, firms with limited financial expertise struggle to identify credible funding alternatives. This could be addressed by implementing Codes of Conduct or an accreditation scheme. The establishment of a Finance hub, as announced by the Dutch government in 2024, would help SMEs identify credible financial advisers and lenders.

The Dutch venture capital market is one of the deepest in the EU but does not support start-ups and scale-ups adequately in later rounds. With strong growth in venture capital investment (47% in 2024), the Dutch venture capital market is the third largest in the EU ([18]). While the number of scale-ups increased in 2024, scale-up growth is at the low end compared to other top EU ecosystems ([19]). Several government initiatives aim to increase start-up funding, but there is still a

([14]) CBS (2025) Financieringsmonitor 2024

([15]) EIF (2023) The European Small Business Finance Outlook 2023

([16]) Instead of relying on traditional borrowing methods, factoring boosts cash flow through invoice financing. This means the business sells its invoices at a discount and benefits from quick cash flow.

([17]) Kamerstukken II 2023/24, 32637, nr. 578.

([18]) OECD (2024) Venture capital investments, OECD Entrepreneurship Financing Database. The Netherlands has the third largest venture capital market, behind Germany and France.

([19]) Interdepartementaal Beleidsonderzoek (2024) Kies voor baten.

funding gap for start-ups with capital needs above EUR 10 million. Scale-ups seeking funding above EUR 50 million before large-scale commercialisation also face difficulties ([20]). Addressing this funding gap by using guarantees or fund-to-fund instruments could boost start-up and scale-up growth and improve Dutch competitiveness, as these companies show higher productivity growth than other new businesses ([21]).

Venture capital investment relies heavily on foreign investors for larger rounds. Domestic participation in scale-up venture capital (rounds above EUR 100 million) declined sharply from 67% in 2023 to 5% in 2024, alongside 15% domestic participation in the segment between EUR 50 million and EUR 100 million (breakout stage) ([22]). While the presence of foreign investors shows the attractiveness of the Dutch innovation ecosystem, the weight of non-EU investors (around 60%) in funding rounds above EUR 100 million risks these companies leaving the market at the time of large-scale commercialisation. In this regard, InvestNL, the Dutch investment institute, recently announced EUR 250 million in blended finance instruments as part of the EUR 900 million initiative to facilitate scale-up investments. In addition, Invest-NL is exploring the creation of a fund-in-fund vehicle to attract institutional investors, including pension funds ([23]).

([20]) Ibid.

([21]) ESB (2024) Start-ups groeien harder dan andere starters.

([22]) Techleap (2025), State of Dutch Tech 2025.

([23]) Het Financieele Dagblad (2024), Invest-NL takes lead on large scale-up fund of funds.

Reducing distortions in the tax system

The Dutch system of private income taxation treats certain assets differently from the rest, affecting the allocation of capital and distorting economic decisions. Housing wealth and pension contributions are given preferential treatment, boosting demand in the owner-occupied housing market and lowering households' disposable incomes due to high pension contributions. In addition, holding assets in closely held companies (a company with the majority of its shares owned by a few individuals) allows taxpayers to delay tax payments on such returns, while still benefiting from those returns through tax-free loans from the company. Furthermore, households with financial market assets are taxed at assumed rates of return, which is unfavourable when the actual return is lower. The differential treatment of financial investments reduces the ability of the tax system to act as an automatic stabiliser and exacerbates economic inequalities.

The government has proposed a reform of capital gains tax, which only addresses part of the distortions. Savings and investments are currently taxed based on assumed returns, which has been ruled unlawful by the Supreme Court. The proposed reform introduces a capital gains tax for most investments, like savings, shares and bonds, based on their unrealised returns, i.e. actual valuation changes, even if the asset was not sold in a given year. To prevent taxpayers from facing liquidity risks, real estate and stakes in start-ups would only be taxed based on realised gains. While the reform addresses the Supreme Court's ruling, it has received a negative opinion from the Dutch Council of State, criticising the complexity of the

new system. The Council also highlights that the reform does not address distortions related to owner-occupied housing or asset holdings in closely held firms ([24]). The reform falls short of aligning the taxation of different types of capital gains across the tax system.

([24]) Wet werkelijk rendement box 3. - Raad van State

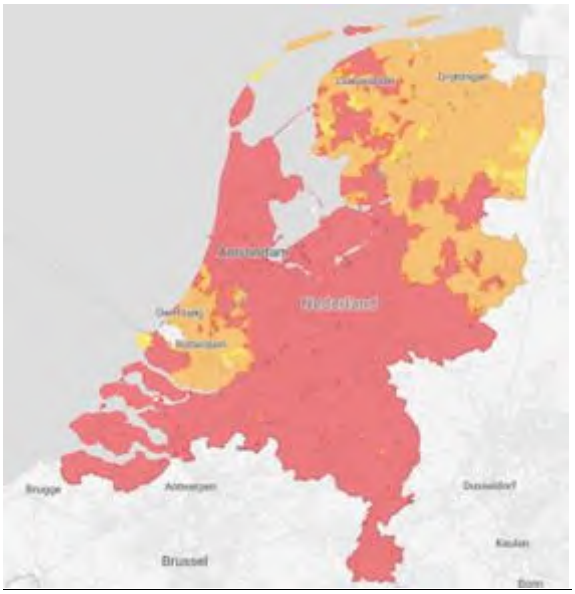
DECARBONISATION, ENERGY AFFORDABILITY AND SUSTAINABILITY

Alleviating energy grid congestion, deploying renewable energy and speeding up decarbonisation

Electricity grid congestion remains a major challenge in the Netherlands. The country is experiencing widespread grid capacity constraints that are no longer limited to rural areas. These constraints occur both at transmission and distribution network level and are a major obstacle to the integration of renewable energy sources. Grid congestion can prevent the connection for example of new photovoltaic installations to the grid. This discourages renewable energy production that relies on grid access, limiting the Netherlands' ability to meet its greenhouse gas emissions reduction targets and clean energy ambitions (see Annex 8). Furthermore, grid congestion poses a risk to security of supply, slows the electrification of the transport sector, hampers the construction of new premises and constrains business expansion. This impacts the Netherlands' competitiveness, with around 10 000 large users (consumers or batteries) and 7 500 large generation projects (bigger than household scale) on a waiting list for connection to the electricity grid ([25]).

([25]) International Energy Agency, Energy Policy Review The Netherlands 2024, https://iea.blob.core.windows.net/assets/2b729152-456e-43ed-bd9b-ecff5ed86c13/TheNetherlands2024.pdf.

Graph 3.1:**Capacity map of the Netherlands, March 2025 (offtake of electricity from the grid)**



Source:
https://capaciteitskaart.netbeheernederland.nl/

Important steps are being taken to alleviate grid congestion through a combination of investments in the grid and regulatory initiatives. The Dutch transmission system operator significantly increased investments in 2023 to modernise and expand the Dutch transmission grid. The Netherlands Authority for Consumers and Markets introduced a broad set of measures in 2024, such as discounts for flexible usage and timeframe-bound contracts, which aim to alleviate grid congestion. Despite these initiatives, it is expected that grid congestion will continue being a major challenge in the short to medium term. In addition to capacity investments, further incentives are needed for efficient grid use. Improving trading over existing cross-

border infrastructure remains a challenge. It would therefore be beneficial to work with the neighbouring countries to maximise cross-zonal electricity trading over existing cross-border infrastructure.

The Netherlands has made good progress in renewable energy deployment but needs to keep up the momentum. Despite progress in the deployment of renewable energy sources, in particular offshore wind, the Netherlands' renewable energy share is still below the targets set out in the revised Renewable Energy Directive and below the EU average (see Annex 8). Its overall energy mix in 2023 remained heavily reliant on fossil fuels, with oil accounting for 43.9%, natural gas 33.8%, and coal 5.8% of gross inland consumption, while renewables (and biofuels) contributed 13.8%. To ensure further deployment of offshore wind, it is important that investments in the sector remain sufficiently attractive. In this context, the Netherlands could consider exploring measures to hedge financial risks in the offshore wind sector, including within the offshore wind supply chain.

Despite the Netherlands' efforts to decarbonise its industrial sector, including carbon pricing and tailored industry agreements, the country is not on track to meet its 2030 sectoral emissions target. With projected greenhouse emissions of 38.5 Mt CO_2-eq compared to the national sectoral 2030 emissions reduction target of 29.1 Mt CO_2-eq, further efforts are needed to close the gap and achieve the desired reduction in industrial greenhouse gas emissions. For example, the work on tailored industry agreements could be stepped up and the support for innovative solutions continued to reduce CO_2 emissions (see Annex 7).

Improving energy affordability and efficiency

Electricity and gas prices in the Netherlands are relatively high compared to neighbouring countries. By way of illustration, major industrial companies in the Netherlands pay up to 66% more for electricity than their counterparts in neighbouring countries (Germany, France, Belgium) ([26]). The difference in electricity costs between countries is largely due to varying network tariffs and rebate schemes. Industrial consumers have seen significant increases in network tariffs, which will have a growing impact on grid tariffs as the grid expands. By 2030, grid costs are expected to rise further, drivefn by higher investment costs. High energy prices in the Netherlands affect the attractiveness of the business environment. To ensure a level playing field with neighbouring Member States, the Netherlands would benefit from addressing in particular the increase in network tariffs. Addressing energy affordability in the Netherlands calls for a comprehensive approach that considers the interplay between energy prices, taxation, energy consumption and grid congestion, taking into account the need to minimise the fiscal impact of such reforms and preserve the price incentive to save energy. (see Annex 8).

Increasing energy efficiency can help address both energy affordability and grid congestion. However, the Netherlands is falling behind on its progress towards reaching the 2030 EU targets for energy efficiency. While good

([26]) Letter No. 1372 from the ministers of economic affairs and climate and energy, https://zoek.officielebekendmakingen.nl/kst-32813-1372.html#extrainformatie.

progress has been made in the residential sector, in which final energy consumption fell by 11.6%, less progress has been made in the transport sector, in which final energy consumption increased by 5% (see Annex 8). As a result, the Netherlands is not on track to meet its targets under the recast Energy Efficiency Directive. To increase energy efficiency, the Netherlands would benefit for example from scaling up building renovations, expanding renewable district heating and accelerating transport electrification.

Flexible grid use in the Netherlands can also have a positive impact on energy affordability. It can enable the efficient integration of renewable energy sources and reduce peak demand, thereby lowering the overall cost of energy supply and need for grid investments. By optimising energy distribution and consumption, flexible grid use can also help reduce energy waste and minimise price volatility, leading to more affordable energy prices for households and businesses. The regulatory measures aimed at alleviating grid congestion, as presented by the Netherlands Authority for Consumers and Markets in 2024, may help pave the way for a more efficient and affordable energy market.

Tackling excessive nitrogen deposition and deteriorating water quality

Excessive levels of nitrogen deposition continue to pose a significant environmental concern, with an impact on the economy as a whole. Excessive levels of nitrogen deposition lead to the over-fertilisation and acidification of soil and water bodies. A comprehensive set of measures is needed to meet this challenge, which originates to a large extent from agricultural activities. Failing to address excessive levels of nitrogen deposition puts significant constraints on construction activities, many of which have been put on hold after rulings by the Council of State on 18 December 2024 ([27]) and the District Court of the Hague of 22 January 2025 ([28]). Previously constraints had already arisen from the ruling from the state council on 19 May 2019 on the special strategy for tackling excess nitrogen (PAS). The uncertainty on how to address nitrogen deposition creates regulatory risk and delays infrastructure investments needed to boost the Dutch economy and its competitiveness. Moreover, following the government's decision to abandon the national programme for rural areas (a programme with the objective to reach goals on nature, nitrogen, climate and water), additional measures are needed to help provinces achieve environmental targets and reduce nitrogen deposition.

The agricultural sector in the Netherlands remains a substantial contributor to greenhouse gas emissions. A considerable proportion of the emissions in the sector can be attributed to livestock production. The Netherlands is not on track to reduce its agricultural sector emissions, with projected greenhouse gas emissions of 22 Mt CO_2-eq compared to the national sectoral 2030 emission reduction target of 17.9 Mt CO_2-eq (see Annex 9). Additional efforts to reduce the sector's environmental impact,

([27]) Judgment of the Council of State of 18 December 2024, reference number 202201311/1/R2, https://www.raadvanstate.nl/uitspraken/@147425/202201311-1-r2/.

([28]) Judgment of the District Court of The Hague of 22 January 2025, reference number C/09/651046 / HA ZA 23-641, https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBDHA:2025:578.

including promoting organic farming, are therefore necessary and would help the Netherlands reach its climate objectives.

Surface and ground water quality in the Netherlands remains a cause for concern. Water bodies are particularly challenged in the country due to high population density, intensive agriculture and land use changes. Many Dutch water bodies generally fail to comply with the Water Framework Directive and the Nitrates Directive (see Annex 9). The current measures are unlikely to substantially improve water quality, and progress towards meeting the 2027 targets under the Water Framework Directive is not on track. As a result, further efforts are needed to address surface and ground water quality, including farming practices aimed at cutting nutrient and pesticide pollution and greenhouse gas emissions.

SKILLS, QUALITY JOBS AND SOCIAL FAIRNESS

Tackling structural shortages in a tight labour market

Labour and skills shortages remain a considerable challenge in the Netherlands against the background of a growing shortage of workers. These shortages have become more widespread and are prevalent across sectors (see Annexes 10 and 12), especially in education, healthcare, technology and ICT. 31% of Dutch companies reported problems in hiring staff, compared to the EU average of 20% ([29]). Even though the fast post-pandemic recovery exacerbated the tightness of the labour market, structural factors such as population decline, trends in workforce growth and low average hours worked remain important drivers. In addition, the lack of available and affordable housing, including in the underdeveloped private rental market, may hinder an efficient allocation of labour through reduced labour mobility to move home for work (see dedicated housing section below).

Labour and skills shortages hamper productivity and competitiveness. The shortages hinder business activity and are one of the main barriers to long-term investment and innovation in the Netherlands. This also affects a range of sectors that are crucial for the adoption of green and digital technologies, thereby weighing on long-term productivity growth and competitiveness. Acute shortages in the healthcare sector also pose a significant risk to population health in general as recent estimates predict a shortage of nearly 265 000 healthcare staff by 2033, including for long-term care services.

The Netherlands still has an untapped pool of potential workers. Despite having one of the highest labour market participation rates in the EU, the Netherlands still has an untapped pool of potential workers such as people with a migrant background and those working in part-time employment, which is widespread in the Netherlands, in particular for women (see Annex 10). This can be at least partially explained by difficulties in combining work with family and care responsibilities. Improving the quality of work and promoting a better work-life balance for working parents and carers can help increase the labour supply.

The government has taken targeted measures and is developing a broad labour market agenda. To address the challenges, the Dutch government has introduced targeted measures for key sectors, aimed also at increasing the attractiveness of these sectors related to societal challenges, such as health and education. In addition, the recently presented outline for the implementation of a broad labour market agenda ([30]) will be further developed in cooperation with

([29]) Business and Consumer Surveys.

([30]) Letter to Parliament of 13 December 2024. Uitwerking plannen arbeidsmarktkrapte en brede arbeidsmarktagenda.

stakeholders in 2025. The package of labour market measures to be adopted before the summer of 2025 is also expected to include a joint agenda on life-long learning (in particular following the abolition of the STAP budget for adult education in 2023) and a reform of the labour market infrastructure.

Addressing labour shortages in the Netherlands will require a multifaceted approach. Fundamental choices with respect to the Dutch labour market may be required and a combination of policies could be considered, focusing on sector-specific needs and barriers and making productivity-enhancing investments. To this end, effective outreach by more targeted and tailored active labour market policies may help to increase the labour supply in key sectors. Promoting better working conditions would also be key to encouraging people to work more hours. For example, in the healthcare sector, limited autonomy and high workloads reduce the attractiveness of the profession (see Annex 14). Furthermore, attracting talent and boosting legal migration could further help to reduce labour shortages.

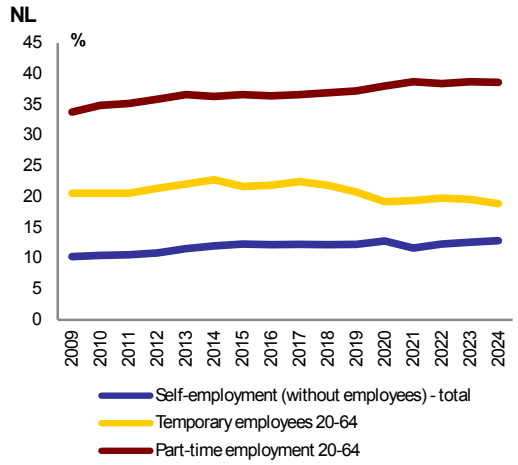
In a tight labour market, investing in skills development and innovation is crucial. Strengthening up- and reskilling opportunities, in particular for those at the margins of the labour market and inactive, is key to addressing skills shortages in a fast-evolving, tight labour market. The persistent shortages are also an opportunity to pursue productivity-enhancing investments in order to reduce labour demand and encourage mobility between sectors, including to those related to societal challenges, and to high-productivity sectors.

Reducing labour market segmentation

The high share of flexible employment on the Dutch labour market continues to be a concern. The percentage of flexible and temporary contracts remains far above the EU average (22.6% vs 11.6% in 2024), as does the number of self-employed people without employees (12.8% vs 9.0% of total employment in 2024). ([31]) (see Graph 4.1 and Annex 10). The prevalence of flexible types of employment is not necessarily driven by job-specific needs or worker preferences. Instead, institutional drivers and national policy choices resulting in differences in tax treatment, social security coverage and labour protection regulations, as well as a lack of public enforcement, have created considerable financial incentives for employers to reduce labour costs using flexible working arrangements.

([31]) As reiterated by the Dutch Council of State in its advice on the draft bills: Wet meer zekerheid flexwerkers (W12.24.00062/III) and Wetsvoorstel Verduidelijking Beoordeling Arbeidsrelaties en Rechtsvermoeden (W12.24.00156/III).

Graph 4.1:**Trends in temporary, part-time and self-employed without employees**



(1) Self-employment (without employees) (% of total employment); temporary employment (% of employees), total, ages 20-64; part-time employment (% of total employment), total, ages 20-64
Source: Eurostat

The rise in precarious employment and low-quality jobs affects vulnerable groups in particular. The high share of flexible employment and resulting labour market segmentation ([32]) has particularly distortive effects for those working at the margins of the labour market, such as the lower skilled and people with a migrant background. It has a negative impact on skills development, as employers are less inclined to invest in training for employees with temporary contracts. People in flexible employment often also lack appropriate social protection coverage, may face an increased risk of in-work poverty and social exclusion, and become trapped in flexible contracts. This hampers inclusive growth and holds back labour productivity ([33]).

The government has put forward reforms to reduce incentives for the use of self-employed persons. Whereas some level of self-employment can be economically beneficial, past policies have created an unequal playing field between employees and self-employed persons without employees and has also enabled bogus self-employment. To address this, the government is implementing various measures to lower incentives for the use of self-employment. This includes a gradual reduction of the tax deduction for the self-employed and the abolition of the tax administration's enforcement moratorium as of 1 January 2025, in line with the commitments included in the Dutch recovery and resilience plan (RRP). In addition, the introduction of a mandatory disability insurance for the self-employed, the adoption of a bill clarifying the concept of an employment relationship in the civil code, and the introduction of a legal presumption of employment for those working below a tariff of EUR 33 are being prepared (all part of the RRP). These aim to limit bogus self-employment and reduce the differences between the self-employed and employees.

Reforms to reduce incentives for the use of flexible and temporary contracts are still pending. The government is preparing a bill aimed at providing job security for those working under flexible employment contracts, for instance by abolishing zero-hours contracts. The bill also intends to improve the job security of temporary agency workers, for example by shortening the most precarious stages of temporary agency work and preventing 'revolving doors' from temporary contracts. However, most of the envisaged reforms have incurred considerable delays, while fast adoption and implementation is key. In addition to these reforms, further steps could be considered to narrow the gap in social security, taxation and pensions between the different groups of workers

([32]) The division of the jobs market into different categories of workers with different levels of job security and/or access to social and other benefits

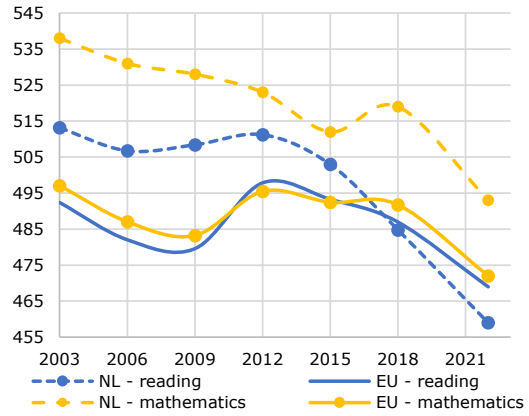
([33]) Ando, S (2020). Productivity in the Netherlands & CBS (2021). De Nederlandse productiviteitspuzzel.

(i.e. permanent, flexible and self-employed persons without employees).

Reprioritising education in line with an evolving labour market

The decline in basic skills in the Netherlands is one of the largest in the EU and undermines education and labour market outcomes and competitiveness. While the Netherlands still has a relatively high share of top performing students, the number of underachievers has sharply increased in mathematics, science and reading over the last decade (see Graph 4.1 & Annex 12). Underachievement has also an equity aspect: in the Netherlands, it is four times more common among disadvantaged students than among their advantaged peers. On digital skills, Dutch 8th-graders (12-year-olds) score the second lowest on average in the EU and have the largest differences in scores according to the level of their parents' education. As a result of the early academic streaming of students into different categories of schools, the Dutch school system shows the strongest ability-based separation of students among all EU countries. Teacher shortages are considerable and vary by the share of disadvantaged pupils in the schools and between regions. The lack of qualified teachers can impact student learning outcomes and hinder access to quality education for all.

Graph 4.2:**Trends in performance in reading and mathematics, PISA mean scores, 2003-2022**



Source: OECD (2023)

The share of tertiary graduates in science, technology, engineering and mathematics (STEM) is low, contributing to skills shortages. While the Netherlands has a tertiary attainment rate above the EU average, the share of STEM graduates is well below the EU average. The share of students in tertiary education was only 17.4% in 2022 (EU 27.1%), leading to increasing future shortages in the sector. Female entrants to vocational education and training and tertiary education are far less likely to choose STEM subjects than their peers in other EU countries (see Annex 12).

Several measures have been taken to improve basic skills and make the teacher profession more attractive. In 2022, the 'Master plan for basic skills' was launched to promote Dutch reading and writing skills, mathematics, citizenship education and digital literacy. In parallel, new learning goals are being set in primary and secondary education, with a focus on basic skills development. The measures introduced as part of the 2022 teacher strategy aim to make the profession more attractive. The government committed to a yearly investment of EUR 1.5 billion in the salaries of teachers and other teaching staff. The Netherlands could evaluate such

measures and maintain the most effective ones with structural support for a lasting impact. Student learning outcomes could be improved by keeping students of different ability levels longer together and making it easier to transition between different educational tracks. The Netherlands could also reduce the performance gap between advantaged and disadvantaged students by allocating extra resources to disadvantaged schools. Enrolment in STEM programmes in higher education could be increased by providing targeted educational support and career guidance to students in secondary education, especially to girls and students with a migrant background.

Unlocking the housing supply

The housing market rebounded strongly in 2024, with house prices expected to continue growing rapidly in 2025. House prices decreased for the first time in a decade in 2023. This drop proved only temporary, as the 2024 upswing in house prices is expected to continue in the coming years, fuelled by declining interest rates, rising wages and persistent supply shortages ([34]). As a result, the Dutch housing market continues to be overvalued ([35]).

The high cost of housing is a major source of financial strain for many households. Dutch households allocate a significant share of their income to housing expenses. The underdeveloped private rental market is particularly challenging, with mostly high costs and limited options available, posing significant affordability challenges and increased poverty risks for low- and middle-income households. The Randstad region is disproportionately affected.

The high cost of housing also has broader implications for the country's competitiveness. It can hinder internal labour mobility, make it difficult for companies to attract foreign talent, and increase labour costs as firms need to offer higher salaries to offset the high cost of living (see Annex 11).

A significant obstacle to the supply of new homes is the complex and time-consuming planning and permitting process. The number of new homes decreased to only 82 000 in 2024 (of which 64 000 were newly constructed dwellings), versus the government target of 100 000 new homes each year ([36]). The estimated housing shortage therefore increased to over 400 000 homes. One major barrier to increasing the supply are planning and permitting procedures. These can currently take up to 6 or 7 years, out of an average construction time of 10 years, due to limitations in planning and administrative capacity among project developers and municipalities (for example slowness in issuing building permits), lengthy appeal procedures and extensive building requirements.

The government recently proposed the Housing Management Enhancement Act ('Wet versterking regie volkshuisvesting') to address this issue, which is also partly incorporated into the Dutch RRP. This

([34]) See the Innovation, business environment and productivity section on tax distortions in the housing market.

([35]) See 2025 In-depth review of macroeconomic imbalance in the Netherlands for a more comprehensive analysis of the Dutch housing market.

([36]) Economisch Instituut voor de Bouw (2025). Verwachtingen bouwproductie en werkgelegenheid 2025.

legislation includes parallel instead of sequential planning and shortened appeal periods to speed up the development of new homes. Swift adoption and implementation of this legislation is now crucial.

At the same time, there are more bottlenecks impeding the supply of new homes. These bottlenecks include high costs and lack of available land, elevated interest rates, labour shortages (see Section 4) and challenges related to the green transition, such as restrictions related to excessive nitrogen deposition and electricity grid congestion (see Section 3). Addressing these issues will require a comprehensive approach.

Recent policy developments may exacerbate the existing supply shortages in the private and social rental sectors. The expansion of rent price controls, although intended to protect tenants, may reduce the already scarce supply of rental properties, particularly in larger cities ([37]). To facilitate the expansion of the private rental sector and accelerate the construction of new homes, it is essential to rebalance incentives between home ownership and renting ([38]). The government also announced that it will freeze rents in the social rental sector in 2025 and 2026. As this will affect cash flows of housing corporations, it risks directly impacting the realisation of new housing projects and thereby undermine supply in the rental sector

([37]) Het kadaster (2024). Investeerders 3e kwartaal 2024: Investeerders verkochten meer woningen.

([38]) See footnote 28.

Maintaining the fiscal sustainability of long-term care

The Dutch long-term care system faces significant challenges from an ageing population, costly institutional care, generous coverage of dependents and labour shortages. The Netherlands fares well compared to the majority of Member States in terms of adequacy, availability and quality of the long-term care system as well as the size of the workforce dedicated to it. However, the system is increasingly putting pressure on the government budget. In 2022, total long-term care spending in the Netherlands stood at 3.8% of GDP, the highest value in the EU by a wide margin. The Commission's 2024 Ageing Report projects that the increase in long-term care spending by 2070 in the Netherlands is also one of the largest in the EU. Labour shortages are also weighing on the system. Estimates suggest that by 2040, the long-term care sector will require around 7.3% of the country's workforce, up from 4.1% in 2020 ([39]).

Despite a major reform of the long-term care system in 2015, the proportion of expenditure and recipients in institutional care is still relatively high. Among other factors, this is due to co-payments, i.e. own contributions by patients to the cost of the care they receive, not being aligned across different types of benefits. The system would work more efficiently if the patients' choice of care setting would be mainly determined by their individual care needs, instead of which setting minimises their co-payments. Additional investments in prevention to delay the onset of long-term care needs and a further improvement in the delivery

([39]) IBO Ouderenzorg, 2023.

of community-based care could also help reduce costs. These improvements could ensure that the benefits of the system are allocated more efficiently without compromising the high coverage and quality of the system. Although the coalition agreement of the current government suggests measures along the lines described above, the government has not yet made concrete proposals.

KEY FINDINGS

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

- **implementing the RRP**, including the REPowerEU chapter; **swiftly implementing cohesion policy**, taking advantage of the opportunities under the mid-term review and making optimal use of EU instruments, including **InvestEU** and **STEP**, to improve competitiveness;
- **improving R&D intensity,** including by targeting public support to investments in key competitive areas;
- **improving access to finance for** smaller businesses, start-ups and scale-ups, with a focus on funding for commercialisation;
- **reducing distortions in the tax system** by better aligning the tax treatment of different types of assets;
- **reduce overall reliance on fossil fuels** by accelerating the deployment of renewables and improving energy efficiency;
- **decreasing electricity grid congestion** by increasing the capacity of the transmission and distribution grid, implementing flexibility solutions and maximising cross-zonal electricity trading over existing cross-border infrastructure;
- **addressing excessive nitrogen deposition and deterioration of water quality** including by promoting sustainable practices in agriculture;
- **tackling labour shortages** by incentivising people in part-time employment to work more hours, increasing the participation of people with a migrant background, boosting productivity-enhancing investments, and encouraging labour mobility to high-productivity sectors and those with societal challenges, such as education and health;
- **reducing labour market segmentation** by swiftly adopting and implementing the reforms on the use of self-employed persons and flexible and temporary contracts;
- **tackling skills shortages** by strengthening up- and reskilling through targeted and tailored active labour market policies;
- **addressing the sharp decline in basic skills** by continuing to implement measures aimed at making the teaching profession more attractive, especially for those teaching at disadvantaged schools, and keeping students of different ability levels longer together;
- **incentivising STEM programmes** by providing targeted education support and career advice;
- **unlocking the housing supply** by, among others, simplifying planning and permitting procedures;

- **ensuring the availability and affordability of the private rental market** by rebalancing incentives between home ownership and renting and making investments more attractive;

- **ensuring the sustainability of the long-term care system** by allocating benefits more efficiently, aligning co-payments in the different care settings, further increasing investments in prevention, and facilitating community-based services instead of institutional care.

ANNEXES

LIST OF ANNEXES

LIST OF TABLES

LIST OF GRAPHS

ANNEX 1: FISCAL SURVEILLANCE AND DEBT SUSTAINABILITY

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

The reformed framework, which entered into force on 30 April 2024 ([40]), aims to strengthen debt sustainability and promote sustainable and inclusive growth through growth-enhancing reforms and priority investments. The medium-term fiscal-structural plans (hereinafter, MTPs or plans) constitute the cornerstone of the framework, setting the budgetary commitment of Member States over the medium term. The latter is defined in terms of net expenditure growth, which is the single operational indicator for fiscal surveillance.

The Netherlands submitted its plan on 15 October 2024. The plan covers the period until 2028, presenting a fiscal adjustment over four years. On 21 January 2025, the Council adopted the Recommendation setting the net expenditure path of the Netherlands ([41]).

The assessment of the implementation of the Council Recommendation setting the net expenditure path of the Netherlands is carried out on the basis of outturn data from Eurostat and the Commission's Spring 2025 Forecast and taking into account the Annual Progress Report (APR), that the Netherlands submitted on 29 April 2025. Furthermore, in the context of the Commission Communication of 19 March 2025 ([42]), on accommodating defence expenditure within the Stability and Growth Pact, the annex reports the projected increase in defence expenditure based on the Commission Spring 2025 Forecast.

The Annex is organised as follows. First, developments in **government deficit and debt** are presented based on the figures reported in Table A1.1. Then, the assessment of the **implementation of the Council Recommendation setting the net expenditure path of the Netherlands** follows, based on the relevant figures presented in Tables A1.2 to A1.8, including data on defence expenditure.

The Annex also provides information on the **cost of ageing** and the **national fiscal framework**. Fiscal sustainability risks are discussed in the Debt Sustainability Monitor 2024([43]).

Developments in government deficit and debt

The Netherlands' government deficit amounted to 0.9% of GDP in 2024. Based on the Commission Spring 2025 Forecast, it is projected to increase to 2.1% of GDP in 2025. The government debt-to-

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

([41]) OJ C, C/2025/648, 10.02.2025, ELI: http://data.europa.eu/eli/C/2025/648/oj

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

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

GDP ratio amounted to 43.3% at the end of 2024 and, according to the Commission, is projected to increase to 45.0% end-2025. Since 2015, the debt ratio has declined by about twenty percentage points. The increase of the deficit in 2025 reflects mainly personal income tax cuts, increasing government spending on compensation of employees and intermediate consumption due to a higher-than-expected base in 2024 and a reduction of some revenue components due to anticipation effects that boosted revenue in 2024. Differences between the projections in the APR and the Commission Spring 2025 Forecast are mainly due to higher assumed underspending of budgeted funds in the latter.

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

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1	General government balance	% GDP	-0.9	-2.3	-2.1	-2.8	-2.7
2	General government gross debt	% GDP	43.3	45.0	45.0	47.8	47.8

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

Developments in net expenditure

The net expenditure ([44]) growth of the Netherlands in 2025 is forecast by the Commission ([45]) to be above the recommended maximum, corresponding to a deviation of 1.4% of GDP. Considering 2024 and 2025 together, the cumulative growth rate of net expenditure is also projected above the recommended maximum cumulative growth rate, corresponding to a deviation of 1.4% of GDP. The national authorities also forecast net expenditure growth of the Netherlands in 2025, as well as the cumulative growth rate considering 2024 and 2025 together, to be above the recommended maximum. The difference between the Commission's calculations of the net expenditure growth and the estimates of national authorities as presented in their APR is mainly due to lower projected utilisation of funds budgeted for 2025 in the Commission 2025 spring forecast.

The annual deviation in 2025 and the cumulative deviation in 2024 and 2025 are above the 0.3% of GDP and 0.6% of GDP thresholds.

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

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

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

	Annual			Cumulative*		
	REC	APR	COM	REC	APR	COM
	Growth rates					
2024	n.a.	5.7%	6.8%	n.a.	n.a.	n.a.
2025	3.5%	7.9%	7.0%	10.4%	14.2%	14.3%
2026	3.3%	3.4%	3.8%	14.0%	n.a.	18.6%

* The cumulative growth rates are calculated by reference to the base year of 2023

Source: Council Recommendation setting the net expenditure path of the Netherlands, Annual Progress Report (APR) and Commission's calculation based on Commission Spring 2025 Forecast (COM).

Source:

General government defence expenditure in the Netherlands remained stable at 1.3% of GDP between 2021 and 2023([46]). According to the Commission Spring 2025 Forecast, expenditure on defence is projected at 1.5% of GDP in 2024 and 1.5% of GDP in 2025.

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

	Variables		2023	2024	2025	2026
			Outturn	Outturn	COM	COM
1	Total expenditure	bn NAC	461.2	497.4	527.5	559.5
2	Interest expenditure	bn NAC	7.3	7.9	8.9	9.8
3	Cyclical unemployment expenditure	bn NAC	-0.6	0.3	1.2	1.8
4	Expenditure funded by transfers from the EU	bn NAC	2.1	1.7	1.4	1.4
5	National co-financing of EU programmes	bn NAC	0.3	0.3	0.3	0.3
6	One-off expenditure (levels, excl. EU funded)	bn NAC	0.0	5.0	0.0	8.5
7=1-2-3-4-5-6	**Net nationally financed primary expenditure (before discretionary revenue measures, DRM)**	**bn NAC**	**452.1**	**482.3**	**515.7**	**537.8**
8	Change in net nationally financed primary expenditure (before DRM)	bn NAC		30.2	33.5	22.1
9	DRM (excl. one-off revenue, incremental impact)	bn NAC		-0.4	-0.5	2.5
10=8-9	**Change in net nationally financed primary expenditure (after DRM)**	**bn NAC**		**30.6**	**33.9**	**19.5**
11	Outturn / forecast net expenditure growth	% change		6.77%	7.0%	3.8%
12	Recommended net expenditure growth*	% change		6.9%	3.5%	3.3%
13=(11-12) x 7	Annual deviation	bn NAC		-0.6	17.1	2.5
14 (cumulated from 13)	Cumulated deviation	bn NAC		-0.6	16.5	18.9
15=13/17	**Annual balance**	**% GDP**		**-0.1**	**1.4**	**0.2**
16=14/17	**Cumulated balance**	**% GDP**		**-0.1**	**1.4**	**1.5**
17	p.m. Nominal GDP	bn NAC	1067.6	1134.1	1191.6	1238.2

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

Source: Commission Spring 2025 Forecast and Commission's calculation

Table A1.4: **Defence expenditure**

			2021	2022	2023	2024	2025	2026
1	Total defence expenditure	% GDP	1.3	1.3	1.3	1.5	1.5	1.6
2	*of which: gross fixed capital formation*	% GDP	0.3	0.2	0.2	0.2	0.2	0.2

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

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

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

	Variables		2024	2025		2026	
			Outturn	APR	COM	APR	COM
1=7+8+9	**Real GDP**	**% change**	**1.0**	**1.9**	**1.3**	**1.5**	**1.2**
2	Private consumption	% change	1.2	2.6	1.9	2.4	1.8
3	Government consumption expenditure	% change	3.6	1.9	1.8	1.3	1.3
4	Gross fixed capital formation	% change	-0.5	2.3	0.8	4.0	1.5
5	Exports of goods and services	% change	0.4	2.0	0.7	1.8	1.9
6	Imports of goods and services	% change	0.3	2.8	1.2	3.2	2.2
	Contributions to real GDP growth						
7	- Final domestic demand	pps	1.3	2.3	1.4	2.4	1.4
8	- Change in inventories	pps	-0.5	0.2	0.1	0.2	-0.1
9	- Net exports	pps	0.1	-0.3	-0.3	-0.8	0.0
10	Output gap	% pot GDP	-0.7	-0.8	-1.0	-1.0	-1.2
11	Employment	% change	1.0	0.3	0.3	0.3	0.2
12	Unemployment rate	%	3.7	3.8	3.9	4.0	4.0
13	Labour productivity	% change	-0.1	1.6	0.9	1.2	1.0
14	HICP	% change	3.2	3.0	3.0	2.4	2.0
15	GDP deflator	% change	5.2	3.6	3.7	2.7	2.6
16	Compensation of employees per head	% change	6.4	5.9	5.1	5.0	3.7
17	Net lending/borrowing vis-à-vis the rest of the world	% GDP	9.8	n.a.	10.1	n.a.	10.5

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

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

	Variables (% GDP)	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1=2+3+4+5	**Revenue**	**43.0**	**42.0**	**42.1**	**42.6**	**42.4**
	of which:					
2	- Taxes on production and imports	11.1	10.9	11.0	11.2	11.3
3	- Current taxes on income, wealth, etc.	14.8	13.9	14.1	14.2	14.2
4	- Social contributions	12.5	12.9	12.6	12.9	12.6
5	- Other (residual)	4.6	4.3	4.4	4.3	4.3
8=9+16	**Expenditure**	**43.9**	**44.4**	**44.3**	**45.4**	**45.2**
	of which:					
9	- Primary expenditure	43.2	43.7	43.5	44.5	44.4
	of which:					
10	- Compensation of employees	8.6	8.7	8.7	8.6	8.6
11	- Intermediate consumption	6.6	6.4	6.6	6.3	6.6
12	- Social payments	20.8	21.3	21.4	21.6	21.7
13	- Subsidies	1.4	1.5	1.4	1.6	1.4
14	- Gross fixed capital formation	3.2	3.2	3.2	3.4	3.3
15	- Other	2.6	2.6	2.3	3.0	2.8
16	- Interest expenditure	0.7	0.7	0.8	0.9	0.8
18=1-8	**General government balance**	**-0.9**	**-2.3**	**-2.1**	**-2.8**	**-2.7**
19=1-9	**Primary balance**	**-0.2**	**-1.6**	**-1.4**	**-2.0**	**-2.0**
20	Cyclically adjusted balance	-0.5	n.a.	-1.5	n.a.	-2.0
21	One-offs	0.0	0.0	0.0	-0.7	-0.7
22=20-21	**Structural balance**	**-0.4**	**-1.9**	**-1.5**	**-1.6**	**-1.3**
23=22+16	Structural primary balance	0.3	-1.1	-0.8	-0.7	-0.5

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

Table A1.7: **Debt developments**

	Variables	2024	2025		2026	
		Outturn	APR	COM	APR	COM
1	**Gross debt ratio* (% of GDP)**	**43.3**	**45.0**	**45.0**	**47.8**	**47.8**
2=3+4+8	Change in the ratio (pps. of GDP)	-1.8	1.6	1.6	2.8	2.8
	Contributions**					
3	**Primary balance**	**0.2**	**1.6**	**1.4**	**2.0**	**2.0**
4≈5+6+7	**'Snow-ball' effect**	**-2.0**	**-1.6**	**-1.3**	**-1.0**	**-0.9**
	of which:					
5	- Interest expenditure	0.7	0.7	0.8	0.9	0.8
6	- Real growth effect	-0.4	-0.8	-0.5	-0.6	-0.5
7	- Inflation effect	-2.2	-1.5	-1.6	-1.2	-1.2
8	**'Stock-flow' adjustment**	**-0.1**	**1.6**	**1.6**	**1.8**	**1.8**

* End of period.

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

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

Table A1.8: **RRF – Grants**

	Revenue from RRF grants (% of GDP)							
		2020	2021	2022	2023	2024	2025	2026
1	RRF grants as included in the revenue projections	n.a.	0.0	0.0	0.0	0.1	0.1	0.2
2	Cash disbursements of RRF grants from EU	n.a.	0.0	0.0	0.0	0.1	0.1	0.0

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

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

Source: Annual Progress Report

Cost of ageing

Total age-related spending in the Netherlands is projected to rise from 21% of GDP in 2024 to about 23% in 2040 and 24.5% in 2070 (see Table A1.9**).** The overall increase is driven by the projected rise in long-term care and pension spending, with a lower impact from rising healthcare expenditure. Of the projected increase of 1.7 pps in public pension by 2070, 1.2 pps would take place by 2040.

Public healthcare expenditure is projected at 5.8% of GDP in 2024 (below the EU average of 6.6%) and is expected to increase by 0.4 pps by 2040 and by a further 0.3 pp by 2070 ([47]).

Public expenditure on long-term care ([48]) is projected at 3.9% of GDP in 2024 (above the EU average of 1.7%) and is expected to increase by 1 pp of GDP by 2040 and by a further 0.8 pps of GDP by 2070. This increase in long-term care expenditure contributes significantly to fiscal risk. Addressing inefficiencies could improve fiscal sustainability without reducing the universality and quality of the Dutch system, as discussed in the 'Skills, Quality Jobs and Social Fairness' section.

Table A1.9: **Projected change in age-related expenditure in 2024-2040 and 2024-2070**

	age-related expenditure 2024 (% GDP)	change in 2024-2040 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2040 (%GDP)	
NL	21.0	*1.2*	*0.4*	*1.0*	*-0.4*	***2.1***	23.1	**NL**
EU	24.3	*0.5*	*0.3*	*0.4*	*-0.3*	***0.9***	25.2	EU

	age-related expenditure 2024 (% GDP)	change in 2024-2070 (pps GDP) due to: pensions	healthcare	long-term care	education	total	age-related expenditure 2070 (%GDP)	
NL	21.0	*1.7*	*0.7*	*1.8*	*-0.7*	***3.5***	24.5	**NL**
EU	24.3	*0.2*	*0.6*	*0.8*	*-0.4*	***1.3***	25.6	EU

Source: 2024 Ageing Report (EC/EPC).

National fiscal framework

The Netherlands have chosen to split the Independent Fiscal Institution (IFI) tasks on two already well-established institutions, which could benefit from more formal independence safeguards. The Council of State (CoS) has only two persons working on IFI issues, as it only performs part of the IFI tasks. It seems to keep a relatively low media profile when it comes to its IFI tasks and is not subject to any external review. As the IFI part is completely embedded in the CoS, it may complicate name/role recognition among the public. The Netherlands Bureau for Economic Policy Analysis (CPB) is a well-resourced institution with a solid reputation for impartiality and with a strong media presence. However, some of its independence features, such as access to information and CV requirements for its leadership, could be strengthened as they are based on tradition rather than legal provisions.

The Netherlands have good practices in place for the appraisal, selection and budgeting of investment projects in the mobility sector. The rules of the Multiannual Programme for Infrastructure, Spatial Planning and Transport (MIRT) apply to projects or programmes in the physical domain, in which the Ministry of Infrastructure and Water Management is involved as a potential co-financing party ([49]), which is, by far, the largest portfolio of investment projects ([50]).

([47]) Key performance characteristics, recent reforms and investments are discussed in Annex 11 'Health and health systems'.

([48]) The quality and the accessibility of the long-term care system are covered in Annex 9 'Social policies'.

([49]) Ministry of Infrastructure and Water Management. (2022). Rules of the game of the Multiannual Programme in Infrastructure, Space and Transport (Dutch). The Netherlands.

([50]) Samset, K. F., Volden, G. H., Olsson, N., & Kvalheim, E. V. (2016). Governance Schemes for Major Public Investement Projects: a comparative study of principles and practices in six countries. Ex Ante Academic Publisher; The Concept research program; Norwegian University of Science and Technology.

The MIRT rules define four phases of projects and there is no automatic flow from one phase to the next. 75% of capital and its sources needs to be identified before a project can go to the first phase, which ensures strict prioritisation. The Mobility Fund governs all budgetary aspects related to the national MIRT mobility investment projects. The fund has a 14-year horizon, the whole cost of the project is budgeted up-front based on multi-annual commitment appropriations and there is a clear breakdown between capital (operations) costs, maintenance costs and available fiscal space. Once appropriated, capital allocation can only be changed with parliamentary approval. Standard methodology for estimating routine maintenance costs is in place for all new projects, but not always for completed infrastructure.

Table A1.10: **Fiscal Governance Database Indicators**

2023	The Netherlands	EU Average
Country Fiscal Rule Strength Index (C-FRSI)	19.76	14.52
Medium-Term Budgetary Framework Index (MTBFI)	0.95	0.73

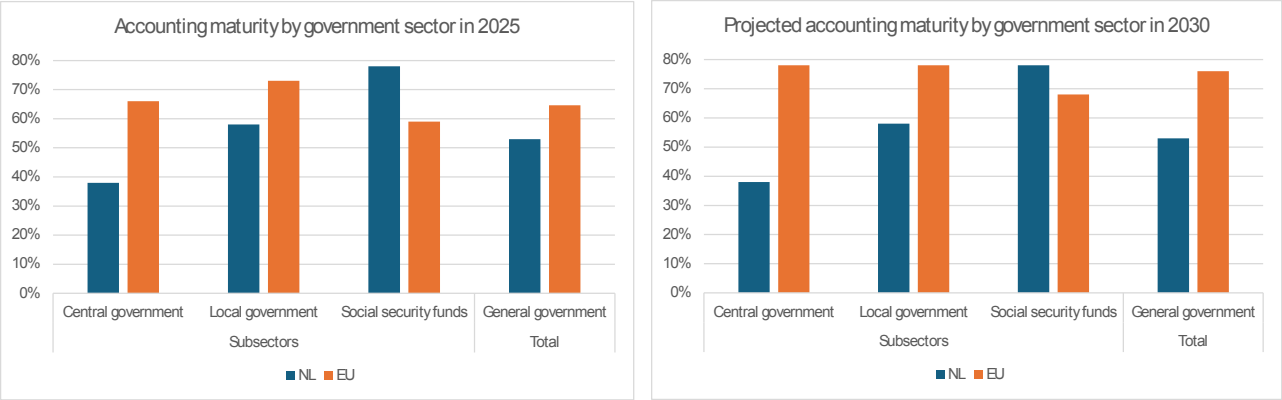
The Country Fiscal Rule Strength Index (C-FRSI) shows the strength of national fiscal rules aggregated at the country level based on i) the legal base, ii) how binding the rule is, iii) monitoring bodies, iv) correction mechanisms, and v) resilience to shocks. The Medium-Term Budgetary Framework Index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

Source: Fiscal Governance Database

Public Accounting

The Netherlands is less advanced in implementing accrual accounting for government relative to the EU average, in particular within the central government (see Graph A1.1, left chart). Furthermore, the Netherlands has no plans to move towards accrual accounting in the medium term (see Graph A1.1, right chart). Accrual accounting as a public accounting standard provides a comprehensive and transparent overview of a public body's financial position and performance and can support sustainability and intergenerational equity.

Graph A1.1: **Accounting maturity by government sector (2025, 2030)**



Source: Tables 3 and 19 of Updated accounting maturities of EU governments and EPSAS implementation cost.

This annex provides an indicator-based overview of the Netherlands' tax system. It includes information on: (i) the tax mix; (ii) competitiveness and fairness aspects of the tax system; and (iii) tax collection and compliance. Furthermore, it provides information on risks of aggressive tax planning activity.

The Netherlands' tax mix and revenue are in line with the EU average. In 2023 the total tax revenue amounted to 38.6% of GDP, close to the EU average of 39.0%. Of the different tax bases, labour taxes represented the most important source of revenue in 2023 (17.9% of GDP), followed by consumption taxes (11.1% of GDP), slightly above the EU average (10.5% of GDP). Between 2010 and 2023, consumption taxes decreased by 0.2 percentage points as a percentage of GDP, although VAT revenues increased slightly, by 0.6 percentage points ([51]). In 2023, VAT revenues amounted to EUR 75.349 million ([52]).

There is scope to align the taxation of different types of income from wealth. In 2024, the Netherlands received a country-specific recommendation that highlighted the need to reconsider the favourable tax treatment of returns from primary residence properties, pension wealth and investments held in closely held companies. Specifically, pension savings benefit from tax relief up to relatively high income levels. Furthermore, in the case of housing, tax benefits are provided through generous mortgage interest deductibility, coupled with a low tax on imputed rents from homeownership. Consequently, there is a high concentration of household wealth in illiquid types of wealth, which may increase the severity of economic downturns and encourage tax planning strategies. The ongoing reform of the Box 3 system, following a judgment by the Supreme Court, to tax wealth on the basis of actual returns may partially address some of these issues and further increase the progressivity of the Dutch tax system.

Non-tax compulsory payments (e.g. pension contributions) drive up the compulsory payment wedge on labour. In 2023, the tax wedge in the Netherlands was considerably lower than the EU average at various wage levels (Graph A2.1)([53]). However, the tax wedge does not include compulsory contributions under collective labour agreements that are paid by employees and employers to collectively managed pension funds. When non-tax compulsory payments are factored in, the compulsory payment wedge for single earners in 2024 amounted to 41.7%, 49.4% and 54.8% for wages of 67%, 100% and 167% of the average wage respectively. These levels are well above the EU average. Aggregate tax expenditures represent a sizeable share of personal income tax revenue in the Netherlands. A recent study shows that simulated tax expenditures in areas such as employment, housing, education, health and family can reduce government revenues from personal income taxation by 22%, or 2% of GDP([54]).

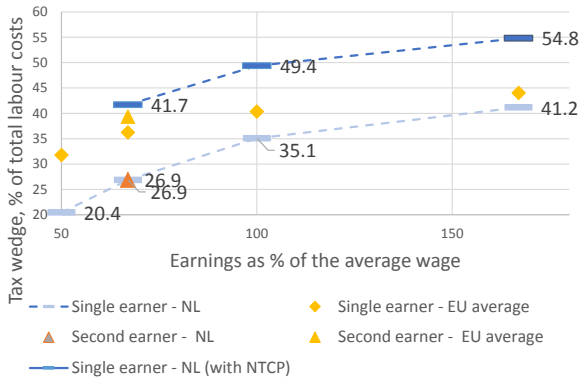
([51]) Taxation Trends Data (TAX_TYPE for SSCs, VAT, PIT and CIT, TAX_EC_FUNC for Environmental taxes and Property taxes).

([52]) VAT gap in the EU - Publications Office of the EU (Table 64).

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

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

Graph A2.1: **Tax wedge for single and second earners, % of total labour costs, 2024**



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

The progressive income tax system in the Netherlands reduces income inequality more than the EU average. In 2023 the reduction in income inequality, as measured by the Gini coefficient, was 9.4 points, surpassing the EU average reduction of 7.7 points. However, wealth is more unevenly distributed than income, with the Gini coefficient for wealth inequality reaching 0,723 in 2023([55]).

In 2025 the Netherlands implemented a reform of the personal income tax system, further increasing its progressivity. The reform created a new income tax bracket and reduced the tax rate for the lower income bracket. It created a second income tax bracket for those earning between EUR 38,441 and EUR 76,817 per year. For those earning less than EUR 38,441 per year, the tax rate was reduced from 36,97% to 35,82%. Furthermore, a recently planned reform to phase out the preferential tax regime for highly educated foreign employees has been partially reversed. According to the 2025 Dutch tax plan, a 27% deduction on personal income tax (down from 30%) will be allowed for a period of five years for a higher qualifying salary. This regime has been assessed as having a medium level of aggressiveness compared with other EU schemes([56]).

There is scope to increase the use of recurrent property taxes in the context of housing shortages. In 2023, recurrent taxes on immovable property represented 0.6% of GDP, slightly below the EU average 0.9% of GDP. The housing imbalances in the Netherlands are further exacerbated by the mortgage interest relief tax scheme, which in practice offsets property taxes. This scheme has been found to have a negative impact on macroeconomic stability by increasing volatility and driving up prices in the housing market, and by increasing the accumulation of household debt. The Netherlands received a country-specific recommendation to reduce the relief scheme in 2019, 2022, 2023 and 2024.

([55]) Ongelijkheid in inkomen en vermogen huishoudens. Centraal Bureau voor de Statistiek.

([56]) New Forms of Tax Competition in the European Union, An Empirical Investigation. EU Tax Observatory, November 2021

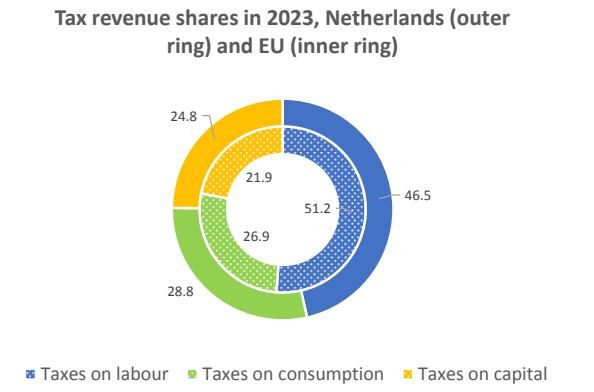
Table A2.1: **Taxation indicators**

		The Netherlands					EU-27				
		2010	2021	2022	2023	2024	2010	2021	2022	2023	2024
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	36.1	39.2	38.1	38.6		37.8	40.2	39.7	39.0	
By tax base	Taxes on labour (% of GDP)	19.6	19.0	18.2	17.9		19.8	20.5	20.1	20.0	
	of which, social security contributions (SSC, % of GDP)	13.7	13.1	12.5	12.1		12.9	13.0	12.7	12.7	
	Taxes on consumption (% of GDP)	11.3	12.0	11.2	11.1		10.9	11.2	10.9	10.5	
	of which, value added taxes (VAT, % of GDP)	6.5	7.3	7.1	7.1		6.8	7.3	7.4	7.1	
	Taxes on capital (% of GDP)	5.1	8.2	8.7	9.5		7.1	8.5	8.7	8.5	
Some tax types	Personal income taxes (PIT, % of GDP)	7.1	8.2	7.7	8.9		8.6	9.6	9.4	9.3	
	Corporate income taxes (CIT, % of GDP)	2.4	3.8	4.8	4.9		2.2	2.9	3.2	3.2	
	Total property taxes (% of GDP)	1.3	1.8	1.6	1.4		1.9	2.2	2.1	1.9	
	Recurrent taxes on immovable property (% of GDP)	0.6	0.8	0.7	0.6		1.1	1.1	1.0	0.9	
	Environmental taxes (% of GDP)	3.8	3.4	2.9	2.8		2.5	2.4	2.1	2.0	
	Effective carbon rate in EUR per tonne of CO_2 equivalents	NA	125.9	NA	120.0		NA	86.0	NA	84.8	
Progressivity & fairness	Tax wedge at 50% of average wage (single person) (*)	28.3	21.7	22.9	21.2	20.4	33.9	31.8	31.5	31.5	31.8
	Tax wedge at 100% of average wage (single person) (*)	38.1	35.0	35.8	35.1	35.1	40.9	39.9	39.9	40.2	40.3
	Corporate income tax - effective average tax rates (1) (*)	22.8	22.8	22.8	22.8		21.3	19.3	19.1	18.9	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	10.0	9.7	9.6	9.4		8.6	8.2	7.9	7.7	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		12.5	11.8				35.5	32.6		
	VAT gap (% of VAT total tax liability, VTTL) (**)		5.3	7.9	7.8			6.6	7.0		

(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 2023. For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, VAT gap in the EU - 2024 report, https://data.europa.eu/doi/10.2778/2476549
For more data on tax revenues and methodology applied, see the Data on Taxation webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
Source: European Commission, OECD

Revenues from environmental taxes fell by 2.6 percentage points of total tax revenues between 2013 and 2023([57]) but remain among the highest in the EU. In 2023 environmental taxes represented 2.8% of GDP compared with 2.0% of GDP for the EU. Since 2010, environmental taxes as a share of GDP have decreased by 1 percentage point. At the same time, in 2023 the Netherlands had the highest effective carbon rate of the EU (i.e. the price of emissions across the economy), with a price of EUR 120.0 per tonne of CO2 equivalents in 2023, well above the EU average of EUR 84.8 per tonne of CO2 equivalent. Furthermore, the Dutch RRP includes measures to reform energy, air travel and car taxation. The aim of these reforms is to promote and accelerate the green transition. In the first quarter of 2025, the Netherlands presented a plan for a new reform of car taxation. Further measures are expected to be implemented in the course of 2026.

Graph A2.2: **Tax revenue shares in 2023**



Source: Taxation trends data, DG TAXUD

The Dutch corporate tax system applies rates above the EU average but supports the business environment through lower complexity and R&D support. The top statutory tax rate is 25.8%, above the EU average. At the same time, the forward-looking effective average tax rate (EATR) has remained stable over the past decades and stood at

([57]) Taxation Trends Data (TAX_TYPE for SSCs, VAT, PIT and CIT, TAX_EC_FUNC for Environmental taxes and Property taxes).

22.8% in 2023, above the EU average of 18.9%. Support for R&D expenditure is above the EU average. Examples of important support schemes are (i) a reduction of withholding tax for companies conducting R&D activities; and (ii) an innovation box scheme that offers a reduced tax rate on income derived from qualifying assets. The lower complexity of the tax system compared with the EU average further supports a strong business environment. The 2025 tax plan includes further measures to support the business environment by raising the general limit on interest deductions for corporation tax purposes from 20% to 25%, bringing it closer to the EU average.

The Netherlands performs strongly in terms of tax compliance. In 2023, the VAT compliance gap was estimated at 7.8% of the VAT total tax liability (VTTL). This is similar to the level of 2022, where the VAT policy gap was stable, with an increasing VAT rate gap and a decreasing VAT exemption gap. Outstanding tax arrears in 2022 represented nearly one third (11.8%) of the EU average (32.6%)([58]). In terms of on-time payments, performance remained stable, with rates higher than 95% between 2019 and 2021 (PIT, CIT, PAYE([59]) and VAT)([60]). Similar trends were observed in the same period in on-time filing rates (PIT, CIT, PAYE and VAT), with the Netherlands ranking among the top five in the EU, with positive performance exceeding 95%. The Dutch Tax Administration has worked to increase the pre-filling of tax returns([61]) to improve compliance and prevent accidental mistakes by taxpayers.

The tax administration in the Netherlands performs well, although challenges remain. In particular, the resource ratios of ICT operating cost (as a percentage of operating expenditure) are among the highest in the EU. In 2022 these costs accounted for 23.1% of total operating expenditure([62]). Furthermore, while the IT infrastructure needs to be modernised, significant efforts are being made to keep existing systems running and adjust them to new tax measures. In this context, the Dutch Administration has developed a three-to-five-year digital transformation strategy, which identifies the necessary digital skills for a successful digital transformation in parts of the administration. In January 2023, the Netherlands had an opening inventory of twenty-nine mutual agreement procedure (MAP) cases([63]). Nine cases were initiated in 2023. The average processing time in 2022 was among the shortest in the EU.

Since 2021, the Netherlands has completed multiple reforms under its recovery and resilience Plan (RRP) to curb the risk of aggressive tax planning (ATP). Specifically, it introduced withholding taxes on interest and royalty payments to listed zero- and low-tax jurisdictions in 2021 and on dividend payments in 2024. These reforms were undertaken to address the ATP-related issues raised in the country-specific recommendations made to the Netherlands in 2019 and 2020. In addition, the Netherlands have made several amendments to the Corporate Income Tax Act to limit loss relief, eliminate tax exemptions on negative interest and positive currency results, and limit loss relief for corporations. Despite these positive developments, there is room for

([58]) Source of data: 2024 European Semester : Country Reports (page 78). For a better overview of 'Tax arrears in relation to collection by tax type', see to that effect: 12. Derived indicators: payment, arrears, audit, disputes and litigation - ISORA (accessed on 27 January 2025).

([59]) "Pay-as-you-earn" refers to a system where employers deduct taxes from income and pay them on behalf of employees.

([60]) Source of data: 12. Derived indicators: payment, arrears, audit, disputes and litigation - ISORA

([61]) Source of data: https://data.rafit.org/regular.aspx?key=74180896

([62]) Source of data: Resource ratios: Cost, Resource Rations (accessed on 31 January 2025).

([63]) Statistics on pending APAs and MAPs in the EU - European Commission

further improvement. According to the IMF, the Netherlands hosts significant investments through empty corporate shells (special purpose entities)([64]). In particular, there may be some ATP risks associated with *Stichting administratiekantoor* (STAK) structures, which could be used as vehicles for tax evasion and avoidance([65]).

Table A2.2: **Indicators for financial activity risk, in % of GDP**

		2019	2023
Stock of FDI	Inward	480.10%	381.80%
	Outward	613.3%	397.60%
Dividends	Received	22.40%	22.20%
	Paid	13.90%	14.90%
Interest	Received	5.40%	4.20%
	Paid	3.70%	3.10%
Royalties	Received	7.50%	3.30%
	Paid	7.50%	2.7%

Source: European Commission

Since enacting the reforms, the Netherlands has moved closer to the EU average on several relevant economic indicators. However, financial flows of foreign direct investments (FDI), dividend, interest and royalty payments in the Netherlands remain significantly disproportionate and above the EU average. Specifically, in 2023 the inward and outward flow of FDI as a share of GDP were among the top three in the EU, at 381.8% and 397.6% of GDP respectively. However, since the relevant reforms were implemented to curb the ATP risk, these economic indicators have moved closer to the EU average.

([64]) Jannick Damgaard, Thomas Elkjaer and Niels Johannesen (2019), *The rise of Phantom Investments*, IMF Finance & Development, September 2019, Vol. 56, No. 3

([65]) *National Risk Assessment Witwassen 2023, WODC*

The Netherlands remains an innovation leader, driven by a lean and efficient R&D system, but this leadership position is at risk due to a declining relative performance and reduced public support for R&D. The 2024 European Innovation Scoreboard (EIS) ([66]) ranks the Netherlands among the innovation leaders for most of the indicators. However, the Netherlands' performance was below the EU average over the last 8 years, increasing by 7.8% compared to a 10% growth rate in the EU. This leadership position is achieved with relatively limited R&D investment: Dutch R&D intensity, at 2.23% of GDP in 2023, is below the rates of other strong R&I performers in the EU and globally. In particular, public R&D intensity is below the EU average, pointing to a highly efficient Dutch R&D system. While the Netherlands has maintained a top position globally, ranking 8th according to the 2024 Global Innovation Index ([67]), there is a visible downward trend in relative terms, as it ranked 2nd in 2018. In this context, the government plans to reduce public support to R&I. As a result, increasing mismatches between skills supply and demand could endanger the Dutch ambition of maintaining its position as a leading knowledge and innovation country.

Science and innovative ecosystems

The Netherlands has an excellent and highly efficient science base producing high-quality research output, but its performance is eroding. The quality of research outputs, as measured by the share of the country's scientific publications within the top 10% most cited publications, remains well above the EU average (14.5% vs 9.6%), but has been on a slightly decreasing trend over the last decade (down from 16.3% in 2011). In 2023, investment in public R&D stood at 0.67% of GDP, well below the EU average of 0.72%, while in 2021 it was on par with the EU average of that year (0.75% of GDP). Such a low level will make it hard for the Netherlands to maintain its leading position of excellence in science.

Business innovation

The Dutch innovation ecosystem benefits from very good science-business linkages and entrepreneurial dynamism, but its technological development performance deteriorated in the last decade. Business-science linkages are strong, as shown for instance by the percentage of public-private scientific co-publications among the total number of publications, which is well above the EU average (11.8% vs 7.7%). The Netherlands also benefits from a significantly higher total entrepreneurial activity than the EU average and can rely on a dynamic and innovative start-up sector. Public efforts to promote and help start-ups and scale-ups (e.g. through the Techleap group ([68]) have been effective in supporting the growth of the start-up ecosystem, with regional specialisations starting to arise around university hubs. Business enterprise expenditure on R&D as a percentage of GDP has remained stable around the EU average in the last decade. In 2023, it rose to 1.56%, above the EU average of 1.49%. Regarding technology developments as captured by patent data, the number of patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €) is above the

([66]) 2024 European Innovation Scoreboard, country profile https://ec.europa.eu/assets/rtd/eis/2024/ec_rtd_eis-country-profile-nl.pdf. The scoreboard provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

([67]) Global Innovation Index 2024https://www.wipo.int/edocs/gii-ranking/2024/nl.pdf

([68]) Techleap.nl

EU average (4.4 vs 2.8 in 2022) but has decreased since 2015 (when it stood at 6.0).

The recently adopted national technology strategy (NTS) ([69]) may provide a policy lever to strengthen technological innovation, but its success will depend on adequate public support. The strategy provides guidance on the development, application and upscaling of selected key enabling technologies through a combination of government investments, industry-academia collaboration and partnerships, aimed at strengthening competitiveness and long-term prosperity. To prioritise resources, the strategy outlines 10 priority technologies such as quantum technology, semiconductors, AI and data science. It will be monitored through regular progress reports and evaluations. Given the high ambition of the NTS, sufficient public resources will be critical to guide and attract private investments. Recent budget cuts, for example related to the National Growth Fund, are therefore a matter of concern.

The Netherlands scores above the EU average on the digitalisation of SMEs and the adoption of advanced technologies by enterprises. Dutch SMEs continue to show good results in basic digitalisation: in 2024, 80.8% of SMEs had at least a basic level of digital intensity, which is above the EU average of 72.9%. The adoption of advanced technologies by Dutch businesses is also above the EU average. Recent figures show an accelerated AI adoption rate, increasing from 13.4% in 2023 to 23.1% in 2024. Similar trends are observed for the adoption of data analytics and advanced cloud services (in 2023, 48.6% of enterprises had adopted data analytics vs the EU average of 33.2%, and 57.4% of enterprises had adopted cloud solutions vs the EU average of 38.9%).

([69]) National technology strategy

Financing innovation

Venture capital levels have increased, but scale-up funding is at the low end compared to other top-performing countries. With regard to venture capital investment levels, at 0.116% of GDP the Netherlands outperforms the EU average of 0.078%, with impressive growth (from 0.028% to 0.116%) over the period 2016-2023. This has allowed the Netherlands to boast one of the strongest tech ecosystems within the EU. However, according to the 2024 state of Dutch tech report ([70]), scale-up funding is at the low end compared to other top ecosystems and is heavily dependent on foreign venture capital. The relatively low availability of large-scale venture capital may pose barriers for start-ups looking to scale up significantly.

Innovative talent

Shortages of skilled workers risk affecting Dutch innovation performance and competitiveness. The Netherlands outperforms the EU average in terms of the share of young people with tertiary education and engagement in lifelong learning. However, despite an increasing trend over the last decade, the country is still lagging behind in terms of new graduates in the science and engineering field (12.0 per thousand population aged 25-34 vs the EU average of 17.5). The number of graduates in the field of computing also remains slightly below the EU average (3.4 vs 3.6 in 2022). Although the Netherlands has put in place an action plan for green and digital jobs in 2023 ([71]), recent policies to limit the intake of international students and budget cuts in international education could have a negative impact on

([70]) State of Dutch Tech 2024

([71]) Action plan green and digital jobs

attracting and retaining top talent at all levels. Increasing mismatches between skills supply and demand might potentially impact Dutch innovation performance and competitiveness.

Entrepreneurship education is well developed in the Netherlands, especially in higher education, but there is a lack of data on students' entrepreneurship competencies. According to the Global Entrepreneurship Monitor 2023 ([72]), entrepreneurial education in school and at post-secondary education is above the average of high-income countries, with the Netherlands ranking third out of 16 surveyed countries. In higher education, the Centres of Entrepreneurship set up under the action programme for education and entrepreneurship coordinate, organise and support entrepreneurship education. However, there is no data available on participation rates in entrepreneurship education or on students' entrepreneurial attitudes, skills and behaviour at any educational level.

([72]) Global Entrepreneurship Monitor 2023/2024. Global Report: 25 Years and Growing.

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

The Netherlands	2012	2017	2020	2021	2022	2023	2024	EU average (1)	USA
Headline indicator									
R&D intensity (gross domestic expenditure on R&D as % of GDP)	1.9	2.14	2.27	2.22	2.18	2.23	:	2.24	3.45
Science and innovative ecosystems									
Public expenditure on R&D as % of GDP	0.83	0.72	0.76	0.75	0.68	0.67	:	0.72	0.64
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	16	15.3	14.5	14.5	:	:	:	9.6	12.3
Researchers (FTEs) employed by public sector (Gov+HEI) per thousand active population	3.3	3.1	3.4	3.5	3.4	3.4	:	4.1	:
International co-publications as % of total number of publications	53.6	61.4	64.9	65.2	65.7	65.9	:	55.9	39.3
R&D investment & researchers employed in businesses									
Business enterprise expenditure on R&D (BERD) as % of GDP	1.08	1.42	1.51	1.46	1.49	1.56	:	1.49	2.7
Business enterprise expenditure on R&D (BERD) performed by SMEs as % of GDP	0.45	0.51	0.49	0.48	0.48	:	:	0.4	0.3
Researchers employed by business per thousand active population	4.7	6.9	7.6	7.8	8.3	8.5	:	5.6	:
Innovation outputs									
Patent applications filed under the Patent Cooperation Treaty per billion GDP (in PPS €)	5.9	5	5	4.8	4.4	:	:	3.2	:
Employment share of high-growth enterprises measured in employment (%)	15.78	21.81	16.95	:	:	:	:	12.51	:
Digitalisation of businesses									
SMEs with at least a basic level of digital intensity % SMEs (EU Digital Decade target by 2030: 90%)	:	:	:	:	80.09	:	80.83	72.91	:
Data analytics adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	:	:	48.56	:	33.17	:
Cloud adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	60.25	:	57.44	68.54	38.86	:
Artificial intelligence adoption % enterprises (EU Digital Decade target by 2030: 75%)	:	:	:	13.1	:	13.37	23.06	13.48	:
Academia-business collaboration									
Public-private scientific co-publications as % of total number of publications	10.6	11.5	11.4	11.7	11.8	11.8	:	7.7	8.9
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.091	0.06	0.06	0.059	0.052	:	:	0.05	0.02
Public support for business innovation									
Total public sector support for BERD as % of GDP	0.164	0.261	0.279	0.278	0.251	:	:	0.204	0.251
R&D tax incentives: foregone revenues as % of GDP	0.133	0.16	0.154	0.158	0.131	0.128	:	0.102	0.141
BERD financed by the public sector (national and abroad) as % of GDP	0.031	0.101	0.125	0.116	0.120	:	:	0.100	0.110
Financing innovation									
Venture capital (market statistics) as % of GDP, total (calculated as a 3-year moving average)	0.023	0.035	0.068	0.1	0.113	0.116	:	0.078	:
Seed funding (market statistics) as % of GDP	2.2	7.8	5.3	7.7	8.1	8.4	:	7.3	:
Start-up and early-stage funding (market statistics) as % of GDP	46.8	59.2	67.3	49.8	51.7	52.6	:	44.0	:
Later stage and scale-up funding (market statistics) as % of GDP	50.9	32.9	27.2	42.6	40.2	39	:	48.7	:
Innovative talent									
New graduates in science and engineering per thousand population aged 25-34	10.9	10.3	11.2	12.4	12.0	12.0	:	17.6	:
Graduates in the field of computing per thousand population aged 25-34	2.5	1.8	2.5	3	3.4	:	:	3.6	:

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

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

The Netherlands has a generally favourable business environment, as attested by a range of international rankings. The quality of the business environment has recently declined slightly. The regulatory and administrative burden on companies is increasing. Firm action to remove the main barriers to investment in construction may improve the business environment.

Economic framework conditions

The Netherlands has a generally favourable business environment. The latest editions of international rankings continue to rank the Netherlands highly, testifying to the attractiveness of its business environment. The OECD ([73]) places the country fourth in the EU and fifth overall (out of 40 countries). The Institute for Management Development ([74]) ranks it the ninth out of 67 countries. The Economist Intelligence Unit ([75]) has it in 11th place out of 82 jurisdictions.

The quality of the business environment has slightly declined in recent years. In all the rankings mentioned above, the Netherlands' performance has recently seen a decline. The score for the OECD PMR was higher in 2018. IMD's rank is below those of 2020-2023 (from fourth down to sixth). EIU downgraded it to 11th place overall (from sixth place previously) and sixth place in the EU (down from fourth). Several large firms have relocated their main headquarters out of the Netherlands in the last four years (Unilever, Shell, DSM). The departure of another company (ASML) was averted by a concerted government effort.

The regulatory and administrative burden on companies appears to have increased recently. Dutch companies increasingly report business regulations as a major barrier to long-term investment ([76]). Over 30% of firms devote more than 10% of staff to fulfil regulatory requirements, one of the highest levels in the EU.

The administrative requirements to set up new businesses seem high and may hinder business dynamism. There is scope for improving the licensing and permitting system by bringing it more into line with international best practice (keeping an inventory of all licences, reviewing it regularly, adopting the 'silence is consent' principle, tailor the length and complexity of the licensing process to the risks inherent in the licensed activities) ([77]).

Regulatory and administrative barriers

Decisive action to remove the main barriers to investment in construction may improve the business environment. The construction sector's performance is tightly linked to many of the challenges faced by the Dutch economy (such as housing shortages, green infrastructure, low public and overall investment, labour shortages, and attracting skilled labour). Residential property prices in the country have doubled in the last 10 years. The housing shortage is currently estimated at 400 000 homes. The construction sector's share in national gross value added increased slightly from 5% in 2023 to 5.2% in 2024 but remains below the EU average (5.6%). Some of the main causes of the slow supply response in housing are known (slow planning and permit procedures, scarcity of building space, tighter financial conditions, labour shortages, nitrogen emissions-related restrictions). Measures are under way to address them, including with EU support (RRF). Implementation is key and

([73]) OECD, Product Market Review (PMR), 2024.

([74]) IMD, World Competitiveness Index 2024.

([75]) EIU, Business Environment Rankings, 2024.

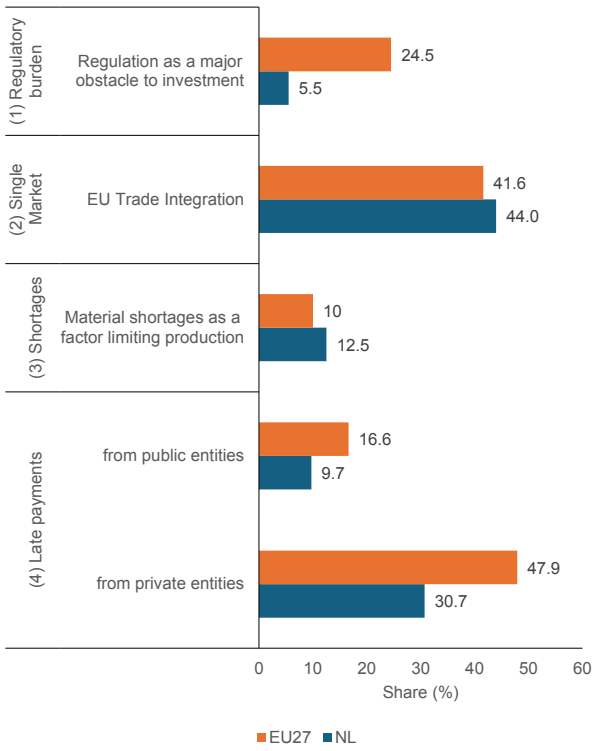
([76]) EIB Investment Survey (EIB IS), 2024. The 2024 share of companies signalling regulation as a barrier is significantly larger compared to 2023 (51% vs 42%).

([77]) OECD, PMR 2024. The relevant indicator puts the Netherlands in 30th place, well above average.

should be sped up. However, other measures such as rent controls or special treatment for housing corporations disincentivise investment and competition.

High energy costs negatively affect the attractiveness of the business environment. Energy costs are the top concern for companies ([78]) (see Annex 8). Keeping a strong industrial base in the country depends to a significant extent on affordable energy. The much-needed investment in energy infrastructure, which is under way, is affecting energy prices. A study commissioned by the Ministry of Economic Affairs and Climate found that major industrial companies in the Netherlands are paying up to 66% more for electricity than their counterparts in neighbouring countries (Germany, France, Belgium).

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



Share of (1) enterprises, (2) average intra-EU exports and imports in GDP, (3) firms, (4) SMEs.
*Q4 data on trade integration is not yet available.
Sources: (1) EIB IS, (2) Eurostat, (3) ECFIN BCS, (4) SAFE survey.

SMEs are performing well but there is room for improvement. The gap between the productivity of large and small companies is small. Nevertheless, a particular area of concern in recent years is the low productivity of the self-employed professionals without employees. There are more than one million self-employed people in the Netherlands and their productivity is less than half that of SMEs. SME access to bank loans and the huge national public procurement market could be improved. Late payments between businesses increased in 2024 (16.8 days) and are now above the EU average (15.6 days) and at the highest level in five years. The government performance in paying businesses is better than the EU average (13.7 vs 15.1 days). This was an improvement on the previous year.

Companies are affected by labour and material shortages. These shortages have lessened but are still high: 31% of companies

([78]) EIB IS 2024.

reported problems in hiring staff compared to the EU average of 20%, while 12.5% had experienced difficulties finding production materials, which is also above the EU average (10%). The job vacancy rate is double the EU average but close to that of peers. The availability of skilled staff is the main barrier to long-term investment. Some prominent measures (e.g. the tax break on personal income tax for highly educated foreign employees) keep the Netherlands attractive for highly skilled foreign labour but have recently been increasingly contested.

The deployment of 5G stand-alone core networks has undergone significant delays. After several delays due to legal proceedings, the Netherlands recently (March 2024) launched the auction of the 3.6 GHz band for the terrestrial provision of wireless broadband electronic communications services (5G). This delay reflects the low percentage of 5G pioneer bands assigned (33.3% against an EU average of 73.4%). The roll-out of 5G in the 3.6 GHz band by Dutch telecom operators will be essential, as it will support high-bandwidth applications (such as video streaming, virtual reality) and enable future applications (like smart cities and other advanced technological use cases).

Single Market

The Netherlands is well integrated into the Single Market but can improve its performance on the Single Market and Competitiveness Scoreboard. In 2023, the country's trade integration with the single market for goods and services (45.60% of GDP) was above the EU average (43%). The 2025 Single Market Scoreboard indicates that the Dutch performance is below the EU average on both the transposition deficit (percentage of transposed directives on time) and conformity deficit (percentage of incorrectly transposed directives). The number and duration of Single Market infringement cases are both at the EU average level. The Netherlands solved 74% of SOLVIT cases it handled as lead centre (below the EU average of 85%).

Professions face fewer regulatory constraints than in most OECD countries. The OECD restrictiveness index shows that the Netherlands has the lowest barriers for trading in services of any EU Member State, except for accountants. This is partly due to accountants being also responsible for auditing. Retail distribution could benefit from a reduction in regulatory barriers ([79]). Territorial supply constraints affect Dutch retailers which face restrictions when trying to source products from other Member States. The restrictions limit the choice of products on the Dutch market and lead to higher consumer prices.

([79]) OECD, PMR 2024.

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

Netherlands							
POLICY AREA	**INDICATOR NAME**	**2020**	**2021**	**2022**	**2023**	**2024**	**EU-27 average**
Investment climate							
Shortages	Material shortage, firms facing constraints, %[1]	8.0	24.3	39.3	23.0	12.5	10.0
	Labour shortage, firms facing constraints, %[1]	14.8	23.2	36.9	34.6	30.7	20.2
	Vacancy rate, vacant posts as a % of all available ones (vacant + occupied)[2]	2.6	4.2	5.4	4.9	4.6	2.3
Infrastructure	Transport infrastructure as an obstacle to investment, % of firms reporting it as a major obstacle[3]	2.9	5.2	15.2	4.7	0.9	13.4
	VHCN coverage, %[4]	-	90.6	97.8	98.3	-	78.8
	FTTP coverage, %[4]	-	51.9	63.4	77.7	-	64.0
	5G coverage, %[4]	-	97.0	100	100	-	89.3
Reduction of regulatory and administrative barriers							
Regulatory environment	Impact of regulation on long-term investment, % firms reporting business regulation as a major obstacle[3]	9.8	9.0	12.6	9.7	5.5	24.5
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[5]	-1.7	11.1	13.0	12.5	16.8	15.6
	Payment gap - public sector, difference in days between offered and actual payment[5]	-1.1	11.4	13.2	16.2	13.7	15.1
	Share of SMEs experiencing late payments, %*[6] — from public or private entities in the last 6 months	25.0	22.7	24.6	29.6	-	-
	Share of SMEs experiencing late payments, %*[6] — from private entities in the previous or current quarter	-	-	-	-	30.7	47.9
	Share of SMEs experiencing late payments, %*[6] — from public entities in the previous or current quarter	-	-	-	-	9.7	16.6
Single Market							
Integration	EU trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]	41.7	46.1	51.9	47.5	44.0	41.6
	EEA Services Trade Restrictiveness Index[7]	0.032	0.032	0.032	0.032	0.037	0.050
Compliance	Transposition deficit, % of all directives not transposed[8]	1.0	1.6	1.4	0.6	0.9	0.8
	Conformity deficit, % of all directives transposed incorrectly[8]	1.7	1.3	1.6	1.2	1.2	0.9
	SOLVIT, % resolution rate per country[8]	78.0	89.2	78.0	73.0	74.0	84.9
	Number of pending infringement proceedings[8]	24.0	21.0	23.0	23.0	25.0	24.4
Public procurement							
Competition and transparency in public procurement	Single bids, % of total contractors**[8]	13	13	19	19	24	-
	Direct awards, %**[8]	9	7	9	11	12	7.0

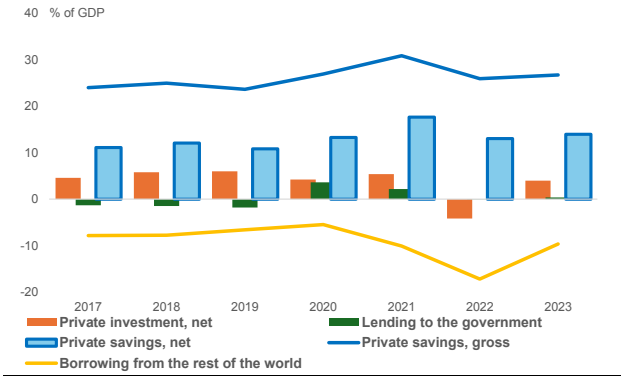
*Change in methodology in 2024: reporting late payments from public and private entities separately.
**The 2024 data on single bids is provisional and subject to revision. Please note that approximately 10% of the total data is currently missing, which may impact the accuracy and completeness of the information. Due to missing data, the EU average of direct awards data is calculated without Romania.
Sources: (1) ECFIN BCS, (2) Eurostat, (3) EIB IS, (4) Digital Decade Country reports, (5) Intrum Payment Report, (6) SAFE survey, (7) OECD, (8) up to 2023: Single Market and Competitiveness Scoreboard, 2024: Public procurement data space (PPDS).

Against the backdrop of high domestic savings and significant net foreign assets, the Dutch economy benefits from deep national capital markets and well-developed and stable banking and non-banking financial sectors. Even though highly developed financial intermediation contributes positively to the financing of the economy, conditions for small and medium enterprises and the direct participation of retail investors in the capital markets could still be improved. Dutch companies rely extensively and more than their EU peers on internal resources to finance their investments. A well-capitalised and profitable banking sector provides a stable source of funding to the economy. The Dutch venture and growth capital market is one of the deepest in the EU and finances investments that have a material importance for the economy. The very large occupational pension funds dominate the landscape of institutional investors, while also accounting for the high indirect participation of households in capital markets. However, direct retail participation in capital markets is relatively low, including due to tax rules that discourage savings in the form of stocks. The insurance sector remains relatively undeveloped, especially considering the high risk of flooding.

Availability and use of domestic savings

The Dutch economy invests the largest part of its relatively high net savings abroad. In the last decade, the private savings ratio, net of fixed capital consumption, persistently fluctuated around its ten-year average of 12.6% of GDP, reaching a maximum of 17.6% in 2021 (see Graph A5.1). The net private investment ratio, which measures the net contribution of the private sector to capital accumulation in the country, was significantly more volatile, exhibited a ten-year average of 4.1% of GDP and reached a maximum of 8.3% in 2015. In the last decade, the government budget balance, which was quite volatile, resulted in a comparatively low average deficit of 0.5% of GDP. Thus, the high positive balance between net domestic savings and net investment, together with the low government deficit, led to a structurally high net lending by the Netherlands to foreigners that averaged 8.0% of GDP, with an exceptional peak of 17.2% in 2022, due to a capital account inflow triggered by the sale of intellectual property rights for about EUR 90 billion. Hence, most of the Dutch net savings, i.e. after accounting for the investments that are necessary to merely maintain the existing capital structure of the economy, are used to finance projects abroad.

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

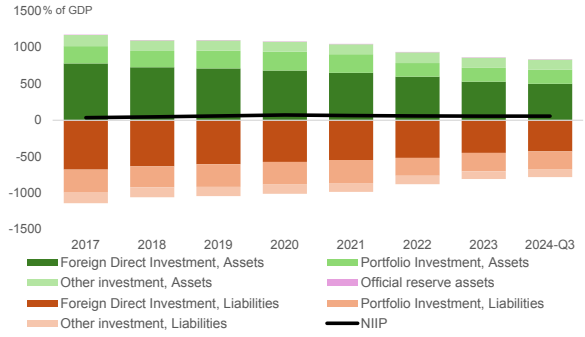


Source: AMECO.

Consistent with its regular position of a net creditor to the rest of the world, the Dutch economy has accumulated significant foreign assets and shows a positive net international investment position. As of Q3 2024, total assets on foreigners equated to 839% of GDP, while liabilities to foreigners stood at 782% of GDP, resulting in a net international investment position (NIIP) equivalent to 57% of GDP (see Graph A5.2). At the same time, the accumulated net foreign direct investment reached 72% of GDP, while the net stock of other investments rose to 38% of GDP. Due to the higher value of foreigners' investments in the Dutch capital markets than Dutch portfolio investments abroad, as of Q3 2024 the portfolio balance showed a net liability equivalent to 59% of GDP. The stock of official foreign exchange reserves contributed 6 percentage points of GDP to the aggregate

positive NIIP. Thus, while the Dutch economy appears to be deeply integrated in international capital flows, including as a major recipient of foreign capital, it remains nevertheless a net capital exporter, notably by means of direct and other investments abroad.

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



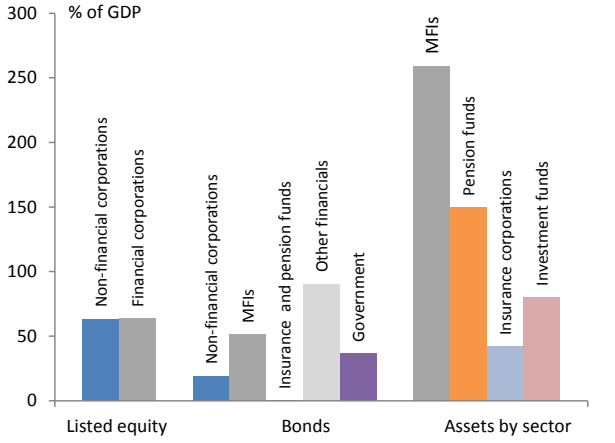
Source: ECB.

Structure of the capital markets and size of the financial sector

The Dutch economy stands out with one of the deepest domestic capital markets in Europe. The market capitalisation of listed equity reached 127% of GDP at end-2023 (see Graph A5.3), which is the fourth highest among member states, after Ireland, Denmark and Sweden. Characteristically, the total market capitalisation is split almost equally between non-financial and financial corporations, which reflects the strong role played by finance in the Dutch economy. The outstanding volume of debt securities reached 198% of GDP at end-2023, which is also among the highest national scores in the EU. Bonds issued by other financial institutions, which are neither banks nor pension funds or insurance corporations, represented the highest share with 46% of the total, followed by debt securities issued by banks (26%) and by the government (19%). The structure of the debt securities market in the Netherlands has been relatively stable over the last years, except for bonds issued by non-financial corporations, the share of which increased from 8% to 10% of the total.

Even though the financial sector in the Netherlands remains dominated by banks, non-bank financial intermediation is very much developed along all segments. After peaking at 311% of GDP in 2020, the size of the banking sector decreased to 259% of GDP in 2023, which is in line with the EU average of 257% and slightly below the EA average of 268%. Foreign presence is limited and accounts for about 9% in terms of assets. With the top five MFIs representing almost 82% the sector, banking concentration appears to be significantly higher than the EU average of 54%, which is also reflected in significantly lower inter-bank lending in the Netherlands than elsewhere in the EU. The pension funds sector, with total assets of almost 150% of GDP at end-2023, dominates non-bank intermediation and is the largest in the EU, and the fifth largest worldwide. Investment funds, though their total assets dropped by almost 50 percentage points to 80% of GDP between 2020 and 2023, remain significant (see section on institutional investors). Insurance corporations, whose assets were equivalent to 42% of GDP as of end-2023, are relevant as well, even if they appear less developed than the EU average of 55% of GDP.

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



Source: ECB, EIOPA, AMECO.

Resilience of the banking sector

The Dutch banking sector is stable, as suggested by healthy financial soundness indicators. Dutch banks enjoy a satisfactory capital position, with an average common equity tier 1 (CET1) ratio of 16.8% as of Q3 2024, slightly above the EU average of 16.6% (see Table A5.1). When additional Tier 1 and Tier 2 capital instruments are included, the total capital ratio reached 21.5%, which was above the EU average of 20.1%. However, the capital adequacy ratios of Dutch banks have been declining since 2020, including due to the introduction of a floor on risk weights for mortgages as of 2022. According to the 2023 EU-wide stress tests conducted by the EBA and the ECB, the severe adverse macroeconomic scenario would produce a material impact, with a peak-to-through negative effect on the CET1 ratios that varied between 4.54 basis points for Rabobank and 10.25 basis points for de Volksbank. For all banks the end-of-period CET 1 ratio would remain above the regulatory minimum, with the 8.9% projection for ING being the lowest. At the end of 2023, Dutch banks' aggregate MREL level (Minimum Requirement for Own Funds and Eligible Liabilities) stood at 33.9%, which was 5.1 percentage points above the required level.

While asset quality is strong, risks of deterioration warrant continuous monitoring. Credit quality is high, with the ratio of non-performing loans (NPLs) having reached 1.3% as of Q3 2024, which is the lowest since 2015 and below the EA average of 1.9%. This satisfactory performance reflects both the general strength of the Dutch economy and the efficiency of the foreclosure and insolvency regimes in the country. However, trade distortions and other unfavourable geo-political developments could impact negatively the very open Dutch economy. The number of company insolvencies has been on the rise lately and the share of restructured SME loans, though remaining low, has increased. Moreover, high indebtedness in the Netherlands remains a general concern. As of end-2023, the indebtedness of NFCs, although on a declining trend, remained much elevated at 97.2% of GDP (EU average of 62.7%). Households' indebtedness followed the same declining trend and stood at 94.5% of GDP (EU average of 51.8%). Another specific risk stems from the country's exposure to climate risk. According to the IMF, as of end-2020, 52% of banks' assets were related to areas vulnerable to flooding. Despite this specific vulnerability, the Dutch banking sector remains generally resilient to flood events, with no bank expected to see its capital falling below the minimum capital requirements even in the most adverse flood scenario.

Dutch banks have ample liquidity buffers. While recently the structural relation between loans and deposits has evolved unfavourably, with the loan-to-deposit ratio increasing from 101.3% at end-2021 to 109.5% as of Q3 2024, banks over-comply with their minimum liquidity ratios. As regards their preparedness to face short-term liquidity outflows, significant and less-significant institutions exhibited liquidity coverage ratios of 149% and 228% respectively as of Q3 2024 (156% for the sector as a whole). As regards the longer-term structural adequacy between assets and liabilities, the same institutions showed net stable funding ratios of 136% and 148% respectively as of Q3 2024 (138% for the sector as a whole). As of Q3 2024, the banking system had an aggregate liquidity buffer of EUR 522 bn, out of which EUR 471 bn was held by the significant institutions.

The profitability of Dutch banks has been high, though earnings are expected to fall as interest rates continue to decline. As Dutch banks' net interest margins widened during the period of interest rate hikes by the Eurosystem, their profitability is expected to decline in the ongoing phase of rate decreases. The return-on-equity, which has hit its highest level since at least 2016, reached 11.8% as of Q3 2024, well above the EU average of 10%. Similarly, at 0.8% the return-on-assets was also historically

high and slightly above the EU average of 0.7%. So far Dutch banks' profitability has resisted well to the declining interest rates, including thanks to their capacity to optimise efficiency, as evidenced by a cost-to-income ratio that improved from 59.8% in 2018 to 50.1% as of Q3 2024.

Resilience of the non-bank financial intermediaries

The liquidity risks to which pension funds are currently exposed are abating as the transition from defined benefits to defined contributions is taking place. The pension funds sector in the Netherlands, which is the fifth largest worldwide after the USA, Canada, the UK and Australia, saw its total assets rise to EUR 1 831 bn as of mid-2024, which is still below their peak of EUR 1 980 bn at end-2021. Assets are held mainly in debt instruments and listed equities. The derivatives in their portfolios entail liquidity risks, notably due to the reliance on well-functioning repo markets. However, thanks to the transition from defined benefits to defined contributions, initially planned for 2023 but now delayed to 2028, the risk of fire sales for liquidity reasons will ease. The gradually ongoing reform, which is closely monitored by De Nederlandsche Bank (DNB) and the Authority for the Financial Markets, will reduce potential tensions between generations and will provide a better alignment between the risk exposures of the various age cohorts. Meanwhile, the issue is alleviated by the fact that the Dutch pension system is still in an accumulation phase, where cash inflows exceed outflows. Thus, the pension funds' funding ratio reached 118.5% as of Q2 2024, with no fund having had a funding ratio below 105% for the preceding four quarters.

The insurance sector is in a broadly sound position. It has been undergoing consolidation over the last two decades, with the number of supervised entities going down from 358 in 2004 to 128 as of Q3 2024. Only 15 entities are life-insurers, while 8 companies deal with reinsurance. The insurance penetration rate is the 15th highest worldwide. As of end-2023, the solvency ratio of 185%, though above statutory requirements and robust, was significantly below the EU average of 260% and lower than in the past year. Assets are mostly invested in collective investment undertakings, followed by mortgages and loans, and government bonds. In recent years, as insurance corporations have expanded their asset allocation to private assets, including more risky and less liquid investments, the aggregate riskiness of their asset portfolios has increased. Given the geographical specificity of the Netherlands, climate change is the highest risk for Dutch insurers. The European Insurance and Occupational Pensions Authority (EIOPA) allocates a high score (3) to the coastal flood protection gap and a relatively high score (2.5) to the general flood protection gap.

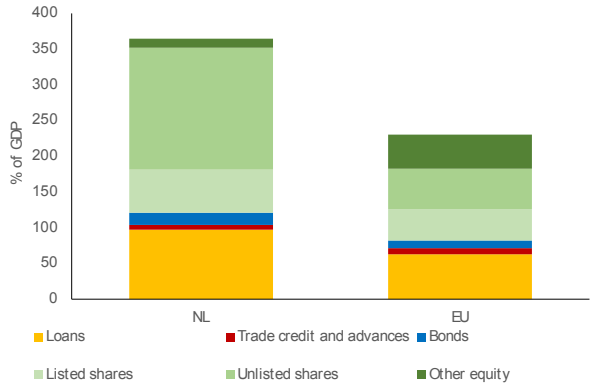
Sources of business funding and the role of banks

Even though Dutch companies are more indebted than their EU peers on average, they rely relatively moderately on debt finance to fund their activities. Financial borrowing by non-financial corporations (NFCs) in the Netherlands reached more than 97% of GDP in 2023, which is significantly higher than the EU average of about 63% (see Graph A5.4). However, given the overall much larger size of the aggregate balance sheet of Dutch NFCs, which reached 365% of GDP at end-2023 (versus an EU average of 230%), the relative share of financial loans in their funding structure (26.7%) is slightly lower than the EU average (27.2%).

To fund their investments, Dutch companies rely on internal resources more than their EU peers. The 2024 EIB Investment Survey shows that, in 2023, Dutch NFCs financed almost four fifths (78%) of their investments with internal resources, well above the two

thirds (66%) characteristic of the average EU company. At the same time, only 8% of companies in the Netherlands believe they invested too little in the last three years, as opposed to 14% in the EU. This suggests that there is a low overall investment gap. However, this may not be the case for all firms, especially for the 4% of companies that consider themselves financially constrained.

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



(1) Reference period is end-2023.
Source: Eurostat.

The highly developed, well-capitalised and profitable banking sector provides a stable source of funding to the economy. Overall, the banking sector appears quite solid, with good liquidity and capital positions, as well as improved operational efficiency and profitability, all slightly above EU average levels (see Table A5.1). With about 3% of bank loans to NFCs non-performing (3.4% on average in the EU), the corporate loan portfolio of Dutch banks appears of about average quality, even though a relatively lower portion of these non-performing exposures (26% versus an EU average of 43%) are covered by provisions. Altogether these elements suggest that businesses in the Netherlands are unlikely to face challenges in accessing stable and affordable bank loans in the future.

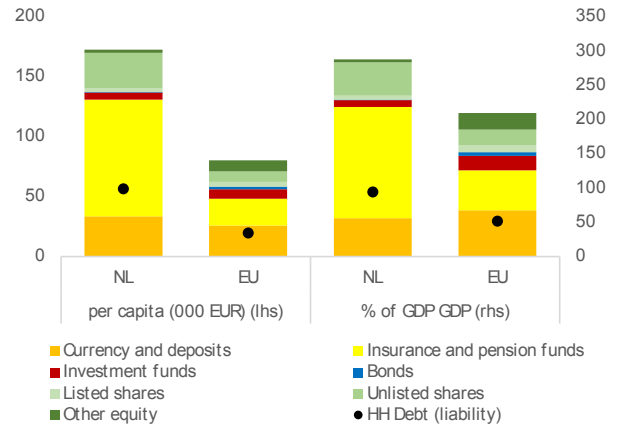
Credit demand, which contracted recently as the cost of borrowing spiked, has been relatively moderate and has started to show signs of recovery since the easing of interest rates resumed. After growing by 4% and 2.5% respectively in 2021 and 2022, credit to NFCs contracted by 1% in 2023. Meanwhile, in these three years aggregate credit to NFCs in the euro area expanded by 3.5%, 6.1% and 0.2% in 2021, 2022 and 2023 respectively. Since end-2023, the recovery of credit growth in the Netherlands (+1.1%) has been somewhat stronger than in the euro area (+0.9%). Overall, as of October 2024, bank loans to NFCs reached 35.7% of GDP, slightly above the euro area average of 34%. Loans to small and medium-sized enterprises (SMEs) grew by 22% over the last five years, while loans to all other NFCs practically stagnated. However, despite reaching almost EUR 174 bn as of end-2024, their relative share in total NFC loans of 28.5% remained much behind the EU average of 40.2%. Lately, companies have been impacted by rising financing costs. Based on data from the ECB, interest rates on new corporate loans, all types and maturities combined, peaked at 5.25% in October 2023, up from 1.32% two years earlier. By October 2024, the interest rates on new corporate loans had moderated to 4.56%.

Retail investment in capital markets

The highly developed and deep stock market in the Netherlands offers multinationals and domestic companies access to global institutional investors. The Amsterdam Euronext offers domestic and foreign companies access to global capital markets, including due to a high-tech trading environment. As part of the Euronext family, it benefits from the deepest pool of liquidity in Europe and participates in the largest pan-European equity market, while being a leading exchange for liquidity. Despite a significant decrease in the number of initial public offerings (IPOs) in 2023, the Amsterdam Exchange index of the 25 largest and most actively traded companies grew by more than 30% between end-2022 and mid-2024, before stagnating since then.

Thanks to their large and often automatic investments in pension funds, Dutch households have a rather high participation in capital markets by EU standards, which nevertheless lags behind the US. As of end-2023, households' aggregate financial assets equated to 288% of GDP, which is above the EU average of 209%, but significantly behind the US average of 437%. Dutch households' investments in insurance and pension funds, relative to GDP, are almost three times larger than on average in the EU. However, direct holdings of bonds and equity are significantly lower, both in nominal amounts per capita and relative to GDP (see Graph A5.5). As of end-2023, Dutch households held less than 20% of their financial wealth in cash and bank deposits, as opposed to 32% on average in the EU. However, the share of cash and deposits, which has been on the rise already since 2020, is expected to increase further because of a 2023 tax reform that discourages savings in stocks. Moreover, in 2023 households' direct holdings of listed shares (1.9% of their total financial wealth), of bonds (0.2%) and of investment funds (3.5%) fell significantly below the EU averages of, respectively, 4.8%, 2.7% and 10%.

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



(1) Reference period is end-2023.
Source: Eurostat.

The role of domestic institutional investors

Large pension funds, which dominate the landscape of institutional investors in the Netherlands, contribute significantly to the financing of the economy. With total assets equating almost 170% of GDP as of Q2 2024, the pension funds sector in the Netherlands accounts for about two thirds of pension funds in the EU. As assets are held mainly in investment funds (38%), debt securities (33%) and listed equities (18%), the sector's contribution to the financing of the economy is material. Despite challenges due to the ongoing transition from defined benefits to defined contributions, delayed from 2023 to 2028 because of widespread opposition in society and some specific liquidity risks, the sector has been performing well since 2022. Pension funds in the Netherlands raised 14% of the funds committed to venture capital and private equity between 2007 and 2023, which is slightly below the EU average of 15%.

Following two decades of consolidation, the insurance sector remains less developed than the EU average. As of end-2023, the total assets of insurance companies in the Netherlands stood at 42% of GDP, lower than the EU average of 55% and below their peak from 2020 at 68% of GDP. Based on data from the European Insurance and Occupational Pensions Authority (EIOPA) on insurance companies' asset exposure, as of Q3 2024, the sector's aggregate balance sheet was invested primarily in investment funds (32%), mortgages and loans (23%), and government bonds (17%). The financing of the corporate sector, through bonds (12%) or equity (8%), was comparatively less significant.

In addition to insurance companies and pension funds, asset management is an important segment of the financial sector in the Netherlands. After increasing by 7% in 2023 up to almost EUR 2 tn, assets under management reached 192% of GDP, which is

more than double the EU average of 95%. As of end-2023, the Netherlands was the legal domicile for investment funds with total assets of EUR 826 bn, while residents' investments in funds stood at EUR 1 124 bn.

The depth of venture and growth capital

The Netherlands is a regional leader in venture capital and private equity investments in the EU. The average annual value of private equity (PE) and venture capital (VC) investments relative to nominal GDP went up to 1% and 0.12% respectively in the period 2021-2023 from 0.7% and 0.05% in 2015-2020, remaining persistently higher than the respective EU averages (0.6% and 0.08%). Over the past decade, the country has emerged as a prominent regional player in the start-up ecosystem, showcasing remarkable growth and offering a favourable environment for innovative business projects. It has become home to 33 'unicorns' ('unicorns' are unlisted companies valued at EUR 1 bn or more) and more than 6 500 funded start-ups, which ranks it within the top 15 global destinations for venture and growth capital. In 2023, VC investments totalled about EUR 1.9 bn, with domestic (47%) and European (28%) investors in the lead. Energy (21%), fintech (20%), health (13%), company software (12%) and transportation (10%) were the main investment sectors.

PE and VC investments have a material importance for the Dutch economy. The total investments of EUR 84 bn for 2007-2023 have backed companies that employ 8.1% of the workforce in the country. The depth of venture and growth capital in the Netherlands is supported by a favourable business environment and a trustworthy ecosystem that is attractive for investors.

Financing the green transition

Both NFCs and financial institutions have been active in supporting the green transition. Since 2022, the outstanding volume of bonds with sustainable characteristics has increased by 50% and reached EUR 255 bn in October 2024. Non-bank financial intermediaries (34%), banks (29%) and NFCs (21%) have been the main issuers, well ahead of the central government (8%). As regards domestic holdings of bonds with sustainable characteristics, they increased by almost 60% between end-2022 and September 2024, reaching EUR 148 bn. Pension funds (60%), banks (20%) and investment funds (10%) are the main investors.

To gain insights into the carbon intensity of the financial sector, De Nederlandsche Bank has developed carbon emission indicators. These indicators, which can be used to assess the carbon footprint of the different financial sector segments, show that when the impact of indirect investments is considered, investment funds appear to be relatively more geared towards less carbon-intensive industries, particularly when compared to insurance corporations and pension funds.

Financial literacy

The very high level of financial literacy of the Dutch population contributes to the high share of capital market investments in their financial wealth. Dutch society recognises that financial literacy is crucial to foster retail investors' participation in capital markets and to familiarise SMEs with alternatives to bank financing. The Netherlands has had a national financial literacy strategy in place since 2008. The current 2024-2026 national strategy is based on the EU/OECD competence framework and aims to prepare people, from a young school age, to take financially sound decisions. De Nederlandsche

Bank is convinced that wiser financial choices are beneficial both for individuals and for the overall economy. It is therefore committed to promoting financial education and responsible financial behaviour. It provides a wide range of ready-made tools and programmes to support schoolteachers. Moreover, as a founding member of the Money Wise Platform, it also cooperates with other financial experts and educational professionals, especially during National Money Week.

As a result of these educational measures, the 2023 Eurobarometer on monitoring financial literacy in the EU ranks the Netherlands first on financial knowledge. It shows that 43% of Dutch citizens have a high level of financial knowledge (26% in the EU) and 18% have a low level (24% in the EU). Moreover, only 8% of Dutch respondents (23% in the EU) declare that they feel some degree of discomfort using digital financial services.

Table A5.1: **Financial sector indicators**

		2017	2018	2019	2020	2021	2022	2023	2024-Q3	EU
Banking sector	Total assets of MFIs (% of GDP)	316.5	294.9	291.0	311.2	296.6	288.9	259.3	254.3	248.4
	Common Equity Tier 1 ratio	16.8	17.0	16.9	17.9	17.8	16.5	16.7	16.8	16.6
	Total capital adequacy ratio	22.1	22.4	22.9	23.2	22.7	21.2	21.2	21.5	20.1
	Overall NPL ratio (% of all loans)	2.1	1.9	1.8	1.9	1.4	1.3	1.3	1.3	1.9
	NPL (% loans to NFC-Non financial corporations)	4.8	4.3	4.3	4.8	3.3	3.2	3.0	3.2	3.5
	NPL (% loans to HH-Households)	1.2	1.2	1.1	1.3	1.3	1.0	1.0	1.0	2.2
	NPL-Non performing loans coverage ratio	29.8	26.0	25.9	27.2	30.7	26.8	26.1	25.8	42.1
	Return on Equity[1]	8.8	8.1	7.7	3.1	8.2	7.7	10.9	11.8	10.0
	Loans to NFCs (% of GDP)	34.7	32.2	30.3	29.6	28.2	26.7	24.6	23.6	30.0
	Loans to HHs (% of GDP)	73.9	71.2	68.1	70.4	65.4	60.1	56.6	54.9	44.5
	NFC credit annual % growth	-0.8	-0.8	-1.8	0.9	4.0	2.5	-1.0	1.5	0.8
	HH credit annual % growth	0.1	0.1	0.2	-0.9	1.2	1.7	1.0	2.5	0.7
Non-banks sector	Stock market capitalisation (% of GDP)	149.1	122.0	152.0	151.8	171.8	120.8	127.1	125.7	69.3
	Initial public offerings (% of GDP)	0.29	1.09	0.00	2.14	2.04	0.00	0.01	-	0.05
	Market funding ratio	52.5	50.9	50.8	46.3	50.2	48.3	47.0	-	49.6
	Private equity (% of GDP)	0.63	0.83	0.84	0.96	0.99	1.22	0.64	-	0.41
	Venture capital (% of GDP)	0.05	0.05	0.06	0.09	0.14	0.10	0.10	-	0.05
	Financial literacy (composite)	-	-	-	-	-	-	53.0	-	45.5
	Bonds (as % of HH financial assets)	0.3	0.3	0.2	0.2	0.2	0.2	0.2	-	2.7
	Listed shares (as % of HH financial assets)	1.6	1.5	1.6	1.6	2.0	1.9	1.9	-	4.8
	Investment funds (as % of HH financial assets)	3.7	3.3	3.3	3.0	3.6	3.4	3.5	-	10.0
	Insurance/pension funds (as % of HH financial assets)	61.9	62.3	64.4	65.0	61.6	55.4	56.4	-	27.8
	Total assets of all insurers (% of GDP)	64.8	60.3	62.8	68.1	59.3	44.7	42.0	40.4	54.8
	Pension funds assets (% of GDP)	-	-	209.9	235.9	222.1	170.9	168.7	167.7	23.4

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

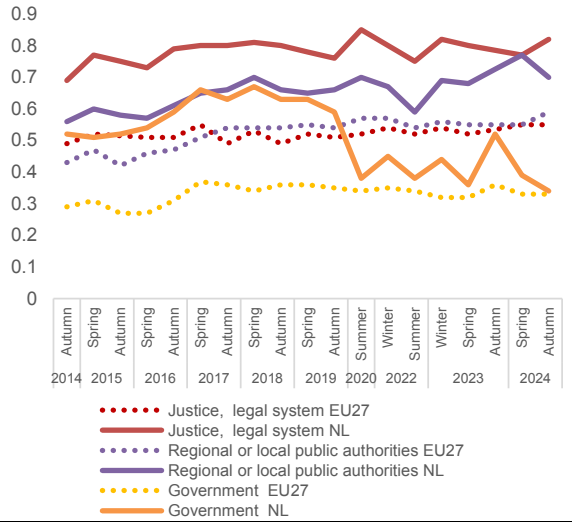
(1) Annualised data. EU data for credit growth and pension funds refers to the EA average.

Source: ECB, Eurostat, EIOPA, DG FISMA CMU Dashboard, AMECO.

The Netherlands' institutional framework influences its competitiveness. While the quality of policymaking is generally high, the country has identified further scope to simplify complex regulations, improve delivery of public services, and reduce administrative burden for the businesses. The Netherlands has made progress in digital public services, ranking above the EU average in the availability of public services for citizens and businesses, and has a high uptake of e-government services. Both the civil service and justice system continue to function well.

Public perceptions

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



(1) EU-27 from 2019; EU-28 before
Source: Standard Eurobarometer surveys

Trust in public institutions remains above the EU average. Judicial and subnational government's authorities achieving higher scores than the central government (Graph A6.1). When asked about aspects that can increase trust in the Dutch public administration, 42% of citizens pointed to greater transparency in decision-making and use of public money (EU: 44%) and 37% to more communication with citizens (EU: 31%) ([80]). The perceived quality of government has remained broadly stable at values above the EU average ([81]).

Quality of legislation and regulatory simplification

Regulatory practices for developing and evaluating legislation are above the EU average and have improved from 2021 to 2024. Ex-ante impact assessments, public consultations, and reviews of existing regulations, show similar performance for primary and subordinate legislation. Stakeholder engagement and ex-ante assessments are stronger than ex-post evaluations, though all remain above the EU average. The policymaking is supported by a rich ecosystem of institutions for producing high-quality knowledge. The main area of improvement is the uptake of evidence in concrete policy processes ([82]). There is also room to enhance transparency requirements in regulatory impact assessments across primary and subordinate legislation (Graph A6.2).

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

([81]) Inforegio - European Quality of Government Index

([82]) JRC. Building capacity for evidence-informed policymaking in governance and public administration in a post-pandemic Europe

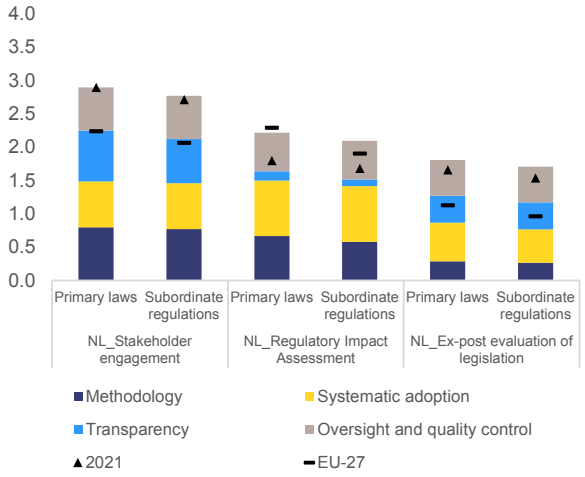
Table A6.1: **The Netherlands. Selected indicators on administrative burden reduction and simplification**

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

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

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

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



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

The Netherlands also has mechanisms in place for simplifying regulation and identifying administrative burdens (table A6.1). The policy preparation framework was revised in 2022/2023. A recent evaluation found that the framework remains underutilised ([83]). In addition, the 2024 State of implementation (Staat van de Uitvoering) report highlights the complexity of laws and regulations, and inadequate data exchange between public service providers as key bottlenecks to futureproofing of public services ([84]).

The OECD product market regulation indicator shows that the Netherlands' licensing system is slightly more burdensome than the EU-27 average. There is room to further align it with best practices. For example, the government does not keep an up-to-date inventory of all the permits and licences required/issued to businesses by public bodies (see also Annex 6).

([83]) Rijksoverheid, 2024.

([84]) Staat van de Uitvoering, 2024.

Social dialogue

Social dialogue is embedded in a well-structured and strongly institutionalised framework. Clear procedures and structures are in place for consulting social partners on the development and implementation of national reforms and important economic and social issues more generally (the 'Polder model'), for instance through the Sociaal-economische Raad (SER), a key advisory body to the government. There is a strong tradition of both bipartite as well as tripartite cooperation between the government, employers, and trade unions on important economic and social issues (including planned major reforms) with a view to finding consensus ([85]).

Digital public services

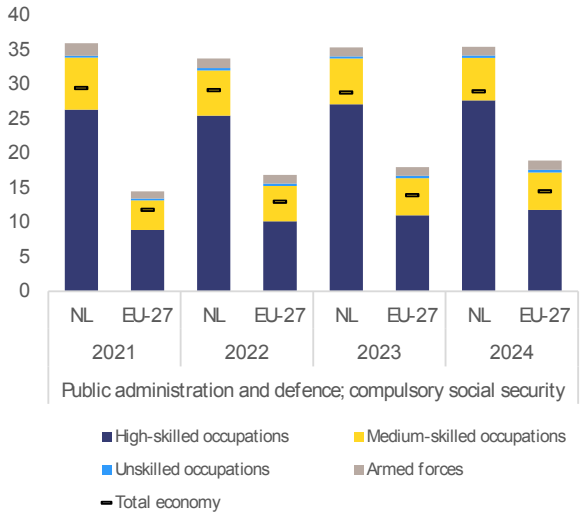
The Netherlands is generally performing well on the digitalisation of public services (Table A6.2). On both availability of public services for citizens (85.9 out of 100) and for businesses (86.7 out of 100), it ranks above the EU average (respectively 79.4 and 85.4).

The Netherlands can still improve on ensuring citizens' online access to e-health records. The country had an overall e-health maturity score of 72.5 in 2023. This compares to a maturity score of 79.1 in the EU, which shows scope for improvement especially since 78.8% of Dutch citizens sought health information online in 2023, well above the EU average of 56%([86]). The Netherlands could improve its e-health maturity score by making more health data types available to people through the online access service and increasing the supply of health data by including more categories of healthcare providers.

The use of e-government services by internet users is also very high (95.5%, EU: 75%). In recent years, eID has attracted a lot of attention in the country, particularly for its potential to facilitate business operations, but also for tax, pension and education purposes. Data shows that about 95% of Dutch citizens used their eID to access public services in 2023([87]).

The Netherlands is now closer to being ready for the seamless, automated exchange of authentic documents and data across the EU. It has completed its first transactions using the Once-Only Technical System, part of the EU Single Digital Gateway, and is ready to roll out services for citizens and business ([88]).

Graph A6.3: **Participation rate of 25-64 year olds in adult learning (%) by occupation**



Source: European Commission, based on the Labour Force Survey.

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

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

([87]) Ibid.

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

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

		Netherlands			EU-27	Digital Decade target by 2030
		2022	2023	2024	2024	EU-27
Digitalisation of public services						
1	**Digital public services for citizens**	**85**	**85**	**86**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
2	**Digital public services for businesses**	**88**	**89**	**87**	**85**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030
3	**Access to e-health records**	**na**	**69**	**72**	**79**	**100**
	Score (0 to 100)	2021	2022	2023	2023	2030

Source: State of the Digital Decade report 2024

Civil service

The civil service functions well but could be affected by planned reductions. The ratio of staff aged 25-49 to staff aged 50-64 has lowered slightly, indicating a relative ageing of the workforce. The ratio is close to the EU average but is significantly lower than that for the whole workforce. The government's coalition agreement includes a 22% reduction in the number of civil servants at central level and a reform of the senior civil service, both of which could influence future staff ratios. The planned reduction in the number of civil servants follows a significant 33% expansion in the central government sector between 2015 and 2023 ([89]). Since 2021, more than a third of staff have taken in adult learning, significantly higher than the EU average (Graph A6.3). Gender parity is steadily improving ([90]), and parity has almost been achieved at senior level, with nearly 47% of women in senior management positions ([91]).

([89]) Rijksoverheid, 2024

([90]) Ibid.

([91]) European Institute for Gender Equality, 2024.

Integrity

Business perception on corruption is below the EU average and new anti-corruption priorities are being implemented. In the Netherlands, 53% of companies consider that corruption is widespread (EU average 64%) and only 13% consider that corruption is a problem when doing business (EU average 36%) ([92]). Moreover, 45% of companies believe that people and businesses caught for bribing a senior official are appropriately punished (EU average 31%) ([93]). The investigation and prosecution of corruption-related offences continue to function properly, including in high-level cases, but the OECD has raised concerns regarding the effective enforcement of foreign bribery cases ([94]). Preventing infiltration of organised crime groups in the civil service and police through corruption is a strategic priority, including through a specific government programme against subversive organised crime ([95]). Furthermore, only 16% of companies (EU average 27%) think that corruption has prevented them from winning a

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

([93]) Ibid.

([94]) See the 2024 country-specific chapter for the Netherlands of the Rule of Law Report, pp. 14-15.

([95]) Ibid., pp. 12-13.

public tender or a public procurement contract in practice in the last three years ([96]).

A National Risk Assessment on Corruption, which commenced in April 2024, has been commissioned and aims to identify the largest corruption threats, as well as potential resilience against corruption in the public and private sectors at a local, provincial and national level. In recent years, the healthcare sector has also proven to be another high-risk area for corruption, including through a corruption case at the country's largest cardiology department, and the Fiscal Intelligence and Investigation Service with its Anti-Corruption-Centre and prosecution have increased their efforts in this regard ([97]).

A transparency register for lobbying Members of Parliament is in place, but it is basic and there is no register for contacts with government (ministers and state secretaries). It remains the individual responsibility of each minister and state secretary to disclose their agendas and their legislative footprints, which can challenge the equal access to high-level officials for companies. The government has commissioned additional research to further evaluate the effects of the measures in place in the lobbying field ([98]).

Justice

The efficiency of the justice system continues to be high. The disposition time in civil and commercial cases in first instance courts was 82 days in 2022 (no data available for 2023). The estimated time to resolve administrative cases at first instance courts rose (267 days in 2023, up from 257 in 2022). The level of digitalisation has further improved. As regards judicial independence, no systemic deficiencies have been reported ([99]).

([96]) the 2024 country-specific chapter for the Netherlands of the Rule of Law Report.

([97]) Ibid., pp. 20-21.

([98]) See the 2024 country-specific chapter for the Netherlands of the Rule of Law Report, p. 18.

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

The Netherlands faces significant challenges regarding its clean industry transition and climate mitigation. While the manufacturing sector has made strides in reducing greenhouse gas emissions intensity, decarbonisation remains a challenge and requires enhanced policy measures, especially on energy affordability, and investments in clean technologies. The country's strategic dependency on critical raw materials is among the highest in the EU. This annex reviews the areas in need of urgent attention in the Netherlands' clean industry transition and climate mitigation, looking at different dimensions.

Strategic autonomy and technology for the green transition

Net zero industry

The Netherlands's manufacturing capacity, although modest relative to other Member States, is diversified across all net-zero technologies([100]) and has important development potential. The Netherlands' net-zero manufacturing capacity amounts to between 350 and 550 MW/y (2-3% of EU capacity) for solar PV; between 300 and 350 MW/y (a negligible share of total EU capacity) for wind turbines; and between 300 and 500 MWh/y (a negligible share of total EU capacity) for battery and storage technologies.

Additionally, there are at least eight production facilities for heat pumps. As a lead innovator in the EU and home to significant pools of capital([101]), the Dutch economy has the potential to further develop net-zero manufacturing.

The policy framework supporting the scale-up of net-zero manufacturing is progressing, but remains fragmented, focused on a sectoral approach. The SolarNL initiative aims at building several plants and producing high-quality, easily recyclable solar panels. Two action plans dedicated to batteries and heat pumps could support the build-up of manufacturing capacity for net-zero technologies in the country. However, the Netherlands would benefit from the introduction of non-price criteria in auctions for net zero technologies and streamlined industrial permitting processes.

A vast array of investment support schemes is in place to promote net-zero technologies. In July 2024, the European Commission approved a state aid scheme of up to EUR 750 million under the Temporary Crisis and Transition Framework. This will also allow investment in building up production capacities for batteries, solar and electrolyser technologies.

The Netherlands is participating in 7 IPCEI initiatives at EU level. The largest amounts of resources are committed to hydrogen and microelectronics. Additionally, the national promotional bank (InvestNL) and the National Growth Fund provide investment and grants supporting an innovative and resilient solar and batteries value chain.

Critical raw materials

Dutch manufacturing heavily depends on imports of critical raw materials needed for the green and digital transitions. The Netherlands' strategic dependency on raw materials in 2023 is one of the highest in the EU, suggesting limited diversification in its sources of supply[2]. A Task Force on Strategic

([100]) European Commission: Directorate-General for Energy, The net-zero manufacturing industry landscape across the Member States 2025, https://data.europa.eu/doi/10.2833/2181110

([101]) See European Innovation Scoreboard 2024.

Dependencies has been set up and is working to identify and address high-risk, strategic dependencies, including in raw materials.

In 2023, the value of imported unprocessed critical raw materials amounted to EUR 17 billion (7.4 billion without transit). Aluminium, nickel, coking coal and copper dominate (EUR 14 billion or 87% of the total). China is only the ninth-largest supplier of critical raw materials to the Netherlands. In 2022, the country was the EU's largest importer of critical raw materials from non-EU sources.[3]

The recycling rate for e-waste, a key source of critical raw materials, stood at 72.6% in 2022, which is below the EU average of 81%. The reuse and recycling rate for end-of-life vehicles is well above the EU average (87.2% vs. 89% in 2022). This points to the need to avoid the loss of critical raw materials, especially as the car industry shifts to battery-electric vehicles.

Climate mitigation

Industry decarbonisation

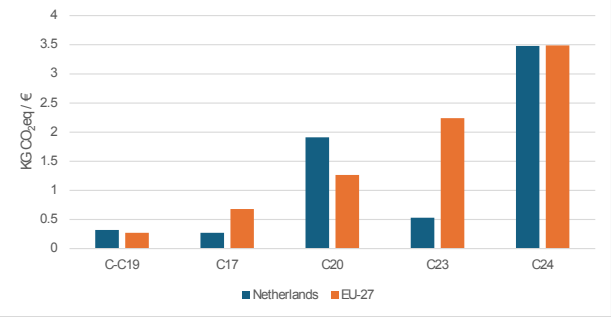
The manufacturing sector in the Netherlands has progressed with reducing greenhouse gas emissions, but challenges remain. About a quarter of the greenhouse gas emissions in the Netherlands come from manufacturing ([102]). In 2022, the sector emitted 320 g CO2eq of greenhouse gases per euro of gross value added (GVA), about 18% more than the EU average (270 g). Since 2017, the greenhouse emissions intensity of manufacturing has declined by 29%, more than in the EU overall (20%). Among the Netherlands' emissions from manufacturing activity, 57% are related to energy and the remainder comes from industrial processes and product use – the same shares as in the EU overall.

The greenhouse gas intensity of manufacturing in the Netherlands has been improving, as regards both energy-related and non-energy-related emissions ([103]). Between 2017 and 2022, the energy-related greenhouse emissions intensity of its manufacturing industry declined by 30%, nearly twice as much as in the EU overall (16%). In the same period, the share of electricity and renewables in the final energy consumption of manufacturing remained broadly stable at around 25%, the lowest share in the EU. The energy intensity of manufacturing in the Netherlands decreased by about 27% between 2017 and 2022, from 1.8 GWh per euro of gross value added to 1.3 GWh/€. Concerning industrial processes and product use, the emissions intensity from these sources of Dutch manufacturing declined by 34%, significantly more than the EU overall (23%), bringing the process and product-related emissions intensity just below EU average levels, at 97 g CO2eq per euro of GVA.

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

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

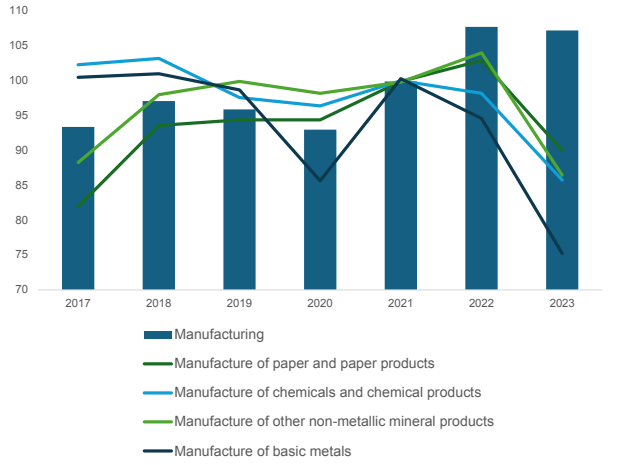
Graph A7.1: **GHG emission intensity of manufacturing and energy intensive sectors, 2022**



Source: Eurostat.

Energy-intensive industries in the Netherlands are facing increasing competitiveness pressure. Energy-intensive industries ([104]) accounted for 15% of the Netherlands manufacturing gross value added in 2022. Although electricity prices for industry have eased since 2023, they have seen very large increases in recent years and remain high compared to neighbouring countries and internationally ([105]). Energy costs are the top concern for companies ([106]). This, along with broader global competition, puts pressure on industrial production in the Netherlands. The country saw a decline in manufacturing output of approximately 7% by October 2024, compared to its peak in June 2023; the GDP share of energy-intensive industries dropped significantly in particular ([107]).

Graph A7.2: **Manufacturing industry production: total and selected sectors, index (2021 = 100), 2017-2023**



Source: Eurostat, 2024, sts_inpr_a.

The Netherlands has implemented a range of policies to drive the decarbonisation of its industrial sector, but additional efforts are still needed. Key measures ([108]) include the introduction of carbon pricing mechanisms, such as the CO2 levy for industry, which complements the EU ETS by setting a minimum carbon price for large industrial emitters. The country has also introduced novel tailor-made agreements with industry to facilitate company-specific decarbonisation pathways, although they have run into delays ([109]). These policies are complemented with public funding for innovation and clean energy projects through programs such the Sustainable Energy Transition Incentive Scheme (SDE++). The Netherlands is also promoting public-private partnerships to drive innovation and scaling of low-carbon technologies, exemplified for instance by the Port of Rotterdam's hydrogen initiatives and CCS projects like Porthos. These efforts are underpinned by strategic clean energy infrastructure investments. Despite these initiatives, the Netherlands is off track in industrial sector emissions, with projected

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

([105]) Electricity 2024 - Analysis and forecast to 2026

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

([107]) See Manufacturing output down by 2.5 percent in October | CBS

([108]) For an overview of industry decarbonisation policies, see Nationaal Programma Verduurzaming Industrie | Nationaal Programma Verduurzaming Industrie.

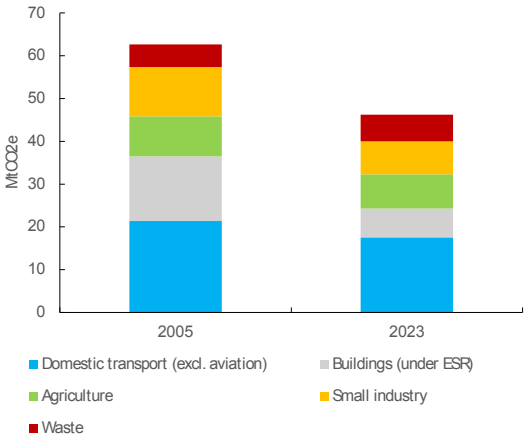
([109]) Klimaat- en Energieverkenning 2024.

greenhouse emissions of 38.5 Mt CO_2eq compared to the national sectoral 2030 emissions reduction target of 29.1 Mt CO2eq ([110]), indicating that additional efforts are needed.

Reduction of emissions in the effort sharing sectors

The Netherlands is projecting a gap to its -48% 2030 effort sharing target based on the data provided in its final updated national energy and climate plan (NECP). However, it can meet its 2030 ESR obligations by accumulating unused emission allocations in 2021-2029. A new Dutch government was sworn in on 2 July 2024, shortly after the final updated NECP was submitted to the Commission. While most of the policies and measures outlined in the final updated Dutch NECP remain relevant, several have been adjusted to align with the new administration's plans. KEV 2024 ([111]) confirms that, also with these adjustments, the country remains on track to stay within its cumulative 2021-2030 ESR emissions cap.

Graph A7.3: **Greenhouse gas emissions in the effort sharing sectors, 2005 and 2023**



Source: European Environment Agency

([110])See: Klimaat- en Energieverkenning 2024 | Planbureau voor de Leefomgeving.

([111])PBL, Klimaat- en Energieverkenning 2024, 24 October 2024.

Sustainable industry

Circular economy transition

The Netherlands is one of the best performers in the EU regarding circular economy and waste recycling. In 2023, the circular use of materials in the Netherlands (30.6%) is the highest in Europe (EU average of 11.8%.) In addition, the Netherlands generated EUR 5.46 per kg of material consumed in 2023, putting it well above the EU's average for resource productivity of EUR 2.23 per kg. In 2024 a new infringement case was opened by the Commission against the Netherlands for not meeting, by 2021, the agreed collection rate for waste electronic and electric equipment (INFR(2024)2121). The Netherlands has put in place a National Programme for Circular Economy 2023-2030 ([112]), following up on the broader 2016 Programme on a Fully Circular Economy by 2050 ([113]), under which the country's objective was to achieve a 50% reduction in the use of primary raw materials by 2030.

Current investment in the circularity transition have been insufficient. Circular economy investment across the economy reaches around EUR 8.4 billion per year in the Netherlands, with a further EUR 1.6 billion provided for waste management that does not come under the circular economy. Around 0.3% of this combined financing for circularity and waste comes from the EU budget, with no further contribution from the Recovery and Resilience Facility. EIB loans identified in support of circularity and waste represent 0.2% of the total. This leave's the lion's share to be covered by national sources (99.5% of the total financing). The Netherlands is estimated to need total additional investment of EUR 1.5

([112])Ministry of Infrastructure and Water Management, 2023, *National Circular Economy Programme 2023-2030*, Link.

([113])Ministry of Infrastructure and Water Management, 2016, *National Agreement on the Circular Economy*, Link.

billion per year for its circular economy transition, including waste management, representing 0.16% of its GDP ([114]).

Zero pollution industry

Air quality in the Netherlands is generally good, with some exceptions. Emissions of several air pollutants have fallen significantly in the Netherlands since 2005, while GDP growth has continued. According to the inventories submitted under Article 10(2) of the National Emission reduction Commitments (NEC) Directive in 2024, the Netherlands meets its emissions reduction commitments for 2020-2029 for the air pollutants NO_x, non-methane volatile organic compounds (NMVOC), sulphur dioxide (SO_2), ammonia (NH_3) and $PM_{2.5}$. According to the latest projections submitted under that Article, the Netherlands projects to meet its emissions reduction commitments for 2030 onwards for NO_x, NMVOC, SO_2, NH_3 and $PM_{2.5}$. The Netherlands submitted its updated national air pollution control programme (NAPCP) to the Commission on 5 December 2023.

Dutch industry continues to release large amounts of air and water pollutants. Around 4 400 industrial installations are required to have a permit based on the Industrial Emissions Directive (IED), with most of them falling in the intensive rearing of poultry and pig sector (61%), followed by the waste-management sector (21%). The Netherlands has relatively high damage caused by air pollution estimated at EUR 2.3 billion for 2021 (the 8th highest in the EU). In terms of emission intensity it has the 10th highest value of EUR 21.7 of damage per thousand EUR GVA and is above the EU average of 27.5 EUR/thousand EUR GVA in emissions intensity. The main contributors to emissions to air are the intensive rearing sector (including poultry and pigs), the electricity production sector and the metal sector and chemicals production.

The costs of pollution remain far higher than the investment in pollution prevention and control. The latest available annual estimates for the Netherlands by the European Environment Agency ([115]) attribute 5 300 deaths a year (or 53 100 years of life lost (YLL)) to fine particulate matter ($PM_{2.5}$) ([116]) in 2022; 1 900 attributable deaths a year (or 19 300 YLL) to nitrogen dioxide (NO_2) ([117]), and 1 800 attributable deaths a year (or 18 600 YLL) to ozone ([118]). To meet its environmental objectives on pollution prevention and control (zero pollution), the Netherlands needs to provide an additional EUR 2.3 billion per year (0.25% of GDP), mostly related to clean air and noise ([119]). The adequate implementation of the final updated national climate and energy plan (NECP) with the investment included for sustainable energy and transport would largely deliver this.

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

([115]) EEA, 2024, *Harm to human health from air pollution in Europe: burden of disease status, 2024*, Link.

([116]) Particulate matter (PM) is a mixture of aerosol particles (solid and liquid) covering a wide range of sizes and chemical compositions. $PM_{2.5}$ refers to particles with a diameter of 2.5 micrometres or less. PM is emitted from many human sources, including combustion.

([117]) Nitrogen dioxide (NO_2) refers to a group of gases called NOx, which also comprises nitrogen monoxide (NO). NOx is emitted during fuel combustion e.g. from industrial facilities and the road transport sector.

([118]) Low-level ozone is produced by photochemical action on pollution. This year, for the first time, the impact of long-term exposure to ozone has also been considered. In previous analysis by the European Environment Agency, only the impact of short-term exposure was estimated.

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

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

Strategic autonomy and technology for the green transition				Netherlands						EU-27	
Net zero industry											
Operational manufacturing capacity 2023											
- Solar PV (c: cell, w: wafer, m: module), MW	350-550 (m)				- Electrolyzer, MW		-				
- Wind (b: blade, t: turbine, n: nacelle), MW	300-350 (n)				- battery, MWh		300-500				
Automotive industry transformation		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Motorisation rate (passenger cars per 1000 inhabitants), %		487	489	493	497	502	501	498	↘	539	561
New zero-emission vehicles, electricity motor, %		1.92	5.41	13.82	20.50	19.75	23.47	30.83	↗	1.03	8.96
Critical raw materials		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material import dependency, %			80.4	80.6	81.0	82.5	82.9	82.7	↘	24.2	22.6

Climate mitigation				Netherlands					Trend	EU-27	
Industry decarbonisation		**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2017**	**2022**
GHG emissions intensity of manufacturing production, kg/€		0.45	0.43	0.41	0.42	0.38	0.32	0.3	↘	0.34	0.27
Share of energy-related emissions in industrial GHG emissions		45.2	44.4	45.9	44.4	44.6	43.4	42.9	↘	44.8	42.5
Energy-related GHG emissions intensity of manufacturing and construction, kg/€		182.9	165.5	159.8	161.3	150.9	128.9	-	↘	158.4	132.9
Share of electricity and renewables in final energy consumption in manufacturing, %		23.9	24.9	24.9	24.8	24.5	25.6	25.3	↗	43.3	44.2
Energy intensity of manufacturing, GWh/€		1.83	1.73	1.66	1.70	1.52	1.34	1.28	↘	1.29	1.09
Share of energy-intensive industries in manufacturing production							15.2				7.3
GHG emissions intensity of production in sector [...], kg/€											
- paper and paper products (NACE C-17)		0.35	0.32	0.27	0.24	0.32	0.27	0.21	-	0.73	0.68
- chemicals and chemical products (NACE C20)		2.16	2.06	2.22	2.48	2.12	1.91	2.23	-	1.25	1.26
- other non-metallic mineral products (NACE C23)		0.87	0.81	0.66	0.63	0.62	0.53	0.56	-	2.53	2.24
- basic metals (NACE C24)		4.09	3.79	3.89	3.71	3.40	3.48	3.42	-	2.79	3.49
Reduction of effort sharing emissions			**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2023**
GHG emission reductions relative to base year, %						-27.5	-33.8	-34.4			
- domestic road transport			-14.4	-15.6	-28.3	-27.7	-28.2	-25.2	↘	1.4	5.2
- buildings			-11.3	-14.0	-18.4	-11.5	-29.9	-34.4	↘	21.4	32.9
		2005				**2021**	**2022**	**2023**	**Target**	**WEM**	**WAM**
Effort sharing: GHG emissions, Mt; target, gap, %		128.1				92.9	84.8	84.1	-48.0	-10	-9.3

Sustainable industry				Netherlands					Trend	EU-27	
Circular economy transition			**2018**	**2019**	**2020**	**2021**	**2022**	**2023**		**2018**	**2021**
Material footprint, tonnes per person			9.0	9.3	9.3	8.7	8.5	6.0	↘	14.7	15.0
Circular material use rate, %			25.8	25.6	27.1	28.5	27.2	30.6	↘	11.6	11.1
Resource productivity, €/kg			4.1	4.4	4.8	5.5	5.6	7.1	↗	2.1	2.3
Zero pollution industry											
Years of life lost due to PM2.5, per 100,000 inhabitants			461	374	282	332	458	-	↗	702	571
Air pollution damage cost intensity, per thousand € of GVA						21.7					27.5
Water pollution intensity, kg weighted by human factors per bn € GVA							0.8				0.9

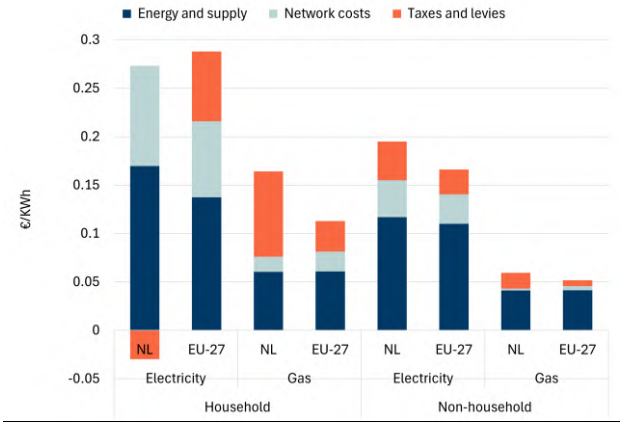
Source: **Net zero industry:** European Commission: The net-zero manufacturing industry landscape across Member States: final report, 2025. **Automotive industry transformation:** Eurostat. **Critical raw materials:** Eurostat. **Climate mitigation:** See footnotes in the "climate mitigation" section;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

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

The Netherlands has made good progress in its energy transition. In particular, the country has advanced in renewable energy deployment, above all in offshore wind (although the renewable energy share is still below the EU target). Progress towards reaching the 2030 EU targets for energy efficiency has slowed down. Grid congestion remains a major issue.

Energy prices and costs

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



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

Netherlands's retail electricity prices for households have significantly decreased in 2024. In contrast to 2023, where Dutch consumers paid more than the EU average, in 2024 they have observed lower than EU average prices. Network costs cover 42.5% of total retail electricity prices for households, compared to 27.2% as the EU average. At the same time, while on average in the EU a quarter of total costs are constituted by taxes, public fiscal intervention reduces total cost by 12.2% in the Netherlands. Retail gas prices for households have also significantly declined but are still the second highest in the EU. Taxes represent a high share of gas prices, 53.7% of total costs vs 27.8% EU average.

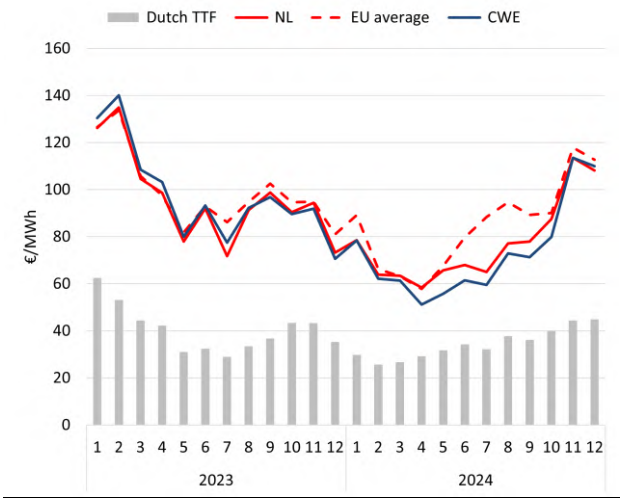
Retail energy prices for industrial consumers have decreased but remain above the EU average. Taxes constitute 20.5% of electricity cost for non-household consumers, vs 15.4% in the EU as an avg.

Thanks to a large share of renewables (50.8%) in its electricity mix, the Netherlands had the EU's eighth-lowest wholesale electricity prices, averaging 77.2 EUR/MWh in 2024([120]) (EU average of 84.7 EUR/MWh). Along with the broader Central Western European (CWE) region, the Netherlands experienced price spikes in the winter months of early 2024 which occurred amid demand increases due to a cold winter (+6.7% and +10.0% in Jan. and Feb. vs the same period in 2023, respectively). Prices picked up again in the second half of the year amid rising natural gas costs and surged in winter as the Netherlands ramped up costly natural gas-fired generation and coal-fired generation (+62.4% and +39.1% in Nov. and Dec. vs same period in 2023, respectively) due to the Dunkelflaute experienced in the region ([121]).

([120]) Fraunhofer (ENTSO-E data)

([121]) Yearly electricity data, Ember (consumption and generation data throughout the paragraph)

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



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

Flexibility and electricity grids

Whilst the Netherlands has ensured that 70% of transmission capacity is offered for cross-zonal trade at the high-voltage direct current (HVDC) bidding zone borders with Denmark and Norway, this is not the case for cross-zonal trade within the Core capacity calculation region (CCR). The Netherlands is part of the Core([122]) and the Hansa([123]) CCRs. The requirement to make a minimum of 70% of capacities available for cross-border trade has not yet been implemented in most Core Member States, including the Netherlands. In December 2019, the Ministry of Economic Affairs and Climate Policy of the Netherlands adopted an action plan establishing a linear trajectory for the minimum capacity available for cross-zonal trade by reinforcing the electricity grid to be compliant with the 70% target by the end of 2025. In addition, the Dutch transmission system operator TenneT has requested and been granted a derogation from the 70% target, on the grounds of excessive loop flows from neighbouring Member States, most notably Germany. A derogation enables a lower level of trades for a time-limited period if needed for operational security reasons. Reducing the level of loop flows in a structural manner is necessary for efficient and improved cross-zonal trading in the Core region.

The Netherlands faces a major challenge at both transmission and distribution network level. Due to constraints and increasing demand, many consumers, including industrial consumers and housing estates, cannot be connected to the grid. Steps are being taken to reinforce the system via a major budget, but improvements will take time. TenneT, the transmission network operator, plans to invest EUR 38 billion from 2024 to 2034. The national grid operator expects to carry out around 700 major infrastructure projects including grid extensions, replacement investments, new customer connections, offshore wind farms and reconstruction projects.

Due to the existence of a high level of interconnection capacity, the Dutch electricity market is strongly linked to markets in neighbouring countries. The interconnection capacity stood at over 15% in 2021 but is set to fall to 7.12% by 2025 due to increasing renewables. Enhancing trading over existing cross-border infrastructures remains a challenge. It would therefore be beneficial to work with the neighbouring countries to maximize cross-zonal electricity trading over existing cross-border infrastructures and develop flexibility solutions to contribute facing grid connection issues.

([122]) Core is the CCR which covers central European countries namely Austria, Belgium Czechia, Germany, France, Croatia, Hungary, the Netherlands, Poland, Romania, Slovenia, Slovakia and, once connected, Ireland. A CCR is a group of countries which calculate cross-border electricity trade flows together.

([123]) Norway, Sweden, Denmark, the Netherlands, Germany and Poland are part of the Hansa CCR.

The Energy Act has been reformed to update, modernise and integrate the regulatory framework for gas and electricity energy systems. The energy market reform package includes measures that aim to reduce congestion on the electricity grid. In 2023, 62 GWh of renewables were curtailed (0.3% of total renewable energy production) ([124]), while day-ahead negative prices occurred 315 times ([125]).

The Netherlands' reported electricity storage capacity is around 600 MWh. The country is expecting more capacity to be installed in the coming years due to the increasingly congested electricity grid networks. This capacity will be derived from large-scale renewable electricity generation. As a result, national transmission system operators and distribution system operators have recognised the need to create a more flexible electricity system and have announced the goal to have at least 10 GW of battery storage by 2030.

The Netherlands identifies in its NECP the development of non-fossil flexibility as a priority and is working to implement the new flexibility provisions of the EU electricity market design package. One of the advantages for the Netherlands is the fact that more than 80% of connection points in the country already have a remotely readable measuring device (smart meter).

The regulatory framework already allows the use of flexibility in the electricity system in several ways, for example through congestion management, aggregation and demand response services. This flexibility also extends to supply contracts with flexible tariffs and the option to have multiple suppliers on a single connection. The country has opened its balancing services to all types of new actors and distributed energy resources. Finally, the Netherlands allows electricity storage systems to participate in both the day-ahead and intraday markets.

The Netherlands is on track to facilitate demand-side response and consumer empowerment. However, some barriers remain. Currently the roll-out of smart meters is above 80%. This has facilitated the introduction of dynamic contracts, which have increased to 4% of total contracts. This, together with a 29% rate of prosumers, creates many options for demand response. One of the barriers that can be tackled is the proliferation of the net metering scheme. Regarding energy communities, this number has grown to 698 communities. Current new legislation entailing a definition as well as a further framework has also been introduced.

In 2023, electricity accounted for 22.9% of the Netherlands' final energy consumption, equal to the EU average of 22.9%, and this share has remained largely stagnant in the last decade ([126]). When it comes to households, electricity accounts for 23.8% of final energy consumption, while in industry it represents 23.6% (see also Annex 4). For the transport sector, this share remains negligible at 3.5%. Further progress in electrification across sectors is required for cost effectively decarbonising the economy and bringing the benefits of affordable renewable generation to consumers.

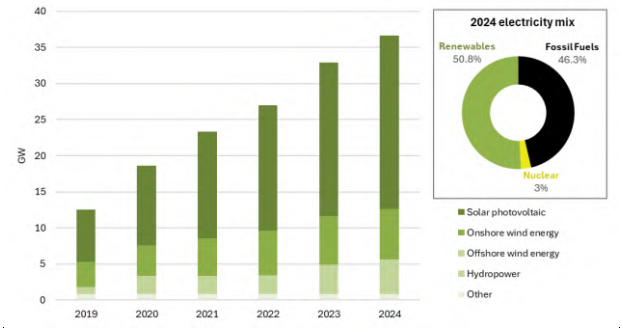
Renewables and long-term contracts

Renewable energy participation in final consumption is currently 15%, with a plan to increase it to between 32% and 42% by 2030. In 2024, renewable energy sources (RES) accounted for 50% (vs EU overall RES share of 47%) of the electricity mix, increasing from 47% in 2023.

([124]) ACER.
([125]) ENTSO-E.

([126]) CAGR (compound annual growth rate) of 1.8% between 2013 and 2023 and minimum/maximum share of 19.2% and 22.9%, respectively.

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



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

The Dutch permitting regulations and support system are overall strongly aligned with the Commission's Recommendation. In 2023-2024, the Dutch authorities took several important steps to improve the framework for granting permits for projects on renewables. The most important change has been the adoption of the Environment Act, which successfully addresses issues related to simplified and faster procedures and focuses on public consultation during renewables project development. A strong point of the Dutch system is the existence of a well-functioning one-stop-shop for digitalised application and the permit-granting process.

The Netherlands has also introduced a single contact point for granting permits for renewables generation assets. This streamlines the process for building, repowering and operating, thus reducing the number of authorities involved. Better internal coordination and planning is ensured by the multi-year infrastructure energy and climate programme (MIEK).

Based on available evidence, there are no specific developments concerning the opening of support schemes, in terms of either legislative requirements or implementation experience through pilot schemes. The Netherlands has not put forward a good plan to indicate that deployment of renewable energy will increase to meet the agreed targets.

Energy efficiency

There has been a slowing in the progress of the Netherlands towards reaching the 2030 EU targets for energy efficiency. In 2023, the Netherlands' primary energy consumption (PEC) was 53.81 Mtoe, a 4.3% decrease compared to 2022. Its final energy consumption (FEC) was 40.98 Mtoe, a 2.6% decrease compared to 2022. As in 2022, the best results came from the residential sector, in which final energy consumption fell by 11.6%. The worst results were in the transport sector, in which final energy consumption increased by 5%. Moreover, the national climate and energy outlook (October 2024) estimates that the Netherlands has only a 5% chance of meeting its 2030 energy efficiency targets (for both PEC and FEC), based on existing and planned policies. As a result, the Netherlands is not on track to meet its 2030 national contribution of 38.41 Mtoe for FEC and 46.2 Mtoe for PEC under the recast Energy Efficiency Directive (Directive (EU) 2023/1791).

The Netherlands has notified the Commission of its comprehensive heating and cooling assessment identifying potential for the application of high-efficiency cogeneration and efficient district heating and cooling in line with Article 25(1) of the Energy Efficiency Directive.

In relation to buildings, it would be beneficial if the Netherlands were to keep up the positive contribution of the residential sector to its 2030 buildings' targets. Between 2020 and 2022, residential final energy consumption declined by around 6% and data from 2023 indicate that this downward trend has continued and even intensified.

Heating and cooling represent 80% of the country's residential final energy

consumption. Approximately 167 000 heat pumps were sold in 2023, representing an increase of 66% compared to the previous year. In this context, it is worrying that the Dutch government has announced that the obligation to install a heat pump when replacing an individual heater from 2026 onwards will be cancelled.

There are several measures in place to support energy improvements, including support for the installation of heat pumps, covering up to EUR 5 100 of the cost[15]. New connections to the gas grid have been banned for new buildings since 2018[14].

The Netherlands continues to deploy a wide range of financial support instruments for energy efficiency, including subsidy schemes for homeowners, tax rebates for companies and energy performance fees for landlords. At the same time, more action would be useful to leverage more private investment in energy efficiency measures in support of the 2030 target.

Security of supply and diversification

Although the country is not directly dependent on Russian gas, the Netherlands has committed to phasing out Russian gas as soon as possible. On the demand side, security of supply will be strengthened through the acceleration of the energy transition and gas savings. The Netherlands consumed on average 28% less gas in the first 10 months of 2024 than in the pre-crisis average.

Regarding oil security of supply, the Netherlands is already importing oil from diversified sources (mainly, Belgium, Norway and the UK). The Dutch oil infrastructure plays an important role in north-west Europe's security of supply, in terms of the import and export of oil and oil products. The country is willing to continue to do this in the future.

Despite progress in renewables, the Netherlands' overall energy mix in 2023 remained heavily reliant on fossil fuels, with oil accounting for 43.9%, natural gas 33.8%, and coal 5.8% of gross inland consumption ([127]), while renewables (and biofuels) contributed 13.8% ([128]).

As part of its national energy system plan ([129]), the Netherlands plans to build two nuclear power plants, set to start operating end 2030. The national energy system plan sees room for 3,5-7 GW of nuclear energy capacity in the Dutch electricity mix by 2050. As of today, there is now only one nuclear power plant operating in the Netherlands – the Borssele nuclear power plant, which was built in the early 1970s and has a net capacity of 0.48 GW. In 2023, it produced approximately 3% of the country's power generation. In the 2024 coalition agreement ([130]), the government announced the ambition to build four new conventional nuclear power plants, with additional room for the development of small modular reactors (SMRs).

Fossil fuel subsidies

In 2023, environmentally harmful ([131]) fossil fuel subsidies without a planned phase-out before 2030 represented 0.38% ([132]) of the

([127]) Nuclear heat and non-renewable waste accounted for 1.4% and 1.3%, respectively. Electricity and heat are excluded to avoid double-counting, focusing on primary energy sources.

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

([129]) Nationaal plan energiesysteem, 2023.

([130]) Coalition Agreement - Elaboration of the outline agreement by the cabinet, 13 September 2024, https://open.overheid.nl/documenten/ronl-f525d4046079b0beabc6f897f79045ccf2246e08/pdf

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

([132]) Numerator is based on volumes provided by the Dutch authorities. For all Member States, it includes public R&D expenditures for fossil fuels as reported by the IEA (Energy

Netherlands' GDP ([133]), below the EU weighted average of 0.49%. Tax measures accounted for 99% of this volume, while the remaining share was direct grants. Additionally, the Netherlands' 2023 Effective Carbon Rate ([134]) averaged EUR 120.03 per tonne of CO_2, above the EU weighted mean of EUR 84.80 ([135]).

Technology RD&D Budgets) and excludes, for methodological consistency, excise tax exemption on kerosene consumed in intra-EU27 air traffic and for the Netherlands, exemption from the use of diesel in international navy.

([133]) 2023 Gross Domestic Product at market prices, Eurostat

([134]) 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.

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

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

	Netherlands				EU			
	2021	**2022**	**2023**	**2024**	**2021**	**2022**	**2023**	**2024**
Household consumer - Electricity retail price (EUR/KWh)	**0.1364**	**0.0875**	**0.3035**	**0.2433**	**0.2314**	**0.2649**	**0.2877**	**0.2879**
Energy & supply [%]	58.1%	229.7%	86.6%	69.7%	36.6%	54.3%	55.6%	47.8%
Network costs	46.1%	75.9%	27.9%	42.5%	26.7%	25.3%	24.8%	27.2%
Taxes and levies including VAT	-4.2%	-205.6%	-14.5%	-12.2%	36.7%	20.3%	19.6%	25.0%
VAT	17.4%	10.1%	17.4%	17.3%	14.5%	13.4%	13.8%	14.6%
Household consumer - Gas retail price	**0.1013**	**0.1481**	**0.2055**	**0.1642**	**0.0684**	**0.0948**	**0.1121**	**0.1128**
Energy & supply	29.2%	53.7%	54.2%	36.8%	43.7%	61.0%	64.5%	53.9%
Network costs	9.6%	6.8%	6.1%	9.5%	22.5%	17.3%	17.1%	18.3%
Taxes and levies including VAT	61.2%	39.6%	39.8%	53.7%	33.8%	21.7%	18.4%	27.8%
VAT	17.4%	13.2%	17.8%	17.4%	15.5%	11.6%	10.2%	13.6%
Non-household consumer - Electricity retail price	**0.1168**	**0.1910**	**0.2404**	**0.1949**	**0.1242**	**0.1895**	**0.1971**	**0.1661**
Energy & supply	43.7%	62.0%	58.5%	49.6%	43.0%	66.5%	63.0%	55.8%
Network costs	13.1%	9.4%	10.4%	16.2%	15.8%	10.7%	11.9%	15.5%
Taxes and levies excluding VAT	31.3%	18.3%	16.6%	20.5%	30.4%	9.9%	11.2%	15.4%
Non-household consumer - Gas retail price	**0.0341**	**0.0682**	**0.0731**	**0.0593**	**0.0328**	**0.0722**	**0.0672**	**0.0517**
Energy & supply	63.7%	76.4%	72.6%	57.5%	66.2%	77.3%	77.3%	68.7%
Network costs	2.9%	1.5%	2.0%	2.5%	7.7%	3.8%	5.3%	7.1%
Taxes and levies excluding VAT	19.4%	10.1%	9.6%	27.3%	12.5%	6.1%	7.3%	11.6%
Wholesale electricity price (EUR/MWh)	102.6	241.2	96.1	77.5	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)	**117,168**	**114,380**	**121,408**	**123,278**	**122,170**	**121,573**	**121,331**	-
Combustible Fuels	99,395	95,965	99,973	94,787	88,305	78,541	67,602	-
Nuclear	3,402	3,515	3,910	4,087	3,828	4,156	3,985	-
Hydro	61	72	74	46	88	50	69	-
Wind	10,569	10,549	11,508	15,278	18,123	21,566	29,525	-
Solar	2,204	3,708	5,399	8,567	11,304	16,657	19,578	-
Geothermal	-	-	-	-	-	-	-	-
Other Sources	1,536	571	544	512	522	602	571	
Gross Electricity Production [%]								
Combustible Fuels	84.8%	83.9%	82.3%	76.9%	72.3%	64.6%	55.7%	-
Nuclear	2.9%	3.1%	3.2%	3.3%	3.1%	3.4%	3.3%	-
Hydro	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	-
Wind	9.0%	9.2%	9.5%	12.4%	14.8%	17.7%	24.3%	-
Solar	1.9%	3.2%	4.4%	6.9%	9.3%	13.7%	16.1%	-
Geothermal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
Other Sources	1.3%	0.5%	0.4%	0.4%	0.4%	0.5%	0.5%	-
Net Imports of Electricity (GWh)	**3,506**	**7,970**	**855**	**-2,660**	**253**	**-4,266**	**-5,660**	-
As a % of electricity available for final consumption	3.1%	7.0%	0.8%	-2.4%	0.2%	-3.9%	-5.3%	-
Electricity Interconnection [%]	**18.1%**	**18.6%**	**22.9%**	**25.9%**	**16.3%**	**13.7%**	**12.0%**	**10.3%**
Share of renewable energy consumption - by sector [%]								
Electricity	13.8%	15.2%	18.2%	26.4%	33.3%	39.7%	46.4%	-
Heating and cooling	5.8%	6.2%	7.2%	8.1%	8.1%	9.1%	10.2%	-
Transport	5.8%	9.5%	12.3%	12.6%	9.2%	11.1%	13.4%	-
Overall	6.5%	7.4%	8.9%	14.0%	13.1%	15.1%	17.4%	-

	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Import Dependency [%]	**68.0%**	**58.4%**	**80.2%**	**70.4%**	**57.5%**	**55.5%**	**62.5%**	**58.3%**
of Solid fossil fuels	91.9%	99.6%	102.1%	102.4%	35.8%	37.2%	45.9%	40.8%
of Oil and petroleum products	100.4%	85.7%	107.4%	92.6%	96.8%	91.7%	97.8%	94.5%
of Natural Gas	45.0%	33.7%	64.6%	65.2%	83.6%	83.6%	97.6%	90.0%
Dependency from Russian Fossil Fuels [%]								
of Natural Gas	37.0%	29.7%	10.1%	3.4%	41.0%	40.9%	20.7%	9.3%
of Crude Oil	26.5%	32.2%	23.7%	0.0%	25.7%	25.2%	18.4%	3.0%
of Hard Coal	53.6%	38.2%	10.4%	0.0%	49.1%	47.4%	21.5%	1.0%

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
Gas Consumption (in bcm)	**43.7**	**42.9**	**44.8**	**43.6**	**42.1**	**33.4**	**31.5**
Gas Consumption year-on-year change [%]	3.3%	-1.9%	4.5%	-2.7%	-3.5%	-20.6%	-5.9%
Gas Imports - by type (in bcm)	**24.0**	**31.1**	**35.6**	**36.2**	**30.9**	**38.8**	**40.3**
Gas imports - pipeline	23.1	27.8	26.2	27.5	22.0	19.6	15.0
Gas imports - LNG	1.0	3.3	9.4	8.7	8.9	19.2	25.3
Gas Imports - by main source supplier [%]							
United States	0.1%	1.0%	6.5%	7.9%	14.0%	28.9%	44.4%
Norway	39.8%	40.5%	35.0%	32.4%	36.6%	25.7%	23.0%
Belgium	1.8%	3.2%	6.1%	5.3%	5.5%	7.1%	6.8%
Russia	31.7%	45.2%	40.2%	37.0%	29.7%	10.1%	3.4%

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

The main challenges in the Netherlands are water quality, nature protection and biodiversity loss, as well as the GHG emissions. Biodiversity is under severe pressure. Nitrogen deposition ([136]) is a big problem because it leads to over-fertilisation and acidification of the soil and water. The Netherlands would benefit from adopting farming practices aimed at cutting nutrient and pesticide pollution, as well GHG emissions and improving soil health. The Netherlands is vulnerable to the impacts of climate change, in particular sea-level rise and a higher intensity and frequency of rainfall, heatwaves and prolonged droughts.

Climate adaptation and preparedness

The Netherlands faces increasing impacts from climate change due to its unique geography ([137]). About 59% of the country's land area is at risk of flooding from the sea and major rivers, with nearly 26% of the country lying below sea level ([138]). Heavy precipitation is another cause of flooding in the Netherlands ([139]) and floods, and their damage will increase due to climate change. The Netherlands also faces the risk of recurring extreme events, such as intense floods, which can have cumulative impacts and create significant budgetary pressure ([140]). Heatwaves are expected to become more frequent and intense, posing health risks, particularly for vulnerable populations such as older people. Over the period 1991-2020, 31% of heat-related mortality (approximately 250 deaths per year) was attributable to climate change. Prolonged droughts may put a strain on water resources, affecting the agricultural sector and the stability of dikes and infrastructure due to soil subsidence ([141]).

Climate risks have already caused substantial loss of life and economic losses. Between 1980 and 2023, the Netherlands suffered economic losses of EUR 10.97 billion due to extreme weather- and climate-related events, with 39% insured. This makes the country one of the EU Member States with the highest levels of insurance cover against extreme events. Over the same period, 3 918 fatalities were recorded ([142]). Climate risks are set to increase in the future, which can lead to higher insurance premiums ([143]).

The Netherlands has intensified its climate change adaptation efforts to mitigate potential damages. The updated delta programme addresses most of the country's adaptive measures, including those for rising sea levels, extreme weather events, and increased rainfall and droughts ([144]). The national climate adaptation strategy (NAS) provides a comprehensive framework for addressing climate risks across sectors, including infrastructure, agriculture and energy ([145]). A new NAS, planned for 2026, will include 15 adaptation pathways and emphasise

([136]) The two gas compounds (ammonia and nitrogen oxides) are generally referred to as 'nitrogen' in the context of its impact on nature and the environment in general. Ammonia and nitrogen oxides have different emission sources but cause cumulative and significant damage to the health of humans and the environment, especially Natura 2000 sites.

([137]) For estimates of the effects of climate change on the Netherlands, see Klimaatschadeschatter

([138]) Most of this (55% of the Netherlands) is protected by dunes, dikes, dams or engineered structures, while just 4% is not.

([139]) Planbureau voor de Leefomgeving, *Correctie formulering over overstromingsrisico Nederland in IPCC-rapport*, Link.

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

([141]) Government of the Netherlands, Climate adaptation in agriculture, Link.

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

([143]) PBL, 2024, *Klimaatrisico's in Nederland, de huidige stand van zaken*, Link.

([144]) The programming of measures is updated annually in the Delta Programme. The more strategic objectives within the Delta Programme, known as the Delta Decisions, are updated every six years. See: Home | Delta Programme.

([145]) Nationale klimaatadaptatiestrategie (NAS), Link.

the concept of 'just resilience'. Other key initiatives include the 'Room for the River' project ([146]), which enhances flood resilience by allowing more space for rivers to manage high water levels, and the 'Sand Motor' ([147]) project, which uses natural sand replenishment for coastal protection. The 'Climate-Proof Cities' programme promotes a green infrastructure and water-sensitive design in urban planning ([148]). Despite these initiatives, which will also help the Netherlands prepare for natural disasters exacerbated by climate change, the Dutch policy framework lacks a clear legal basis for adaptation ([149]). It also lacks targeted programmes to address emerging climate threats, such as changes in wildfires and the spread of invasive species and tropical diseases. The Dutch authorities intend to address these emerging threats in the 2026 update of their NAS.

The Netherlands has established a robust institutional framework to facilitate cooperation on adaptation efforts. It includes the national adaptation strategy, which involves collaboration by many ministries, and the Delta Programme, supported by the delta fund. Strategic objectives are adopted every six years, and the programme is submitted to the national parliament annually. Key institutions involved in these efforts include Rijkswaterstaat, the national agency for water management, provinces, regional water authorities and municipalities. However, adaptation has not yet been well integrated into broader governmental policies and long-term planning, including at regional and local level.

Water resilience

Large areas of the Netherlands are subject to water stress due to high demands from manufacturing and energy. These sectors are heavily dependent on water supply, in particular manufacturing and electricity cooling. The Netherlands' water-use productivity is considerable, standing at EUR 76 per m^3 of abstracted water in 2022, but showing a decreasing trend over a five-year period ([150]). The water exploitation index plus (WEI+) stood at 4% in 2022, with the worst seasonal value being 6% in Q3-2022, showing an increasing trend over the last two years, but remaining lower than five years ago. Between 2018 and 2022 water abstraction in the manufacturing sector increased by 32% and the sector accounts for the highest water consumption, at 1 563 million m^3, i.e. 51% of total consumption in 2022, putting a significant strain on the country's water resources, together with energy (40%). The challenges remain significant, particularly in regions subject to high water stress. Water abstraction pressure is relevant for some areas of the Netherlands, with 17% of surface water bodies in the Meuse River Basin District (RBD) and 18% in the Rhine RBD facing significant abstraction pressures.

Water quality in the Netherlands remains a cause for concern in the case of surface and groundwater bodies. Many Dutch water bodies generally fail to comply with the Water Framework Directive (WFD) and the Nitrates Directive. Compared to previous reports**,** the number of water bodies in good chemical status has dramatically and steadily decreased over the three previous cycles from 70% to

([146]) Ministry of Infrastructure and Water Management, *Room for the River*, Link.

([147]) Ministry of Infrastructure and Water Management, *The Sand Motor*, Link.

([148]) Kennisportaal Klimaatadaptatie, *Climate-proof cities focus area, Dutch National Water and Climate Knowledge and Innovation Programme (NKWK)*, Link.

([149]) The Dutch Climate Law focuses primarily on climate mitigation measures. However, the Delta Act establishes the Delta Commissioner, the Delta Fund, and the Delta Programme to address specific climate adaptation challenges.

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

39% and to 9%. Their ecologic status has, however, somewhat improved due to a steady reduction of surface water bodies in bad ecologic status. That said, not a single water body achieves the required good ecologic status. In 2021 100% of surface water bodies were classified as failing to achieve good ecological status and 90% as failing to achieve good chemical status, while the percentages are 4% and 13% respectively for groundwater bodies. A study by a new Dutch advisory body shows that it will be almost impossible for the Netherlands to meet all the 2027 objectives under the WFD unless efforts are stepped up ([151]). Main drivers for increased pressures on water bodies are the high population density ([152]), land-use changes, economic/agricultural activities, past pollution and transboundary pollution. Diffuse pollution from agricultural sources is a main pressure, affecting 78% of surface water bodies, followed by pressures from dams, barriers and locks (61%). For groundwater bodies, the most significant pressure comes from point source discharges (57% affected), followed by diffuse pollution from agriculture (52%).

Wastewater management and drinking water quality are not a cause for concern, though significant investments are needed to maintain this level of quality. The quality of drinking water in Netherlands does not give rise to concern since the compliance for all parameter groups in the Netherlands was at least 99.97 % in 2017, 99.96 % in 2018 and 99.97 % in 2019. Urban wastewater treatment covered 100% of the population in 2020, but increasing investment will be all the more important as the Directive was revised and strengthened in 2024 ([153]). In 2023, out of the 746 Dutch bathing waters, 539 (72.3 %) were of excellent quality, 127 (17 %) were of good quality and 31 (4.2 %) were of sufficient quality. A total of 32 (4.3 %) bathing waters were found to be of poor quality ([154]).

However, significant investments are needed to ensure high-quality water management. Total annual water investment needs are estimated at EUR 4.6 billion, covering the water industry, protection and management ([155]) (the Netherlands are exposed to high increase in riverine flood risks and coastal floods). In addition, the Netherlands have explicitly encouraged the development and deployment of smart water systems, either to address local issues, or to support a growing global business ([156]). Of the total annual needs, EUR 1.9 billion relates to the management of wastewater, a further 2.7 billion is necessary for drinking water-related investments and around 80 million for the protection and management of water (including marine). Current investments (related to water supply, sanitation and flood protection) are estimated around EUR 3.7 billion, provided by EU MFF (0.4%), RRF (0.3%), EIB (1.4%) and national sources (98%) ([157]). Of this, EUR 1.3 billion supports wastewater management (for managing certain emerging substances), 2.3 billion drinking water (water infrastructure including micropollutants, climate change and security) and around EUR 80 million the other aspects of the Water Framework Directive (water management and protection, including renew of existing infrastructure and projected coastal flood risk investment needs and some marine aspects). Thus, the Netherlands faces an annual water investment gap of EUR 935 million (0.1% of

([151]) Council for the Environment and Infrastructure, 2023, Extra maatregelen noodzakelijk voor goede waterkwaliteit, Link.

([152]) With 517 persons per m² in 2022 the population density is significantly higher than the EU average of 109.

([153]) Directive 2024/3019, of 27 November 2024. The deadline for transposition is 31 July 2027.

([154]) EEA, *European Bathing Water Quality in 2023*, briefing No 04/2024, Copenhagen, 2024, Link

([155]) European Commission, DG Environment, Environmental investment needs & gaps assessment programme, 2025 update.

([156]) OECD (2015), Water and Cities, OECD Studies on Water, OECD Publishing, Paris, Link

([157]) European Commission, DG Environment, Environmental investment needs & gaps assessment programme, 2025 update.

GDP), over the existing levels of financing, to meet environmental targets under the Water Framework and Floods Directives. The largest portion, EUR 567 million, is for wastewater management, including costs from the revised Directive, with EUR 367 million needed for drinking water investments.

Biodiversity and ecosystems

Targeted action on nature protection and restoration is needed to meet the Netherlands' nature restoration targets. The three most significant pressures and threats to habitats come from agriculture, human-induced changes to water regimes (including lowering water tables or groundwater pollution) and natural processes (e.g. vegetation succession). Today, according to the latest available information from Dutch official sources, a total of 131 Dutch Natura 2000 sites out of 162 sites (81%) are vulnerable to excessive nitrogen deposition ([158]). However, according to the latest available data, only 11.5% of the country's habitats have a good conservation status, lower than the EU average of 14.7%. For some habitat types there has been no improvement to their bad conservation status since 1994 (i.e. the entry into force of the Habitats Directive in the Netherlands). Similarly, the conservation status of species is concerning, with 26.3% reported as having a good status, lower than the EU average of 30%. The common farmland bird index also indicates a deteriorating conservation status of species, having as decreased from 63 in 2021 to 60.4 in 2022, significantly lower than the EU average of 68.2. This situation has severe implications for the Netherlands' climate resilience, as the loss of biodiversity impairs ecosystems' ability to provide services that help mitigate the effects of climate change, such as regulating water cycles, maintaining soil health and sequestering carbon.

In 2021, 27% of the Netherlands' territory was covered by protected land area, and this percentage has fallen to 23% over the last few years ([159]). This is likely due to adjustments made by the Netherlands in the nationally protected areas, where sites not specifically created for nature protection were removed. Only sites relevant to the EU biodiversity strategy target – to legally protect and effectively manage a minimum of 30% of land by 2030 – were retained. Although the percentage currently stands at 23%, there is some uncertainty regarding whether the Netherlands will meet the environmental objectives for biodiversity and ecosystem protection and restoration. On a positive note, the Netherlands plans to allocate 27.5% of its CAP budget for 2021–2027 to biodiversity investments, along with an estimated 26.5% of its RRF funds (Nature programme). This represents the highest share of CAP and RRF investments in biodiversity among all Member States for this period. However, no EU contribution from the cohesion policy funds is planned for biodiversity.

In March 2025 the Netherlands has submitted a national biodiversity strategy and action plan (NBSAP) under the Convention on Biological Diversity or national targets aligned with the Kunming-Montreal Biodiversity Framework. The previous government had developed a concept NBSAP, which built on inter alia on the national programme for rural areas or NPLG (*Nationaal Programma Landelijk Gebied*) and the associated transition fund. This programme aimed to improve nature, soil and water quality and mitigating climate change. The current government has abandoned the NPLG and transition fund and has announced it will take a different approach towards achieving the

([158])National Institute for Public Health and the Environment RIVM, 2023, *Monitor nitrogen deposition in Natura 2000 areas 2023*, Link

([159])Eurostat, last update 12 March 2025, *Protected areas*, Link

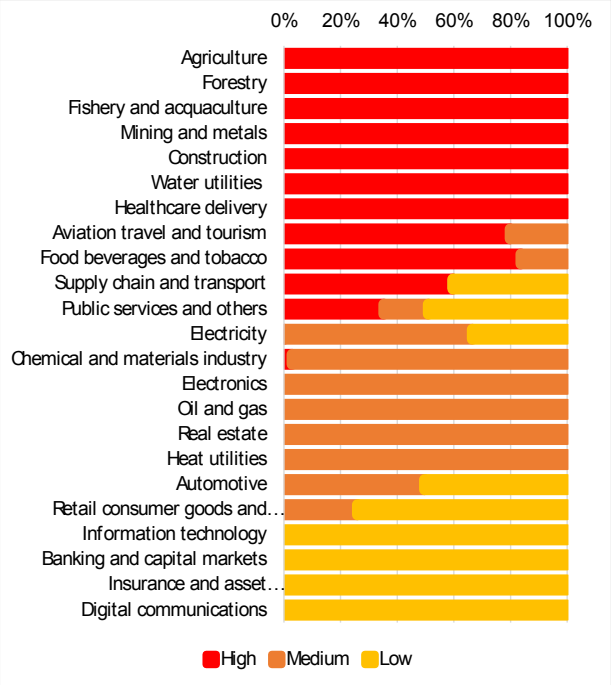
environmental targets. In November 2024 the approach Space for Agriculture and Nature was announced replacing some aspects of the previous NPLG. As part of its new approach, the government announced a stronger emphasis on generic measures as opposed to area-specific ones. The government has recently updated the concept NBSAP based on this new approach. The cut of the transition funds means that the current budgetary resources reserved for measures related to farming and nature is substantially smaller than it. The analysis of the Attorney General (Landsadvocaat) of the intentions expressed in the letter of 25 April underpins the need for the authorities to further improve their measures ([160]). Among other factors, habitat fragmentation, intensive agriculture and atmospheric nitrogen deposition affect the Natura 2000 network, which is smaller than the EU average.

Nature degradation creates significant risks to the Netherlands' economy and competitiveness, as it is one of the Member States with the highest dependency on ecosystem services. The Netherlands is the Member State with the highest supply chain dependency on ecosystem services, with 26% of its gross value added having a high degree of dependency compared to the EU-27 average of 22%. The Dutch economy also shows a high direct dependency on ecosystem services, with 44% of gross value added highly reliant. Several sectors, such as agriculture, forestry, fisheries, construction, water utilities and healthcare (see graph A9.1), are particularly dependent on ecosystem services, with 100% of these sectors' gross value added directly dependent on ecosystem services. This means that failure to maintain the capacity of ecosystems to deliver services could entail significant costs or even stop production in these sectors. Protecting and restoring key ecosystems would ensure that the long-term competitiveness of these economic sectors is preserved. A characteristic example is the building sector, where permits or constructions were found to be illegal in relation to nitrogen, following the rulings of the Council of State of 18 December 2024 and of 22 January 2025 ([161]). As a result, securing permits for construction projects, including those necessary for the climate transition, will remain challenging unless remediation measures are taken.

([160]) Full text advice of State Attorney for nitrogen plans, Link.

([161])NOS, 2025, *Grote zorgen binnen kabinet over gevolgen stikstofuitspraak*, Link.

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



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

Sustainable agriculture and land use

The Netherlands' carbon removals are in line with the level of ambition needed to meet its 2030 target for land use, land use change and forestry (LULUCF). The Netherlands' LULUCF sector has had relatively high emissions compared to its total land area and has not had negative emissions since 1990. The main source of these emissions is agricultural land. Since 2018, there has been a modest reduction in LULUCF emissions. To meet its 2030 LULUCF target, additional carbon removals of -0.4 million tonnes of CO_2 equivalent (CO_2eq) are needed ([162]). Recent projections show a surplus compared to the target of -1.2 million tonnes of CO_2eq for 2030 ([163]). The Netherlands is therefore on track to meet its 2030 target.

Dutch agriculture is still a major source of greenhouse gas emissions and continues to have a significant impact on air, water and soils. In 2022, agriculture was responsible for a total of 18 million tonnes of CO_2eq, accounting for around 11% of the country's total emissions. This includes 13.8 million tonnes of CO_2eq from livestock. The Netherlands is not on track in terms of reducing agricultural sector emissions, with projected GHG emissions of 22.0 Mt CO_2eq compared to the national sectoral 2030 emission reduction target of 17.9 Mt CO_2eq, and additional efforts are therefore needed to reduce emissions in the sector. The Netherlands' utilised agricultural area (UAA) remained around 1.8 million hectares between 2013 and 2023. The Netherlands' soils were significantly more impacted by nutrient losses, with the highest rate in the EU ([164]), which is a significant environmental concern and poses a threat to human health. The greatest contributor to the Netherlands' unhealthy soils is excessive nutrient concentrations, which impacts roughly 88 % of the total agricultural area, with 69 % of the national territory containing phosphorus concentrations above 50 mg/kg and 63 % containing nitrogen concentrations above 50 kg/ha. 16% of the national territory also experiences unsustainable soil erosion by water, wind, tillage and harvest, representing 63 % of the Netherlands' cropland area. This is

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

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

([164]) European Commission, 2023, Impact assessment report annexes – accompanying the proposal on Soil Monitoring and Resilience, Link

.

reflected in the country's nitrogen balance of more than 160 kg of nitrogen per hectare of UAA, as compared to the EU average of 40.2 kg/ha. Furthermore, according to data from the Nitrates Directive, 14% of groundwater monitoring stations in the Netherlands recorded average nitrate concentrations above 50 mg/l between 2016 and 2019, exceeding the healthy threshold for human consumption. Despite the decreasing trend, the livestock density index was 3.45 in 2020, and the highest in the EU (EU average of 0.75). Ammonia emissions also decreased by 10% between 2018 and 2022. Between 2017 and 2022, pesticides at levels exceeding the thresholds were detected in 49% of surface water bodies, much higher than the EU average (29%).

The Netherlands is transitioning to a sustainable food system by implementing policies and allocating funds to reduce the environmental impact of agriculture. In 2022, 7.2% of its agricultural land had landscape features such as woods and non-productive grasslands, above the EU average of 5.6%. Organic farming, which reduced the use of synthetic fertilisers and pesticides, made up 4.4% of Netherlands' agricultural land, a 70% increase since 2012. The Dutch authorities are far behind of the objective of 25% of the EU's farmland being under organic farming by 2030 and should commit to stronger and binding efforts to meet that target. The Netherlands' national strategic plan for the common agricultural policy (CAP) 2023-2027 allocates EUR 514 million (47% from the European Agricultural Fund for Rural Development) to environmental and climate objectives and EUR 964 million (32% from the European Agricultural Guarantee Fund for direct payments) to eco-schemes. The Netherlands makes a significant contribution to the CAP strategic plan with additional national financing of EUR 736 million, most of which is earmarked for environmental and climate measures. Under this plan, the Dutch government implements measures to protect biodiversity, increase the share of organic farming, promote crop rotation and diversification and the use of soil covers, reduce nutrient losses, and encourage other sustainable agriculture practices. These measures are crucial to the long-term competitiveness of the Netherlands' agri-food system and its bioeconomy, which play a significant economic role. The bioeconomy, encompassing the production and processing of biological products, contributed EUR 34 billion of added value to the country's gross domestic product in 2021. Agriculture accounted for EUR 12.7 billion, while the food industry contributed EUR 13.2 billion.

Table A9.1: **Key indicators tracking progress on climate adaptation, resilience and environment**

Climate adaptation and preparedness:	Netherlands						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Drought impact on ecosystems *[area impacted by drought as % of total]*	26.53	5.15	16.91	0	17.88	0	6.77	2.76
Forest-fire burnt area (1) *[ha, annual average 2006-2023]*	103	103	103	103	103	103		
Economic losses from extreme events *[EUR million at constant 2022 prices]*	-	47	542	757	785	113	24 142	62 981
Insurance protection gap (2) *[composite score between 0 and 4]*	-	-	-	-	0.88	1.00		
Heat-related mortality (3) *[number of deaths per 100 000 inhabitants in 2013-2022]*	18	18	18	18	18			
Sub-national climate adaptation action *[% of population covered by the EU Covenant of Mayors for Climate & Energy]*	28	29	29	29	29	29	41	44

Water resilience:	Netherlands						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Water Exploitation Index Plus, WEI+ (4) *[total water consumption as % of renewable freshwater resources]*	2.7	2.9	3.0	2.3	4.0	-	4.5	4.5
Water consumption *[million m^3]*	2 197	2 339	2 404	2 233	3 068	-		
Ecological/quantitative status of water bodies (5) *[% of water bodies failing to achieve good status]*								
Surface water bodies	-	-	-	100%	-	-	-	59%
Groundwater bodies	-	-	-	4%	-	-	-	93%

Biodiversity and ecosystems:	Netherlands						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Conservation status of habitats (6) *[% of habitats having a good conservation status]*	11.5	-	-	-	-	-	14.7	-
Common farmland bird index *2000=100*	58.5	61.1	-	63.0	60.4	-	72.2	74.4
Protected areas *[% of protected land areas]*	-	-	-	27	23	-	-	26

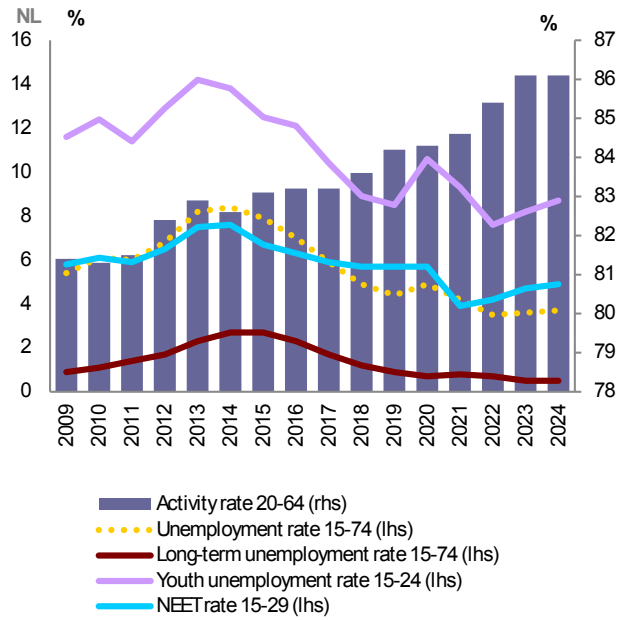
Sustainable agriculture and land use:	Netherlands						EU-27	
	2018	2019	2020	2021	2022	2023	2018	2021
Bioeconomy's added value (7) *[EUR million]*	30 372	32 438	32 613	34 079			634 378	716 124
Landscape features *[% of agricultural land covered with landscape features]*	-	-	-	-	7	-		
Food waste *[kg per capita]*	-	-	161	148	129	-		
Area under organic farming *[% of total UAA]*	3.5	3.8	4.0	4.2	4.4		7.99	-
Nitrogen balance *[kg of nitrogen per ha of UAA]*	196.0	165.8	-	-	-	-		
Nitrates in groundwater (8) *[mgNO_3/l]*	-	-	-	-	-	-		
Net greenhouse gas removals from LULUCF (9) *[Kt CO_2-eq]*	5 029	4 694	4 326	4 387	5 060	-	- 256 077	- 240 984

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

The Dutch labour market continues to perform well overall, but still faces persistent structural challenges. These include labour and skills shortages, labour market segmentation and weaker employment outcomes of certain groups, which may have a negative impact on productivity growth, competitiveness and the achievement of the green and digital transitions. Addressing these labour market challenges, while enhancing job quality, will be key to fostering productivity gains, sustainable and inclusive growth, and competitiveness.

The Dutch labour market continues to perform well overall, but structural challenges persist. Despite a marked economic slowdown in 2023, the labour market remained tight and resilient. The employment rate remained stable at 83.5% in 2024, among the highest in the EU and well above the EU average (75.8%) and the 2030 employment target of 82.5%. Unemployment remains low at 3.7% despite a slight increase in 2024. The proportion of young people not in employment, education or training (NEETs) remains among the lowest in the EU, making the Netherlands one of the best performers, despite a further increase in 2024 (by 0.2 percentage points (pps) to 4.9%). The Netherlands has one of the highest labour participation rates in the EU. This is driven in part by the relatively high participation of women, whose number of hours worked has recently increased. At the same time, part-time employment, in particular for women, remains widespread although the proportion of those reporting doing so involuntarily is among the lowest in the EU. Labour productivity growth has been stagnating and is structurally low (0.4% per year in 2014-2024). This is driven by factors such as strong employment growth in low-productivity sectors, and sectors with a high prevalence of flexible work schemes.

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



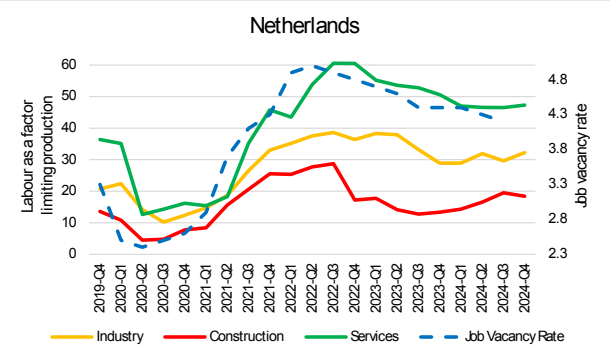
(1) Activity rate and Employment rate (% of population), total, ages 20-64
Unemployment rate and long-term unemployment rate (% of labour force), total, ages 15-74
Youth unemployment rate (% of labour force), total, ages 15-24
NEET: Not in employment, education or training (% of population), total, ages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

There are significant shortages of workers across sectors. Before the COVID-19 pandemic, labour shortages were on the rise, and during the recovery period such shortages became more widespread across sectors. While the macroeconomic skills mismatch ([165]) in the Netherlands is very low, shortages in labour and skills pose a challenge across various sectors. Despite the recent slight decrease, the job-vacancy rate remains one of the highest in EU (4.3% in Q4-2024, well above the EU average of 2.3% in the same quarter) and well above its pre-pandemic level (3.4% in Q4-

([165])The macroeconomic skills mismatch indicator measures the dispersion of employment rates across skill groups (proxied by qualification levels, with ISCED 0-2 low; 3-4 medium and 5-7 high).

2019). Shortages are most acute where the job-vacancy rate is higher than 4.5%. According to CEDEFOP-EURES data ([166]) the most sought-after occupations in the country were office professionals, metal and machinery workers, accounting clerks, office associate professionals, researchers and engineers, electro engineering workers, ICT professionals, personal service workers and construction workers ([167]). In terms of employers' perceptions, in October 2024 the proportion of employers expecting labour shortages to limit their production was fairly high in the service sector (47.3%), among the highest in the EU and well above the average of 26.8%. This proportion was also higher than the EU average in industry (32.2% vs 18%) ([168]).

Graph A10.2:**Labour shortages in the Netherlands**



(1) Job vacancy statistics by NACE Rev. 2 activity - quarterly data

Source:

Not only do labour and skills shortages hinder business activity, innovation and the achievement of the green and digital transitions, they also pose a considerable risk to labour productivity, sustainable and inclusive growth and competitiveness. The post-pandemic economic growth has likely exacerbated the tightness in the Dutch labour market. Structural factors, such as limited labour productivity growth and decreasing labour supply caused by demographic change, remain an important driver behind severe labour shortages. Additionally, expected trends in workforce growth and potential measures to reduce migration may exacerbate labour shortages in some sectors. To address this challenge, the Dutch government has introduced targeted measures for key sectors, such as health and education, and has presented an outline for a broad labour-market agenda to be further developed with stakeholders in 2025. In terms of encouraging people to work more hours, and of increasing the labour supply useful measures include promote better work-life balance for working parents and those with family and care responsibilities and increase quality of work. To ensure sufficient numbers of people employed in key sectors facing shortages and increase productivity and competitiveness, the following measures may prove effective: i) more targeted and tailored active labour market policies, ii) strengthening upskilling and reskilling opportunities for all, iii) attracting talent and fostering legal migration to help reduce labour and skills shortages, iv) encouraging mobility between sectors and v) increasing investment in innovation.

Despite a high participation rate, certain groups such as people with low skills, those from a migrant background or persons with disabilities, encounter difficulties in finding quality jobs. People on flexible and temporary contracts often work in low-skilled and low-paid jobs in low-productivity sectors. Their income levels are significantly lower and poverty significantly is higher than for workers on permanent contracts. Part-time employment is widespread, in particular for women (60.5% compared to 27.9% in the EU in 2024). Many of them report that family and care responsibilities are the primary reason for working part-time. Therefore, although the gender employment gap is below the EU average (7.6 pps vs 10.0 pps in the EU in 2024), this has led to one of the widest gender gaps in part-time employment in the EU (41.9 pps against an EU average of 20.2 pps in 2024) and a substantial gender pension gap (36.3% vs

([166]) EURES - Countries and occupations | CEDEFOP

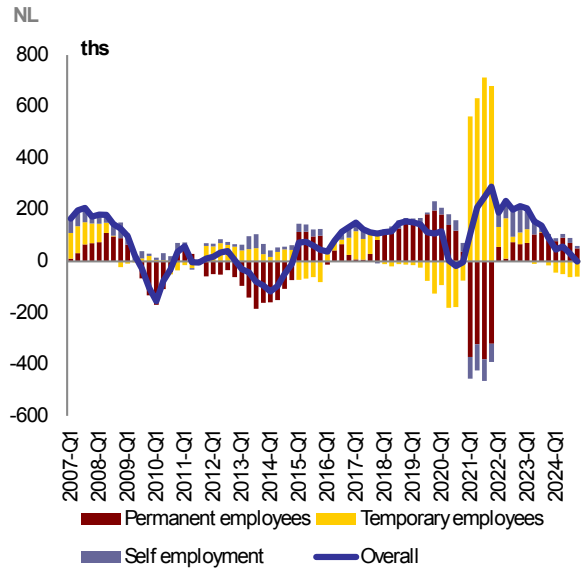
([167]) From January to September 2024.

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

24.7% in the EU in 2024). While the employment rate of people born outside the EU is above the EU average (68.6% vs 65.3% in 2024), the gap between them and people born in the country is more than twice the EU average. Native-born people with a migrant background are often in an unfavourable labour market situation partly due to lower educational outcomes but also the lack of recognition of qualifications and discrimination. The disability employment gap narrowed further in 2024 and is now below the EU average (20.9 pps vs 24.0 pps). The Netherlands has not set a target for employment of persons with disabilities. Tapping into the labour market potential of these groups can help to alleviate shortages (which may otherwise hold back investment projects, including those relating to the green and digital transitions) and increase such people's ability to enter work.

The highly segmented labour market poses another major structural challenge. The use of flexible employment - including self-employed without employees, - remains very high and represents a substantial proportion of the Dutch labour market. The percentage of flexible and temporary contracts remains far above the EU average (22.6% vs 11.6% in 2024), as does the number of self-employed without employees (12.8% vs 9.0% of total employment in 2024). The large proportion of flexible employment and the structural risk of labour market segmentation holds back investment and productivity, and has a particularly detrimental impact on those on the margins of the labour market. It is also detrimental to i) investment in skills by employers, ii) participation in training, lifelong learning and skills development, iii) labour productivity, iv) sustainable and inclusive growth and v) competitiveness. In addition, it poses risks to the achievement of the goals set for the green, energy and digital transitions. Furthermore, people in flexible employment often are more vulnerable and may face an increased risk of (in-work) poverty and/or social exclusion. To reduce incentives for the use of self-employed (including those without employees) and to create a level playing field with employees, the Netherlands has included measures in their recovery and resilience plan. This includes major reforms, such as i) a gradual reduction in the tax deduction for self-employed people, ii) the introduction of a mandatory disability insurance for the self-employed, iii) measures to tackle bogus self-employment (including clarification of what an employment relationship is and the establishment of a (civil) legal presumption of employment) and iv) the abolishment of the tax administration's enforcement moratorium (as of 2025). The government is also preparing a (draft) bill aimed at providing more job security for those working under flexible employment contracts (by abolishing zero-hours contracts, replacing on-call contracts with a new type of bandwidth contract providing more income security for workers). This bill is also aimed at improving the job security of temporary-agency workers (shortening the most precarious stages of temporary agency work and preventing revolving doors from temporary contracts).

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



(1) Employment (thousand), total, ages 20-64, year-on-year change based on non-seasonally adjusted data
Source: Eurostat, LFS [lfsq_egaps, lfsq_etgaed]

Wage growth has been robust against a background of persistently high labour shortages. Nominal wage growth is projected to fall to 4.7% in 2025, from 6.3% in 2023 and 2024, while remaining above the 3.6% recorded in 2022 ([169]). In turn, after a sizeable 8% decrease in 2022, there were increases in real wage growth in 2023 and 2024 (by 2.6% and 2.9% respectively), with a slight fall back to 2.3% in 2025. The rebound in real wages can be attributed to both sustained nominal wage growth amid high labour shortages coupled with decreasing inflation (as inflation rates fell from 11.6% in 2022 to 3.2% in 2024). At the same time, the statutory minimum wage increased even more significantly, by around 27% between January 2022 and January 2025, an approximate 10% rise in real terms. The growth rate of unit labour costs (ULCs) ([170]) stood at 7.9% in 2023, above the euro-area average of 6.4%, with forecasts indicating a reduction to 6.3% in 2024 and 3.5% in 2025.

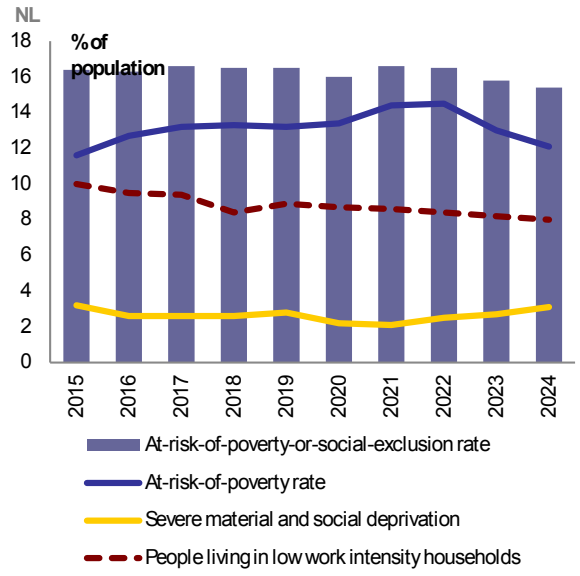
The Dutch economy is adapting to the green and digital transitions against a backdrop of labour shortages in emerging sectors. In 2024, employment in the country's energy-intensive industries accounted for 1.3% of total employment, while there has been a substantial increase in jobs in the green economy. Between 2016 and 2022, employment in the environmental goods and services sector grew by 45.7%, reaching 2.2% of total employment (EU: 3.3%). The job-vacancy rate in construction, a key sector for the green transition, is significantly above the EU average (6.8% vs 3.1% in 2024). The greenhouse gas emission intensity of the Dutch workforce has improved, decreasing from 20.8 tonnes per worker in 2015 to 13.3 in 2023 (EU: 12.3), which represents progress in the green transition. The ICT sector is also well developed, with ICT specialists accounting for 7.0% of total employment (vs 5.0% in the EU in 2024). However, the reported shortages of technically skilled staff are a major factor limiting progress in the digital transition. In this context, appropriate skills are vital for successful labour market transitions, particularly in sectors that are transforming (see Annex 12). To promote a fair green transition, a wide range of policy instruments have been adopted. For instance, measures are planned, mostly under the Just Transition Fund, to upskill potential employees in green jobs and sectors, and to reduce potential risks for the most vulnerable, which may arise during the transition process. The Netherlands is also making efforts to seize the opportunity provided by the green transition to increase the labour market participation of underrepresented or vulnerable groups. In 2021 only 30% of all green jobs were held by women**.** The country has introduced systematic and in-depth analytical and assessment tools for monitoring the socioeconomic effects of the green transition. The action plan for green and digital jobs addresses various labour market challenges – particularly shortages in relevant sectors. Gearing these measures to the people most directly affected by the transition would be welcome.

([169]) For nominal wage growth, compensation per employee is considered. This includes: i) Wages and salaries payable in cash or in kind; and ii) Social contributions payable by employers. For real gross wages, the deflator used is HICP. Real wages using this deflator then can differ from real wages shown in AMECO (that uses private consumption as deflator). Data for 2024 and 2025 are based on the European Commission Autumn 2024 economic forecast.

([170]) Unit labour costs are defined as the ratio of total labour compensation per employee to output per persons employed (labour productivity).

The Netherlands continues to perform well overall in terms of social outcomes. However, the country faces some challenges related to rising in-work poverty and the housing cost overburden, especially for lower-income households. Addressing these will be key in making further progress towards the national 2030 poverty reduction target, while also contributing to inclusive growth and competitiveness.

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



(1) AROPE: At-risk-of-poverty or social exclusion rate (% of total population). People who are at-risk-of poverty (AROP) and/or suffering from severe material and social deprivation (SMSD) and/or living in household with very low work intensity (LWI).
Source: Eurostat, EU-SILC [ilc_peps01n, ilc_li02, ilc_mdsd11, ilc_lvhl11n]

While poverty levels remain relatively low, some population groups experience higher risks. The at-risk-of-poverty or social exclusion (AROPE) rate dropped to 15.4% in 2024, which is the lowest level recorded since 2015 (EU: 21.0%). Nevertheless, certain groups face a much higher at-risk-of-poverty, such as people with a migrant background (32.5%) and persons with disabilities (22%) who continue to face challenges linked to overrepresentation in precarious, flexible, contracts, lack of recognition of qualifications, reduced job opportunities, in-work poverty and discrimination. The at-risk-of-poverty or social exclusion gap between non-EU-born and people born in the Netherlands is one of the highest in the EU (23 pps in 2023 vs EU: 20.8 pps). While the share of children at risk of poverty or social exclusion is below the EU average (15.8% vs 24.2% in 2024), the number increased recently in contrast to the stable trend in the EU. Overall, the Netherlands is making progress towards its 2030 target of reducing the number of people at risk of poverty or social exclusion by at least 163 000 people compared to 2019. After an initial increase in absolute numbers in the aftermath of the COVID-19 pandemic, the number of people at-risk-of-poverty or social exclusion went down by 86 000 in 2024 compared to 2019. However, taking into account the persistent gaps between groups, there appears to be further scope for policy action. While the Netherlands did not set a complementary target on child poverty reduction by 2030 under the framework of the Pillar of Social Rights, the 2022 action plan for implementation of the European Child Guarantee (ECG) sets the objective of halving the number of children growing up in poverty (based on a national definition) within four years. The 2024 ECG implementation report shows progress made in some areas, e.g. expanding accessibility of childcare, the Early Childhood Development Programme, or the guidance on dealing with poverty. These measures are key to close access gaps which remain. For example, the Netherlands has among the largest early childhood education and care participation gaps between children under three in poverty (31.1%) and those not in poverty (71.6%) in 2023.

House prices increased significantly over the last decade and household indebtedness is high. House prices have increased by more than 80% since 2015. They decreased marginally in 2023 (-1.9%) but are estimated to be overvalued following years of strong increases (+13.3% in 2022 and +14.5% in 2021). In recent years, the adjustment to the higher interest rate environment occurred

more significantly through quantities than through prices, with both house transactions and building permits falling in 2022 and 2023. House prices have increased further in 2024 (+10.3% year-on-year in Q3-2024). Looking ahead, increases in wages and a continued lack in housing supply could add upward pressures on house prices. Furthermore, household indebtedness is high with debt representing 95% of GDP and 144% of households' gross disposable income in 2023. In terms of financial stability, in February 2024, the European Systemic Risk Board concluded that the residential real estate market in the Netherlands was subject to high risks and the macroprudential policy mix was appropriate but only partially sufficient to mitigate the situation.

The overall housing affordability has deteriorated due to booming house prices and sluggish dwelling provision, reflecting a strong mismatch between supply and demand. Over the past decade, the pace of house prices has exceeded that of household incomes and the standardised house price-to-income ratio has increased by 27% since 2015 despite a marked easing in 2023. This ratio stands around 27% above its long-term average. Since 2015, the ratio of dwellings per capita has been relatively stable, showing a modest increase of 2%. However, it continues to lag approximately 10% behind the euro area average, contributing to an estimated housing shortage of over 400,000 dwellings in 2024. At the same time, although the ratio of house completions per capita has surged by nearly 50% since 2015, placing it above the EU average, the actual number of new dwellings constructed has declined, decreasing by 5% in 2024 after a 6% drop in 2023. Meanwhile, despite a rebound in 2024, residential building permits have been decreasing over the past years, which could imply more limited supply of new housing looking ahead. Taking into account the cost of mortgages, the borrowing capacity of households worsened over the past decade as an average household needs a higher share of its annual income for mortgage payments. The ratio of new rents to incomes increased over the last decade.

The housing cost overburden remains a persistent challenge, especially for lower-income households. The share of population living in households where total housing costs represented more than 40% of their total disposable household income increased from 8.3% in 2020 to 10% in 2022 (EU: 9.1%). It then decreased slightly to 9.3% in 2023 and further to 6.9% in 2024 (EU: 8.2%). Inflation, rising energy prices and the scarcity of affordable and suitable housing have significantly impacted household disposable incomes. In the Netherlands, 20.5% of households disposable income is spent on housing (EU: 19.2%). This issue is particularly pronounced for households with an income below 60% of the median equivalised income, with 27.9% of people experiencing poverty risks overburdened by housing costs (EU: 31.1%). Tenants are disproportionately affected: 43.9% of tenants renting at the market price and 14.3% of tenants renting at reduced price (for instance social housing) face housing cost overburden, while only 1.0% of homeowners with a mortgage experience this overburden. The Dutch government is taking measures to simplify and increase housing benefits. Almost all current recipients of housing benefits (around 1.5 million people ([171])), are expected to see an increase in their benefit as part of these simplifications, which include a general reduction in the personal contribution, harmonisation of the number of household types within the housing benefits and an introduction of a linear income-dependent reduction. In addition, the simplification is expected to increase the number of beneficiaries by 170 000 people in 2026 compared to 2024 ([172]). In 2023, 7% of the surveyed population, reported experiencing

([171]) Ministerie van Financien. Aantallen en bedragen | Over ons werk | Over Dienst Toeslagen

([172]) Ministerie van Binnenlandse Zaken. Explanatory memorandum

housing difficulties in the past, a share which almost doubled for people at-risk-of-poverty or social exclusion (13%) ([173]). According to latest available administrative data (2023), 30 600 people are facing homelessness in the Netherlands, including people living on the streets, emergency accommodation, unconventional dwellings and with family, friends or acquaintances ([174]). The country has put in place a National Action Plan on Homelessness: Housing First (2023-2030) aiming to significantly and structurally reduce homelessness in the Netherlands, in line with the ambition of the Lisbon Declaration to end homelessness by 2030 ([175]), which emphasises prevention and housing.

Energy poverty in the Netherlands is relatively low. In 2024, 7.1% of the population were unable to keep their homes sufficiently warm (EU: 9.2%). However, this represents a significant increase of 4.7 pps since 2021 and for people at-risk-of-poverty or social exclusion, the share is 19.5%. Only 1.9% of individuals faced arrears on utility bills (EU: 6.9%). To address energy poverty, the Netherlands is implementing various energy efficiency measures, such as home insulation referred to as 'energyfixers', and established a price cap during the winter months. In recent years, the government supported the most vulnerable households as low-income households could apply for an energy allowance. However, the country would benefit from more targeted structural measures to address the root causes of energy poverty.

The Netherlands has a relatively low level of income inequality. The income quantile share ratio (S80/S20 ratio) fell to 3.72 in 2024 (EU: 4.66). Despite a slight increase from the previous year, growth in real gross disposable household income per capita remains slightly below the EU average, standing at 109.36 (EU: 111.05). However, the Dutch government aims to make work more rewarding by reducing the income tax rate. Starting in 2025, income tax rates will be adjusted, with a reduction in the first tranche. In addition, instead the current system with two tranches of different tax rates on income, will be replaced by a system of three tranches with three income tax rates.

Transport poverty and environmental inequalities do not present major obstacles to the fair green transition. The share of people who could not afford a car was 5.2% in 2024 (EU: 5.6%) This share was higher for people experiencing poverty risks, yet slightly below the EU average (15.2% vs 15.9% in 2024). This suggests that, while the general population does not face challenges in affording a car, transport poverty risks become more prominent among vulnerable income groups. Particularly those at risk of poverty face difficulties as the cost of fuel for private transport is very high. Recent analysis shows that between 113 000 and 270 000 households in the Netherlands have low income and high fuel costs. In this group, between 73 000 and 175 000 households are extra vulnerable because they have low financial assets and limited access to nearby public transport ([176]). On environmental inequalities, the consumption footprint for 20% of the population with the highest income was 1.5 times higher than the footprint of the poorest 20% in 2022 (EU:1.9).

([173]) EU SILC on housing difficulties https://doi.org/10.2908/ILC_LVHD01.

([174]) Statistics Netherlands (CBS) (2024).

([175]) Dutch National Action Plan on Homelessnes: Housing First (2023-2030)

([176]) TNO (2024). Groep huishoudens kwetsbaar in transitie naar duurzame mobiliteit

The Netherlands' long-term productivity and competitiveness is threatened by declining basic skills (especially among disadvantaged students), persistent teacher shortages, and shortages of skills needed for the green and digital transitions. The share of underachievers among 15-year-olds increased in all three competence areas tested in the OECD Programme for International Student Assessment (PISA). Several measures have been launched to address declining basic skills, but teacher shortages and the early streaming of pupils into many different tracks can limit their effect. The low share of STEM and ICT graduates further exacerbates skills shortages. While the Netherlands has one of the highest participation rates in adult learning, certain groups in an unfavourable employment or vulnerable social position currently participate less in lifelong learning.

Participation in early childhood education and care (ECEC) from age three is higher than the EU average, but staff shortages may hamper targeted support for disadvantaged children. 93.2% of all children in the Netherlands are in ECEC, below the EU average (94.6%) and the EU level target for 2030 (96%). Children at risk of poverty or social exclusion are less likely to participate in ECEC than those who are not at risk (in 2023, the gaps amounted to 35.2 percentage points (pps) for the 0-3 age group). 30% of the facilities offering early childhood education for disadvantaged children aged 2.5-4 ([177]) face staff shortages, corresponding on average to 25% of their total staff ([178]). At national level, staff shortages are estimated to further increase to 7 700 people by 2031, five times higher than the current level. To address current and future shortages, the Minister of Social Affairs announced several measures, including introducing a new type of position for unqualified people in combination with career development, and providing incentives for qualified employees to work more hours ([179]).

Students' basic skills declined sharply over the past decade but the shares of top performers in mathematics and science are among the highest in the EU. In 2012, the share of underachieving students was below the EU 2030 target (15%) and well below the EU average in all three domains. However, by 2022, it had almost doubled in mathematics and in science and it was 2.5 times higher in reading ([180]). The underachievement rate is below the EU average only in mathematics, also following an increase in the EU average ([181]). Almost half of foreign-born students underachieve in mathematics (48.5%). For native-born students with foreign-born parents, the underachievement rate is considerably lower (37.9%). Over a 10-year period, average performance in reading and mathematics declined more than on average in the EU. The decline varied substantially between different streams in secondary education, with students in the lowest streams showing the greatest decline in test scores ([182]). Even if the share of top performers has decreased significantly, the Netherlands still shows the highest top performance rate in mathematics in the EU ([183]). In terms of digital skills, most Dutch students are low achievers and students show the largest differences in

([177]) Early childhood education (*Voor en vroegschoolse educatie*) aims to help toddlers who may risk a developmental delay so that they can have a good start in primary school.

([178]) Bakker, A.F., Das, L., Lange, A. De, Leseman, P. & Varwijk, J.: Personeelstekort bij voorschoolse educatie

([179]) Minister van Sociale Zaken en Werkgelegenheid: Kamerbrief voortgang aanpak personeelstekort kinderopvang

([180]) OECD (2023a), PISA 2022 Results (Volume I): The State of Learning and Equity in Education.

([181]) In PISA 2022, the underachievement rates were 34.6% in reading (EU: 26.2%); 27.4% in mathematics (EU: 29.5%) and 27.3% in science (EU: 24.2%).

([182]) Meelissen, M., Maassen, N., Gubbels, J., Langen, A. Van, Valk, J., Dood, C., Derks, I., Zandt, In't, M. & Wolbers, M. Resultaten PISA-2022 in vogelvlucht

([183]) In PISA 2022, the top performance rates were 15.4% (EU: 7.9%) in mathematics; 10.5% (EU: 6.9%) in science and 7.0% (EU: 6.5%) in reading.

the EU according to the level of their parents' education ([184]).

Underachievement increased significantly among disadvantaged students. In 2018, only 26.1% of students from the bottom quarter of the socio-economic index used in the PISA study lacked basic competencies in mathematics compared with 5.3% of advantaged students. These rates had increased to 42% and 9.9%, respectively, by 2022. Educational inequalities have negative implications later in life, with lower participation of disadvantaged young people in higher education and of adults with low qualifications in lifelong learning. In response to declining basic skills, in 2022 the Dutch government launched the 'Master plan for basic skills' to promote Dutch reading and writing skills, mathematics, citizenship education and digital literacy. The learning goals in the curriculum are also being streamlined, with a focus on basic skills development. At the same time, a number of measures addressing disadvantaged pupils were abolished or had their financing reduced in the 2025 budget cuts ([185]). In 2021, the Education Council recommended abolishing the end-of-primary test and postponing the time of streaming until after the first three years of secondary school to make education more accessible.

Teacher shortages are considerable and impact education outcomes. In 2024, 8.1% of teacher posts and 9.8% of school-head posts in primary education were not filled ([186]). Shortages differ considerably by the share of disadvantaged pupils in the school and between regions. The lack of qualified teachers can impact students' learning outcomes and hinder access to quality education for all ([187]). The largest shortages are faced by primary schools in the five biggest cities (15.8% compared with 6.6% outside these cities) and primary schools for students with special needs (12.1% compared with 9.4% in regular schools) ([188]). In secondary education, the shortage is somewhat lower, at 5.1% on average. The 2022 teacher strategy proposed a number of measures to improve the attractiveness of the profession. In the Education Agreement of April 2022, the government committed to a yearly investment of EUR 1.5 billion in the salaries of teachers and other teaching staff.

Participation in vocational education and training (VET) remains significantly higher than in other Member States. The share of students at medium-level education attending programmes with a vocational orientation was significantly higher than the EU average in 2023 (69.6% vs 52.4%). The exposure of VET graduates to work-based learning was well above the EU average (94.3% vs 65.3% in 2024). Recent VET graduates also have a high employment rate (90.5% vs the EU average of 80.0%) This indicates that programmes appear to be effective in equipping people with the knowledge, skills and competencies required for specific occupations and the labour market in general. The updated national implementation plan focuses on: (i) promoting equal opportunities in VET and making it more inclusive; (ii) strengthening links between VET and the labour market; (iii) ensuring a high-quality, future-ready VET through research and innovation; and (iv) improving flexibility and promoting a lifelong learning culture in VET. Specific measures targeting VET students focus

([184]) International Computer and Information Literacy Study (ICILS) in Europe – 2023. .

([185]) Measures include the funding for establishing bridge classes in secondary education; bonuses for teachers in big cities and programmes to enhance transitions from lower tracks of vocational education training to higher tracks. See Ministerie van Onderwijs, Cultuur en Wetenschap: OCW-begroting 2025: basis op orde, kwaliteit omhoog

([186]) Ministerie van Onderwijs, Cultuur en Wetenschap:Trendrapportage Arbeidsmarkt Leraren po, vo en mbo 2024

([187]) European Commission / EACEA / Eurydice: Structural indicators for monitoring education and training systems in Europe – 2023: The teaching profession

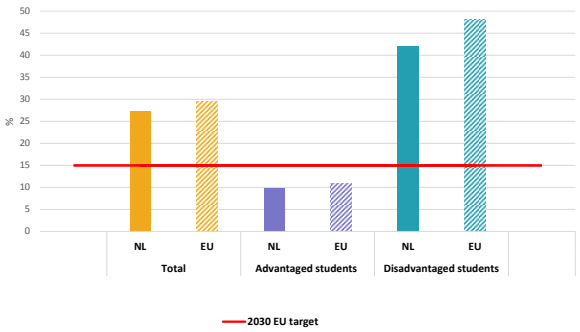
([188]) Centerdata: De toekomstige arbeidsmarkt voor onderwijspersoneel. Po, vo en mbo. 2023-2033

on numeracy, Dutch literacy, and citizenship competencies, and are offered as mandatory courses. Additional measures will help adapt VET to the current and future dynamics of the labour market. The Netherlands is adapting its VET programmes and apprenticeships to meet the demands of the green transition. There are many climate, energy and housing-related secondary vocational education certificates accessible through the school-based track or through apprenticeships (European Qualifications Framework levels 2, 3, 4). There are also apprenticeship courses on installing charging stations and solar panels and on reducing the use of gas.

The tertiary attainment rate is among the highest in the EU but the share of graduates in STEM is low, contributing to skills shortages. Of the population aged 25-34, 55.1% holds a tertiary degree (EU average: 44.2%). Tertiary attainment is also high among the non-EU-born population (47.8%, EU average: 38.4%). However, in 2022 the share of STEM graduates was low (20.1% of all tertiary graduates, EU average: 26.6%). The share of tertiary students in STEM subjects was 17.4% (EU average: 27.1%). From these, only 5% were female (EU average: 8.6%). According to national data, girls are even more underrepresented in technical VET studies (F: 9%; M: 46%) ([189]). The share of students enrolled in ICT subjects (4.1%) was also lower than the EU average (5.2%).

There is scope to improve green skills through school, VET and higher education. Less than a fifth of Dutch schools offered all or nearly all their 8th graders opportunities to take part in activities related to environmental sustainability (EU-17 average: 48%) ([190]). Dutch students scored around the average level for knowledge of sustainable development among the 17 EU countries surveyed.

Graph A12.1:**Underachievement rate in mathematics by students' socio-economic background, PISA 2022**



Source: OECD (2023).

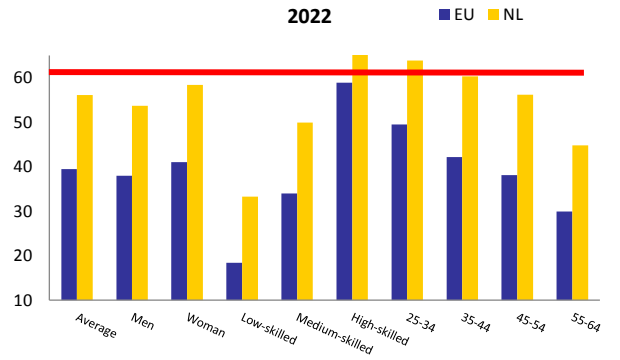
In light of persistent shortages, skills development is essential for enhancing competitiveness and promoting resilience and fairness. Nearly 7 in 10 small and medium enterprises report difficulties in finding workers with the right skillset ([191]). The Netherlands has a long-held tradition of conducting systematic skills anticipation exercises. Furthermore, sectoral development pathways are being developed to stimulate the inflow of qualified workers into shortage sectors and occupations (e.g. care and technology fields). These pathways are intended for both workers and jobseekers, including people away from the labour market.

([189]) Platform Talent voor Technologie

([190]) 2022 International Civic and Citizenship Education Study (ICCS). The average in the 17 Member States surveyed was 48%.

([191]) Eurobarometer survey

Graph A12.2:**Adult learning**



(1) Participation in learning in the last 12 months (excluding guided on the job training)
Source: Eurostat Adult Education Survey 2022

The availability of a skilled workforce is key for competitiveness and for the success of the green transition. Nearly half of SMEs in the Netherlands say skill shortages are hindering their efforts to adopt digital technologies or green their business activities ([192]). According to the European Labour Authority, shortages were reported in 2024 for several occupations that required specific skills or knowledge for the green transition, including insulation workers, electrical engineering technicians and building and related electricians, and environmental engineers ([193]). Furthermore, if the Netherlands matches its projected contribution to the EU's 2030 renewable energy target, between 3 400 and 11 400 additional skilled workers will be needed for the deployment of wind and solar energy, which may require an investment in skills of EUR 121.3-151.7 million. About 49 000 people will benefit from upskilling and reskilling through the Just Transition Fund (JTF). In line with the objectives of the Council Recommendation of 2022 on ensuring a fair transition towards climate neutrality, the Netherlands is investing – mainly through the JTF - in the skills needed for a fair green transition. The JTF provides upskilling and reskilling opportunities to workers in emission-intensive regions most affected by the climate transition and people at the margins of the labour market to ensure that people have the necessary skills for the transition. The JTF will also support 240 SMEs investing in skills for smart specialisation and industrial transition. Integrated territorial development projects co-funded by the European Regional Development Fund will reach almost 166 000 people.

The Netherlands generally performs very well on adults' basic digital skills. The Netherlands has the highest share of individuals with at least basic digital skills in the EU (83% versus an EU average of 56%). The already high share of ICT specialists is improving, but shortages of technically skilled staff are reported as a major bottleneck to further expansion of the sector (see Annex 10) The Dutch recovery and resilience plan includes measures to further promote digital skills, at both secondary and higher education level. A new action plan was also introduced to address the issue of ICT shortages in the labour market.

The Netherlands has one of the highest participation rates in adult learning in the EU. In 2022, 56.1% of the population aged 25-64 participated in formal or non-formal training (excluding on the job training). Despite showing a slight decrease compared to 57.1% in 2016, this is still one of the highest rates in the EU and close to the 2030 target of at least 62% set by the Netherlands. Nevertheless, the country continues to face challenges in increasing participation rates, promoting workplace learning, expanding access to learning opportunities and nurturing a culture of lifelong learning. These challenges are particularly relevant for those groups who would benefit the most from lifelong learning but currently participate less (people with lower levels of education and skills, those working on flexible or temporary contracts, and those who are out of the labour force).

([192]) Ibid.

([193]) Based on the European Labour Authority's 'EURES Report on labour shortages and surpluses 2023 and 2024', i.e. data submitted by the EURES National Coordination Offices.

More targeted or tailored support could help increase the effective outreach for upskilling and reskilling those in an unfavourable labour market situation. These groups include the low-skilled, people with flexible or temporary contracts, people with a migrant background, and persons with disabilities. The decentralised system of providing support means that vulnerable groups in particular may not always be equally or adequately supported. Continued investment in improving basic, technical and digital skills, increasing mobility between sectors, sustainable employability, and improving the quality and inclusiveness of education and training for all are essential for the Netherlands to reach its national target of at least 62% of adults participating in training every year by 2030, which should support competitiveness further.

The Netherlands is continuing to invest in tackling labour shortages. Under the European Social Fund Plus, the Netherlands continues to make investments to help people from groups in an unfavourable employment and/or vulnerable social situation find work or training and activate people's untapped skills and employment potential. The Dutch recovery and resilience plan (as amended in 2024) also includes an investment measure for the upskilling and reskilling of temporarily unemployed individuals with a weak position in the labour market position. This '*Scholingsregeling WW*' has become structural as of 2023 and provides financial support for at least 8 000 training programmes for upskilling and reskilling to facilitate the employment of the target group.

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

Social Scoreboard for Netherlands		
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)	56,1
	Early leavers from education and training (% of the population aged 18-24, 2024)	7,0
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	82,7
	Young people not in employment, education or training (% of the population aged 15-29, 2024)	4,9
	Gender employment gap (percentage points, population aged 20-64, 2024)	7,6
	Income quintile ratio (S80/S20, 2024)	3,72
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2024)	83,5
	Unemployment rate (% of the active population aged 15-74, 2024)	3,7
	Long term unemployment (% of the active population aged 15-74, 2024)	0,5
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2023)	109,4
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2024)	15,4
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2024)	15,8
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2024)	41,0
	Disability employment gap (percentage points, population aged 20-64, 2024)	20,9
	Housing cost overburden (% of the total population, 2024)	6,9
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2024)	78,9
	Self-reported unmet need for medical care (% of the population aged 16+, 2024)	0,6

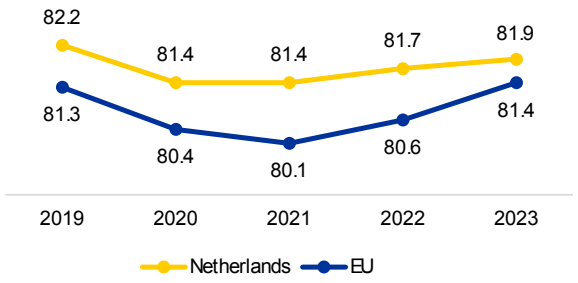
Critical situation	To watch	Weak but improving	Good but to monitor	On average	Better than average	Best performers

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

Source: Eurostat

The Netherlands' health system performs comparatively well. Nevertheless, specific challenges need to be addressed if the country is to improve the health of its population and social fairness, while boosting the competitiveness of its economy. Healthcare spending in the Netherlands is among the highest in the EU and primarily focuses on outpatient services. The country also has a strong primary care system. However, the declining focus on preventive care may raise concerns about the sustainability of the healthcare system, especially as rising demands for healthcare are increasing the workloads of health professionals, which in turn affects retention and the attractiveness of the profession. Structural shortages of certain types of healthcare worker also pose a major challenge.

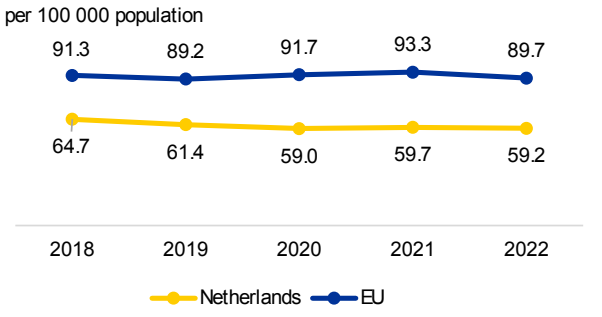
Graph A14.1:**Life expectancy at birth, years**



Source: Eurostat (demo_mlexpec)

Life expectancy at birth in the Netherlands almost rebounded to its pre-COVID-19 level and was slightly above the EU average in 2023. However, there is a gender gap in the country, with women expected to live 3 years longer than men (below the EU average gap of 5.3 years). That said, women spend approximately 4.4 fewer years in good health than men. Treatable mortality is one of the lowest in the EU. However, while it saw a slight increase in 2021 and 2022 compared to 2020, it remains below pre-pandemic levels. Cancer mortality is above the EU average, with lung cancer being one of the main causes. This correlates with tobacco use being the country's leading behavioural risk factor. In 2022, cancer was followed by cardiovascular diseases as the main cause of deaths. The national suicide rate decreased by 4.8% since 2013 to reach 10.8 % in 2022, slightly above the EU average of 10.6 The national agenda for suicide prevention for 2021-2025, built from the previous one (2018-2021) includes a multi-disciplinary approach, focusing on training health workers and those in contact with high-risk groups. The pressure on youth mental healthcare services has intensified in the Netherlands, with a 23% increase in use between 2015 and 2022, and growing costs.

Graph A14.2:**Treatable mortality**



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

The country has a strong primary care system. In 2022, health spending per inhabitant in the Netherlands (adjusted for differences in purchasing power) was among the highest in the EU, with the largest part going towards outpatient care (but only slightly above the EU-average share). The country had more than 40% fewer hospital beds per inhabitant than the EU average in 2022. The shortage of intensive care unit beds was seen as a significant challenge in light of the COVID-19 pandemic. At primary care level, the Netherlands has a high share of spending on dental care, with voluntary health insurance also playing a key role. Compulsory health insurance covers more than three quarters of all health costs, and public funds cover a large part of the rest, resulting in a low proportion of out-of-pocket payments.

Regarding public health, the focus the Netherlands places on disease prevention is

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

	2019	2020	2021	2022	2023	EU average* (latest year)
Cancer mortality per 100 000 population	266.6	261.3	256.2	254.1	n.a.	234.7 (2022)
Mortality due to circulatory diseases per 100 000 population	239.0	219.7	219.9	225.7	n.a.	336.4 (2022)
Current expenditure on health, purchasing power standards, per capita	3 932	4 238	4 565	4 531	n.a.	3 684.6 (2022)
Public share of health expenditure, % of current health expenditure	82.8	85.0	84.9	84.2	n.a.	81.3 (2022)
Spending on prevention, % of current health expenditure	3.3	4.6	8.6	5.7	n.a.	5.5 (2022)
Available hospital beds per 100 000 population**	222	212	183	166	n.a.	444 (2022)
Doctors per 1 000 population*	3.8	3.8	3.9	3.9	n.a.	4.2 (2022)*
Nurses per 1 000 population*	10.8	11.1	11.4	11.5	n.a.	7.6 (2022)*
Mortality at working age (20-64 years), % of total mortality	13.7	12.8	13.2	12.8	12.6	14.3 (2023)
Number of patents (pharma / biotech / medical technology)	682	687	504	415	449	29 (2023)***
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants****	9.5	8.5	8.3	9.1	9.6	20.0 (2023)

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

Source: Eurostat database; European Patent Office; ****European Centre for Disease Prevention and Control (ECDC) for 2023.

declining. Spending on preventive care has been decreasing sharply in recent years, reaching 5.7% of total health expenditure in 2022, slightly above the EU average. The preceding increase in expenditure on prevention between 2019 and 2021 was primarily driven by COVID-19 testing, tracing and vaccines, which accounted for over two thirds of the annual costs of preventive care in 2021**.** The Netherlands is doing relatively well in reducing risk factors, with one of the highest rates of physical activity outside of working hours and a high consumption of fruit and vegetables. However, the regular use of vaping products ([194]) is fairly high among young adults (6.8%) compared to the EU average (2.7%). In 2023, the Netherlands had the lowest antibiotic consumption in the EU (9.6 defined daily doses per day and per 1 000 inhabitants), significantly below the EU average (20). However, this figure increased slightly compared to 2019. The country is participating to the joint action funded by EU4Health on Antimicrobial Resistance and Healthcare-Associated Infections EU-JAMRAI 2.

Structural shortages of certain healthcare workers are an ongoing challenge, especially in rural areas. Recent estimates predict a shortage of nearly 277 000 healthcare staff by 2033, including for long-term care services (see Annex 10). The number of doctors relative to the population is slightly below the EU average, while the number of nurses is above the EU average, suggesting a greater reliance on nurses in delivering services, participating in task-sharing and engaging in advanced practices. However, nursing staff are increasingly overwhelmed, particularly in hospitals, and some choose to work part-time. There is also a growing trend of healthcare workers opting for self-employment over salaried positions. The shortage of healthcare professionals is exacerbated by challenges with job strain and satisfaction, work-life balance, workplace aggression, prompting many to consider leaving the profession. Healthcare professionals often raise concerns about limited autonomy and insufficient time for patient care due to heavy administrative burdens. The Dutch recovery and resilience plan (RRP) includes two measures specifically to help address health workforce challenges: one aims to boost workforce capacity during crises through vocational training and by setting up a national care reserve of former professionals, while the other focuses on

([194]) OECD/European Commission (2024), Health at a Glance: Europe 2024 - State of Health in the EU Cycle, Chapter 4.

expanding intensive care capacities by improving hospital infrastructure and providing intensive care training for nurses.

The Dutch health system has the potential to drive innovation and foster industrial development in the EU medical sector. The Netherlands is among the countries with the highest public spending on health research and development. The Netherlands generated 449 European patents in 2023 in the combined areas of pharmaceuticals, biotechnologies and medical devices (vs an EU-level median of 29) ([195]).

The Netherlands has among the highest uptakes of e-health and overall rates of health system digitalisation in the EU, including data storage and sharing. The share of people using online health services (excluding phone) instead of in-person consultations increased significantly in 2024 compared to 2022 and is well above the EU average (42.6 vs 20.8%). The share of patients accessing their personal health records online is also significantly above the EU average (47.7% vs 27.7%). Despite these positive trends, there is still room to improve the overall technical deployment of electronic health records (see Annex 6).

The government prioritises guidelines and policies that enable the rapid, safe, and responsible deployment of artificial intelligence for the reduction of administrative burdens. This contributes to the broader goal of reducing the time healthcare professionals spend on administrative tasks from 40% to 20% of the working hours, while simultaneously speeding up improvements in data availability and exchange in both the healthcare and welfare sectors.

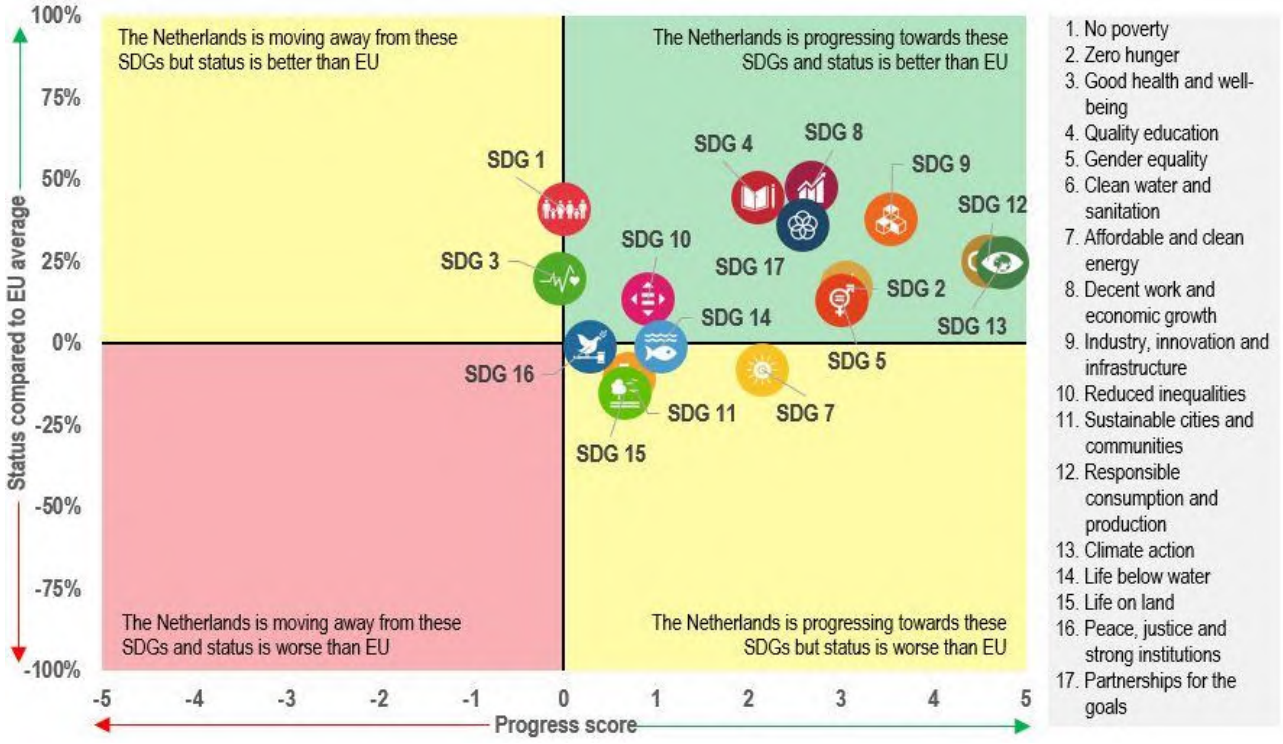
The Dutch RRP includes two measures out of the four within the healthcare component specifically aimed at supporting the digital transformation of the healthcare sector. One measure aims to support care for people living at home, particularly older adults and those with vulnerable health, by using e-health solutions that were developed during the COVID-19 pandemic. This would also help address shortages in the health workforce. A second measure is designed to stimulate innovation in life sciences and healthcare by standardising and connecting data through the Health Research Infrastructures (Health RI) consortium. This would entail: (i) developing an integrated national health data infrastructure; (ii) removing social and organisational barriers through agreements between public and private stakeholders; and (iii) setting up a central hub for data sharing, in line with the European Health Data Space Regulation.

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

This Annex assesses the Netherlands' 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.

The Netherlands performs very well on SDG indicators related to *competitiveness* (SDGs 4, 8 and 9). When it comes to quality education (SDG 4), the Netherlands has one of the highest share of people with at least basic digital skills (82.7% in 2023; EU average: 55.6%), and one of the highest shares of adult participation in learning (26.5% in 2024; EU average: 13.3%). In addition, the level of tertiary education attainment increased further (from 49.1% in 2019 to 55.1% in 2024) and is substantially above the EU average of 44.2% in 2024. On SDG 9 (Industry, innovation and infrastructure), the Netherlands outperforms the EU average in some indicators. The share of households with high-speed internet connection in 2023 (98.3%) was well above the EU average (78.8%), representing a continuous positive progress on this indicator since 2019 (88.6%). The share of R&D investments as a

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



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

Source: Eurostat, latest update of 28 April 2025. Data refer mainly to the period 2018-2023 or 2019-2024. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

share of GDP in the Netherlands slightly increased (from 2.1% in 2018 to 2.2% in 2023), although it remained just below the EU average (2.24% in 2023). The share of R&D personnel among the active population rose from 1.7% in 2018 to around 2% in 2023 (EU average: 1.56% in 2023). The Dutch Recovery and Resilience Plan (RRP) includes several measures to further improve digital skills and upskill and reskill the workforce.

The Netherlands performs well on several SDGs related to *sustainability* (SDGs 2, 9 and 12). However, it still needs to catch up with the EU average on SDGs 7, 11, 14 and 15. On SDG 13 (Climate action), net greenhouse gas emissions have decreased over time (from 11.1 tonnes per capita in 2018 to 8.2 tonnes per capita in 2023) but are still above the EU average (6.8 tonnes per capita in 2023). As regards SDG 7 (Affordable and clean energy), the Netherlands has made considerable progress on increasing the share of renewable energy in gross final energy consumption (from 7.4% in 2018 to 17.4% in 2023) but remains below the EU average (24.6% in 2023). The Netherlands also improved on indicators such as primary energy consumption (3 tonnes of oil equivalent per capita in 2023 compared to 3.8 in 2018) and final energy consumption (2.3 tonnes in 2023 compared to 2.8 in 2018), but consumption remains above the EU average (2.7 and 2 tonnes, respectively, in 2023). Energy import dependency increased further (from 59.5% in 2018 to 70.4% in 2023) and is thus considerably above the EU average (58.3% in 2023). Under SDG 12 (Responsible consumption and production), the Netherlands increased its energy productivity from 8.1 EUR per kilogram of oil equivalent (kgoe) in 2018 to 10.5 EUR per kgoe in 2023, scoring a high energy productivity level compared to the EU average in 2023 (9.8 EUR per kgoe). The Netherlands scores well on SDG 2 (Zero hunger), but when it comes to the environmental impacts of agricultural production, ammonia emissions from agriculture – although they have decreased between 2017 (65.3 kg) and 2022 (58.3 kg) – are still very high compared to the EU average (18.3 kg in 2022). The Dutch RRP includes investments to boost the deployment of renewable energy and support the transition to sustainable agriculture.

The Netherlands performs well on most SDGs related to *social fairness* (SDGs 3, 4, 5 and 8) and is improving on the targets for SDGs 1 and 10. The Netherlands outperforms the EU average in most indicators related to health, education, gender equality, and decent work and growth (SDGs 3, 4, 5 8). Historically, the Netherlands performs very well on decent work and economic growth (SDG 8). The employment rate increased further between 2019 and 2024 (from 81.0% to 83.5%), which makes the Netherlands one of the best performers in the EU (EU average: 75.8% in 2024). In addition, the long-term unemployment rate further decreased (from 0.9% in 2019 to 0.5% in 2024) and is well below the EU average (1.9% in 2024). A few indicators for SDG 1 (No poverty) have slightly improved in recent years in the Netherlands. The housing cost overburden rate impacted 9.3% of the population in 2023 (in contrast to 9.4% in 2018), and the number of people at risk of monetary poverty after social transfers decreased between 2018 and 2023 (from 13.3% to 13.0% of the population). On migration and social inclusion (SDG 10), the gap between non-EU citizens and EU nationals in terms of people at risk of monetary poverty after social transfers increased between 2018 and 2023 (from 21.0% to 24.7%) and is now above the EU average of 22.5% in 2023. At the same time, the gap between those two categories in terms of employment rates slightly decreased (from 20.8% in 2019 to 20.1% in 2024), remaining above the EU average (12.5% in 2024). The Dutch RRP includes reforms and investments aimed at fair education and a resilient health system.

The Netherlands performs well on SDGs related to *macroeconomic stability* (SDGs 8 and 17). However, on SDG 16 (Peace, justice and strong institutions), the population

reporting on crime, violence or vandalism (16.7% of population in 2023) remains higher than the EU average (10% in 2023) and the perceived independence of the justice system remained stable from 71% in 2019 to 70% in 2024 (still above the EU average of 52% in 2024). The corruption perceptions index decreased from 82% in 2019 to 78% in 2024 but remains above the EU average of 62% in 2024. The Netherlands performs better than the EU average on most indicators related to partnerships for the goals (SDG 17) and decent work and economic growth (SDG 8). The Dutch RRP includes reforms to improve transparency of the public administration and several measures to tackle money laundering.

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

The Netherlands faces structural challenges in a wide range of policy areas, as identified in the country-specific recommendations (CSRs) addressed to the country as part of the European Semester. They refer, among other things, to the functioning of the labour market, skills, vocational education and training, renewable energy, energy infrastructure and networks, and housing.

The Commission has assessed the 2019-2024 CSRs considering the policy action taken by the Netherlands to date and the commitments in its recovery and resilience plan (RRP). At this stage, the Netherlands has made at least 'some progress' on 54% of the CSRs ([196]), and 'limited progress' on 40% (Table A16.2).

EU funding instruments provide considerable resources to the Netherlands by supporting investments and structural reforms to increase competitiveness, environmental sustainability and social fairness, while helping to address challenges identified in the CSRs. In addition to the EUR 5.4 billion funding from the Recovery and Resilience Facility (RRF) in 2021-2026, EU cohesion policy funds ([197]) are providing EUR 1.5 billion to the Netherlands (amounting to EUR 3.5 billion with national co-financing) for 2021-2027 ([198]) to boost regional competitiveness and growth. Support from these instruments combined represents around 0.65% of 2024 GDP ([199]). The contribution of these instruments to different policy objectives is outlined in Graphs A16.1 and A16.2. This substantial support comes on top of financing provided to the Netherlands under the 2014-2020 multiannual financial framework, which financed projects until 2023 and has had significant benefits for the economy and Dutch society. Project selection under the 2021-2027 cohesion policy programmes is advanced and implementation of selected projects has gained momentum.

The Dutch RRP contains 28 investments and 22 reforms to stimulate sustainable growth and accelerate the green and digital transitions. A year before the end of the RRF timespan, implementation is delayed, with 45.9% of the funds disbursed. At present, the Netherlands has fulfilled 40% of the milestones and targets in its RRP ([200]). With sustained efforts, the Netherlands should be able to complete all RRP measures by 31 August 2026.

The Netherlands also receives funding from several other EU instruments, including those listed in Table A16.1. Most notably, the common agricultural policy (CAP) provides the Netherlands with an EU contribution of EUR 4.7 billion under the CAP strategic plan 2023-2027 ([201]). A further EUR 394.3 million are available under the Asylum, Migration and Integration Fund (AMIF), together with the border management and visa instrument (BMVI) and internal security funds. Operations amounting to EUR 1.1 billion ([202]) have been signed under the InvestEU instrument backed by the EU guarantee, improving access to financing for riskier operations in the Netherlands.

([196]) 9% of the 2019-2024 CSRs have been fully implemented, 11% substantially implemented, and some progress has been made on 35%.

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

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

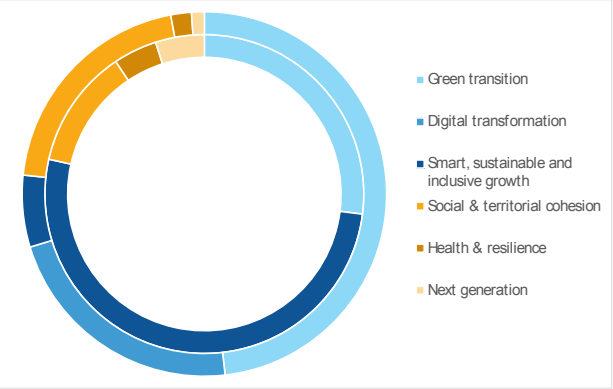
([199]) RRF funding includes both grants and loans, where applicable. GDP figures are based on Eurostat data for 2024.

([200]) As of mid-May 2025, the Netherlands has submitted 2 payment requests.

([201]) An overview of the Netherlands' 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/netherlands_en

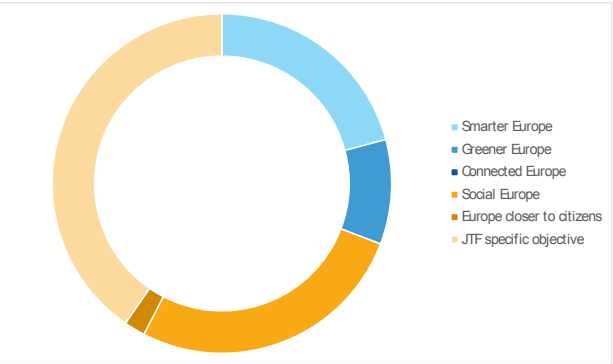
([202]) Data reflect the situation on 31.12.2024.

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



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

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



Source: European Commission

Cohesion policy funds aim to increase the productivity and competitiveness of Dutch firms and improve the business environment. The EUR 506 million European Regional Development Fund (ERDF) supports innovation in small and medium-sized enterprises (SMEs) and fosters collaboration between SMEs and research organisations, in accordance with regional smart specialisation strategies. Nearly 6 000 businesses will receive support, with 900 engaging in partnerships with research organisations, leveraging an estimated EUR 390 million in private investment. The Netherlands is making use of the Strategic Technologies for Europe Platform (STEP) to strengthen its competitiveness, allocating ERDF and Just Transition Fund (JTF) financing to STEP priorities covering clean and resource efficient technologies. Meanwhile, the European Social Fund Plus (ESF+) is allocating EUR 413 million through a single national programme primarily targeting vulnerable workers. The measures focus on increasing participation through lifelong learning and skills development to address labour shortages and activate underutilised workforce potential.

Other funds are contributing to competitiveness in the Netherlands, for instance through open calls. The Connecting Europe Facility has financed strategic investments in railway infrastructure and the development of alternative fuels, integration of the energy market, and the deployment and take up of 5G in smart communities. Horizon Europe supported research and innovation from scientific breakthroughs to scaling up innovations, with the European Research Council and Climate, Energy and Mobility as top priorities in the Netherlands. The Technical Support Instrument (TSI) supports actions in the Netherlands in areas such as the preparation of national biodiversity finance plans, integrating sustainability goals into local public finance, and improving and speeding up permitting for renewable energy projects in regions.

The Dutch RRP also contains ambitious measures to improve the business environment and competitiveness. Examples of such measures covered by payment requests submitted over the past year are accelerated residential construction procedures, skills trainings for workers and unemployed persons, flexible use for operators of the electricity grid during times of congestion, the completion of an ERTMS planning study for the northern part of the Netherlands to enhance railway safety and interoperability, and investments supporting the development of green hydrogen.

EU funds are playing a significant role in promoting environmental sustainability and green transition in the Netherlands during the current seven-year EU budget (multiannual financial framework). Through ERDF and JTF investments, innovative renewable energy projects are expected to create around 100 MW in additional production capacity. The Just Transition Fund (JTF) is helping six regions with emission-intensive industries to decarbonise by investing in innovation, economic diversification, energy infrastructure and workforce upskilling and reskilling. The fund will support 1 500 businesses, of which 380 will cooperate with research organisations. The Netherlands' CAP strategic plan allocates EUR 514 million of the European Agricultural Fund for Rural Development (EAFRD) for environmental and climate objectives and EUR 964 million of the European Agricultural Guarantee Fund (EAFG) to eco-schemes, supporting biodiversity, organic farming and sustainable practices. This includes incentives for farmers to create 36 000 hectares of new meadows with characteristics beneficial to increasing the presence of meadow birds.

The Netherlands' RRP has a comprehensive set of reforms and investments for the green transition. This concerns amongst others a nature programme to reduce the negative effects of nitrogen emissions, the lowering the negative externalities associated with the deployment of additional offshore wind power capacity, the introduction of a CO_2 levy for industry and subsidies for households for energy saving measures. Important taxation measures were also undertaken to reduce fossil fuels in transport, e.g. through phasing out the motor vehicle and motorcycle purchase tax exemption; a voluntary compensation scheme was launched in order to reduce ammonia emissions by pig farms; and a priority framework has been created for electricity grid investments to reduce congestion. The government also adopted a Human Capital Agenda to increase skills supply in the green hydrogen sector.

Promoting fairness and social cohesion are among the key priorities of EU funding in the Netherlands. Through EUR 623 million from JTF, about 49 000 people will benefit from upskilling and reskilling. The JTF will also support 240 SMEs investing in skills for smart specialisation and industrial transition. Integrated territorial development projects co-funded by the ERDF will reach almost 166 000 people. The Netherlands allocates EUR 146 million (35%) of its ESF+ budget to social inclusion, including EUR 35 million for vulnerable workers' social participation. Under the investment, by 2029 82 000 people will have received help to become more ready to work and less likely to drop out. The Netherlands is also investing EUR 20.5 million in social innovation for equal opportunities and work-life balance, plus EUR 15.8 million for material assistance, of which EUR 2.5 million targets children in need. In addition, the AMIF supports integration measures, including language training, civic orientation courses, and other support services. Special emphasis is placed on language training and addressing (mental) health barriers for labour market participation. To help the Netherlands implement its RRP, the TSI provides support for instance to the upskilling of educational staff, especially on digital skills and technologies.

The Dutch RRP contains several reforms and investments related to fairness and social policies. Examples are career advice and skills training for workers and the unemployed, agreements between national and local government on the construction of quality affordable housing, as well as the increase of intensive care capacity of hospitals and training of hospital staff. In addition, tailor-made sectoral pathways were created to strengthen employability of workers, and primary and secondary schools received support to prevent learning losses among pupils with a migrant background.

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

Instrument/policy	Allocation 2021-2026		Disbursed since 2021 (1)
RRF grants (including the RepowerEU allocation)	5 441.4		2 517.9
RRF loans	0		0.00
Instrument/policy	**Allocation 2014-2020 (2)**	**Allocation 2021-2027**	**Disbursed since 2021 (3)** (covering total payments to the Member State on commitments originating from both 2014-2020 and 2021-2027 programming periods)
Cohesion policy (total)	1 582.1	1 543.1	1 303.5
European Regional Development Fund (ERDF)	791.1	506.2	586.4
European Social Fund (ESF, ESF+)	791.1	413.8	516.7
Just Transition Fund (JTF)		623.1	200.4
Fisheries			
European Maritime, Fisheries and Aquaculture Fund (EMFAF) and the European Maritime and Fisheries Fund (EMFF)	101.5	97.9	69.2
Migration and home affairs			
Migration, border management and internal security - AMIF, BMVI and ISF (4)	388.5	394.3	197.9
The common agricultural policy under the CAP strategic plan (5)	**Allocation 2023-2027**		**Disbursements under the CAP Strategic Plan (6)**
Total under the CAP strategic plan	4 694.3		1 408.0
European Agricultural Guarantee Fund (EAGF)	3 611.3		1 213.4
European Fund for Agricultural Development (EAFRD)	1 083.0		194.6

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

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

Netherlands	Assessment in May 2024*	Relevant SDGs
2019 CSR 1	**Some progress**	
Reduce the debt bias for households and the distortions in the housing market, including by supporting the development of the private rental sector.	Limited progress	SDG 8
Ensure that the second pillar of the pension system is more transparent, inter-generationally fairer and more resilient to shocks.	Substantial progress	SDG 8
Implement policies to increase household disposable income, including by strengthening the conditions that support wage growth, while respecting the role of social partners.	Substantial progress	SDG 8
Address features of the tax system that may facilitate aggressive tax planning, in particular by means of outbound payments, notably by implementing the announced measures.	Full implementation	SDG 8, 16
2019 CSR 2	**Limited progress**	
Reduce the incentives for the self-employed without employees, while promoting adequate social protection for the self-employed,	Limited progress	SDG 1, 2, 8, 10
and tackle bogus self-employment.	Limited progress	SDG 8
Strengthen comprehensive life-long learning and upgrade skills, notably of those at the margins of the labour market and the inactive.	Some progress	SDG 4
2019 CSR 3	**Some progress**	
While respecting the medium-term budgetary objective, use fiscal and structural policies to support an upward trend in investment.	Not relevant anymore	SDG 8, 16
Focus investment-related economic policy on research and development, in particular in the private sector,	Some progress	SDG 9
on renewable energy, energy efficiency and greenhouse gas emissions reduction strategies	Some progress	SDG 7, 9, 13
and on addressing transport bottlenecks.	Some progress	SDG 11
2020 CSR 1	**Some progress**	
In line with the general escape clause, take all necessary measures to effectively address the pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	SDG 8, 16
Strengthen the resilience of the health system, including by tackling the existing shortages of health workers and stepping up the deployment of relevant e-Health tools.	Some progress	SDG 3
2020 CSR 2	**Some progress**	
Mitigate the employment and social impact of the crisis and	Substantial progress	SDG 1, 2, 8, 10
promote adequate social protection for the self-employed.	Limited progress	SDG 1,2,10
2020 CSR 3	**Some progress**	
Front-load mature public investment projects (to foster the economic recovery)	Not relevant anymore	SDG 8, 16
and promote private investment to foster the economic recovery.	Limited progress	SDG 8, 9
Focus investment on the green and digital transition, in particular on digital skills development,	Some progress	SDG 4
sustainable infrastructure and clean and efficient production and use of energy	Some progress	SDG 7, 9, 13
as well as mission-oriented research and innovation.	Some progress	SDG 9
2020 CSR 4	**Substantial progress**	
Take steps to fully address features of the tax system that facilitate aggressive tax planning in particular on outbound payments, notably by implementing the adopted measures and ensuring its effectiveness.	Full implementation	SDG 8, 16
Ensure effective supervision and enforcement of the anti-money laundering framework.	Substantial progress	SDG 8, 16
2021 CSR 1	**Not relevant anymore**	
In 2022, pursue a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.	Not relevant anymore	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Not relevant anymore	SDG 8, 16
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	Not relevant anymore	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all.	Not relevant anymore	SDG 8, 16
2022 CSR 1	**Substantial progress**	
In 2023, ensure that the growth of nationally financed primary current expenditure is in line with an overall neutral policy stance, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	Not relevant anymore	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.	Not relevant anymore	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.	Not relevant anymore	SDG 8, 16
Reduce the debt bias for households and the distortions in the housing market, including by supporting the development of the private rental sector and taking measures to increase housing supply.	Limited progress	SDG 8
Enact and implement the reform of the pension system agreed in 2019 and 2020.	Substantial progress	SDG 8

(Continued on the next page)

Table (continued)

2022 CSR 2		
Swiftly finalise the negotiations with the Commission of the 2021-2027 cohesion policy programming documents with a view to starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.	
2022 CSR 3	**Limited progress**	
Promote adequate social protection for the self-employed without employees,	Limited progress	SDG 1, 2, 10
tackle bogus self-employment	Limited progress	SDG 8
and reduce the incentives to use flexible or temporary contracts.	Limited progress	SDG 8
Address labour and skills shortages, in particular in healthcare, education, digital and technical jobs and construction, including by tapping underutilised labour potential originating from the high share of part-time employment and the lower employment rate of people with a migrant background.	Some progress	SDG 8
Strengthen up- and reskilling opportunities, in particular for those at the margins of the labour market and the inactive.	Some progress	SDG 4
2022 CSR 4	**Some progress**	
Reduce overall reliance on fossil fuels	Limited progress	SDG 7, 13
by accelerating the deployment of renewables, in particular by boosting complementary investments in network infrastructure and further streamlining permitting procedures,	Some progress	SDG 7, 9, 16
improving energy efficiency, in particular in buildings,	Some progress	SDG 7
and accelerating investments in sustainable transport	Some progress	SDG 11
and sustainable agriculture.	Limited progress	SDG 11, 12, 13, 15
2023 CSR 1	**Some progress**	
Wind down the emergency energy support measures in force, using the related savings to reduce the government deficit, as soon as possible in 2023 and 2024. Should renewed energy price increases necessitate new or continued support measures, ensure that these are targeted at protecting vulnerable households and firms, fiscally affordable, and preserve incentives for energy savings.	Substantial progress	SDG 1, 7, 8, 10, 12
Ensure prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 3.5%.	Full implementation	SDG 8
Preserve nationally financed public investment and ensure the effective absorption of RRF grants and other EU funds, in particular to foster the green and digital transitions.	Full implementation	SDG 8, 9, 13
For the period beyond 2024, continue to pursue a medium-term fiscal strategy of gradual and sustainable consolidation, combined with investments and reforms conducive to higher sustainable growth, to achieve a prudent medium-term fiscal position.	Full implementation	SDG 8
Reduce the household debt bias and distortions in the housing market. Support the availability and affordability of housing on the private rental market.	Limited progress	SDG 8
Remove obstacles holding back investments, including in residential construction.	Limited progress	
2023 CSR 2		
Proceed with the steady implementation of its recovery and resilience plan and swiftly finalise the REPowerEU chapter with a view to rapidly starting its implementation. Proceed with the speedy implementation of cohesion policy programmes, in close complementarity and synergy with the recovery and resilience plan.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress with the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.	
2023 CSR 3	**Some progress**	
Reduce incentives to use flexible or temporary contracts.	Limited progress	SDG 8
Taking into account sector-specific needs, address structural labour and skills shortages, including by tapping into underutilised labour potential	Some progress	SDG 8
and strengthening up- and reskilling opportunities, in particular for those at the margins of the labour market and the inactive.	Some progress	SDG 4, 8, 10
2023 CSR 4	**Some progress**	
Reduce reliance on fossil fuels	Limited progress	SDG 7, 13
by accelerating the deployment of renewables, improving framework conditions to boost investment in the expansion of electricity transmission and distribution grids,	Some progress	SDG 7, 9, 13
extending and accelerating energy efficiency measures to reduce energy consumption, in particular in the built environment.	Some progress	SDG 12
Support the transition towards sustainable agriculture.	Limited progress	SDG 11, 12, 13, 15
Step up policy efforts aimed at the provision and acquisition of skills and competences needed for the green transition.	Some progress	SDG 4, 13
2024 CSR 1	**Limited progress**	
Submit the medium-term fiscal-structural plan in a timely manner.	Limited progress	SDG 8, 16
In line with the requirements of the reformed Stability and Growth Pact, limit the growth in net expenditure in 2025 to a rate consistent with, inter alia, maintaining the general government deficit below the 3% of GDP Treaty reference value and keeping the general government debt at a prudent level over the medium term.	No progress	SDG 8, 16
Align the taxation of different types of income from wealth, amongst others, to reduce the household debt bias.	No progress	SDG 8, 10, 12
Remove obstacles to the construction of new dwellings,	Limited progress	SDG 8, 9
and ensure the affordability and availability of housing in the private rental market.	Limited progress	SDG 8
Address the expected increase in age-related expenditure by making the long-term care system more cost-effective.	No progress	SDG 3

(Continued on the next page)

Table (continued)

2024 CSR 2		
Significantly accelerate the implementation of the recovery and resilience plan, including the REPowerEU chapter, ensuring completion of reforms and investments by August 2026. Accelerate the implementation of cohesion policy programmes. In the context of their mid-term review, continue focusing on the agreed priorities and promote testing and piloting solutions to help reduce the congestion of the electricity grid, while considering the opportunities provided by the Strategic Technologies for Europe Platform initiative to improve competitiveness.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress with cohesion policy is monitored in the context of the Cohesion Policy of the European Union.	
2024 CSR 3	**Limited progress**	
Implement measures to reduce incentives to use flexible or temporary contracts.	Limited progress	SDG 8
Address structural and sector-specific labour and skills shortages, including by tapping into underutilised labour potential, and by encouraging mobility to high-productivity sectors and sectors related to societal challenges.	Limited progress	SDG 8
Improve basic skills, including by addressing teacher shortages and tailored support to disadvantaged schools.	Some progress	SDG 4, 10, 8
2024 CSR 4	**Some progress**	
Improve framework conditions to boost investment in the electricity transmission and distribution grids, in particular to accelerate the deployment of renewables and improve competitiveness.	Some progress	SDG 7, 8, 9, 13
Take further efforts for sustainable agriculture.	Limited progress	SDG 12, 6, 15

Source: European Commission

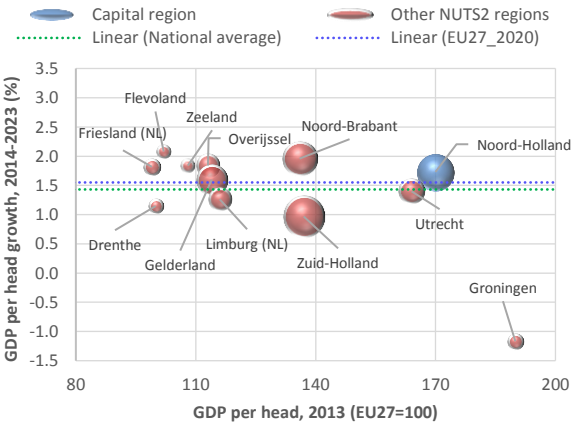
Regional disparities have remained static over the last decade, reflecting differences in GDP per head, labour productivity, innovation and R&D investments. Congestion in the electricity network and low labour productivity growth are key bottlenecks, constraining growth and competitiveness and hampering the clean energy transition. Affordable housing also remains a challenge in the Netherlands, especially in urban areas, and could negatively impact socio-economic convergence.

Through innovation ecosystems with strong business-science links and proactive policies, Dutch regions could leverage competitive advantages in future areas of the green and digital transition. Such future areas include ICT/semiconductors; clean industry such as battery, solar and green hydrogen; and smart energy systems to optimise energy usage. High levels of innovation and human capital offer the potential to improve labour productivity.

Regional variations in GDP have remained stable over the last decade. In 2023, Noord-Holland led with the highest GDP in purchasing power standard (PPS) ([203]) per head (174% compared to the EU average of 100). However, Flevoland had the highest real GDP per capita growth (2.1%) between 2014 and 2023 (Graph A17.1). Six other regions (Friesland, Gelderland, Noord-Holland, Zeeland, Noord-Brabant and Overijssel) also recorded a growth rate above the EU average of 1.5%. Drenthe was the only region with a GDP per capita below the EU average, at 95% of that average. In Groningen, GDP per head declined by 1.2%, primarily due to reduced gas extraction.

Population growth during 2014-2023 was positive in all Dutch regions, but the ageing population could increase labour shortages. The highest annual average growth per 1 000 residents was recorded in Flevoland (12) and Utrecht (11) and Noord-Holland (8.2) compared to Friesland (2.4) and Limburg (1.2). Population growth was mainly driven by net migration, which was positive in all regions. Natural growth was smaller but still positive in most regions, except for the three northern regions and two southern regions Limburg and Zeeland. Future regional growth and productivity could be negatively affected by an ageing population, also in the context of a tight labour market, notably in regions with a projected population decline.

Graph A17.1:**Average annual GDP per head growth vs GDP per head in 2013**



X axis: GDP per head, 2013 (PPS, index EU-27 = 100). Y axis: Annual average real growth of GDP per head, 2014-2023 (EUR, 2015 prices, %). Bubble size: Population, 2023.

Source: ARDECO (JRC)

Competitiveness

Labour and skills shortages remained acute in all regions. The ratio of job vacancies to unemployed people was the second highest in the eurozone after Germany. The number of vacancies declined slightly in most provinces in 2024. Labour market tightness was highest in Zuid-Holland, Noord-Holland, Noord-Brabant and Gelderland.

Labour productivity growth was low, with regional variations in line with differences in

([203]) For contemporaneous comparison of GDP levels in different regions (or countries) we use 'GDP in PPS terms', to account for difference in price levels between regions. GDP growth in a specific region is measured in 'constant prices' terms to correct for inflation in that region.

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

	GDP per head (PPS)	Real GDP per head growth	Productivity - GDP per person employed (PPS)	Real productivity growth (per person employed)	Productivity - GDP per hour worked (PPS)	Real productivity growth (per hour worked)	Population aged 30-34 with high educational attainment	Innovation performance	Regional Competitiveness Index	Employment rate 20-64	Unemployment rate	At-risk-of-poverty or social exclusion
	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	Index EU-27 = 100	Average annual % change	% of population aged 30-34	Regional performance group	Index EU-27 = 100	% of population aged 20-64	% of labour force	% of total population
	2023	2014-2023	2022	2013-2022	2022	2013-2022	2024	2023	2022	2024	2024	2024
European Union (27 MS)	100	1.6	100	1	100	0.9	44.8			75.8	5.9	21.0
Netherlands	133	1.4	112	0.7	124	0.5	54.8		137	83.5	3.7	15.4
Groningen	124	-1.2	125	-2.1	140	-2.0	60.5	Strong innovator +	120	80.6	4.7	21.0
Friesland (NL)	101	1.8	94	0.1	102	0.1	45.2	Strong innovator -	117	83.2	3.9	16.0
Drenthe	95	1.2	90	-0.2	100	-0.3	45.8	Strong innovator -	119	83.0	3.4	15.7
Overijssel	114	1.8	96	0.8	107	0.7	51.4	Strong innovator +	126	83.6	3.4	14.6
Gelderland	113	1.6	98	0.7	109	0.6	52.0	Innovation Leader -	136	84.2	3.5	12.9
Flevoland	105	2.1	106	0.7	112	0.6	42.3	Strong Innovator +	141	84.2	3.8	13.0
Utrecht	159	1.4	114	0.5	131	0.5	67.2	Innovation Leader -	151	85.3	3.7	12.9
Noord-Holland	174	1.7	132	1.2	143	1.1	61.1	Innovation Leader	141	84.4	3.8	15.8
Zuid-Holland	127	1.0	109	-0.2	124	-0.1	55.0	Innovation Leader -	143	82.5	4.1	17.7
Zeeland	108	1.8	103	0.7	118	0.7	32.2	Strong Innovator -	119	84.7	2.1	13.7
Noord-Brabant	137	2.0	110	1.1	120	1.0	54.3	Innovation Leader -	141	84.0	3.2	14.4
Limburg (NL)	110	1.3	98	1.0	117	1.0	43.3	Innovation Leader -	131	80.6	3.3	16.2

Source: Eurostat and ARDECO (JRC)

GDP per capita. In terms of GDP (PPS) per hour worked, Noord-Holland and Groningen were the most productive in 2022 (respectively 143% and 140% of the EU average), while Drenthe and Friesland were the least productive (100% and 102%).

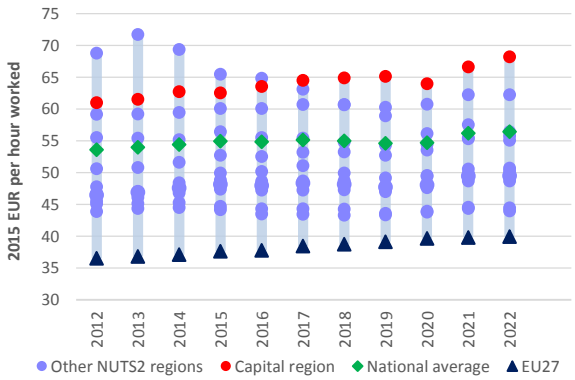
The gap between the capital and other regions increased (Graph A17.2).

Average real productivity per hour growth between 2013 and 2022 ranged from 1.1% in Noord-Holland to -0.3% in Drenthe, and to -2.0% in Groningen. Productivity growth in the Netherlands (0.5%) was below the EU average (0.9%). Growth in all regions was below the EU average, except Noord-Holland, Noord-Brabant and Limburg.

Dutch regions tended to have a high level of human capital, with regional differences correlating with GDP per capita. In 2024, the percentage of the Dutch population aged 30-34 with a high level of education was high at 54.8%, reaching 67.2% in Utrecht, 61.1% in Noord-Holland and 60.5% in Groningen. Only Flevoland (42.3%), Limburg (43.3%) and Zeeland (32.2%) had a rate below the EU average of 44.8%. However, the 2022 OECD Programme for International Student Assessment survey highlighted a trend of declining basic skills among Dutch students, especially disadvantaged students. This could affect competitiveness in a context of skills shortages and low labour productivity growth.

Innovation performance was high with moderate regional variations. At 125.7% of the EU average, the Netherlands was one of the EU's four innovation leaders (2024 European Innovation Scoreboard). According to the 2023 Regional Innovation Scoreboard, all Dutch regions were strong innovators or innovation leaders, above the EU average of 100, from innovation leaders Noord-Holland (148.7) and Utrecht (145.3) to strong innovators Zeeland (114.6), Drenthe (110.2) and Friesland (108.8). These performance levels offer excellent opportunities for further improving competitiveness.

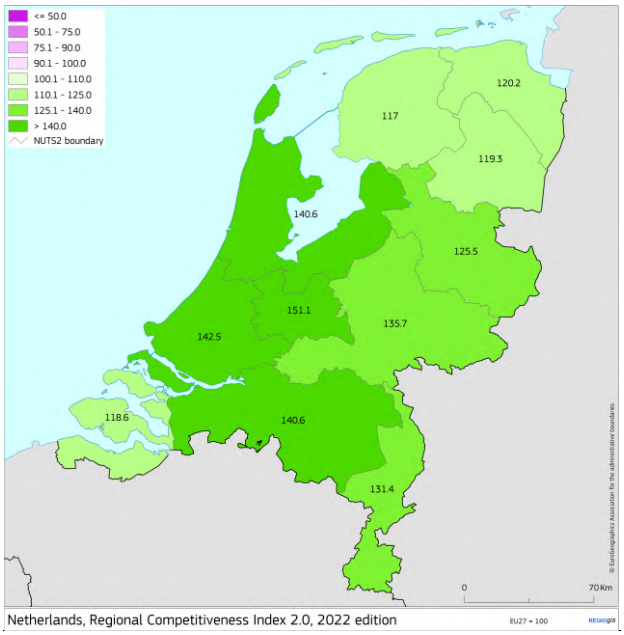
Graph A17.2:**Labour productivity per hour**



Unit: Real GDP per hour worked (EUR, 2015 prices)
Source: Eurostat, DG REGIO elaboration

While R&D intensity (2.18% of GDP) was just below the EU average (2.21% of GDP) in 2022, there were notable variations between regions. These ranged from high levels of investment in Noord-Brabant (2.64%), Gelderland (2.32%), and Limburg (1.88%) to low R&D intensity in Friesland (0.86%), Drenthe (0.72%) and Zeeland (0.53%). The presence of economic clusters and multinationals (for example Brainport in Eindhoven, which includes companies such as ASML) also explains the disparities in R&D. These patterns aligned with regional competitiveness rankings and point to scope for action in the more peripheral regions.

Map A17.1:**Regional Competitiveness Index 2.0, 2022 edition**



Source: DG REGIO, JRC based on Eurostat

All Dutch regions ranked well above the EU average in terms of competitiveness (Map A17.1), with regional differences in line with innovation performance. The Regional Competitiveness Index tended to be lower in the northern regions and Zeeland and higher in the regions in the western Randstad area, mainly due to differences in innovation and efficiency aspects. The index value varied from 117 in Friesland to 151 in Utrecht, the highest-ranking region in the EU.

The quality of government is high in the Netherlands. The European Quality of Government Index ([204]) was significantly higher than the EU average in all Dutch regions. This also held true for each of the sub-pillars 'corruption', 'quality and accountability' and 'impartiality'. This is an important enabler to further improve innovation and competitiveness.

Uptake of information and communication technologies was high in all Dutch regions. In 2021, there was a high level of online

([204]) European Quality of Government Index 2024| University of Gothenburg

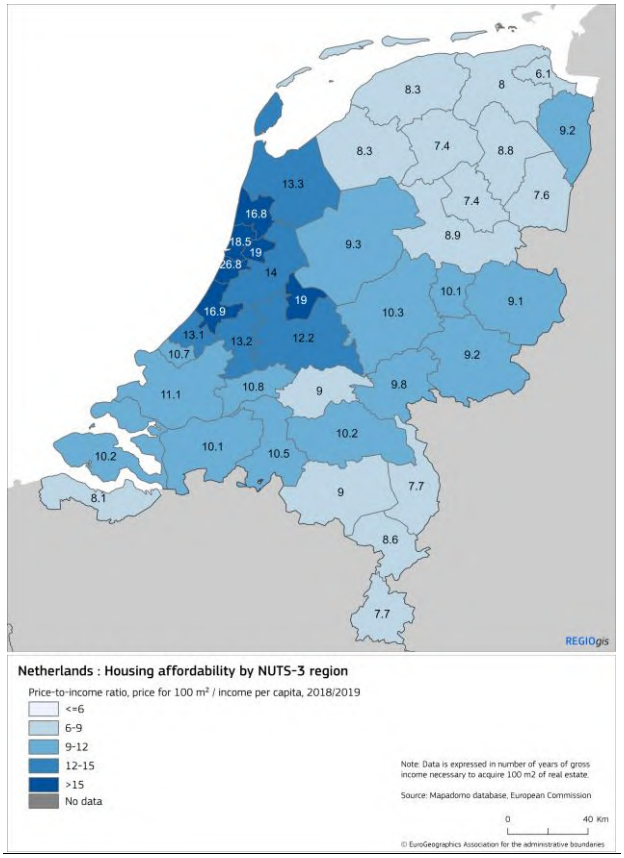
interaction between Dutch people and the public authorities in all regions. In 2021, between 84% (Limburg, Friesland) and 91% (Utrecht, Zeeland) of individuals had such contact (EU average 58%; NL average 87%) within 12 months. Practically universal broadband coverage offers opportunities to further improve education and innovation performance.

Social fairness

The housing cost overburden rate in Dutch regions has declined since 2022, while regional disparities increased. In 2024, the rate ranged from 5.1% in the southern regions to 8.3% in the western regions in 2023. House prices in the Netherlands increased by 83% between 2010 and 2023, almost double the EU average (48.1%). The affordability of housing could affect the attractiveness of regions and aggravate labour shortages.

The Netherlands had a high employment rate (83.5%) and a low unemployment rate (3.7%) with small regional differences. In 2024, employment rates ranged from 81% in Limburg and Groningen to 85% in Utrecht and Zeeland. The unemployment rate in Groningen was the highest at 4.7%, albeit well below the EU average. The lowest rate was in Zeeland at 2.1%.

Map A17.2: **House prices relative to income, 2019**



Source: European Commission, Mapadomo

The proportion of the population at risk of poverty and social exclusion in the Netherlands (15.4%) was below the EU average (21.0%) in 2024, but with some regional variations. This rate stood at 21.0% in Groningen and ranged between 12.9% and 17.7% in other regions.

Access to essential services was generally good in the Netherlands. The proportion of people in rural areas with access to healthcare within 10 minutes' drive was above the EU average (29%) in all Dutch regions except Friesland (18%) and Groningen (19%). The percentage of children with a primary school less than 15 minutes' walk away was above the EU average of 31% for all regions.

Sustainability

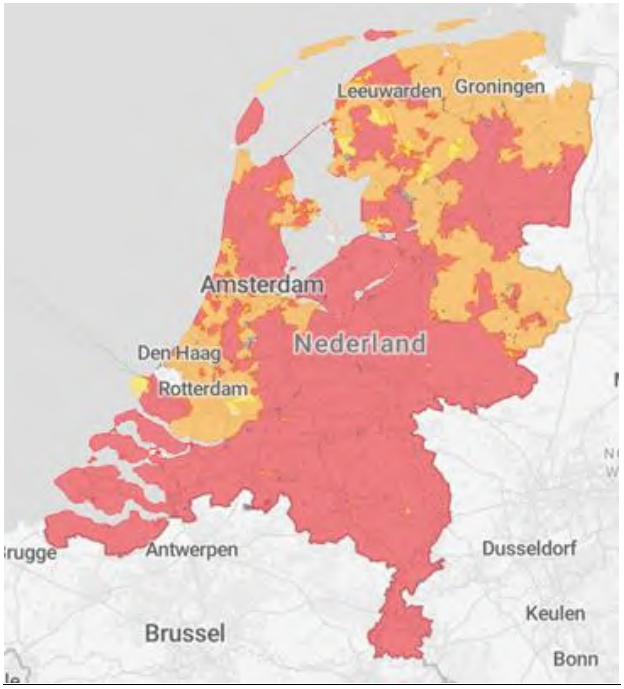
Greenhouse gas emissions per capita in the Netherlands were 8.4 tonnes of CO2

equivalent per year, which is above the EU average of 7.1. Emissions have decreased more than twice as rapidly as the EU average over the last five years. Still, variations across regions remain substantial, ranging from 2.3 tonnes per year in Zuid-Holland to 78.5 in Zeeland, reflecting the distribution of population, agriculture and heavy industry across the country.

Net congestion has become a bottleneck across the Netherlands, slowing the clean energy transition and negatively affecting regional growth. The capacity of the electricity grid, influenced by the high volatility of supply and demand, was constrained in all provinces but particularly acute in the centre of the country (Utrecht, Gelderland, parts of Flevoland). In response, Dutch regions, companies and research institutes turned to innovation to reduce grid congestion and optimise energy consumption through smart energy systems.

As a small, urbanised country with a large agricultural sector, high levels of nitrogen dioxide levels remained of particular concern in the Netherlands. Zuid-Holland, Noord-Brabant, and Noord-Holland recorded the highest annual average nitrogen concentration and the northern provinces (Friesland, Groningen, Drenthe) the lowest.

Map A17.3: **Capacity of electricity network**



Red: shortage of transport capacity with waiting list. Orange: under investigation with waiting list. Yellow: limited transport capacity available without waiting list.
Source: Netbeheernederland.nl (January, 2025)

In terms of access to alternative fuel infrastructure and green employment, the Netherlands performed well. The Netherlands has about a quarter of all the charging electric stations in Europe ([205]). In 2022, the average number of electric vehicle charging points within 10 km was almost four times higher than the EU average of 539, in particular in the Randstad region (>3,000) ([206]). This infrastructure forms a solid basis for further electrification of the transport sector. Green employment, with 22% of jobs classified as sustainable and competitive ([207]), was above the EU average of 15%. Green jobs are strongly concentrated in the western Netherlands

([205]) IMF, April 2024 Article IV Staff Report.

([206]) Indicators of access to alternative fuel infrastructure are based on calculations by DG REGIO and the JRC, using data from the European Alternative Fuels Observatory (EAFO), Eurostat, TomTom and Eco-Movement.

([207]) Regional Competitive Environmental Sustainability (RCES) indicator; https://publications.jrc.ec.europa.eu/repository/handle/JRC136629.

(Utrecht 48%) with the northern, eastern and southern provinces ranging between 6-9%.