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COMMISSION STAFF WORKING DOCUMENT

2023 Country Report – Cyprus

Accompanying the document

Recommendation for a COUNCIL RECOMMENDATION

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

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European
Commission

Cyprus

2023 Country Report



ECONOMIC AND EMPLOYMENT SNAPSHOT

The Cypriot economy is proving resilient throughout the crises, but challenges remain.

In 2022, the Cypriot economy grew solidly and with continued momentum.

Real GDP increased by 5.6% in 2022 following growth of 6.6% in 2021, outperforming the EU average in both years. Despite the links with the Russian economy, the negative impact of the Russian aggression of Ukraine on Cyprus' economy has so far been contained. Household spending proved resilient, supported by increased employment and higher wages, targeted measures to compensate high energy prices, and accumulated savings from the pandemic. Tourism performed well, reaching about 90% of pre-pandemic revenue and 80% of pre-pandemic arrivals. This reflects a successful strategy to diversify tourist markets. Going forward, economic activity is expected to remain positive though growth is expected to slow to 2.3% in 2023 and to 2.7% in 2024. This reflects the anticipated global slowdown, high prices and tightening monetary policy.

Non-tourism service sectors are gaining momentum and help diversify the economy.

The share of gross value added by services excluding sectors related to tourism and public services increased from an average of almost 60% from 2016-2019 to around 65% in 2022. ICT and professional services have played a significant role in this development. These sectors, together with investment funds, are mainly export-oriented and their share in total exports of services increased from 51% in 2016-2019 to 64% in 2022. As a result, the economy has become less dependent on tourism.

Ongoing implementation of the recovery and resilience plan and Cyprus' new long-term strategy for the sustainable and inclusive growth⁽¹⁾ are key to further diversifying and redirecting the economy to higher value-added sectors. In addition to support from the Recovery and Resilience Facility (see Section 2), Cyprus receives a significant volume of EU Cohesion Funds (EUR 1.5 billion from 2021-2027, representing 5.5% of GDP in 2022) (see Annex 4).

Investments are skewed mainly to sectors that do not enhance productivity.

At 20% of GDP in 2022 (against the EU average of 23.2%), investment levels in Cyprus are not only below the EU average, but they are also concentrated in housing, machinery and equipment (mainly transport equipment, for the registration and deregistration of ships). By contrast, the level of productivity-enhancing investment, including research and development, is still low. The same applies to labour productivity, which is only 85.8% of the EU average (Annex 12). The flow of investment in green and digital sectors is still limited and the rise in interest rates pose further challenges to the investment level.

⁽¹⁾ A long-term strategy for sustainable growth for Cyprus, Cyprus Economic and Competitiveness Council, adopted by the Council of Ministers on July 6th, 2022.

Energy policy response in Cyprus

Cyprus adopted several support measures to cushion the impact of energy price inflation on households and businesses. The Commission's 2023 spring forecast projects the gross budgetary costs of these measures to amount to 0.4 % of GDP in 2023. Most measures do not preserve the price signal to consume less energy and are not targeted to the most vulnerable households to energy price hikes. Most measures started in mid-2022 and were phased out at the end of the year.

One of the most prominent measures is to subsidise the increase in the electricity tariffs, covering 50% to 100% of the increase for the period September 2022 to June 2023. For the implementation of this measure, the government is providing payments to the Electricity Authority of Cyprus, a fully State-owned entity. The government also reduced excise duty on fuel products (petrol and diesel by 7 cents per liter and heating fuel by 5.37 cents per liter) for all consumers, and reduced the VAT rate on electricity consumption for households, from 19% to 9% (with a further reduction for vulnerable households to 5%). Moreover, the Electricity Authority of Cyprus subsidised electricity bills of all consumer tariffs (for both households and businesses) by 10% from November 2021 to February 2022. It also brought in several other measures, including targeted measures to support vulnerable households. Notably, the government provided a one-off grant to support disadvantaged population groups in a form of a lump-sum payment for family units with dependent children under the age of 18 whose annual gross income was under a certain threshold. The government provided support to beneficiaries investing in renewables and energy efficiency measures, and targeted support for companies in the agricultural sector to offset part of the increased costs due to high energy prices. The energy market regulator (CERA) took several decisions, including a cap on the price of renewable energy of EUR 110/MWh (a historical average) and a discount of 65% on the network charges for four months.

Cyprus is also preparing a new draft bill to apply the EU solidarity contribution in application of Council Regulation (EU) 2022/1854 (*), which was published for public consultation in December 2022.

Cyprus does not use gas in its energy mix but has taken action to improve its overall security of energy supply and to reduce its reliance on fossil fuels. Specifically, Cyprus has taken measures to accelerate the roll-out of renewable energy (photovoltaics, promoting renewable energy in agriculture, accelerating/simplifying permitting procedures for renewable energy installations), it promoted energy storage systems and launched energy efficiency programmes. Cyprus has run information campaigns to promote energy saving, providing information to households and businesses on simple energy saving measures that have zero or minimal cost.

(*) I.e. applying a mandatory temporary solidarity contribution of at least 33% to the extraordinary and unexpected profits of businesses active in the extraction of crude petroleum, natural gas, coal, and refinery sectors. This is calculated on taxable profits, as determined under national tax rules in the fiscal year starting in 2022 and/or in 2023, which are above a 20% increase of the average yearly taxable profits in 2018-2021.

After peaking in 2022, inflation is slowing. It reached 8.1% in 2022 as a result of high energy and food prices and supply-side disruptions. It is expected to slow to 3.8% in 2023 and to 2.5% in 2024 as pressures from energy inflation and supply disruptions abate. However, core inflation is expected to remain relatively high due to wage indexation. Nominal wages rose by 6.5% in 2022, and they are expected to pick up in 2023. Due to high inflation, real wages contracted by 1.8% in 2022 but are expected to partially recover in 2023. High energy prices have put pressure on vulnerable households. Already in 2021, 19.4% of the total population was unable to keep their homes adequately warm, compared to 6.9% in the EU (see Annex 14), one of the highest shares in the EU. The government has rolled out several measures to tackle high energy prices, including for vulnerable households.

Despite challenging economic conditions, Cyprus is in the process of a gradual correction of macroeconomic vulnerabilities, which relate to private, public and external indebtedness. These vulnerabilities are assessed in the In-depth Review. ⁽²⁾ The net international investment position has improved but remains highly negative. Private and public debt decreased in 2021 and 2022, and they are projected to continue on a downward path. Furthermore, the stock of non-performing loans in the banking sector continued to decline. Going forward, the country's vulnerabilities are projected to continue their correction supported by economic growth (see Annex 22).

Long-term economic vulnerabilities are mostly back on the path of recovery, except for a widened current account deficit.

Public finances continue to improve, although risks remain due to still high level of debt and contingent liabilities.

Following the challenging years of the COVID-19 pandemic, Cyprus' budget balance recovered quickly and turned positive in 2022, recording a general government surplus of 2.1% of GDP. Debt has been falling steeply since it peaked at 113.5% of GDP in 2020 and is expected to fall below 75% of GDP in 2024. Healthcare costs and ageing are expected to be a drag on public finances in future years (see Annex 16).

The current account deficit has widened, mainly as a result of demand for imported goods remaining resilient and prices high.

The sharp increase in the current account deficit highlights the persisting economic vulnerabilities, in particular the dependency on imports of oil, raw materials and consumer goods. It is essential to reduce Cyprus' dependence on imports, in particular of oil, to ensure that external debt remains sustainable in the future. The large current account deficit is related to resilient household spending, contributing to the historically low savings rate in Cypriot households. Going forward, the deficit is expected to gradually fall, but not yet to reach a level conducive to further reducing the net international investment position.

The banking sector has proved resilient to recent shocks, but vulnerabilities remain linked to non-performing loans and the foreclosure framework.

Banks have an adequate level of capitalisation, high liquidity, and they have seen profitability started to rebound. The capital ratio was 21.2% in the third quarter of 2022, above the EU average of 18.6% (see Annex 18). However, this ratio is commensurate with the credit risk on the balance sheet of Cypriot banks. There is

⁽²⁾ European Commission (2023), In-Depth Review for Cyprus, Commission staff working document (COM(2023) 635 final).

ample liquidity, with deposits growing last year. The banking sector's profitability improved in the course of 2022, from making a very small profit in 2021 and making losses in 2020. The government extended the suspension of foreclosures throughout 2022 up until 31 January 2023, which had a negative impact on resolving non-performing loans. Cyprus still has one of the highest ratios of non-performing loans in the EU, while private indebtedness also remains high and poses risks to asset quality going forward.

Cyprus performs well on labour market and social protection, but key skills gaps remain.

The labour market continues to improve, although challenges remain, notably skills mismatches. At 77.9% in 2022, the employment rate (for people aged 20-64) is well above the EU average, with employment up by 2.9% in 2022. This puts Cyprus on track to meet its national 2030 employment target. The unemployment rate (for people aged 15-74) fell to 6.8% in 2022 and is set to fall to 6.4% in 2024. Labour shortages are becoming increasingly prevalent, especially in higher skilled labour. This is reflected in the low share of STEM graduates (science, technology, engineering and mathematics), and of employed people in high-skilled jobs (40% of the working-age population) ⁽³⁾. This limits Cyprus' capacity to generate

new knowledge and innovation. The employment rate for the high-skilled was 86.9% in 2022, 24 pp above the rate for low-skilled workers. There are also widespread labour shortages for lower and medium-skilled jobs in certain sectors of the economy, such as the hospitality industry, trade, transport and manufacturing. This includes sectors that require specific skills for the green transition. The influx of migrants has partially helped, but challenges remain in enabling migrants to acquire relevant skills, integrating migrants in the labour market and in strengthening the capacity of the Public Employment Service (see Annex 15).

Although Cyprus performs relatively well in implementing the principles of the European Pillar of Social Rights on social protection and health-related policy areas, challenges remain regarding employment and poverty of women and disadvantaged groups, as well as in on education and training (see Annex 14). In particular, women, young people and third-country nationals still experience significant labour market challenges. The gender employment gap (12.1 pp in 2022) is above the EU average (10.7 pp) and still increasing. While the share of young people neither in employment nor in education and training decreased in 2022, it remains above the EU average. The youth unemployment rate (15-24 years old) remains high and the employment gap between people with and without disabilities widened. Furthermore, low levels of adult learning and weak digital literacy pose challenges in addressing the persistent skills mismatch in the labour market. Digital literacy remains low: 50% of the population had at least basic digital skills in 2021, which is below the EU average and could both hamper the digital transition and the achievement of the national 2030 skills target. The early school-leaving rate in Cyprus decreased, but it remained above the EU average in 2022. In general, the risk of poverty or social exclusion is low, but it is higher for disadvantaged groups, such as people with disabilities and people born outside the EU. The introduction of statutory minimum

(3) "Data on labour demand over the period 2022-2032 show that overall employment needs in the professions of STEM make up around 40 % of the total needs in the higher-level occupations. Comparing these data with labour supply ... significant labour shortages emerge in these occupations... In addition, demand forecasts for higher-level occupations requiring higher education make up around 40% of total needs, while labour supply with tertiary education will reach around 55% by 2032. As a result, a comparatively high share of tertiary graduates in lower-skilled jobs will continue to be observed." Supply and demand forecasts of labour force in the Cypriot economy 2022 – 2032, Human Resource Development Authority of Cyprus 2022.

wage as of 1 January 2023 is expected to reduce in-work poverty rates and the number of people at risk of poverty or social exclusion. Real gross disposable household income per person has grown at one of the slowest rates in the EU over the medium-term. On the positive side, income inequality and self-reported unmet needs for health care are relatively low in Cyprus.

Cyprus still has progress to make on the digital transition. It ranks among the lower half of countries in the Commission's Digital Economy and Society Index for 2022 and lags behind in particular on the basic digital skills of the population and on the share of information communication technology specialists in the workforce. However, Cyprus is achieving good results on connectivity, thanks to investment in 5G (with the full coverage already achieved) and in the fixed network (with a coverage rate above the EU average). The use of cloud computing services by businesses is above the EU average in Cyprus, but companies do not make full use of other advanced digital technologies available. For instance, the application of artificial intelligence and big data is below the EU average (see Annex 10).

Green and sustainable growth is increasing only slowly.

Achieving environmentally sustainable economic growth remains a key challenge. In 2021, Cyprus' greenhouse gas emissions in the sectors not covered by the Emission Trading Scheme far exceeded its annual emission allocations (see Annex 6). The existing and additional measures planned by Cyprus are not sufficient to reach the effort sharing target of reducing emissions by 32% by 2030 compared to the 2005 level, in line with the EU's Fit for 55 objectives. Under current policy, Cyprus would only reduce its emissions by 7% and 17% with additional measures.

Cyprus' green transition has been slow and its potential to expand renewable

energy is so far untapped. The share of solar energy reached 26% in heating, but in the electricity mix, oil still accounts for 85% and renewable energy for only 15%. A more ambitious and faster roll-out of renewables in energy production can help remedy the fossil fuel dependence of the Cypriot economy. Investments in large-scale renewable energy production are not happening due to the limited capacity of the network (due to a lack of investment in grid upgrades and modernisation), the lack of storage facilities, and the slow process of opening the electricity market to competition.

Efforts continue to improve energy efficiency with action planned for the coming years. Several support schemes started in 2021 to help citizens, public authorities and businesses save energy, for instance by insulating buildings and producing energy from photovoltaics. The schemes have been successful in attracting a sufficient number of applications and as a result, many energy saving investments are planned for the coming months.

Cyprus has a long way to go to achieve sustainable transport, given its overreliance on conventional private vehicles. Reliance on private transport leads to high and steadily growing emissions from the transport sector (21% of Cyprus' overall greenhouse gas emissions). It is coupled with the lowest market share of electric vehicles and the lowest number of charging points per vehicle in the EU.

Cyprus has a medium, and increasing, level of vulnerability to climate disasters coupled with one of the highest levels of water stress in the EU due to its semi-arid climate and few natural surface water bodies. Cyprus is expected to experience higher temperatures and less rainfall over the coming years. This is projected to increase the risk of desertification and climate-change-related disasters such as sudden droughts and wildfires⁽⁴⁾. Tackling over-abstraction of

(4) AVLI (2022) Climate Change in Cyprus. <https://avli.org/resources/climate-change-in-cyprus-report/>

water is key to mitigating the negative impact of water scarcity on agriculture, tourism, industry, biodiversity and public health (see Annex 6).

Overall, Cyprus performs well and is improving on most of the UN's Sustainable Development Goals (SDGs).

Notably, on the indicators tracking environmental sustainability, Cyprus performs above the EU average on SDG 15 (life on land), and is improving on SDGs 11 (sustainable cities and communities) and 13 (climate action). It needs to catch up with the EU average on affordable and clean energy (SDG 7) and on responsible consumption and production (SDG 12). Moreover, it performs above the EU average on SDGs 1 and 3 on poverty and health but below the EU average on several indicators assessing the fairness of society and the economy especially with regard to gender equality (SDG 5) and on indicators related to migration and social inclusion. On productivity and macroeconomic stability, Cyprus is improving on all the SDGs but it is still below the EU average, in particular in the field of industry, innovation and infrastructure (SDG 9), where a key indicator such as R&D expenditure as a proportion of GDP is one of the lowest in the EU (see Annex 11). Lastly, Cyprus is pulling away on four targets, SDG 10 on reduced inequalities, where it is slightly below the EU average, SDGs 5 (gender equality) and 16 (peace, justice and strong institutions), where it is well below EU average, and SDG 14 on life below water, where it still performs above the EU average (see Annex 1).

THE RECOVERY AND RESILIENCE PLAN IS UNDERWAY

Cyprus' recovery and resilience plan (RRP) aims to address the key challenges related to the twin (green and digital) transition, to public health and civil protection, and to boost its economic, social and institutional resilience. It consists of 75 reforms and 58 investments that are supported by EUR 916 million in grants and EUR 200 million in loans, representing 4.1% of 2022 GDP after the update of the maximum financial contribution⁽⁵⁾ (see Annex 3 for more details).

The implementation of Cyprus' recovery and resilience plan is underway, however with risk of some delays.

Cyprus submitted one payment request on 28 July 2022, corresponding to 14 milestones in the plan and resulting in an overall disbursement of EUR 85 million on 2 December 2022. The Cypriot recovery and resilience plan is relatively large and complex in nature. Strong governance and continuous monitoring of the recovery and resilience plan are essential to minimise the risk of delays. The more detailed review of measures being implemented under the RRP in the following sub-chapter in no way implies formal Commission approval or rejection of any payment requests.

The Cypriot recovery and resilience plan is expected to be revised to include REPowerEU measures and take into account the decreased maximum financial contribution. Cyprus has not formally submitted its amendment proposals to its recovery and resilience plan. Once submitted, they will need to be assessed by the Commission and approved by the Council before becoming effective. Amendment proposals are

expected to relate to objective circumstances that have caused delays in the implementation of corresponding measures. In addition, given the reduced financial allocation, a few measures in the Cypriot recovery and resilience plan are expected to be removed on the condition that the overall ambition of the plan remains high, and the green tracking and digital tagging threshold are still be met.

Supporting the green transition

The recovery and resilience plan played a key role in supporting the green transition. A number of implemented measures have contributed to addressing the country-specific recommendations that recommend focusing investment and investment-related policies on energy efficiency and renewable energy. By 2021, Cyprus adopted two laws that increase competition in the electricity market, which were followed up by related regulatory decisions. These reforms will create the conditions in the energy market for new investors to participate in the generation, storage and supply of electricity and will promote the participation of electricity storage facilities and demand response in the electricity market.

The recovery and resilience plan, also includes measures that encourage the transition of local communities to climate mitigation and facilitate adaptation action. It includes calls for proposals for investments promoting energy efficiency in buildings for small and medium enterprises, communities and the public sector, together with calls for investment in the use of renewables and energy savings by public authorities and NGOs. These measures will reduce both primary and final energy consumption and

(5) The maximum financial contribution for Cyprus was updated on 30 June 2022 to an amount of EUR 0.916 billion in grants, in line with Article 11(2) of the RRF Regulation (Regulation (EU) 2021/241).

the greenhouse gas emissions generated by buildings. They should encourage the use of renewable energy sources in old dwellings, including in energy poor households, in households with people with disabilities and in old infrastructure used by local authorities.

Cyprus also published a comprehensive national action plan for the enhancement of the circular economy.

The plan includes action to raise awareness, offer consulting services to businesses and consumers, and provide incentives for investing in the circular economy via a grant scheme.

Further measures contributing to climate neutrality, energy efficiency and renewable energy penetration are underway. Cyprus also plans improvements to water resource management and to boost the capacity of the authorities in Cyprus to tackle fire hazards.

Supporting the digital transition

The recovery and resilience plan includes reforms and investments contributing to the digital transition.

These measures aim to address the country-specific recommendations to sharpen the focus of investment-related economic policy on research and innovation. Cyprus adopted a national e-skills action plan that aims to develop and upgrade digital skills across the Cypriot society. It also purchased and installed specialised equipment to use blockchain technologies to authenticate at least three categories of traditional Cypriot products (dairy, honey and spirits) particularly affected by food adulteration and fraud. This is in line with the Cyprus Industrial Strategy recognising the importance of the digital transformation of the industry, by accelerating the rollout of cutting-edge technologies in industry and services.

Several other measures set out in the plan also put aspects of digitalisation at their core and will make a significant

contribution towards the digital transformation.

Notably, important measures aiming to digitalise government services and the judicial system are yet to come, along with measures to boost the digital skills across all population groups.

Boosting economic, social and institutional resilience

The recovery and resilience plan contributes to improving Cyprus' economic, social and institutional resilience.

The country implemented several measures over the period 2021-2022 to make justice more efficient and to fight corruption, addressing related country-specific recommendations. It extended the Famagusta District Court building by five additional court rooms to try both criminal and civil cases. The government passed two laws on transparency in decision-making and on the protection of whistle-blowers. The entry into force of a law establishing the Independent Authority against Corruption should improve the legal and institutional framework for fighting corruption.

The government also approved a reform to improve the functioning of the public service.

Cyprus reviewed the recruitment and promotion framework and the performance appraisal system in the public sector, adopting new criteria and methods based on objective assessment and merit., which marks some progress on the country-specific recommendations on improving efficiency in the public sector.

A reform that aims to reduce the level of non-performing loans in Cyprus is expected to boost financial stability.

To this end, two amending laws entered into force in July 2022, putting credit servicers under the Central Bank's regulation and supervision, and giving digital access to credit servicers and credit acquiring companies to the Land Registry. This contributed to addressing the related country-specific recommendations for Cyprus.

Other measures included in the recovery and resilience plan but are still pending, will further contribute to enhancing the economic resilience.

These include a reform aiming to remedy inefficiencies in the system of issuing and transferring title deeds and a legislation to simplify the procedures for strategic investors to obtain permits and licences to start operations that should stimulate investment in the country. In addition, the recovery and resilience plan contains numerous investments that are expected to enhance business competitiveness and promote the diversification of the economy.

Box 2:

Key deliverables under the recovery and resilience plan in 2023 and 2024

- **Enhancement, modernisation and upgrade of Cyprus State Hospitals**, including the construction of new buildings, energy efficiency renovations and digitalisation
- **The development of the EuroAsia interconnector project** to end Cyprus' energy isolation
- **The development of renewable energy**, by streamlining renewable energy project permitting and schemes to install small-scale renewable energy for businesses and citizens
- **Energy efficiency measures**, enabling the active participation of customers in the electricity market, self-consumption based on RES and energy efficiency, notably installing and operating smart metering infrastructure
- **Sustainable transport measures**, notably promoting the widespread use of electric vehicles
- **Developing a funding scheme** to boost growth and the competitiveness of start-ups and innovative companies
- **Designing and establishing a national promotional agency** to improve access to finance for small and medium enterprises
- **Measures improving tax collection and expanding the tax base**, by setting up an integrated tax administration system and adopting a law to tackle aggressive tax planning
- **Improving the financial stability framework** via full implementation and operation of the legal and institutional framework for insolvency
- **Improving digitalisation** by expanding very high-capacity networks in underserved areas
- **Schemes to support the digital transformation of schools** with the aim of boosting digital skills

FURTHER PRIORITIES AHEAD

Cyprus faces additional challenges beyond those addressed by the RRP.

These include the need for additional action on the green transition, in particular to tap the island's full potential for renewable energy and to enhance energy efficiency and sustainable transport solutions. Cyprus would also greatly benefit from improving its business environment, notably by taking measures on state-owned entities, to further reduce non-performing debt and measures to correct macroeconomic imbalances. Addressing these challenges will also help Cyprus make further progress in achieving the UN Sustainable Development Goals (SDGs) where Cyprus currently shows room for further improvement, namely 'Affordable and clean energy' (SDG 7), 'Decent work and economic growth' (SDG 8), 'Sustainable cities and communities (SDG 11)', 'Responsible consumption and production' (SDG 12) and 'Climate Action' (SDG 13).

Action to achieve the green transition in Cyprus is progressing only slowly; further measures are merited

Despite some action taken by Cyprus, more would be needed to reach its green objectives set under the Fit for 55 package. The green transition has been slow and needs a boost. In particular, action is needed to tap the island's potential to generate renewable energy, to improve energy efficiency, to upgrade the workforce's skills for the green economy, and to roll out more sustainable transport solutions.

Cyprus remains highly dependent on imported oil products, though it is reducing its dependency. This makes its

economy very vulnerable to fluctuations in the oil price on international markets and creates a dependency on imports (see Annexes 6 and 12). Cyprus relies on imported energy in the form of heavy fuel oil for electricity production, generating significant costs related to the greenhouse gas emission allowances cost passed on to electricity consumers, compounded by its isolated island location and a highly concentrated electricity market. Also, reducing its reliance on fossil fuels is an essential part of ensuring security of supply. As a result, Cyprus has one of the highest electricity prices in the EU. Cyprus is taking steps to end this energy isolation by building the EuroAsia interconnector as planned in the recovery and resilience plan. This will help achieve strategic autonomy in energy, reduce electricity prices and enable Cyprus to incorporate more renewables in its energy mix. The reforms set out in the recovery and resilience plan on liberalising the electricity market and amending the energy storage regulatory framework are steps in the right direction. Implementing these reforms swiftly will support the green transition in Cyprus though additional action is also needed.

Increasing the production of sustainable energy requires continued action to roll out renewable energy and reduce the dependency on imported fossil fuels.

The island has untapped potential to generate renewable energy, in particular solar energy. Though it has made some improvements recently, there is scope to further streamline the permitting framework for renewable energy and identify go-to areas. Cyprus would need to raise its overall level of ambition to roll out renewable energy, in line with the European Green Deal and RePowerEU proposals, taking into account its untapped potential. It can meet the new proposed sectoral targets in the Renewable Energy Directive under negotiation by taking

measures to accelerate progress of renewable energy deployment in end-use sectors such as heating and cooling, buildings, transport and industry. Power purchase agreements and contracts for difference can be suitable economic instruments to accelerate the rollout of renewables. Rolling out more renewable energy is intrinsically linked with significant grid improvements and modernisation to ensure that this additional renewable capacity can be integrated in the network without creating grid stability issues. Lastly, this will require grid-scale energy storage facilities and the coupling of small-scale renewable energy production (e.g. rooftop solar panels) with small-scale storage solutions such as batteries.

Reducing energy demand is another fundamental aspect of the green transition of the Cypriot economy. This can be achieved by swiftly rolling out ambitious energy efficiency measures and sustainable transport solutions. For that purpose, the energy efficiency schemes introduced by the government in 2021 could be extended to cover a larger segment of the population, including vulnerable households. This would both reduce energy consumption and the risk of energy poverty (see Annex 8).

In Cyprus, as the green transition starts, labour shortages in key sectors have increased in recent years, linked to the lack of relevant skills and creating bottlenecks in the transition to a net-zero economy. In 2022, labour shortages were reported in Cyprus in 11 occupations that required specific skills or knowledge for the green transition. The job vacancy rate increased across key sectors, such as construction (from 0.6% in 2015 to 1.3% in 2021) and manufacturing (from 0.6% in 2015 to 3.1% in 2021), with only manufacturing above the EU average (1.9%) in 2021 ⁽⁶⁾. Upskilling and reskilling for the green transition, including the people who will be most affected, and promoting inclusive labour markets are essential ways to accelerate the transition

⁽⁶⁾ Eurostat (JVS_A_RATE_R2)

to net zero and to ensure the transition is socially fair (see Annex 8).

Cyprus is struggling to reduce its greenhouse gas emissions in line with its EU obligations and transport is a prime contributor. It is the most energy-intensive sector in the economy, accounting for 40% of final energy demand and the fastest growing sector in all the effort sharing sectors (transport, buildings and agriculture). The rollout of electric vehicles lags behind the EU average, with the lowest share of electric vehicles sales in the EU ⁽⁷⁾. In these sectors, there is an urgent need to bring in additional measures and to accelerate implementation of existing measures to achieve the Fit for 55 targets (see Annex 6). The swift and decisive implementation of the green taxation reform planned in the recovery and resilience plan can help reduce emissions from those sectors. Cyprus would also benefit from further energy efficiency measures to be identified as part of the ongoing process to revise its national energy and climate plan.

Expediting a sustainable water management system would benefit both the environment and the economy. Due to its island location in the eastern Mediterranean, Cyprus experiences comparatively low precipitation and high temperatures, which contribute to the highest water stress levels in the EU. Water scarcity and over-abstraction has a negative impact on important economic sectors such as tourism and agriculture. Agriculture is the most water-consuming industry in Cyprus, with the effects of climate change subjecting soils to additional degradation and desertification with resulting lower crop yields. Creating sustainable water management and implementing the measures in the recovery and resilience plan efficiently would help reduce the high water stress and the negative impact on water-dependent sectors. It would also help protect

⁽⁷⁾ Report From The Commission to the European Parliament and the Council, *Progress on competitiveness of clean energy technologies*, COM(2022) 643 final.

biodiversity and public health, and limit the need for expensive desalination of water and water imports in the future. Between 1980 and 2020, only around 2% ⁽⁸⁾ of disaster losses were insured in Cyprus. Cyprus appears to be particularly vulnerable to wildfires. The current protection gap ⁽⁹⁾ for wildfires suggests that the insurance coverage remains low compared to projected risk, and this could result in losses to be covered by the public sector, thereby potentially posing a risk to public finances.

It is still a long way towards a real circular economy in Cyprus; more could be done. Cypriots generate more waste per capita than the EU average and the recycling rate was 14.9% in 2021, far below the EU average of 48.5% (see Annex 9). It thereby missed the EU target of 50% by 2020 clearly and, despite the envisaged implementation of measures towards separate collection, has yet to achieve the 2025 target. Landfilling much of municipal waste remains a concern (62% against the EU average of 23%). For the period 2014-2020, Cyprus covered around 47% of its estimated environmental investment needs. More could be done with additional funds from the Recovery and Resilience Facility and the European Regional Development Fund to tackle the issues of sustainable water management and the circular economy.

⁽⁸⁾ [Disaster Risk Financing: Limiting the Fiscal Cost of Climate-Related Disasters \(Radu, 2022\)](#)

⁽⁹⁾ The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters. This indicator is based on the modelling of the current risk from floods, wildfires, and windstorms as well as earthquakes, and the estimation of the current insurance penetration. The indicator does not provide information on the split private/public cost of climate related disasters. A score of 0 means no protection gap, while a score of 4 corresponds to a very high gap. EIOPA considers that a score below 3 is not a relevant protection gap but that countries with a score of 2.5 need to be monitored ([EIOPA, 2022](#)).

Improving the business environment, with measures including state-owned entities

Cyprus continues to perform poorly on a number of aspects of the business environment, which undermine productivity. A well-functioning and competitive business environment is crucial to economic efficiency and growth. Cyprus lags behind in several aspects, with poor performance (around the 20th percentile level) or below median performance in the EU on firm entry, access to markets and trade, access to finance, regulatory burden and related indicators ⁽¹⁰⁾. The level of restrictiveness in the regulation of professions is greatly above the EU average for a number of key professions ⁽¹¹⁾, and firms' financing is hampered by frequent issues of payment delays, with negative effects especially on small and medium enterprises (see also Annex 12). In addition, the frequency of direct awards and price-only award criteria signal insufficient level of competition, resulting potentially in low value-for-money in the public procurement sector.

⁽¹⁰⁾ See the following sources: for firm entry, the OECD Product Market Regulation indicators. On administrative requirements for limited liability companies and personally-owned enterprises, complexity of regulatory procedures and licences and permits. For access to markets and trade: the proportion of firms that directly exported goods and services to another country per EIB Investment Survey, question 43, percentage gap between the number of Single Market directives adopted by the EU and those transposed in Cyprus according to Single Market Scoreboard. On the extent of market dominance, see a survey in WEF Global Competitiveness Report. For access to finance, see the cost of credit, ECB, on factors impacting long-term investment decisions in the EIB Investment Survey. On the regulatory burden and factors impacting long-term investment decisions, see business regulations in the EIB Investment Survey and the share of high-growth firms, Eurostat.

⁽¹¹⁾ They include lawyers, patent/trademark agents, real estate agents, civil engineers and tourist guides, though improvements have recently been made for architects.

One of the areas that undermines the business environment in Cyprus is the governance of state-owned entities (see also Annex 13 and the 2022 Cyprus Country Report). It shows there are major gaps with respect to international standards⁽¹²⁾. While action under the recovery and resilience plan tackles some business environment aspects such as access to finance and research and innovation, governance of state-owned entities is not. State-owned entities in the energy sector in particular have a large share of the market, which impedes competition and trade. This undermines the business environment by lowering the quality of services used by businesses and/or their pricing. For instance, electricity (see below) was indicated as one of the main business environment concerns in Cyprus.⁽¹³⁾

Pending a more fundamental reform, the governance of state-owned entities would benefit from better board appointment processes, board performance evaluation and central monitoring. The Cypriot authorities sought technical assistance from the IMF for the proposals for the reform of state-owned entity governance, which may take up the entire year of 2023. While awaiting the results and before proposals are formulated, some measures could be beneficial in the short term. For instance, establishing a centralised monitoring unit in the Ministry of Finance would help steer the financial, operational and non-financial performance of state-owned entities against key performance indicators. It could also be tasked with drawing up an annual aggregate report on state-owned entity

⁽¹²⁾ International standards on the governance of state-owned entities typically focus on enterprises defined as any corporate entity recognised by national law as an enterprise and in which the state exercises ownership, if their purpose and activities, or parts of their activities, are of a largely economic nature. However, some measures such as board member appointments could be extended to cover all semi-public organisations, including those operating in the regulatory field in Cyprus.

⁽¹³⁾ See <https://www.enterprisesurveys.org/en/data/exploreeconomies/2019/cyprus>.

performance that could improve transparency and accountability to the general public. Board performance evaluation could be shifted to the centralised body in the Ministry of Finance from the current practice of mainly self-assessment. The appointment of state-owned entity board members could be revised to achieve a more open and merit-based selection of candidates.

Weak governance of state-owned entities is curbing the green transition.

Improving governance would help ensure key public investment projects are completed in time, notably in the electricity sector. The incumbent electricity operator (the Electricity Authority of Cyprus (EAC), with a market share of 83.2% in electricity generation and 96.4% in supply)⁽¹⁴⁾, is a state-owned organisation that could play a significant role in achieving the green transition. To do so it could invest in the modernisation and improvement of the grid and grid-scale energy storage facilities; increase the share of renewable energy production by using already obtained operating permits⁽¹⁵⁾ and speed up the rollout of smart metering infrastructure. Accelerating the transition to less polluting fuels and more renewables would help tackle the high electricity cost (see Annex 7). Also, one of EAC's power plants (the Dhekelia steam plant) continues operating even though it is already in breach of the Industrial Emissions Directive. Currently there is no replacement capacity in operation to replace it.

⁽¹⁴⁾ The EAC is also the owner of the Cyprus Transmission System Operator (TSOC), recently unbundled from it. Hence, the EAC executes projects included in TSOC's ten-year network development plan as approved by the regulator, CERA. As instructed by CERA, the plan is subject to update, due by end 2024, to ultimately accommodate a very large share of renewables, up to 100%.

⁽¹⁵⁾ The CERA draft regulatory decision (Regulatory Treatment of the development of RES-E by EAC) prevents the EAC from obtaining further licences to operate renewables. However, it still has the capacity to build/install them under current licences/permits, which would increase its current electricity generation capacity in renewables more than 17 times.

Safeguarding financial stability by reducing the risks stemming from non-performing assets

Cyprus continues to have one of the highest ratios of non-performing loans in the EU, despite a significant reduction in recent years. It achieved a first significant reduction in 2018, followed by other sizable declines in 2020 and 2021. So far, the banking sector has proven to be resilient to recent shocks, the COVID-19 pandemic and the war in Ukraine, while managing to further offload non-performing loans. Write-offs, debt-to-asset swaps, curing loans (moving non-performing loans into performing categories) and cash repayments all played an important role in achieving the reduction in recent years. Nevertheless, the key driver behind the reduction were the asset sales by systemic banks to credit-acquiring companies and the transfer of distressed assets of the Cyprus Cooperative Bank to the state-owned asset management company KEDIPES in 2018. As of September 2022, the ratio of non-performing loans reached 5.2%, well below the 38.6% at the end of 2014. Nevertheless, the ratio of non-performing loans in Cyprus remains high compared to other EU countries and the EU average of 1.8%.

The foreclosure framework is key to reduce the stock of non-performing loans in the economy, with credit-acquiring companies now holding the majority of bad loans. Non-performing loans transferred to credit-acquiring companies remain a burden on the economy due to high private indebtedness and fewer business opportunities for banks in the domestic market. At the end of September 2022, credit-acquiring companies held a portfolio of about 87% of all non-performing loans in the economy, whereas banks had about 13%. Therefore, credit-acquiring companies are critical to reduce the high shares of non-performing loans among households and non-financial corporations. Foreclosure proceedings have been suspended several times since March 2020, continuing throughout 2022.

The recent suspensions were more limited in scope, but the frequency and length of suspensions of foreclosures have restricted banks' ability to organically deleverage their portfolios of non-performing loans and reduced the capacity of loan servicers and credit-acquiring companies to resolve non-performing loans. KEDIPES, the state-owned asset company (and also the biggest credit-acquiring company) had also been adversely impacted, facing significant delays in the planned resolution of the residential segment. The last foreclosure suspension expired on 31 January 2023, which was welcome. An operational and effective foreclosure framework is key to encourage borrowers to restructure their loans, address strategic defaulters, further reduce the stock of non-performing loans in the economy and improve payment discipline in Cyprus.

Remaining inefficiencies in the justice system weaken the enforcement of claims, which are also key to improving payment discipline. The adoption of the amended Civil Procedure Law, which is expected to facilitate the execution of court orders for the seizure of movable property, would improve the legal framework for the enforcement of court decisions and contractual claims. The adoption of this law by Parliament has been pending since March 2020. To improve payment discipline, it is essential to shorten court proceedings of cases relating to financial disputes. Progress at the Department of Insolvency also remains slow.

KEY FINDINGS

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

- improving access to quality healthcare and achieving the digital health transition;
- making ongoing investments in energy efficiency and digitalising several central government services, as well as adopting laws and regulations to increase competition in the electricity market;
- contributing to improvements to the operating environment for non-performing loan management, including by introducing provisions that improve the operating environment of credit acquiring companies and credit servicers (in July 2022);
- improving the business environment by fostering access to finance, research and innovation;
- making justice more efficient and fighting corruption by adopting laws on transparency in decision-making (in February 2022) and laws on the protection of whistle-blowers (in January 2022);
- increasing the quality and labour-market relevance of education and training at all levels, including digital and green skills, and fostering youth employment.

Cyprus should accelerate the implementation of the recovery and resilience plan, also by ensuring an adequate administrative capacity, and swiftly finalise the addendum and the REPowerEU chapter with a view to rapidly starting its implementation.

In addition to the reforms and investments set out in the recovery and resilience plan, Cyprus would benefit from:

- ensuring a well-functioning and competitive business environment, in particular by improving the governance of state-owned entities, including in the energy sector, in line with international standards, which would also help achieve the green transition;
- making significant improvements to and modernising the grid (including grid-scale energy storage facilities) to tap the island's full potential to generate renewable energy and reduce its reliance on fossil fuels;
- accelerating the roll-out of energy efficiency measures and the development of sustainable transport solutions, to help reduce Cyprus' greenhouse gas emissions and meet its EU obligations;
- swiftly setting up a sustainable water management system to reduce pressure on water-dependent sectors and on the environment;
- further promoting the skills needed for the green transition;
- maintaining an operational and effective foreclosure framework in order to reduce the stock of non-performing loans in the economy and to improve payment discipline in Cyprus;
- strengthening the legal framework to enforce court decisions and contractual claims and expediting court proceedings for cases relating to financial disputes.

ANNEXES

Cross-cutting indicators	22
A1. Sustainable Development Goals	22
A2. Progress in the implementation of country-specific recommendations	24
A3. Recovery and resilience plan - overview	28
A4. Other EU instruments for recovery and growth	30
A5. Resilience	33
Environmental sustainability	34
A6. European Green Deal	34
A7. Energy security and affordability	38
A8. Fair transition to climate neutrality	42
Productivity	45
A9. Resource productivity, efficiency and circularity	45
A10. Digital transformation	47
A11. Innovation	49
A12. Industry and single market	51
A13. Public administration	55
Fairness	57
A14. Employment, skills and social policy challenges in light of the European Pillar of Social Rights	57
A15. Education and training	59
A16. Health and health systems	61
A17. Economic and social performance at regional level	63
Macroeconomic stability	65
A18. Key financial sector developments	65
A19. Taxation	67
A20. Table with economic and financial indicators	69
A21. Debt sustainability analysis	70
A22. Macroeconomic imbalance procedure assessment matrix	73

LIST OF TABLES

A2.1.	Summary table on 2019-2022 CSRs	25
A3.1.	Key elements of the Cypriot RRP('s)	28
A5.1.	Resilience indices summarising the situation across RDB dimensions and areas	33
A6.1.	Indicators tracking progress on the European Green Deal from a macroeconomic perspective	34
A7.1.	Key Energy Indicators	38
A8.1.	Key indicators for a fair transition in Cyprus	42
A9.1.	Overall and systemic indicators on circularity	46
A10.1.	Key Digital Decade targets monitored by DESI indicators	47
A11.1.	Key innovation indicators	49
A12.1.	Industry and the single market	51
A13.1.	Public administration indicators	55
A14.1.	Social Scoreboard for Cyprus	57
A14.2.	Situation of Cyprus on 2030 employment, skills and poverty reduction targets	58
A15.1.	EU-level targets and other contextual indicators under the European Education Area strategic framework	60
A16.1.	Key health indicators	61
A17.1.	Main socio-economic indicators by degree of urbanisation, Cyprus, 2021	63
A18.1.	Financial soundness indicators	66
A19.1.	Taxation indicators	67
A20.1.	Key economic and financial indicators	69
A21.1.	Debt sustainability analysis – Cyprus	70
A21.2.	Heat map of fiscal sustainability risks – Cyprus	72
A22.1.	Assessment of macroeconomic imbalances matrix	73

LIST OF GRAPHS

A1.1.	Progress towards the SDGs in Cyprus in the last 5 years	23
A2.1.	Cyprus' progress on the 2019-2022 CSRs (2023 European Semester)	24
A3.1.	Fulfilment status of milestones and targets	28
A3.2.	Total grants disbursed under the RRF	29
A3.3.	Total loans disbursed under the RRF	29
A3.4.	Disbursements per pillar	29
A4.1.	Cohesion policy funds 2021-2027 in Cyprus: budget by fund	30
A4.2.	Synergies between cohesion policy funds and the RRF with its six pillars in Cyprus	30
A4.3.	Cohesion policy funds contribution to the SDGs in 2014-2020 and 2021-2027 in Cyprus	31
A6.1.	Thematic – greenhouse gas emissions from the effort sharing sectors in Mt CO ₂ eq, 2005-2021	34
A6.2.	Energy mix (top) and Electricity mix (bottom), 2021	35
A6.3.	Thematic – environmental investment needs and current investment, p.a. 2014-2020	36
A8.1.	Fair transition challenges in Cyprus	42
A8.2.	Distributional impacts of energy prices due to rising energy expenditure (2021-2023)	44
A9.1.	Trend in material use	45
A9.2.	Treatment of municipal waste	45
A11.1.	R&D expenditure as % of GDP, 2021	49
A12.1.	Labour productivity [% of EU-27]	51
A12.2.	Labour productivity by sector [2015=100]	51
A12.3.	Business environment and productivity drivers	53
A13.1.	Cyprus. a) Regulatory impact assessment, b) Stakeholder engagement and c) Ex post evaluation of legislation	55
A15.1.	Early leavers from education and training (18-24) by sex and country of birth in 2022	59
A16.1.	Life expectancy at birth, years	61
A16.2.	Projected increase in public expenditure on healthcare over 2019-2070	62
A17.1.	Labour productivity, EU-27, Cyprus, 2000-2020	63
A18.1.	Evolution of credit activity	66
A19.1.	Tax wedge for single and second earners as a % of total labour costs, 2022	68
A19.2.	Share of net inward and outward foreign direct investment (FDI) stock held through special purpose entities (SPEs) as a % of total inward and outward stock, 2021	68



CROSS-CUTTING INDICATORS

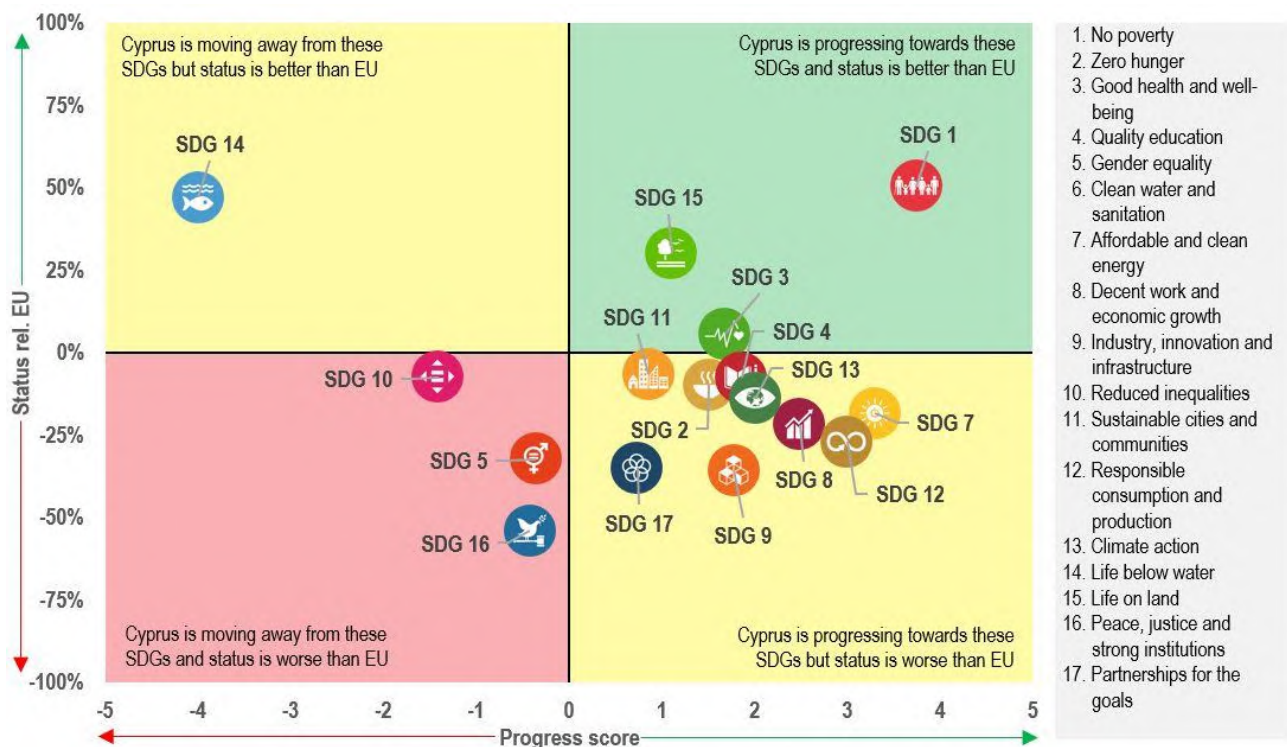
ANNEX 1: SUSTAINABLE DEVELOPMENT GOALS

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

While Cyprus is improving on most SDG indicators related to *environmental sustainability*, it is moving away from SDG 14 (Life below water). It needs to catch up with the EU average on SDG 7 (Affordable and clean

energy), SDG 12 (Responsible consumption and production) and SDG 13 (climate action). Per capita energy consumption in Cyprus is below the EU average, and the country has made progress on energy consumption indicators, including the share of renewable energy in gross final energy consumption (SDG 7 and 13), from 9.8% in 2016 to 18.4% in 2021. However, it still remains below the EU average of 21.8%. On affordable energy (SDG 7), the percentage of the Cypriot population unable to keep their homes adequately warm was much higher than the EU average in 2021, at 19.4% (EU 6.9%). Furthermore, the high concentration of nitrate in groundwater (41mg/litre vs EU 22.6mg/litre in 2020), combined with a low recycling rate of municipal waste (14.9% vs EU 48.5% in 2021) and a high material footprint (23.2 tonnes per inhabitant vs EU 13.7 tonnes), pose considerable challenges for the environment. The average CO2 emissions per km from new passenger cars

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



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

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

(SDG 13) was at 125 g CO₂ per km well above the EU average 108.2. Measures in the recovery and resilience plan (RRP) under Policy Axis 2, such as energy efficiency renovations of public and private buildings and investments in sustainable water management and transport, will help achieve further progress on these SDGs.

While Cyprus is improving on several SDG indicators related to *fairness*, it still needs to catch up on SDGs 4, 5, 7, 8 ⁽¹⁶⁾. Cyprus outperforms the EU average in most indicators related to poverty and health (SDGs 1 and 3). It is moving away, while performing slightly below the EU average, on SDG 10 (Reduced inequalities). In particular, it is moving away from the EU average on indicators related to migration and social inclusion. The EU/non-EU citizenship gap for early leavers from education and training was 29.9 percentage points (pps) vs the EU average of 17.6 pps in 2021. Furthermore, on SDG 4 (Quality education), the high rate of early school leavers (10.2% vs EU 9.7% in 2021), combined with low basic skills (43.7% of 15-year-old low achievers in reading vs EU 22.5%), pose challenges to the opportunities for young people. This is also reflected in the higher numbers of young people aged 15-29 not in education, employment or training (15.4% vs EU 13.1% in 2021). On gender equality (SDG 5), the country needs to catch up on women's employment, as the gender gap remains above the EU average (12.2 pps vs EU 10.8 pps in 2021), and on senior management positions held by women (14.3% of seats in parliament and government are held by women vs EU 32.5% in 2022). Reforms and investments under Policy Axis 5 of the RRP aim to improve the quality of education and training, reach out to young people not in education, employment or training and improve access to early childhood education and care and to flexible working arrangements. This will provide equal opportunities for all children and make it easier for women to participate in the labour market.

Cyprus is improving on *productivity* (SDGs 4, 8, 9), but still needs to catch up compared to the EU. On digital skills, Cyprus remains below the EU average, with 50.2% of adults aged 16-74 having basic digital skills

compared to 53.9% in the EU. The country is making progress on SDG 8 (Decent work and economic growth). However, it still needs to catch up on investments as their share of GDP, at 19.5%, was below the EU average of 22.4% in 2021. On SDG 9 (Industry, innovation and infrastructure), the country needs to catch up on R&D expenditure, which remains low at 0.89% of GDP in 2021 – one of the lowest in the EU (2.27% average). Furthermore, the share of households with a high-speed internet connection in Cyprus was 41.4% in 2021, well below the EU average of 70.2%. The RRP is targeting bottlenecks, especially in digitalisation and the diversification of the economy, and investing in R&D to facilitate further progress on these SDGs.

Cyprus is improving on several SDG indicators related to *macroeconomic stability* (SDGs 8, 16, 17), but still needs to catch up compared to the EU. Real GDP per capita is below the EU average (EUR 25 480 vs EU average EUR 27 800 in 2021). Cyprus is improving on many indicators related to SDG 16 (Peace, justice and strong institutions), with a lower share of people reporting crime, violence or vandalism in 2020 (10.4% compared to 12% in 2015 and the EU average of 11.4% in 2021). However, Cyprus is moving away from this SDG, as the country needs to catch up on government expenditure on law courts, which is well below the EU average (EUR 36.8 per capita vs EUR 107 for the EU in 2020). Furthermore, the perceived independence of the justice system (very good and fairly good) is lower in Cyprus (50% of the population vs EU 53%). The Corruption Perceptions Index scores worse in Cyprus (53 compared to 64 in the EU, with 0 highly corrupt and 100 very clean). The RRP includes reforms and investments under Component 3.4 (Modernising public and local authorities, making justice more efficient and fighting corruption) to address long-standing challenges in the areas of justice and the fight against corruption.

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

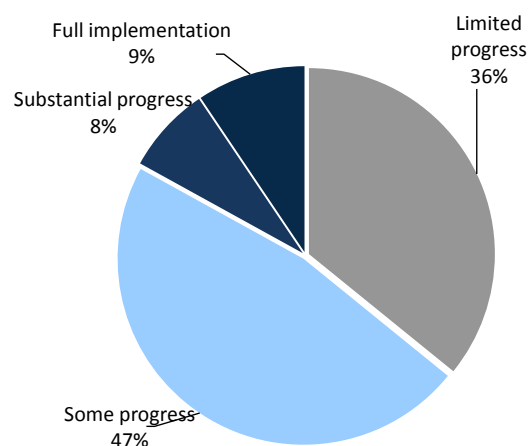
⁽¹⁶⁾ See Annex 12 'Employment, skills and social policy challenges in light of the European Pillar of Social Rights' for more information.

ANNEX 2: PROGRESS IN THE IMPLEMENTATION OF COUNTRY-SPECIFIC RECOMMENDATIONS



The Commission has assessed the 2019-2022 country-specific recommendations (CSRs)⁽¹⁷⁾ addressed to Cyprus as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 14 of the 17 Sustainable Development Goals (see Annexes 1 and 3). The assessment considers the policy action taken by Cyprus to date⁽¹⁸⁾ and the commitments in its recovery and resilience plan (RRP)⁽¹⁹⁾. At this stage of RRP implementation, 64% of the CSRs focusing on structural issues from 2019-2022 have recorded at least 'some progress', while 36% recorded 'limited progress' (see Graph A2.1). As the RRP is implemented further, considerable progress in addressing structural CSRs is expected in the years to come.

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



Source: European Commission

⁽¹⁷⁾ 2022 CSRs: [EUR-Lex - 32022H0901\(07\) - EN - EUR-Lex \(europa.eu\)](#)

2021 CSRs: [EUR-Lex - C:2021:304:TOC - EN - EUR-Lex \(europa.eu\)](#)

2020 CSRs: [EUR-Lex - C:2020:282:TOC - EN - EUR-Lex \(europa.eu\)](#)

2019 CSRs: [EUR-Lex - 32019H0905\(13\) - EN - EUR-Lex \(europa.eu\)](#)

⁽¹⁸⁾ Including policy action reported in the national reform programme and in Recovery and Resilience Facility (RRF) reporting (twice a year reporting on progress in implementing milestones and targets and resulting from the payment requests assessment).

⁽¹⁹⁾ Member States were asked to effectively address all or a significant subset of the relevant country-specific recommendations issued by the Council in 2019 and 2020 in their RRP. The CSR assessment presented here considers the degree of implementation of the measures included in the RRP and of those carried out outside of the RRP at the time of assessment. Measures laid down in the Annex of the adopted Council Implementing Decision on approving the assessment of the RRP, which are not yet adopted or implemented but considered credibly announced, in line with the CSR assessment methodology, warrant 'limited progress'. Once implemented, these measures can lead to 'some/substantial progress or full implementation', depending on their relevance.

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

Cyprus	Assessment in May 2023*	RRP coverage of CSRs until 2026**	Relevant SDGs
2019 CSR 1	Limited progress		
<i>Adopt key legislative reforms to improve efficiency in the public sector, in particular as regards the functioning of the public administration</i>	Some progress	Relevant RRP measures being implemented as of 2022.	SDG 16
<i>and the governance of State-owned entities</i>	Limited progress		SDG 9
<i>and local governments.</i>	Substantial progress	Relevant RRP measures planned as of 2024 and 2025.	SDG 16
<i>Address features of the tax system that may facilitate aggressive tax planning by individuals and multinationals, in particular by means of outbound payments by multinationals.</i>	Limited progress	Relevant RRP measures planned as of 2022.	SDG 8, 16
2019 CSR 2	Some progress		
<i>Facilitate the reduction of non-performing loans including by setting up an effective governance structure for the State-owned asset management company,</i>	Some progress	Relevant RRP measures being implemented as of 2022.	SDG 8
<i>taking steps to improve payment discipline</i>	Limited progress	Relevant RRP being implemented as of 2022.	SDG 8
<i>and strengthening the supervision of credit-acquiring companies.</i>	Full implementation		SDG 8
<i>Strengthen supervision capacities in the non-bank financial sector, including by fully integrating the insurance and pension-fund supervisors.</i>	Limited progress	Relevant RRP measures planned as of 2022 and 2023.	SDG 8
2019 CSR 3	Some progress		
<i>Complete reforms aimed at increasing the effectiveness of the public employment services and reinforce outreach and activation support for young people</i>	Some progress	Relevant RRP measures planned as of 2022.	SDG 8
<i>Deliver on the reform of the education and training system, including teacher evaluation, and increase employers' engagement and learners' participation in vocational education and training,</i>	Limited progress	Relevant RRP measures being implemented as of 2021.	SDG 4
<i>and affordable childhood education and care.</i>	Some progress	Relevant RRP measures planned as of 2022 and 2024.	SDG 4, 5
<i>Take measures to ensure that the National Health System becomes operational in 2020, as planned, while preserving its long-term sustainability.</i>	Substantial progress	Relevant RRP measures planned as of 2022, 2023 and 2024.	SDG 3
2019 CSR 4	Limited progress		
<i>Focus investment-related economic policy on sustainable transport,</i>	Limited progress	Relevant RRP measures planned as of 2023 and 2024.	SDG 10, 11
<i>environment, in particular waste and water management,</i>	Limited progress	Relevant RRP being implemented as of 2021.	SDG 6, 10, 11, 12, 15
<i>energy efficiency and renewable energy,</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 7, 9, 10, 11, 13
<i>digitalisation, including digital skills,</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 4, 9, 10, 11
<i>and research and innovation, taking into account territorial disparities within Cyprus.</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 9, 10, 11
<i>Adopt legislation to simplify the procedures for strategic investors to obtain necessary permits and licences.</i>	Limited progress	Relevant RRP measures planned as of 2022, 2023 and 2024.	SDG 8, 9
<i>Improve access to finance for SMEs,</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 8, 9
<i>and resume the implementation of privatisation projects.</i>	Limited progress	Relevant RRP measures planned as of 2024.	SDG 9
2019 CSR 5	Some progress		
<i>Step up efforts to improve the efficiency of the judicial system, including the functioning of administrative justice and revising civil procedures, increasing the specialisation of courts and setting up an operational e-justice system. Take measures to strengthen the legal enforcement of claims</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 9, 16
<i>and ensure reliable and swift systems for the issuance and transfer of title deeds and immovable property rights.</i>	Limited progress	Relevant RRP measures planned as of 2022.	SDG 8, 9
<i>Accelerate anti-corruption reforms, safeguard the independence of the prosecution and strengthen the capacity of law enforcement.</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 16
2020 CSR 1	Some progress		
<i>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.</i>	Not relevant anymore	Not applicable	SDG 8, 16
<i>Strengthen the resilience and capacity of the health system to ensure quality and affordable services, including by improving health workers' working conditions.</i>	Some progress	Relevant RRP measures planned as of 2022, 2023 and 2024.	SDG 3

(Continued on the next page)

Table (continued)

2020 CSR 2	Some progress		
<i>Provide adequate income replacement and access to social protection for all.</i>	Some progress	Relevant RRP measures planned as of 2023.	SDG 1, 2, 8, 10
<i>Strengthen public employment services,</i>	Some progress	Relevant RRP measures planned as of 2022.	SDG 8
<i>promote flexible working arrangements and</i>	Limited progress	Relevant RRP measures planned as of 2023.	SDG 8
<i>improve labour market relevance of education and training.</i>	Limited progress	Relevant RRP being implemented as of 2021.	SDG 4
2020 CSR 3	Some progress		
<i>Secure adequate access to finance and liquidity, especially for small and medium-sized enterprises.</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 8, 9
<i>Front-load mature public investment projects</i>	Limited progress	Relevant RRP being implemented as of 2022.	SDG 8, 16
<i>and promote private investment to foster the economic recovery.</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 8, 9
<i>Focus investment on the green and digital transition, in particular on clean and efficient production and use of energy,</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 7, 9, 13
<i>waste and water management,</i>	Limited progress	Relevant RRP being implemented as of 2021.	SDG 6, 12, 15
<i>sustainable transport,</i>	Limited progress	Relevant RRP measures planned as of 2023 and 2024.	SDG 11
<i>digitalisation,</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 9
<i>research and innovation.</i>	Some progress	Relevant RRP being implemented as of 2021.	SDG 9
2020 CSR 4	Limited progress		
<i>Step up action to address features of the tax system that facilitate aggressive tax planning by individuals and multinationals.</i>	Limited progress	Relevant RRP measures planned as of 2022.	SDG 8, 16
<i>Improve the efficiency and digitalisation of the judicial system</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 9, 16
<i>and the public sector.</i>	Some progress	Relevant RRP being implemented as of 2022.	SDG 9, 16
2021 CSR 1	Substantial progress		
<i>In 2022, maintain a supportive fiscal stance, including the impulse provided by the Recovery and Resilience Facility, and preserve nationally financed investment.</i>	Substantial progress	Not applicable	SDG 8, 16
<i>When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.</i>	Full implementation	Not applicable	SDG 8, 16
<i>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 national 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.</i>	Some progress	Not applicable	SDG 8, 16
<i>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.</i>	Substantial progress	Not applicable	SDG 8, 16
2022 CSR 1	Full implementation		
<i>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.</i>	Full implementation	Not applicable	SDG 8, 16
<i>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.</i>	Full implementation	Not applicable	SDG 8, 16
<i>For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions.</i>	Full implementation	Not applicable	SDG 8, 16
2022 CSR 2			
<i>Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 28 July 2021.</i>	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.		
<i>Swiftly finalise the negotiations with the Commission of the 2021-2027 cohesion policy programming documents with a view to starting their implementation.</i>	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	Limited progress		
<i>Take measures to improve the governance of State-owned entities in line with international standards.</i>	Limited progress		SDG 8, 9

(Continued on the next page)

Table (continued)

2022 CSR 4	Some progress		
<i>Reduce overall reliance on fossil fuels and further diversify energy supply.</i>	Limited progress	Relevant RRP measures being implemented as of 2022.	SDG 7, 9, 13
<i>Accelerate the deployment of renewables, in particular by further streamlining permitting procedures</i>	Some progress	Relevant RRP measures being implemented as of 2022.	SDG 7, 8, 9, 13
<i>and expanding photovoltaics.</i>	Some progress	Relevant RRP measures being implemented as of 2022.	SDG 7, 9, 13
<i>Develop energy interconnections with neighbouring countries,</i>	Some progress	Relevant RRP measures being planned as of 2023.	SDG 7, 9, 13
<i>while extending and accelerating energy efficiency measures,</i>	Some progress	Relevant RRP measures being implemented as of 2022.	SDG 7
<i>including in the transport sector.</i>	Limited progress	Relevant RRP measures being planned as of 2023.	SDG 11

Note:

* See footnote (18).

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

Source: European Commission



ANNEX 3: RECOVERY AND RESILIENCE PLAN - OVERVIEW

The Recovery and Resilience Facility (RRF) is the centrepiece of the EU's efforts to help it recover from the COVID-19 pandemic, speed up the twin transition and strengthen resilience against future shocks. The RRF also contributes to implementation of the SDGs and helps to address the Country Specific Recommendations (see Annex 2). Cyprus submitted its current recovery and resilience plan (RRP) on 17 May 2021. The Commission's positive assessment on 8 July 2021 and Council's approval on 28 July 2021 paved the way for disbursing EUR 1 billion in grants and EUR 0.2 billion in loans under the RRF over the 2021-2026 period.

Since the entry into force of the RRF Regulation and the assessment of the national recovery and resilience plans, geopolitical and economic developments have caused major disruptions across the EU. In order to effectively address these disruptions, the (adjusted) RRF Regulation allows Member States to amend their recovery and resilience plan for a variety of reasons. In line with article 11(2) of the RRF, the maximum financial contribution for Cyprus was moreover updated on 30 June 2022 to an amount of EUR 916 million in grants. No revision was submitted at the time of publication of this country report yet.

implementing the RRF as a whole, in a transparent manner. The graphs in this Annex show the current state of play of the milestones and targets to be reached by Cyprus and subsequently assessed as satisfactorily fulfilled by the Commission.

EUR 242 million has so far been disbursed to Cyprus under the RRF. The Commission disbursed EUR 157 million to Cyprus in pre-financing in September 2021, equivalent to 13% of the financial allocation. Cyprus's first payment request was positively assessed by the Commission, taking into account the opinion of the Economic and Financial Committee, leading to EUR 85 million being disbursed in financial support (net of pre-financing) on 2 December 2022. The related 14 milestones cover measures in the financial sector and public administration, as well as in the areas of electricity market, energy efficiency, circular economy, anti-corruption and transparency, e-skills and audit and budgetary control.

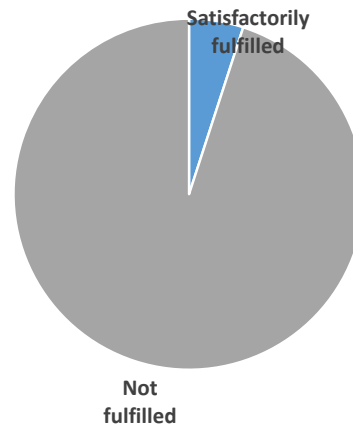
Table A3.1: Key elements of the Cypriot RRP('s)

	Current RRP
Scope	Initial plan
QD adoption date (date of submission)	28 July 2021
Total allocation	EUR1 billion in grants and EUR0.2 billion in loans (5.2% of 2021 GDP)
Investments and reforms	75 investments and 58 reforms
Total number of milestones and targets	271

Source: RRF Scoreboard

Cyprus' progress in implementing its plan is published in the Recovery and Resilience Scoreboard⁽²⁰⁾. The Scoreboard also gives an overview of the progress made in

Graph A3.1: Fulfilment status of milestones and targets



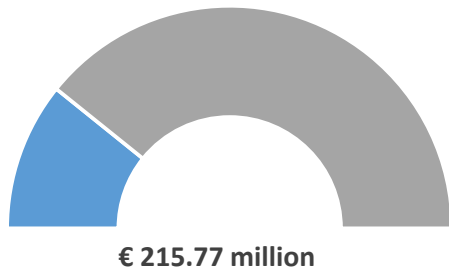
This graph displays the share of satisfactorily fulfilled milestones and targets. A milestone or target is satisfactorily fulfilled once a Member State has provided evidence to the Commission that it has reached the milestone or target and the Commission has assessed it positively in an implementing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

Source: RRF Scoreboard

https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

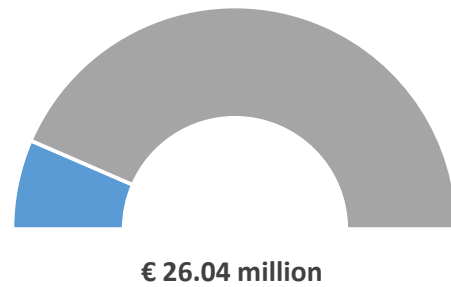
⁽²⁰⁾ https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A3.2: Total grants disbursed under the RRF



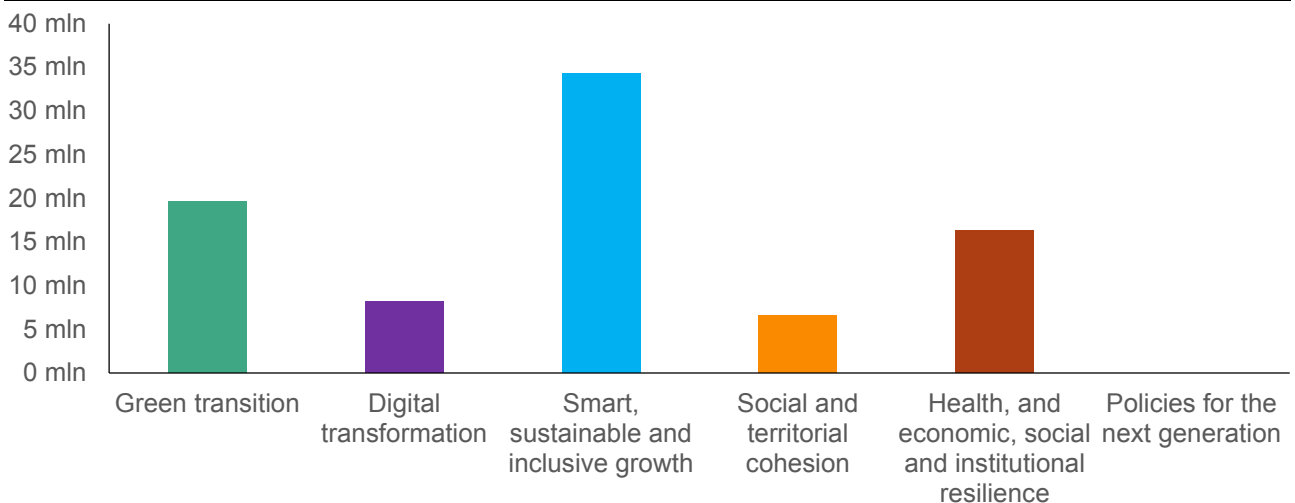
Note: This graph displays the amount of grants disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and the total estimated cost of the respective RRP.
Source: RRF Scoreboard

Graph A3.3: Total loans disbursed under the RRF



Note: This graph displays the amount of loans disbursed so far under the RRF. Loans are repayable financial contributions. The total amount of loans given to each Member State is determined by the assessment of its loan request and cannot exceed 6.8% of its 2019 GNI.
Source: RRF Scoreboard

Graph A3.4: Disbursements per pillar



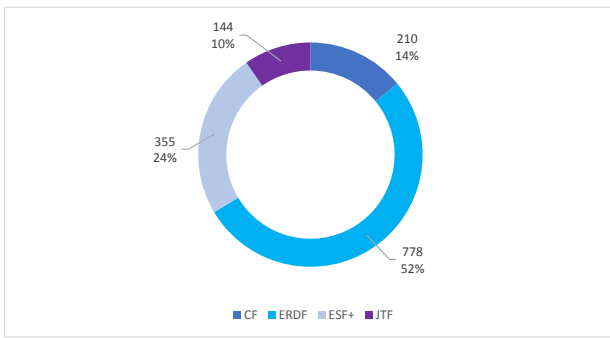
Note: Each disbursement reflects progress in the implementation of the RRF, across the six policy pillars. This graph displays how disbursements under the RRF (excluding pre-financing) relate to the pillars. The amounts were calculated by linking the milestones and targets covered by a given disbursement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



ANNEX 4: OTHER EU INSTRUMENTS FOR RECOVERY AND GROWTH

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

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



(1) million EUR in current prices, % of total; (total amount including EU and national co-financing)

Source: European Commission, Cohesion Open Data

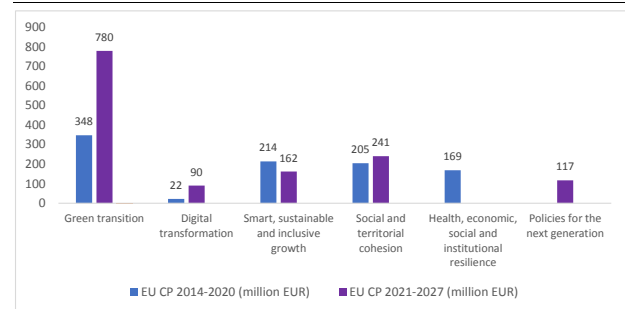
In 2021-2027, in Cyprus, cohesion policy funds⁽²¹⁾ will invest EUR 780 million in the green transition and EUR 90 million in the digital transformation as part of the country's total allocation of EUR 1.5 billion. In particular, the European Regional Development Fund (ERDF) will boost R&D, innovation and digitalisation by creating 885 new research jobs and 133 000 additional users of new and upgraded public digital services, products and processes. Cyprus' green transition will be achieved through significant investment in energy efficiency and reduction of carbon emissions, combined with renewed efforts to reach the targets for waste and water management. The Cypriot Territorial Just Transition Plan will support Cyprus' ambitious energy transition towards its 2030 and 2050 targets. Actions under the plan will improve the energy transmission and distribution system, support SMEs in their use of new technologies and renewables. The plan also includes education and training measures and the creation of a 'green' technical school. Cohesion policy investment is expected to lead to an 18.3% increase in the share of

⁽²¹⁾ European Regional Development Fund (ERDF), Cohesion Fund (CF), European Social Fund+ (ESF+), Just Transition Fund (JTF) excluding Interreg programmes. Total amount includes national and EU contributions. Data source: [Cohesion Open Data](#).

renewables in the country's energy mix, a reduction of 271 160 MWh/year in primary energy consumption and a reduction of 108 900 tonnes CO₂ eq. /year in estimated greenhouse gas emissions. The European Social Fund Plus (ESF+) allocates EUR 75.6 million⁽²²⁾ to education and training, technical and vocational education and the up- and reskilling of workers, to align education and training with labour market needs, especially in light of the green and digital economy.

Of the investments mentioned above, EUR 177 million will be invested in line with REPowerEU objectives. This is on top of the EUR 46 million dedicated to REPowerEU under the 2014-2020 budget. EUR 150 million (2021-2027) and EUR 45 million (2014-2020) is for improving energy efficiency; and EUR 27 million (2021-2027) and EUR 1 million (2014-2020) is for renewable energy and low-carbon R&I.

Graph A4.2: Synergies between cohesion policy funds and the RRF with its six pillars in Cyprus



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

Source: European Commission

In 2014-2020, cohesion policy funds made EUR 0.9 billion available to Cyprus⁽²³⁾. Including national financing, the total investment amounts to EUR 1 billion - around 0.7% of GDP for 2014-2020.

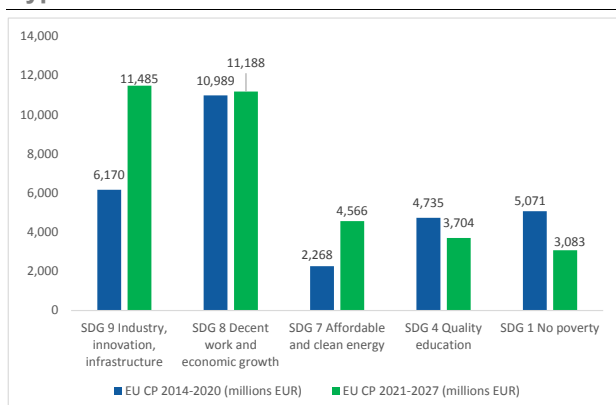
Cyprus continues to benefit from cohesion policy flexibility to support economic recovery, step up convergence and provide

⁽²²⁾ This includes the national contribution.

⁽²³⁾ Cohesion policy funds include the ERDF, CF, ESF and the Youth Employment Initiative (YEI). ETC programmes are excluded here. According to the 'N+3 rule', the funds committed for 2014-2020 must be spent by 2023. REACT-EU is included in all figures. Data source: [Cohesion Open Data](#).

vital support to regions following the COVID-19 pandemic. The Recovery Assistance for Cohesion and the Territories of Europe instrument (REACT-EU)⁽²⁴⁾ under NextGenerationEU provides EUR 132 million on top of the 2014-2020 cohesion policy allocation for Cyprus. Of this, the Cypriot authorities used EUR 57 million on COVID-19-related support (giving 18 500 firms non-repayable financial support for working capital), and EUR 65 million to support workers as part of its short-term employment support plans. EUR 10 million is being used for climate change adaptation measures and the prevention and management of climate-related risks. With SAFE (Supporting Affordable Energy), the 2014-2020 cohesion policy funds may also be mobilised by Cyprus to support vulnerable households, jobs and companies particularly affected by high energy prices.

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



(1) 5 largest contributions to SDGs in million (EUR) current prices

Source: European Commission

In both 2014-2020 and 2021-2027, cohesion policy funds have contributed substantially to the Sustainable Development Goals (SDGs). These funds support 11 of the 17 SDGs, notably SDG 9 ‘industry, innovation and infrastructure’ and SDG 7 ‘affordable and clean energy’⁽²⁵⁾.

Other EU funds make significant resources available for Cyprus. The common

agricultural policy (CAP) made EUR 0.7 billion available in 2014-2022, and will keep supporting Cyprus with EUR 0.4 billion in 2023-2027. The two CAP Funds (European Agricultural Guarantee Fund and European Agricultural Fund for Rural Development), contribute to the European Green Deal while ensuring long-term food security. They promote social, environmental and economic sustainability and innovation in agriculture and rural areas, in coordination with other EU funds. The European Maritime and Fisheries Fund made EUR 40 million available to Cyprus in 2014-2020 and the European Maritime, Fisheries and Aquaculture Fund allocates EUR 38 million in 2021-2027.

Cyprus also benefits from other EU programmes, notably the Connecting Europe Facility, which under CEF 2 (2021-2027) has so far allocated EU funding of EUR 5.73 million to two projects on strategic transport networks. Similarly, Horizon Europe has so far allocated nearly EUR 66 million to Cypriot R&I actors, while in the previous programming period, Horizon 2020 earmarked EUR 320 million. The Public Sector Loan Facility established under the Just Transition Mechanism makes EUR 7.67 million of grant support from the Commission available in 2021-2027, which will be combined with loans from the EIB to support investments by public sector entities in just transition regions.

Cyprus received support under the European instrument for temporary support to mitigate unemployment risks in an emergency (SURE) to finance short-time work schemes and similar measures to mitigate the impact of COVID-19. The Council granted financial assistance to Cyprus of EUR 632 million in loans, which supported around 40% of workers and 25% of firms in 2020, and around 21% of workers and 12% of firms in 2021.

The Technical Support Instrument (TSI) supports Cyprus in designing and implementing growth-enhancing reforms, including the implementation of its recovery and resilience plan (RRP). Cyprus has received significant support since 2015, including to improve the digital skills of adults, and to transition from a cash public accounting system to an accrual system. The TSI is also helping Cyprus implement specific reforms and investments included in its RRP, e.g. support

⁽²⁴⁾ REACT-EU allocation on Cohesion Open Data.

⁽²⁵⁾ Other EU funds contribute to the implementation of the SDGs. In 2014-2022, this includes both the European Agricultural Fund for Rural Development (EARDF) and the European Maritime and Fisheries Fund (EMFF).

for its national strategy for the enhancement of financial literacy, and for its one-stop-shop for building renovation and renewable energy sources permitting. ⁽²⁶⁾

⁽²⁶⁾ Country factsheets on reform support are available [here](#).



ANNEX 5: RESILIENCE

This Annex illustrates Cyprus’ relative resilience capacities and vulnerabilities using the Commission’s resilience dashboards (RDB) ⁽²⁷⁾. Comprising a set of 124 quantitative indicators, the RDB provide broad indications of Member States’ ability to make progress across four interrelated dimensions: social and economic, green, digital, and geopolitical. The indicators show vulnerabilities ⁽²⁸⁾ and capacities ⁽²⁹⁾ that can become increasingly relevant, both to navigate ongoing transitions and to cope with potential future shocks. To this end, the RDB help to identify areas that need further efforts to build stronger and more resilient economies and societies. They are summarised in Table A5.1 as synthetic resilience indices, which illustrate the overall relative situation for each of the four dimensions and their underlying areas for Cyprus and the EU-27 ⁽³⁰⁾.

According to the set of resilience indicators under the RDB, Cyprus generally displays a similar level of vulnerabilities compared to the EU average. Cyprus shows medium-high vulnerabilities in the green and geopolitical dimensions of the RDB, and medium-low vulnerabilities in the social and economic and digital dimensions. It has higher vulnerabilities than the EU average in the areas of ‘economic and financial stability and sustainability’, all areas of the green dimension, as well as in ‘raw material and energy supply’ and ‘financial globalisation’. Cyprus has relatively low vulnerabilities in relation to ‘inequalities and social impact of the transitions’, ‘health, education and work’, ‘digitalisation of industry and the public space’ and ‘cybersecurity’.

Compared to the EU average, Cyprus shows an overall slightly lower level of

capacities across all RDB indicators. It has medium-high resilience capacities in the digital and geopolitical dimensions, medium capacities in the social and economic dimension, and medium-low capacities in the green dimension. Cyprus shows stronger capacities than the EU average in the areas of ‘economic and financial stability and sustainability’, ‘raw material and energy supply’, ‘value chains and trade’ and ‘security and demography’. There is significant room for improving capacities compared to the EU in ‘climate change mitigation and adaptation’ and the ‘digitalisation of the public space’.

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

Dimension/Area	Vulnerabilities		Capacities	
	CY	EU-27	CY	EU-27
Social and economic	Medium	Medium	Medium	Medium
Inequalities and social impact of the transitions	Medium	Medium	Medium	Medium
Health, education and work	Medium	Medium	Medium	Medium
Economic & financial stability and sustainability	High	High	Low	Medium
Green	High	High	High	Medium
Climate change mitigation & adaptation	High	High	High	Medium
Sustainable use of resources	High	High	High	Medium
Ecosystems, biodiversity, sustainable agriculture	High	High	High	Medium
Digital	Medium	Medium	Medium	Medium
Digital for personal space	Medium	Medium	Medium	Medium
Digital for industry	Medium	Medium	Medium	Medium
Digital for public space	Medium	Medium	High	Medium
Cybersecurity	Medium	Medium	Medium	Medium
Geopolitical	High	High	Medium	Medium
Raw material and energy supply	High	High	Medium	Medium
Value chains and trade	Low	Not available	Medium	High
Financial globalisation	High	Medium	Medium	Medium
Security and demography	Medium	Medium	Low	Medium

Vulnerabilities Index

- High
- Medium-high
- Medium
- Medium-low
- Low
- Not available

Capacities Index

- High
- Medium-high
- Medium
- Medium-low
- Low
- Not available

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

⁽²⁷⁾ For details see https://ec.europa.eu/info/strategy/strategic-planning/strategic-foresight/2020-strategic-foresight-report/resilience-dashboards_en; see also 2020 Strategic Foresight Report (COM(2020) 493).

⁽²⁸⁾ Vulnerabilities describe features that can exacerbate the negative impact of crises and transitions, or obstacles that may hinder the achievement of long-term strategic goals.

⁽²⁹⁾ Capacities refer to enablers or abilities to cope with crises and structural changes and to manage the transitions.

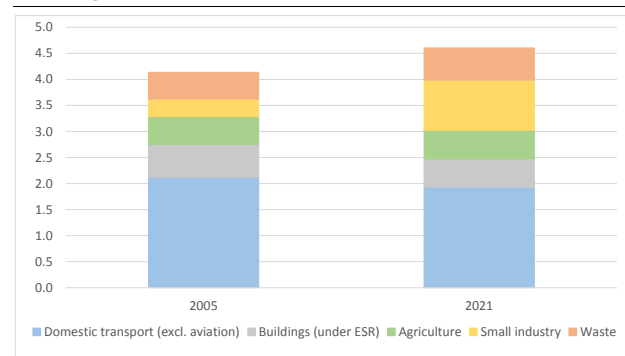
⁽³⁰⁾ This Annex is linked to Annex 1 on SDGs, Annex 6 on the green deal, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource productivity, efficiency and circularity, Annex 10 on the digital transition and Annex 14 on the European pillar of social rights.

Cyprus' green transition requires continued action on several aspects including rolling out renewable energy, reducing transport emissions, and climate adaptation. Implementation of the European Green Deal is underway in Cyprus; this Annex provides a snapshot of the key areas involved ⁽³¹⁾.

Cyprus has not yet defined all the climate policy measures it needs to reach its 2030 climate target for the effort sharing sectors ⁽³²⁾. Data for 2021 on Cyprus' greenhouse gas emissions in the effort sharing sectors are expected to show the country far exceeded its annual emission allocations ⁽³³⁾. Current policies in Cyprus are projected to reduce these emissions by 7% relative to 2005 levels in 2030. The additional measures planned would bring the emission reductions to 17%. This is not sufficient to reach the effort sharing target set before it was raised in line with the EU's 55% objective, let alone the new target to reduce by 32% ⁽³⁴⁾. In its recovery and

resilience plan, Cyprus has attributed 41 % of its Recovery and Resilience Facility allocation to key reforms and investments to attain climate objectives ⁽³⁵⁾. Cyprus has set a greenhouse gas emissions reduction target for its effort sharing sectors of 21% to be achieved with domestic measures by 2030, compared to 2005 emissions ⁽³⁶⁾.

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



Source: European Environmental Agency.

⁽³¹⁾ The overview in this Annex is complemented by Annex 7 on energy security and affordability, Annex 8 on the fair transition to climate neutrality and environmental sustainability, Annex 9 on resource productivity, efficiency and circularity, Annex 11 on innovation, and Annex 19 on taxation.

⁽³²⁾ Member States' greenhouse gas emission targets for 2030 ('effort sharing targets') were increased by Regulation (EU) 2023/857 (the Effort Sharing Regulation) amending Regulation (EU) 2018/842, aligning the action in the concerned sectors with the objective to reach EU-level, economy-wide greenhouse gas emission reductions of at least 55% relative to 1990 levels. The Regulation sets national targets for sectors outside the current EU Emissions Trading System, notably: buildings (heating and cooling), road transport, agriculture, waste, and small industry. Emissions covered by the EU ETS and the Effort Sharing Regulation are complemented by net removals in the land use sector, regulated by Regulation (EU) 2018/841 (the Land Use, Land Use Change and Forestry (LULUCF) Regulation) amended by Regulation (EU) 2023/839.

⁽³³⁾ Cyprus' annual emission allocations for 2021 were some 4.0 Mt CO₂eq, and its approximated 2021 emissions were 4.6 Mt (see European Commission, *Accelerating the transition to climate neutrality for Europe's security and prosperity: EU Climate Action Progress Report 2022*, SWD (2022)343). Greenhouse gas emissions in the effort sharing sectors above the annual emission allocations do not imply non-compliance with the Effort Sharing Regulation, as it contains specific flexibility provisions that may be used for compliance.

⁽³⁴⁾ See the information on the distance to the 2030 climate policy target in Table A6.1. Existing and additional measures as of 15 March 2021.

Continued forest fire prevention policies and better cropland and grassland management would help preserve the capacity of Cyprus' land use sector to remove carbon. Cyprus' land use, land use change and forestry (LULUCF) sector is a net carbon sink, although the volume of carbon removed has dropped significantly since 2021. For 2030, Cyprus' target for the land use sector implies net removals of 352 kt CO₂eq (see Table A6.1) ⁽³⁷⁾.

Fossil fuels still make up the bulk of Cyprus' energy mix and are set to remain with the future use of natural gas. A more ambitious and faster rollout of renewables in energy production can help remedy this. In 2021, oil accounted for 84% of the energy mix. Renewable energy sources play an important role in the energy mix of Cyprus, especially in

⁽³⁵⁾ For example, green taxation (introducing a carbon tax for fuels), a gradual phase-in of a levy on water, and a charge on landfill waste.

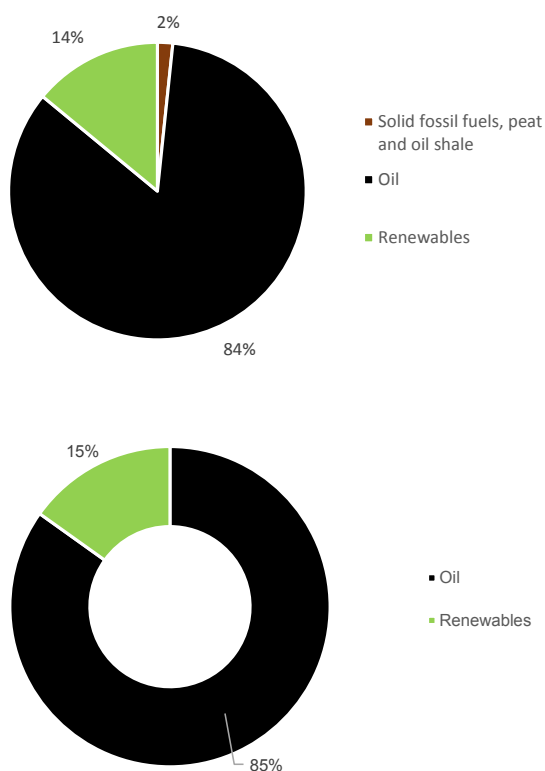
⁽³⁶⁾ According to Cyprus' national energy and climate plan (NECP). An update of the plan, mandated by Regulation (EU) 2018/1999 (the Governance Regulation), is underway.

⁽³⁷⁾ This value is indicative and will be updated in 2025 (as mandated by Regulation (EU) 2023/839).



heating, due to the extensive use of solar thermal systems. Their share kept stable in 2021 at 14%, while the share of coal remained low at only 2% of the energy mix. There is a similar breakdown in the electricity mix, with oil accounting for 85% and renewables for 15%. Cyprus is one of the few Member States that does not use natural gas in its energy mix. However, it plans to integrate gas in its energy system by mid-2024, after the needed infrastructure (liquified natural gas terminal and pipes to bring the gas on shore) is completed.

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



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

The recovery and resilience plan contains significant green investments focused on renewable energy production⁽³⁸⁾, addressing the security of supply, and tackling the energy isolation of Cyprus. The EuroAsia Interconnector project will allow a better integration of renewable energy

⁽³⁸⁾ Cyprus will need to increase its renewable energy target in the updated NECP to reflect the more ambitious EU climate and energy targets in the Fit for 55 Package and in the REPowerEU Plan

production and it aims to ensure secure energy supplies and more competitive wholesale electricity prices in Cyprus (see Annex 7). Other green investments under the plan include several support schemes worth EUR 89 million, promoting renewables, improving energy efficiency and combating energy poverty. It includes several reforms to bring in green taxation, reform the electricity market and facilitate the take-up of electric vehicles.

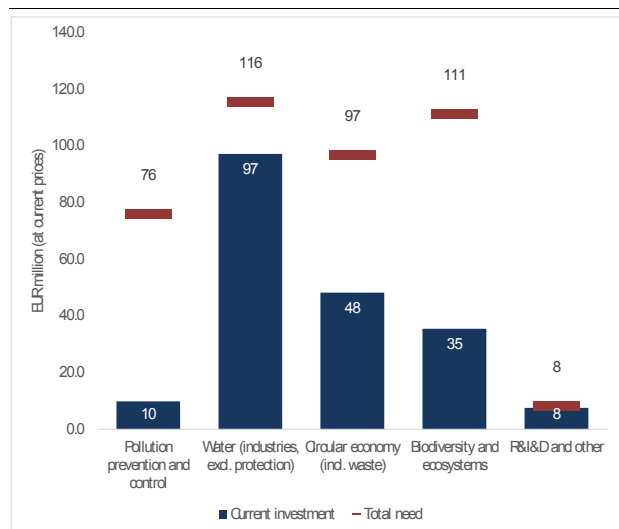
Cyprus' recovery and resilience plan contains investments in energy efficiency⁽³⁹⁾ and smartening the electricity grid, which would benefit from swifter implementation. Energy efficiency investments in both the public and private sector and the mass installation of smart metering infrastructure are key measures with important implementation steps planned for 2023. Action to reduce CO2 emissions (at least 345 566 tonnes of CO2eq) in industries, businesses and organisations is another important investment planned in Cyprus' recovery and resilience plan.

Cyprus has a long way to go to achieve sustainable mobility. Transport emissions constitute 21% of Cyprus' overall greenhouse gas emissions, and they are rising steadily. Individual transport is the main form of transport on the island. Cyprus' market for zero-emission passenger cars is still in its infancy; it has the lowest market share of electric vehicles and the lowest number of charging points in the EU in 2022.⁽⁴⁰⁾ Cyprus' recovery and resilience plan contains EUR 87 million of investments to promote sustainable mobility, notably for public transport, to promote the use of electric vehicles and reforms to facilitate their take-up. Cyprus is largely on track to meet EU air quality standards, although health-related external costs from air pollution exceed EUR 549 million per year.

⁽³⁹⁾ After the conclusion of the negotiations for a recast EED, the ambition of both the EU and national targets as well as of the national measures for energy efficiency to meet these targets is expected to increase

⁽⁴⁰⁾ Source: European Alternative Fuels Observatory.

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



Source: European Commission.

Cyprus would benefit from investing more in environmental and biodiversity protection and in measures to tackle pollution. Between 2014 and 2020, the environmental investment needs⁽⁴¹⁾ were estimated to be at least EUR 408 million per year while investment was at about EUR 198 million, leaving a gap of at least EUR 209 million per year (see Graph A6.3)⁽⁴²⁾. Cyprus' EU Natura 2000 network covers 29% of land under the effective control of the government⁽⁴³⁾. Cyprus has yet to allocate sufficient resources to the protection and management of these sites, and to completing designations for the marine network. Cyprus' recovery and resilience plan has element of green tax reform, in line with the polluter pays principle and to make more use of environmental taxation (see Annex 19). Initial results are expected in 2023.

Cyprus' vulnerability to climate change is growing; adaptation challenges relate to

⁽⁴¹⁾ Environmental objectives include pollution prevention and control, water management and industries, circular economy and waste, biodiversity and ecosystems (European Commission, 2022, Environmental Implementation Review, [country report Cyprus](#)).

⁽⁴²⁾ When also accounting for needs estimated at EU level only (e.g., water protection, higher circularity, biodiversity strategy).

⁽⁴³⁾ In 2021, Cyprus had 37.7% terrestrial protected areas (Natura 2000 and nationally designated areas), against the EU average of 26.4% (European Environment Agency, 2023, [Natura 2000 Barometer](#)).

sustainable water management in particular⁽⁴⁴⁾. Cyprus has among the highest levels of water stress in the EU due to its semi-arid climate and few natural surface water bodies. Cyprus is set to face higher temperatures and less precipitation, promoting desertification⁽⁴⁵⁾. Water resources, agriculture, coastal zones, tourism, biodiversity, energy, fisheries and aquaculture, soils, forests, public health, and infrastructure are all affected by climate change. These sectors all depend on water, which is becoming increasingly scarce⁽⁴⁶⁾. Wildfires could pose risks to public finances if insurance penetration remains low. Cyprus is implementing its national adaptation strategy through a national action plan. To support the strategy and the action plan, Cyprus intends coordinate climate adaptation in the eastern Mediterranean and the Middle East. Cyprus' recovery and resilience plan has measures to protect against and prevent forest fires and floods.

Cyprus provides fossil fuel and other environmentally harmful subsidies that could be considered for reform, while ensuring food and energy security and mitigating social effects. Environmentally harmful subsidies have been identified, via an initial assessment, in the agriculture, forestry and fishing, electricity, gas, steam and air conditioning, professional, scientific, and technical activities and other services activities. Examples of such subsidies include the reduced VAT rate for fertilisers and pesticides⁽⁴⁷⁾. A mapping of all

⁽⁴⁴⁾ [JRC map of vulnerability to disasters in Europe](#).

⁽⁴⁵⁾ AVLI (2022) Climate Change in Cyprus: <https://avli.org/resources/climate-change-in-cyprus-report/>

⁽⁴⁶⁾ According to the [6th IPCC climate adaptation report](#), in southern Europe, more than a third of the population will be exposed to water scarcity at global warming of 2°C.

⁽⁴⁷⁾ Fossil fuel figures in EUR of 2021 from the 2022 State of the Energy Union report. Initial assessment of environmentally harmful subsidies done by the Commission in [the 2022 toolbox for reforming environmentally harmful subsidies in Europe](#), using OECD definitions, and based on the following datasets: OECD Agriculture Policy Monitoring and Evaluations; OECD Policy Instruments for the Environment (PINE) Database; OECD Statistical Database for Fossil Fuels Support; IMF country-level energy subsidy estimates. [Annex 4](#) of the toolbox contains detailed examples of subsidies on the candidates for reform.

environmentally harmful subsidies by Cyprus would help prioritise candidates for reform.

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

		2005	2017	2018	2019	2020	2021	"Fit for 55"			
								2030 target/value	Distance WEM	Distance WAM	
Progress to policy targets	Greenhouse gas emission reductions in effort sharing sectors ⁽¹⁾	Mt CO2eq, % pp	4.2	2%	-1%	5%	1%	-	-32%	-25	-15
	Net carbon removals from LULUCF ⁽²⁾	kt CO2eq	-221	-307	-302	-297	-299	-235	-352	n/a	n/a
							National contribution to 2030 EU target				
	Share of energy from renewable sources in gross final consumption of energy ⁽³⁾	%	3%	10%	14%	14%	17%	18%	23%		
Energy efficiency, primary energy consumption ⁽³⁾	Mtoe	2.5	2.5	2.5	2.5	2.2	2.3	2.4			
Energy efficiency, final energy consumption ⁽³⁾	Mtoe	1.8	1.9	1.9	1.9	1.6	1.7	2.0			
		Cyprus						EU			
Fiscal and financial indicators	Environmental taxes (% of GDP)	% of GDP	2.9	3.0	2.8	2.5	2.4	2.3	2.35	2.23	2.24
	Environmental taxes (% of total taxation) ⁽⁴⁾	% of taxation	9.1	9.0	8.6	7.4	7.0	6.5	5.89	5.57	5.52
	Government expenditure on environmental protection	% of total exp.	0.7	0.8	0.6	0.7	0.8	0.9	1.70	1.61	1.6
	Investment in environmental protection ⁽⁵⁾	% of GDP	0.3	0.3	0.2	0.4	-	-	0.4	0.4	0.4
	Fossil fuel subsidies ⁽⁶⁾	EUR2021bn	0.1	0.2	0.2	0.2	0.3	0.2	53.0	50.0	-
	Climate protection gap ⁽⁷⁾	score 1-4					1.9	1.6			1.5
	Climate	Net greenhouse gas emissions	1990 = 100	157.0	158.0	157.0	157.0	135.0	147.0	76.0	69.0
	Greenhouse gas emission intensity of the economy	kg EUR10	0.46	0.45	0.43	0.40	0.41	-	0.31	0.30	0.26
	Energy intensity of the economy	kgoe EUR10	0.13	0.13	0.12	0.12	0.11	-	0.11	0.11	-
Energy	Final energy consumption (FEC)	2015=100	106.0	114	111.4	113.2	94.0	101.2	102.9	94.6	-
	FEC in residential building sector	2015=100	103.0	105.7	103.4	111.0	112.2	109.6	101.3	101.3	106.8
	FEC in services building sector	2015=100	106.6	110.7	130.1	135.8	113.7	124.2	100.1	94.4	100.7
Pollution	Smog-precursor emission intensity (to GDP) ⁽⁸⁾	tonne EUR10	1.3	1.2	1.2	1.1	1.0	-	0.9	0.9	-
	Years of life lost due to air pollution by PM2.5	per 100,000 inh.	695.1	735.4	667.8	703.5	685.1	-	581.6	544.5	-
	Years of life lost due to air pollution by NO ₂	per 100,000 inh.	258.6	184.8	256.3	215.7	223.3	-	309.6	218.8	-
	Nitrates in ground water	mg NO3litre	-	-	-	-	-	-	21.0	20.8	-
Biodiversity	Land protected areas	% of total	37.5	37.5	-	37.6	37.6	37.7	26.2	26.4	26.4
	Marine protected areas	% of total	0.1	-	-	8.6	-	8.6	10.7	-	12.1
	Organic farming	% of total utilised agricultural area	4.9	4.6	4.6	5.0	4.6	6.3	8.5	9.1	-
			2017	2018	2019	2020	2021	2022	2020	2021	2022
Mobility	Share of zero-emission vehicles ⁽⁹⁾	% in new registrations	0.3	0.3	0.6	0.4	0.8	3.1	5.4	8.9	10.7
	Number of ACDC recharging points (AFR categorisation)		-	-	-	49	62	68	188626	330028	432518
	Share of electrified railways	%	-	-	-	-	-	-	56.6	n/a	56.6
	Hours of congestion per commuting driver per year		35.7	37.3	37.7	38.4	n/a	n/a	28.7	n/a	n/a

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

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

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

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

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

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

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

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

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



While Cyprus does not use gas in its energy mix, is highly dependent on imported fossil fuels, which can be mitigated by accelerating the clean energy transition. This Annex⁽⁴⁸⁾ sets out actions carried out by Cyprus to achieve the REPowerEU objectives, including through the implementation of its recovery and resilience plan, in order to improve energy security and affordability while accelerating the clean energy transition, and contributing to enhancing the EU’s competitiveness in the clean energy sector⁽⁴⁹⁾.

The development of gas infrastructure in Cyprus to allow using gas for electricity production could strengthen security of supply, as it will make available an additional energy supply. Cyprus plans to develop a liquefied natural gas (LNG) terminal at Vassilikos Area which includes pipelines to transport the gas to new gas-fired facilities to be constructed, as well as to the near Electricity Authority of Cyprus (EAC) generation plant. The project was initially scheduled to be completed in 2022, but is delayed and is expected to be operational in mid-2024. Completing the project will allow the country to switch a part of its electricity generation to combined cycle gas turbines replacing older and less efficient steam turbines.

Gas discoveries in Cyprus, by making available an endogenous energy source, have the potential to the country to less dependent on imported fossil fuels supplies. In 2022, two significant gas discoveries were made in offshore Cyprus (Block 6), and there is strong interest from companies to commercialise these gas resources. In the long term, these discoveries have the potential to end Cyprus’ dependence on imported fossil fuels by replacing them with

domestic sources with a limited contribution to the green transition of the Cypriot economy. The EastMed pipeline, a Project of Common Interest, remains one of the options to transport gas from Cypriot and Israeli fields to Greece and the EU as long as it is future-proof and adapted to transporting also hydrogen to avoid carbon lock-in of assets.

Completion of the planned electricity interconnections will have a positive impact on the share of renewable energy in power generation in Cyprus, accelerate the green transition, reduce energy prices and end its energy isolation. The EuroAsia interconnector⁽⁵⁰⁾ works were inaugurated in October 2022 and the project received the second largest grant from the Connecting Europe Facility (EUR 657 million in total) and is also funded by the Recovery and Resilience Facility (EUR 100 million). This is a crucial project that will link Cyprus to the energy network of the rest of the EU and contribute to the completion of the EU internal energy market. Timely implementation of the interconnector will greatly benefit both the Cypriot and European electricity markets, will help Cyprus and neighbouring countries achieve strategic autonomy in energy, will boost their green transition and will reduce energy prices for consumers by allowing them to switch to cleaner, cheaper and safer energy sources compared to fossil fuels. This interconnector will play a crucial role in enabling the grid to take on more renewables.

Given Cyprus’ dependence on fossil fuel-based electricity production and its isolated system, electricity prices have been mainly driven by the prices of oil product and the cost of purchasing greenhouse gas emission allowances for the electricity produced using imported fuel oil. Retail electricity prices for households increased in the second half of 2022 by 76% compared with the second half of 2021 and were above the EU average⁽⁵¹⁾. Prices for industrial consumers were among the highest in the EU. Cyprus has taken fiscal measures to reduce energy bills, including those targeting the most vulnerable consumers (the measures included

⁽⁴⁸⁾ It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition, by Annex 8 on the actions taken to mitigate energy poverty and protect the most vulnerable ones, by Annex 9 as the transition to a circular economy will unlock significant energy and resource savings, further strengthening energy security and affordability, and by Annex 12 on industry and single market complementing ongoing efforts under the European Green Deal and REPowerEU.

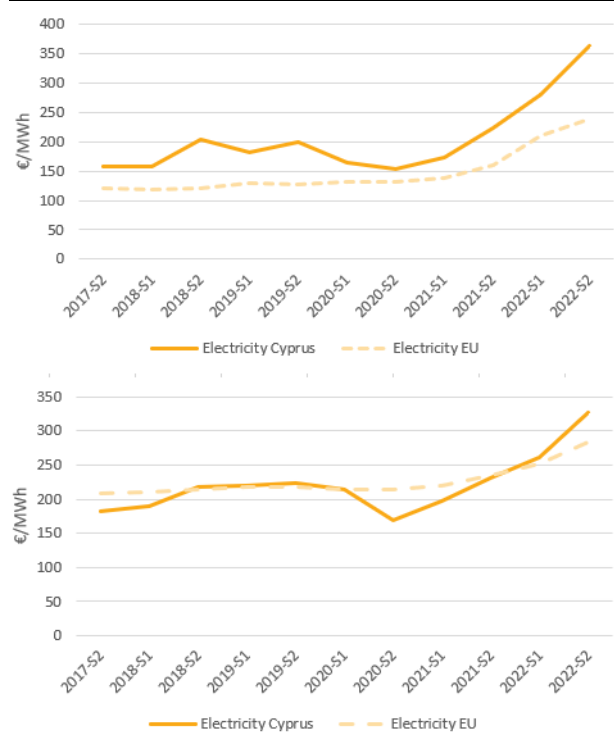
⁽⁴⁹⁾ In line with the Green Deal Industrial Plan COM(2023) 62 final, and the proposed Net-Zero Industry Act COM(2023) 161 final

⁽⁵⁰⁾ Commissioner Simson attends Energy Transition Conference and EuroAsia Interconnector ceremony (europa.eu)

⁽⁵¹⁾ [Statistics | Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat)

reducing the VAT rate on household electricity bills, with higher reductions for vulnerable households, reducing the excise duty on petroleum products and subsidising electricity rates for consumers). The government also subsidised energy efficiency grant schemes to encourage consumers to save electricity.

Graph A7.1: Cyprus's retail electricity prices for industry (top) and households (bottom)



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

Source: Eurostat

Cyprus has made progress in the deployment of renewable energy. The overall installed electricity capacity, including fossil fuels, came to 2 GW in 2021, with the renewables share being 25% ⁽⁵²⁾. The share of renewables in electricity generation was 14.9%, in an overall 5.12 TWh in 2021 ⁽⁵³⁾. In 2022, it is estimated that the total renewable energy capacity installed increased to 635 MW from 485 MW in 2021. Solar energy capacity increased from 315 MW in 2021 to 464 MW in 2022 (47.3% increase) while wind energy remained stable ⁽⁵⁴⁾. In 2021, Cyprus

introduced a support scheme to encourage the use of renewable energy sources and energy savings in households (roof insulation, fitting solar panels or a combination of both). Guarantees of Origin in Cyprus are issued independent of any support received, e.g. investment support or feed in tariff premiums. Revenues from Guarantees of Origin are therefore an additional benefit to producers ⁽⁵⁵⁾.

To speed up the deployment of renewable energy, Cyprus approved new legislation ⁽⁵⁶⁾ setting shorter maximum timeframes for the completion of the licensing process for RES projects. As part of the RRP, Cyprus will create a 'Digital One-Stop Shop' to streamline renewable energy source projects and facilitate energy renovation in buildings by providing guidance and support throughout the entire process. These one-stop shops will also act as a single point of contact for all applicants for the permitting of RES projects. The contract for the IT platform required for the one-stop shop was signed in 2022.

The RRP helps Cyprus achieve its energy efficiency commitments. The building sector in Cyprus represents a big part of the final energy consumption (the residential sector alone represented approximately 22% of final energy consumption in the country in 2021, according to Eurostat data). As a result, the building sector has an important role to play in the energy transition. Energy efficiency in buildings will remain a key priority for Cyprus, particularly with regard to worst-performing buildings. The country must increase its renovation ambition in line with global energy saving objectives, also continuing to address energy poverty. Further actions to mobilise investment, especially private investment, in buildings energy efficiency, including for the development of skills in the energy and construction sectors and for technical assistance (e.g., one-stop-shops), could increase the renovation rate in the country. Cyprus is not carrying out in-depth checks of compliance on products covered by ecodesign and energy labelling (source: ICSMS database). This generates serious concerns

⁽⁵²⁾ Eurostat - SHARES

⁽⁵³⁾ Eurostat - SHARES

⁽⁵⁴⁾ IRENA, Renewable capacity statistics 2023

⁽⁵⁵⁾ <https://data.europa.eu/doi/10.2833/12592>

⁽⁵⁶⁾ Law on the Promotion and Encouragement of the Use of Renewable Energy Sources Law of 2022 (L.107(I)/2022), replacing the old 2013 Law

with respect to the level playing field among economic operators and uncertainty as to the compliance levels of the concerned products, and therefore possible missed energy and CO2 savings.

Cyprus still lags behind in the implementation of smart meters. Until 2022 only a few thousand smart meters have been installed while the RRP foresees the delivery and installation of 400 000 meters by 2026. Smart meters will allow better electricity management, resulting in lower consumption and better integration of a growing share of renewable energy sources and improved quality of the service for consumers.

Despite the steady increase in its R&D spending, particularly from 2015 (more than doubled) Cyprus has one of the EU's lowest scores in R&D intensity, according to Eurostat, 0.89% in 2021 (provisional data). It also invests far less in the Energy Union R&I priorities than the EU average. Nevertheless, according to the NECP, national objectives and funding targets for research, innovation and competitiveness will triple annual spending in research and development on energy and climate leading to overall R&D of 1.5% of GDP. The diversification of the energy mix requires a parallel endeavour to strengthen the effectiveness of the renewable energy value chain and of clean energy carriers while increasing energy efficiency. Cyprus is considered a strong innovator in the European Innovation Scoreboard 2022. However, between 2015 and 2020, Cyprus showed an important percentage increase, (+81 %) in clean energy technology related publications.

Table A7.1: Key Energy Indicators

	CYPRUS				EU				
	2018	2019	2020	2021	2018	2019	2020	2021	
ENERGY DEPENDENCE	Import Dependency [%]	92%	93%	93%	90%	58%	61%	57%	56%
	of Solid fossil fuels	98%	117%	105%	98%	44%	44%	36%	37%
	of Oil and petroleum products	99%	100%	102%	98%	95%	97%	97%	92%
	of Natural Gas	0%	0%	0%	0%	83%	90%	84%	83%
	Dependency from Russian Fossil Fuels [%]								
	of Hard Coal	50%	100%	100%	100%	40%	44%	49%	47%
	of Crude Oil	n.a	n.a	n.a	n.a	30%	27%	26%	25%
of Natural Gas	n.a	n.a	n.a	n.a	40%	40%	38%	41%	
	2015	2016	2017	2018	2019	2020	2021	2022*	
ELECTRICITY	Gross Electricity Production (GWh)	4535	4888	5004	5061	5141	4849	5119	
	Combustible Fuels	4186	4515	4621	4640	4685	4313	4405	
	Nuclear	0	0	0	0	0	0	0	
	Hydro	0	0	0	0	0	0	0	
	Wind	222	227	211	221	239	240	246	
	Solar	127	146	172	199	218	296	468	
	Geothermal	0	0	0	0	0	0	0	
	Other Sources	0	0	0	0	0	0	0	
	Net Imports of Electricity (GWh)	0	0	0	0	0	0	0	
	As a % of electricity available for final consumption	0%	0%	0%	0%	0%	0%	0%	-
Electricity Interconnection (%)	0%	0%	0%	0%	0%	0%	0%		
	2015	2016	2017	2018	2019	2020	2021	2022*	
DIVERSIFICATION OF GAS SUPPLIES	Gas Consumption (in bcm)								
	Gas Imports - by type (in bcm)								
	Gas imports - pipeline								
	Gas imports - LNG								
	Gas Imports - by main source supplier (in bcm)								
	2019	2020	2021	2022					
DIVERSIFICATION OF GAS SUPPLIES	LNG Terminals								
	Number of LNG Terminals (FSRU ¹)	0	0	0	0				
	LNG Storage capacity (m3 LNG)	0	0	0	0				
	Underground Storage								
	Number of storage facilities	0	0	0	0				
Operational Storage Capacity (bcm)	0	0	0	0					
	2019	2020	2021	2022					
CLEAN ENERGY	VC investments in climate tech start-ups and scale-ups (EUR Mln)	n.a	n.a	n.a	n.a				
	as a % of total VC investments in Cyprus	n.a	n.a	n.a	n.a				
	Research & Innovation spending in Energy Union R&I priorities (2)								
	Public R&I (EUR mln)	0,7	0,4	0,2	n.a				
	Public R&I (% GDP)	0,003%	0,002%	0,001%	n.a				
	Private R&I (EUR mln)	5,7	n.a	n.a	n.a				
	Private R&I (% GDP)	0,03%	n.a	n.a	n.a				

(1) The ranking of the main suppliers is based on the latest available figures (for 2021)

(2) FSRU included

(3) Venture Capital investments include Venture Capital deals (all stages) and Private Equity Growth/Expansion deals (for companies that have previously been part of the portfolio of a VC investment firm).

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

ANNEX 8: FAIR TRANSITION TO CLIMATE NEUTRALITY

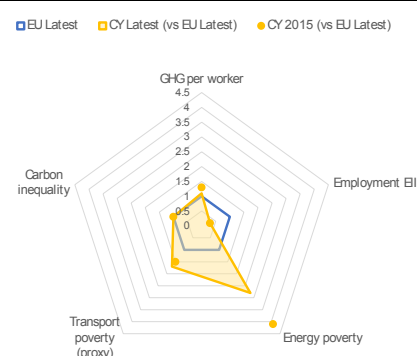
This Annex monitors Cyprus' progress in ensuring a fair transition towards climate neutrality and environmental sustainability, notably for workers and households in vulnerable situations. The number of jobs in the green economy has risen quickly. To ensure a fair green transition in line with the Council Recommendation⁽⁵⁷⁾ and to further support the implementation of REPowerEU, up- and reskilling is key. Cyprus' recovery and resilience plan (RRP) outlines measures for a fair green transition⁽⁵⁸⁾, such as the construction of technical schools and related training schemes rolled out by the Human Resource Development Authority of Cyprus (HRDA). The territorial just transition plans and action supported by the European Social Fund Plus (ESF+) contribute to creating jobs, with a focus on skills for the green transition.

Employment in Cyprus' sectors that are most affected by the green transition remains stable, but workers in declining activities need active support. The greenhouse gas (GHG) emissions intensity of Cyprus' workforce declined from 17.5 to 15.4 tonnes per worker between 2015 and 2021, but it was still above the EU average of 13.7 tonnes in 2021 (see Graph A8.1 and Table A8.1). Employment in Cyprus' energy-intensive industries (EII) represented a stable share of 0.9% of total employment in 2021 (in 2020: 0.9% vs 3.0% in the EU). The job vacancy rate in construction, which is one of the key sectors for the green transition, is lower than the EU average (1.0% vs 4.0% in EU in 2021)⁽⁵⁹⁾. As part of the RRP, training programmes will be implemented by the HRDA to strengthen and upgrade the knowledge and skills of people employed in the sectors of the green economy, or the unemployed who wish to enter these sectors.

Upskilling and reskilling in declining and transforming sectors is necessary to contribute to the green transition. Skills are key for smooth labour market transitions and preserving jobs in transforming sectors. In Cyprus, 28% of citizens believe they do not

have the necessary skills to contribute to the green transition (EU: 38%)⁽⁶⁰⁾ (see Annex 15). Specific investment under the RRP, and the Just Transition Mechanism provides training for reskilling workers affected by the transition, together with a broader training offer at national level and flexibility mechanisms to encourage in-company training. In Cyprus, the Just Transition Fund will provide support for upgrading the skills of the workforce through training and education in green professions, creating a Green Technical School and providing specialised training in related sectors.

Graph A8.1: Fair transition challenges in Cyprus



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

While energy poverty indicators improved in recent years, Cyprus remains among the worst performers in the EU, and the current spike in energy prices can be expected to worsen the situation. The share of the population unable to keep their homes adequately warm declined from 28.3% in 2015 to 19.4% in 2021⁽⁶¹⁾. In particular, 50% of the population at risk of poverty (AROP) in 2021 (EU: 16.4% in 2021) and 20.2% of lower middle-income households (in deciles 4-5) were affected in 2021 (EU: 8.2% in 2021). Before the energy price hikes, an estimated 8% of the total population and 25.8% of the (expenditure-based) AROP population had residential expenditure on electricity, gas, and

⁽⁵⁷⁾ Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality (2022/C 243/04) covers employment, skills, tax-benefit and social protection systems, essential services and housing.

⁽⁵⁸⁾ See also 2022 Country Report (Annex 6).

⁽⁵⁹⁾ Eurostat (JVS_A_RATE_R2)

⁽⁶⁰⁾ Special Eurobarometer 527. Fairness perceptions of the green transition (May – June 2022).

⁽⁶¹⁾ Energy poverty is a multi-dimensional concept. The indicator used focuses on an outcome of energy poverty. Further indicators are available at the [Energy Poverty Advisory Hub](#).



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

Indicator	Description	CY 2015	CY Latest	EU Latest
GHG per worker	Greenhouse gas emissions per worker - CO2 equivalent tonnes	17.5	15.4 (2021)	13.7 (2021)
Employment EII	Employment share in energy-intensive industries, including mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24), automotive (C29) - %	0.9	0.9 (2020)	3 (2020)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm - %	28.3	19.4 (2021)	6.9 (2021)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport - %	55.1	62.7 (2023)	37.1 (2023)
Carbon inequality	Average emissions per capita of top 10% of emitters vs bottom 50% of emitters	5.1	5.1 (2020)	5 (2020)

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

other fuels⁽⁶²⁾ above 10% of their household budget (below the estimated EU average of 26.9% and 48.2%, respectively). There are also significant energy costs related to cooling houses, which are amongst the highest in the EU. In 2020, space cooling constituted 10.2% of the final energy consumption of households compared to the EU average of 0.4%. Cyprus' RRP includes targeted investment to improve the energy efficiency of residential buildings, especially for vulnerable households.

The increased energy prices in 2021-2023 negatively affect household budgets, in particular those on lower incomes. As a result of energy price changes during the August 2021 to January 2023 period relative to the 18 months prior (cf. Annex 7), in the absence of policy support and behavioural responses, the share of individuals living in households which spend more than 10% of their budget on energy would have increased by 13.4 pps for the whole population and by 24.5 pps among the (expenditure-based) AROP population, more than the EU-level increases for the latter (16.4 pps and 19.1 pps, respectively)⁽⁶³⁾. Expenditure shares of low and lower-middle income groups would have increased the most, in particular for electricity but also for gas (Graph A8.2). Among the (expenditure-based) AROP population, the share of individuals living in households with budget shares for private transport fuels⁽⁶⁴⁾ above 6% would have increased more than the EU average (7.5 pps vs 5.3 pps), reaching 62.7% in January 2023 (EU: 37.1%) due to the increase in transport fuel prices.

⁽⁶²⁾ Products defined according to the European Classification of Individual Consumption according to Purpose (ECOICOP): CP045, including electricity, natural gas and town gas as well as liquefied hydrocarbons (butane, propane, etc.). Related expenditures include also cost of use e.g., storage containers, metering, and handling.

⁽⁶³⁾ [EMPL-JRC GD-AMEDI/AMEDI+](#); see details in the related technical brief.

⁽⁶⁴⁾ ECOICOP: CP0722.

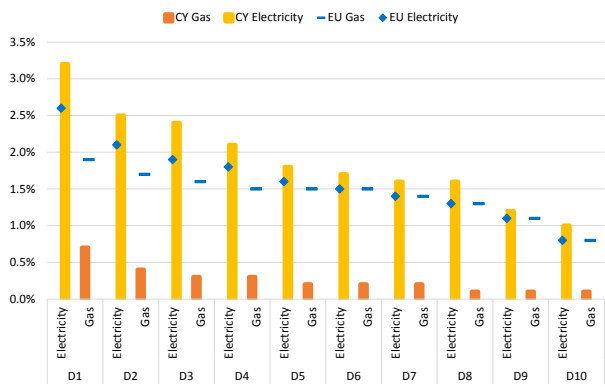
Access to public transport is perceived to be worse than in the EU overall, albeit slightly better in rural areas. The share of people perceiving public transport as available, affordable and of good quality (40%, 48%, and 45%, respectively) is lower in Cyprus than in the EU (55%, 54%, and 60%, respectively). As regards these perceptions, rural areas in Cyprus perform better than urban areas, and better only in terms of affordability when compared to rural areas in the EU⁽⁶⁵⁾. Cyprus' RRP and the Cohesion Policy programme "Thalia" includes investment in sustainable urban and rural transport projects, promoting public and non-motorised transport, and accessibility-enhancing measures which will improve urban transport for all users, including people with disabilities. The Department of Road Transport has also implemented an incentive scheme with subsidies for buying electric vehicles, including taxis and buses. Carbon inequality, as measured by the average carbon footprint of the top 10% emitters among the population in Cyprus is about 5.1 times higher than that of the bottom 50% (see Graph A8.1), which is almost the same level as the EU average (5.0). In Cyprus, the average levels of air pollution in 2020 stood above the EU average (14 vs 11.2 µg/m PM2.5), with all regions being exposed to critical levels of air pollution⁽⁶⁶⁾, leading to significant health impacts, in particular on vulnerable groups, and 565 premature deaths annually⁽⁶⁷⁾.

⁽⁶⁵⁾ EU (rural): 46%, 48% and 56% respectively. Special Eurobarometer 527.

⁽⁶⁶⁾ Two times higher than the recommendations in the WHO Air Quality Guidelines (annual exposure of 5µg/m3)

⁽⁶⁷⁾ [EEA- Air Quality Health Risk Assessment](#)

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



Mean change of energy expenditure as a percentage (%) of total expenditure per income decile (D) due to observed price changes (August 2021 – January 2023 relative to the 18 months prior), excl. policy support and behavioural responses.

Source: EMPL-JRC GD-AMEDI/AMEDI+ projects, based on Household Budget Survey 2015 and Eurostat inflation data for CP0451 and CP0452.

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

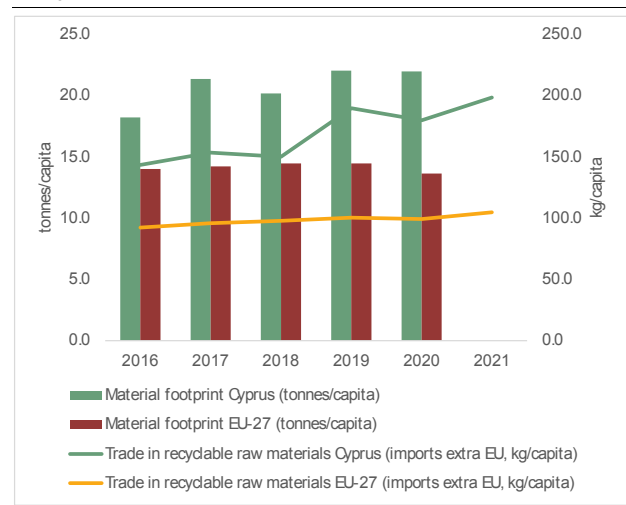
Cyprus' circular economy transition has a long way to go to meet EU's circular economy goals. The EU 2020 circular economy action plan (CEAP) aims at doubling the circular material use rate between 2020 and 2030. Cyprus' circular use of material slightly increased from 2.4% in 2016 to 2.8% in 2021. However, this rate is still well below the EU 2021 average of 11.7%. The CEAP also aims to significantly decrease the EU's material footprint. Cyprus' material footprint (22%) was significantly above the 2020 EU-27 average (13.7%), confirming the upward trend since 2016.

Cyprus recently adopted new policies to address circular economy challenges, but more effort might be warranted. In 2021, Cyprus' 2021-2027 action plan for the circular economy was adopted, funded primarily by the recovery and resilience plan. The plan is built around four pillars: (i) cultural change for a circular economy (including a grant scheme for SMEs to move into a circular economy model); (ii) providing incentives for investments in the circular economy; (iii) developing circular economy infrastructures; and (iv) managing municipal waste.

The treatment of municipal waste has been stagnating for several years and is well below the EU's average performance level. With a municipal waste recycling rate of 15.3% in 2021, Cyprus has largely missed the EU target for recycling of 50% by 2020. Cyprus is at risk of missing the EU's municipal waste recycling target for 2025 and is at a significant distance from the landfill reduction target for 2035. Some 62% of Cyprus' municipal waste was still landfilled in 2021, which is significantly higher than the 2021 EU average (23%), although in a downward trend over the years. Moreover, a significant amount (20% in 2021)

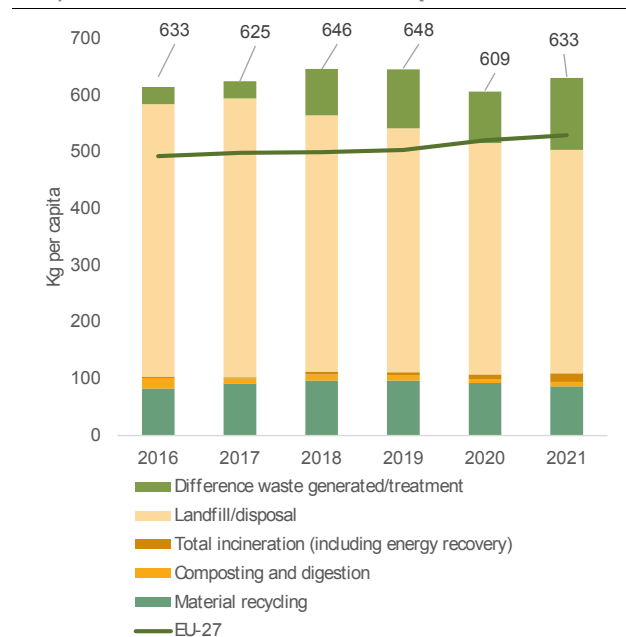
of the total generated waste in Cyprus is unaccounted for in terms of treatment. Sub-standard landfilling is still widespread, diverting materials and resources that could be reused, remanufactured or recycled. Cyprus will need to make considerable efforts to meet the EU's recycling targets for the period up to 2035 through improvements in separate collection and treatment of waste, in particular biowaste, and improve its data management system in order to present coherent and verifiable data sets (especially on packaging waste).

Graph A9.1: Trend in material use



Source: Eurostat

Graph A9.2: Treatment of municipal waste



Source: Eurostat



The built environment system continues to contribute to nature deterioration. The recovery rate of construction and demolition waste has increased considerably since 2016 but remains below the EU average (79% vs 89%). Soil sealing progressed between 2015 and 2018 and remains higher than the EU average. The effective protection of Natura 2000 areas – especially coastal zones – from adverse developments can be reinforced by the effective implementation of management plans and environmental assessments.

The agri-food system has yet to design out food waste. Cyprus' composting and anaerobic digestion per head has been decreasing since 2016, significantly below the EU average in 2021 at 8 kg per head vs 100 kg. Increasing anaerobic digestion could enhance Cyprus' strategic autonomy by generating biomethane and/or producing organic fertilisers.

Additional investments could close the remaining financing gap in the circular economy, including waste management. The financing gap was estimated at EUR 48 million per year between 2014 and 2020. Over this period, investment needs were estimated to be at least EUR 97 million per year while investment baselines were EUR 48 million per year (see Annex 6). Investing in the circular economy is key to achieving the transition.

Additional investments for wastewater and waste management infrastructure could significantly accelerate this transition – the additional cumulative investment need for Cyprus was estimated at EUR 217 million (around EUR 22 million per year) over baselines, of which around 95% relates to wastewater. An additional EUR 74 million (around EUR 10.6 million per year) of investments in 2021-2027 on collection, recycling reprocessors, biowaste treatment, waste sorting facilities and digitalising waste registries would significantly facilitate Cyprus' effort to meet the recycling targets for municipal waste and packaging waste. Cyprus is already using funds from the ERDF and the RRF, but further investments could further address the needs of the country.

Table A9.1: Overall and systemic indicators on circularity

AFEA	2016	2017	2018	2019	2020	2021	EUJ-27	Latest year EUJ-27
Overall state of the circular economy								
Material footprint (tonnes/capita)	182	214	202	220	220	-	13.7	2020
YoY growth in persons employed in the circular economy (%) ¹	42	0.0	-	-0.5	-	-	2.9	2019
Water exploitation index plus (ME+) (%)	102.1	101.1	92.5	113.0	-	-	3.6	2019
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	1.6	1.4	1.5	1.5	1.4	1.6	2.3	2021
Circular material use rate (%) ²	24	24	2.8	2.9	3.7	2.8	11.7	2021
Recycling rate (% of municipal waste)	16.1	16.0	16.7	16.6	16.6	15.3	49.6	2021
Built environment								
Recovery rate from construction and demolition waste (%) ³	57.0	-	64.0	-	79.0	-	89.0	2020
Soil sealing index (base year = 2006) ⁴	113.7	-	122.9	-	-	-	108.3	2018
Agri-food								
Food waste (kg per capita) ⁵	-	-	-	-	397.0	-	131.0	2020
Composting and digestion (kg per capita)	190	9.0	11.0	9.0	6.0	8.0	100.0	2021

(1) Persons employed in the circular economy only tracks direct jobs in selected sub-sectors of NACE codes E, C, G and S; (2) the circular material use rate measures the share of material recovered and fed back into the economy in overall material use; (3) the recovery rate of construction and demolition waste includes waste which is prepared for reuse, recycled or subject to material recovery, including through backfilling operations; (4) soil sealing: 2016 column refers to 2015 data; (5) food waste includes primary production, processing and manufacturing, retail and distribution, restaurants and food services, and households.

Source: Eurostat, European Environment Agency

Digital transformation is key to ensuring a resilient and competitive economy. In line with the Digital Decade Policy Programme, and in particular with the targets in that Programme for digital transformation by 2030, this Annex describes Cyprus' performance on digital skills, digital infrastructure/connectivity and the digitalisation of businesses and public services. Where relevant, it makes reference to progress on implementing the Recovery and Resilience Plan (RRP). Cyprus allocates 23% of its total RRP budget to digital (EUR 0.3 billion) ⁽⁶⁸⁾.

The Digital Decade Policy Programme sets out a pathway for Europe's successful digital transformation by 2030. The Programme provides a framework for assessing the EU's and Member States' digital transformation, notably via the Digital Economy and Society Index (DESI). It also provides a way for the EU and its Member States to work together, including via multi-country projects, to accelerate progress towards the Digital Decade digital targets and general objectives ⁽⁶⁹⁾. More generally, several aspects of digital transformation are particularly relevant in the current context. In 2023, the European Year of Skills, building the appropriate skillset to make full use of the opportunities that digital transformation offers is a priority. A digitally skilled population increases the development and adoption of digital technologies and leads to productivity gains ⁽⁷⁰⁾. Digital technologies, infrastructure and tools all play a role in the fundamental transformation needed to adapt the energy system to the current structural challenges ⁽⁷¹⁾.

Cyprus performs relatively poorly on digital skills. The basic digital skills of Cypriots and the share of ICT specialists in the workforce

remain below the EU average. The share of female ICT specialists in Cyprus is in line with the EU average. In December 2021, Cyprus adopted a 2021-2025 National Action Plan for Digital Skills ('e-skills Action Plan') to improve digital skills of everyone in Cyprus, including vulnerable groups. This plan is being implemented as an RRP measure and includes, among others, training programmes for the labour force in the private and public sector and the general population, as well as a communication strategy to promote lifelong learning.

Cyprus performs moderately well on digital infrastructure/connectivity. Cyprus is one of the few Member States that have reached a 100% of the overall 5G coverage. It also made progress in the deployment of the 5G coverage on the 3.4-3.8 GHz spectrum band, which is essential for enabling advanced applications requiring large spectrum bandwidth, while remaining below the EU average. However, despite recent significant improvements in fixed very high capacity network (VHCN) coverage, Cyprus still ranks below the EU average. Cyprus envisages to set up a voucher scheme to further improve fixed VHCN connectivity by encouraging the building of fibre cabling in private premises.

Cyprus has a mixed performance on the digitalisation of businesses. The percentage of SMEs with at least a basic level of digital intensity is around the EU average. However, Cyprus is doing well on cloud computing services, and is above the EU average (42% vs an EU average of 34%). A key challenge is that Cypriot companies do not yet make full use of all of the state-of-the-art digital technologies available. Their use, for example, of big data and artificial intelligence is below the EU average. In the context of its RRP, Cyprus implemented a measure that supports the use of blockchain to verify the authenticity of Cypriot traditional foods and drinks.

Digital public services is one area in which Cyprus performs well, though it still has room for improvement. The country scores slightly above the EU average on digital public services for business (85 versus 84) but is still below the EU average in providing digital public services for citizens (64 versus 77) but the level of e-Government users is very high

⁽⁶⁸⁾ The share of financial allocations that contribute to digital objectives has been calculated using Annex VII of the RRF Regulation.

⁽⁶⁹⁾ The Digital Decade targets as measured by DESI indicators and complementary data sources are integrated to the extent currently available and/or considered particularly relevant in the MS-specific context.

⁽⁷⁰⁾ See for example OECD (2019): OECD Economic Outlook, Digitalisation and productivity: A story of complementarities, [OECD Economic Outlook, Volume 2019 Issue 1 | OECD iLibrary \(oecd-ilibrary.org\)](https://www.oecd-ilibrary.org/oecd-economic-outlook/volume-2019-issue-1).

⁽⁷¹⁾ The need and possible actions for a digitalisation of the energy system are laid out in the Communication 'Digitalisation the energy system – EU action plan' (COM(2022)552).

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

	Cyprus			EU	Digital Decade target by 2030 (EU)
	DESI 2021	DESI 2022	DESI 2023	DESI 2023	
Digital skills					
At least basic digital skills	NA	50%	50%	54%	80%
% individuals		2021	2021	2021	2030
ICT specialists ⁽¹⁾	3.1%	3.9%	3.9%	4.5%	20 million
% individuals in employment aged 15-74	2020	2021	2021	2021	2030
Digital infrastructure/connectivity					
Fixed Very High Capacity Network (VHCN) coverage	26%	41%	60%	73%	100%
% households	2020	2021	2022	2022	2030
Fibre to the Premises (FTTP) coverage ⁽²⁾	26%	41%	60%	56%	-
% households	2020	2021	2022	2022	2030
Overall 5G coverage	0%	75%	100%	81%	100%
% populated areas	2020	2021	2022	2022	2030
5G coverage on the 3.4-3.8 GHz spectrum band	NA	NA	25%	41%	-
% populated areas			2022	2022	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	NA	NA	70%	69%	90%
% SMEs			2022	2022	2030
Big data ⁽³⁾	6%	6%	6%	14%	75%
% enterprises	2020	2020	2020	2020	2030
Cloud ⁽³⁾	NA	42%	42%	34%	75%
% enterprises		2021	2021	2021	2030
Artificial Intelligence ⁽³⁾	NA	3%	3%	8%	75%
% enterprises		2021	2021	2021	2030
Digitalisation of public services					
Digital public services for citizens	NA	56	64	77	100
Score (0 to 100)		2021	2022	2022	2030
Digital public services for businesses	NA	86	85	84	100
Score (0 to 100)		2021	2022	2022	2030
Access to e-health records	NA	NA	70	71	100
Score (0 to 100)			2023	2023	2030

(1) The 20 million target represents about 10% of total employment.

(2) The Fibre to the Premises coverage indicator is included separately as its evaluation will also be monitored separately and taken into consideration when interpreting VHCN coverage data in the Digital Decade.

(3) At least 75 % of Union enterprises have taken up one or more of the following, in line with their business operations:

(i) cloud computing services; (ii) big data; (iii) artificial intelligence.

Source: Digital Economy and Society Index

(99% compared to 74% at EU level) ⁽⁷²⁾. Cyprus' RRP includes measures to provide with high-quality and user-friendly digital services, such as the reform 'Digital Services Factory'. When it comes to electronic identification (eID), Cyprus has introduced a national eID scheme that is expected to be notified under the eIDAS Regulation in 2023.

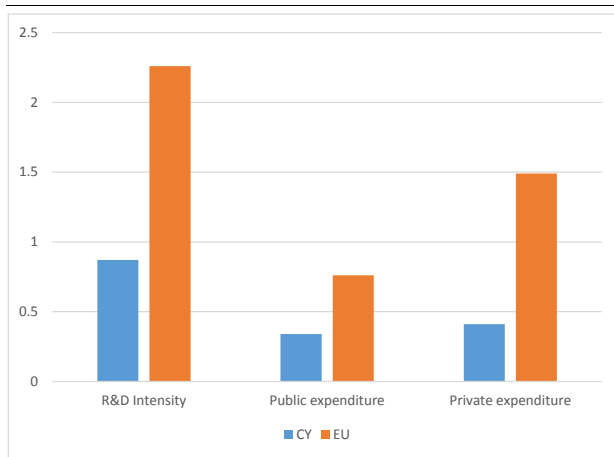
⁽⁷²⁾ Source: [Data visualisation tool, key indicators](#) and Digital Economy and Society Index 2022.

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

Cyprus is a 'strong innovation performer' and its performance has been improving over time. According to the 2022 edition of the European Innovation Scoreboard⁽⁷³⁾, Cyprus performs at 107% of the EU average and has been improving thanks to the innovation performance of the business sector.

Cyprus' R&D intensity has been gradually improving, but it still remains far below the European average. In 2021, R&D investment increased from the previous year and reached 0.87% of GDP. However, the country still fares amongst the lowest in the EU (2.26%). While both public expenditure on R&D (at 0.34% of GDP in 2021) and business enterprise expenditure on R&D (0.41% of GDP in 2021) are on the rise, they remain below the EU average (0.76% and 1.49% respectively) and hinder the country's ability to diversify its economy towards innovation-led activities.

Graph A11.1: R&D expenditure as % of GDP, 2021



Source: Eurostat, 2022

While the private sector contributes more to R&D spending, the available Cyprus venture capital market continues to

decrease and it is below the European average. Between 2019-2021, the venture capital started to decrease from 0.049% in 2019 to 0.028% of GDP in 2021, compared with the EU average of 0.07%. The Cypriot recovery and resilience plan (RRP) seeks to support an increase in public and private research and innovation (R&I) investments. Nevertheless, this increased investment would benefit from further policies capable of further strengthening the country's national R&I system⁽⁷⁴⁾.

Academia-business linkages remain a major bottleneck hampering the valorisation of research results. The number of public-private co-publications is increasing as a proportion of total R&D publications (8.3% in 2021), and is now above the EU average (7.1%). However, business sector involvement in financing public R&D is one of the lowest in Europe (0.006% in 2019 compared to an EU average of 0.054%). Findings from a recent Policy Support Facility study (2020)⁽⁷⁵⁾ highlighted that businesses are not properly benefiting from the research, laboratory and consulting services that universities and research institutes could offer. The RRP contains measures to facilitate and support the optimal use of research infrastructure by opening up access to other research institutions and the business sector. For example, policies and incentives are to be introduced to facilitate and foster access to publicly funded research infrastructure and laboratories. Moreover, a central Knowledge Transfer Office was to be set up to support effective collaboration and facilitate the commercialisation of research results.

Weak human capital in science and technology is limiting Cyprus' capacity to create new knowledge and generate further innovations. The share of new graduates in science & engineering per thousand population aged 25-34 ranks amongst the lowest in Europe (7.2% in 2020, compared to the EU average of 16%). The low rate of scientific talent integration is evidenced by the very low share of researchers amongst public-sector

⁽⁷³⁾ 2022 European Innovation Scoreboard, Country profile: Cyprus. Web page: https://ec.europa.eu/assets/rtd/eis/2022/ec_rtd_eis-country-profile-cy.pdf. The EIS 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).

⁽⁷⁴⁾ Particularly considering that the total RRF funding for R&I equals to 115% of the public R&D expenditure of Cyprus 2020.

⁽⁷⁵⁾ <https://ec.europa.eu/research-and-innovation/en/statistics/policy-support-facility/specific-support-cyprus>.

Table A11.1: Key innovation indicators

Cyprus	2010	2015	2019	2020	2021	EU average (1)
Key indicators						
R&D intensity (GERD as % of GDP)	0.44	0.48	0.71	0.84	0.87	2.26
Public expenditure on R&D as % of GDP	0.31	0.3	0.32	0.36	0.34	0.76
Business enterprise expenditure on R&D (BERD) as % of GDP	0.08	0.11	0.3	0.37	0.41	1.49
Quality of the R&I system						
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	8.6	8.6	8.2	:	:	9.8
PCT patent applications per billion GDP (in PPS)	0.3	0.5	0.7	:	:	3.3
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	10.8	6.8	8.1	8.0	8.3	7.1
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.004	0.002	0.006	:	:	0.054
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	5.2	8.2	7.5	7.2	:	16
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	0.022	0.014	0.041	:	:	0.194
Business enterprise expenditure on R&D (BERD) financed by the public sector (national and abroad) as % of GDP	0.022	0.014	0.041	0.056	:	0.104
Green innovation						
Share of environment-related patents in total patent applications filed under PCT (%)	11	9.7	12.4	:	:	13.3
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.013	0.0	0.049	0.033	0.028	0.074
Employment in fast-growing enterprises in 50% most innovative sectors	1.3	0.1	1.6	:	:	5.5

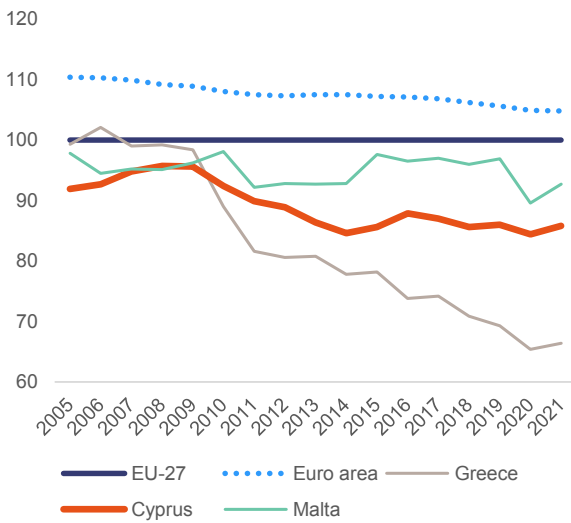
(1) EU average for the latest available year or the year with the highest number of country data

Source: Eurostat, OECD, DG JRC, Science-Metrix (Scopus database and EPO's Patent Statistical database), Invest Europe

employees per thousand active population (1.9% in 2020) and amongst private-sector employees (1.3% in 2020), compared with the EU averages (4.0% and 5.1% respectively). The RRP includes a targeted reform to encourage and attract human capital in R&I. Also, it includes a reform to digitally transform school units with the aim of enhancing digital skills and skills related to Science, Technology, Engineering and Math education. Notwithstanding these measures, addressing this challenge is key to building critical mass, equipping the population with the skills needed for the digital and green transition and building a stronger, more diversified, innovation-based economy.

In 2022, Cyprus' labour productivity recovered faster than the EU average, but a significant gap in productivity levels remains vis-à-vis the EU. Aggregate labour productivity in Cyprus grew by 2.7% in 2022 (compared to an EU average of 1.5%). Nevertheless, Cyprus' labour productivity still only makes up 85.8% of the EU average, thereby placing the country in the lower tail of the productivity distribution, as shown in Graph A12.1.

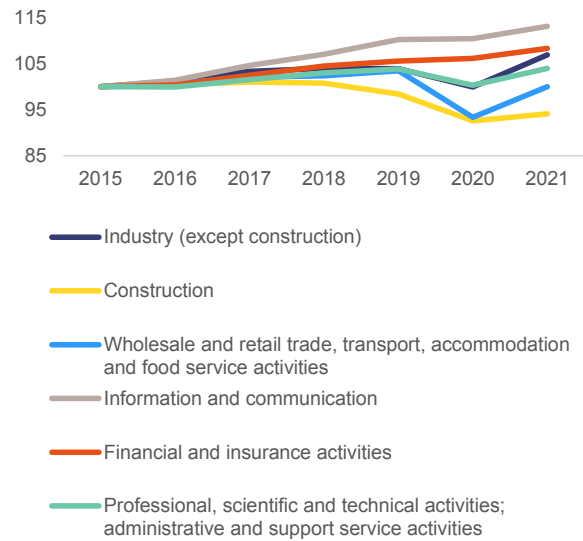
Graph A12.1: Labour productivity [% of EU-27]



Source: Eurostat.

As shown in Graph A12.2, however, sectoral differences in productivity are noticeable, with ICT and financial services being almost unaffected by the pandemic and performing significantly better than industry or construction.

Graph A12.2: Labour productivity by sector [2015=100]



Source: Eurostat.

Given the service-based nature of its economy, Cyprus was less affected than other member states by the shortages and disruptions that have characterised the global post-pandemic conjuncture. In 2022, material shortages were reported by 4% of firms compared to an EU average of 47%, while import concentration for raw materials also remained below average. Moreover, Cyprus is less dependent than the EU average on non-food materials exported by Russia and Ukraine, whose supply and availability have been severely impacted after Russia's military aggression. For instance, while the EU as a whole is dependent on Russia for 9.4% of its extra-EU imports of metals and 5% of minerals, Cyprus' dependency amounts to 2.5% and 0% respectively ⁽⁷⁶⁾.

Nevertheless, the Cypriot economy maintains important strategic dependencies, due inter alia to its peculiar energy mix and pattern of sectoral diversification. While Cyprus does not rely on gas for energy generation (see Annex 6 for the details on Cyprus' energy mix), and as such does not suffer from the over-reliance on Russian gas that affects other member states, the country is still very largely dependent on oil imports, which are fundamental for its electricity generation. This constitutes an

⁽⁷⁶⁾ European Commission, JRC Technical Report - Russian trade in non-food raw materials (2022), and European Commission, JRC Technical Report - Ukraine's trade in non-food raw materials (2022).

important and structural strategic dependency for the Cypriot economy and its businesses, as it exposes them not only to the fluctuation of oil prices on international markets, but also to one of the highest prices for electricity in the EU, even before the energy crisis ⁽⁷⁷⁾. This scenario has clear consequences for firms' cost competitiveness, and has a disproportionate impact on SMEs, which have more limited resources to cope with high energy prices. Moreover, despite its potential, Cyprus still lags substantially behind in the uptake of renewable energy. Although there have been recent improvements, notably with the simplifications of permitting procedures included inter alia in the Recovery and Resilience Plan (RRP), there is still ample room for improvement to exploit the full potential of renewables while opening up business opportunities for innovative firms and reducing electricity costs for businesses and households.

For what concerns the business environment, room for improvement remains, as long-standing challenges including in access to finance continue to hinder Cypriot firms' potential. The area of access to finance remains problematic for businesses, and particularly SMEs, with largely below-average scores in the EIF SME Access to Finance composite index, and particularly low results in the equity subindex (0.06 compared to an EU average of 0.23). Moreover, the availability of non-traditional forms of finance, such as venture capital, equity funding and business angels, is also comparatively scarce, while firms' liquidity management is also hampered by the practice of late payments, which according to the SAFE survey affected over 60% of Cypriot SMEs in 2022 (compared to an EU average of 43%). Similarly, other challenges in the Cypriot business environment relate to contract enforcement, with 76% of surveyed investors mentioning that they are fairly or very unconfident that their investments are protected by the law and courts (11 p.p. more than last year) ⁽⁷⁸⁾.

For what concerns public procurement, over the last years Cyprus has made important efforts to open it up and attract more competition, although some important

weaknesses continue raising concerns. The latter include a very high share of contracts awarded exclusively based on the lowest price (94% in 2022, vs. an EEA average of 56%), as well as the increasing use of negotiated procedures without a call for tenders (39% in 2022, up from 28% in 2021). Moreover, health procurement is challenging, as over the past few years the sector has gathered the highest number of overall single bidder procedures and direct awards in the country. Aggregating procurement e.g. in the health sector could help attract more competition and further professionalise public buyers.

Whilst Cyprus is well integrated into the single market, in particular for services, barriers remain. According to the Single Market Scoreboard, Cyprus' trade integration for services is among the highest in the EU, while for goods it is below the average. However, the level of restrictiveness in the regulation of professions remains well above the EU average in numerous cases, despite recent improvements with respect to architects. In the case of lawyers, patent/trademark agents and real estate agents, for instance, the level of restrictiveness is among the highest in the EU, with lawyers being subject to rules e.g. on incompatibility and multidisciplinary that restrict the potential of the sector. Restrictiveness is also above the EU average for civil engineers, architects and tourist guides ⁽⁷⁹⁾. Similarly, restrictions remain comparatively high in the retail sector – especially as regards the establishment of shops, where Cyprus ranks among the most restrictive Member States ⁽⁸⁰⁾.

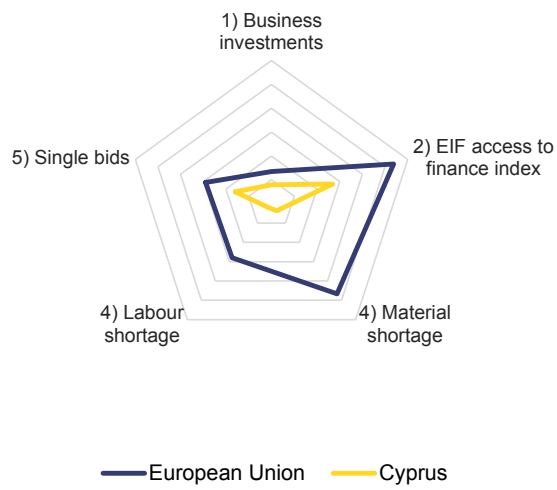
⁽⁷⁷⁾ 2021 Cyprus competitiveness report.

⁽⁷⁸⁾ European Commission, EU Justice Scoreboard.

⁽⁷⁹⁾ European Commission, COM(2021) 385 final.

⁽⁸⁰⁾ European Commission, [Retail Restrictiveness Indicator](#) (2022 update), forthcoming.

Graph A12.3: **Business environment and productivity drivers**



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

Table A12.1: Industry and the single market

POLICY AREA		INDICATOR NAME	2018	2019	2020	2021	2022	EU27 average (*)
HEADLINE INDICATORS	Economic Structure	Net private investment, level of private capital stock, net of depreciation, % GDP ⁽¹⁾	4.3	7.2	8.3	7.2	7.7	3.7
		Net public investment, level of public capital stock, net of depreciation, % GDP ⁽¹⁾	2.7	0.5	0.6	0.6	0.8	0.4
	Cost competitiveness	Real labour productivity per person in industry (% yoy) ⁽²⁾	5	3.8	-2.2	7.1	-0.2	1.4
RESILIENCE	Shortages	Material shortage (industry), firms facing constraints, % ⁽³⁾	2	1	3	2	4	47
		Labour shortage using survey data (industry), firms facing constraints, % ⁽³⁾	2	3	2	1	2	28
		Vacancy rate (business economy) ⁽⁴⁾	1.7	1.9	1.6	2.5	2.8	3.1
RESILIENCE	Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials ⁽⁵⁾	0.15	0.14	0.13	0.14	0.15	0.18
		Installed renewables electricity capacity, % of total electricity produced ⁽⁶⁾	13.7	14.2	16.6	18.9	n.a.	50.9
SINGLE MARKET	Single Market integration	EU trade integration, % ⁽⁷⁾	29.1	31.5	32.5	35.8	38.3	45.8
	Restrictions	EEA Services Trade Restrictiveness Index ⁽⁸⁾	n.a.	n.a.	n.a.	n.a.	n.a.	0.05
	Public procurement	Single bids, % of total contractors ⁽⁹⁾	37	22	25	23	16	29
BUSINESS ENVIRONMENT - SMES	Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle ⁽¹⁰⁾	30.61	27.5	25.4	33.4	n.a.	28.0
	Business demography	Bankruptcies, Index (2015=100) ⁽¹¹⁾	38	43.5	35.9	64.1	20.7	86.8
		Business registrations, Index (2015=100) ⁽¹¹⁾	n.a.	n.a.	n.a.	n.a.	n.a.	121.2
	Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment ⁽¹²⁾	n.a.	n.a.	n.a.	n.a.	n.a.	13
		Payment gap - public sector, difference in days between offered and actual payment ⁽¹²⁾	n.a.	n.a.	n.a.	n.a.	n.a.	15
		Share of SMEs experiencing late payments in past 6 months, % ⁽¹³⁾	n.a.	51.1	52.3	63.6	63.6	43
Access to finance	EIF Access to finance index - Loan, Composite: SME external financing over last 6 months, index values between 0 and 1 ⁽¹⁴⁾	0.32	0.33	0.29	0.19	n.a.	0.46	
	EIF Access to finance index - Equity, Composite: VC/GDP, IPO/GDP, SMEs using equity, index values between 0 and 1 ⁽¹⁴⁾	0.18	0.07	0.2	0.06	n.a.	0.23	

(*) last available year

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



This Annex outlines the performance of Cyprus' public administration, which is essential for providing services and carrying out reforms. Overall, Cyprus ranks below the EU-27 average on government effectiveness⁽⁸¹⁾. Weaknesses consist of strategic planning, evidence-based policymaking and problems in coordinating between different levels of government. Cyprus has launched several reforms under its recovery and resilience plan (RRP) to address entrenched problems, modernise the management of human resources in the civil service and improve the digital transformation of the public administration.

Cyprus' civil service has a good age and education structure. Recruitment and promotion procedures for managers are being revised towards a merit-based system. The ratio of staff aged 49 or below to those aged 50 or above is higher than the EU-27 average and so is the share of civil servants participating in adult learning (Table A13.1). New legislation drafted under the RRP on the appraisal and promotion of civil servants was passed in 2022 and will enter into force in 2024. This aims to remove the bias towards seniority over capability and ensure that performance is considered in promotions. Recruitment competitions will be run by a new examination centre, with selection based on meritocratic and objective exams to be designed with help provided through the EU's Technical Support Instrument.

Cyprus faces challenges as regards the quality of its legislation. Performance on the OECD indicators on regulatory governance and policy is well below the EU average (Graph A13.2). Regulatory impact assessments and stakeholder consultations are provided for in the law. However, consultations do not always take place at an early stage. Other factors that weaken the quality of legislation are overregulation, inexistent *ex post* evaluation of policies and non-standardised public consultation on draft legislation. Certain sectors of the economy are overregulated or are subject to legislation that is obsolete or has a distorting effect⁽⁸²⁾.

⁽⁸¹⁾ Worldwide Governance Indicators, 2021 data.

⁽⁸²⁾ European Commission, Public administration and governance: Cyprus, Publications Office of the EU, 2023 (forthcoming).

Consistency between different policy sectors is a major indicator of government effectiveness and Cyprus has taken action to implement its better regulation agenda, which is centrally coordinated by the Ministry of Finance. Moreover, under the recovery and resilience facility, and supported by the EU's Technical Support Instrument, Cyprus is undertaking a major reform of its legislative process. This includes digitalisation and the creation of an open data platform (e-legislation platform), accessible to citizens and businesses, which will improve legal certainty and transparency and give investors access to complete and credible information on Cyprus' legal and regulatory framework.

The justice system faces serious challenges as regards its efficiency and digitalisation. Civil, commercial and administrative judicial proceedings are still very lengthy. The time needed to resolve administrative cases in first instance courts (843 days in 2021) is among the longest in the EU. A few measures in the RRP aim to modernise how cases are heard to deliver a cheaper, more accessible and faster service to the parties involved. The goal is to reduce backlogs in cases and appeals. Although certain digital tools are used in courts, e-justice in general needs improvement. No systemic deficiencies in judicial independence have been reported.⁽⁸³⁾

Cyprus accelerated the digitalisation of its public administration during the COVID-19 pandemic. Several digital solutions were put in place during the crisis to make it easier for citizens, workers and SMEs to submit applications. However, there is still a gap with the EU-27 average in the share of e-government users and in the e-government benchmark score (Table A13.1). Ongoing RRP measures aim to improve the provision of digital public services, including in the health and justice sectors.

There are gaps in the quality of State-Owned Enterprise (SOE) governance with respect to best practice. To illustrate, there is no requirement for all large SOEs to be subject to external audits by an independent audit firm

⁽⁸³⁾ For a more detailed analysis of the performance of the justice system in Cyprus, see the 2023 [EU Justice Scoreboard](#) (forthcoming) and the country chapter for Cyprus in the 2023 [Rule of Law Report](#) (forthcoming).

Table A13.1: Public administration indicators

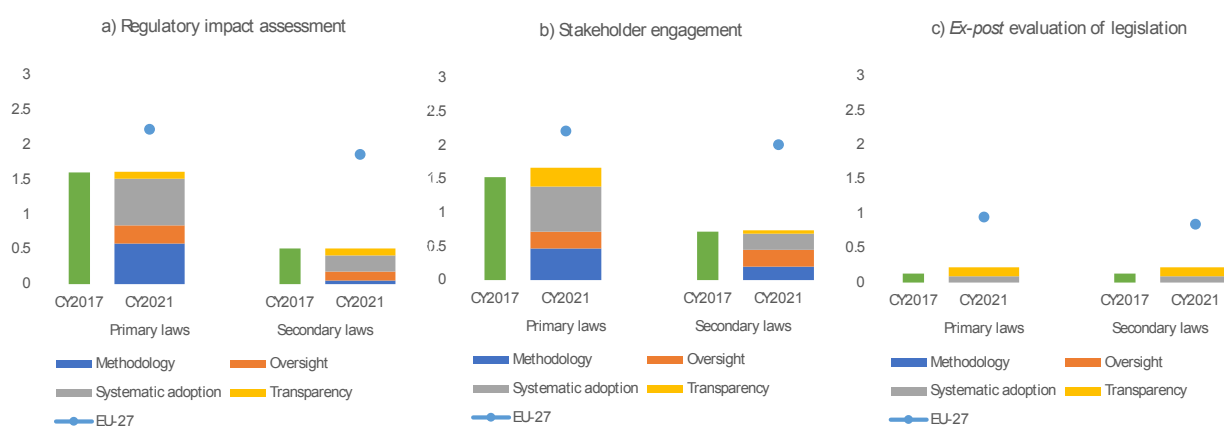
CY Indicator ⁽¹⁾	2017	2018	2019	2020	2021	2022	EU-27 ⁽²⁾
E-government and open government data							
1 Share of individuals who used the internet within the last year to interact with public authorities (%)	52.1	49.2	58.3	58.7	63.0	n/a	64.8
2 E-government benchmark overall score ⁽³⁾	n/a	n/a	n/a	54.4	50.2	53.4	72.9
3 Open data and portal maturity index	n/a	0.8	0.8	0.9	0.9	0.9	0.8
Educational attainment level, adult learning, gender parity and ageing							
4 Share of public administration employees with tertiary education (levels 5-8, %)	57.8	55.6	55.6	60.0	61.4 (b)	58.9	52.0
5 Participation rate of public administration employees in adult learning (%)	10.5	10.3	9.5	4.8 (u)	12.9 (b)	17.4	16.9
6 Gender parity in senior civil service positions ⁽⁴⁾	18.4	16.0	29.2	27.2	20.0	8.4	11.0
7 Ratio of 25-49 to 50-64 year olds in NACE sector O	2.8	2.1	2.1	2.0	1.9 (b)	1.7	1.5
Public financial management							
8 Medium term budgetary framework index	0.6	0.6	0.6	0.6	0.8	n/a	0.7
9 Strength of fiscal rules index	1.1	1.1	1.1	1.1	1.1	n/a	1.5
Evidence-based policy making							
10 Regulatory governance	0.77	n/a	n/a	n/a	0.83	n/a	1.7

(¹) High values denote a good performance, except for indicator # 6. (²) 2022 value. If not available, the 2021 value is shown. (³) Measures the user centricity (including for cross-border services) and transparency of digital public services as well as the existence of key enablers for the provision of those services. (⁴) Defined as the absolute value of the difference between the percentage of men and women in senior civil service positions.

Flags: (b) break in time series; (d) definition differs; (u) low reliability.

Source: ICT use survey, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Labour Force Survey, Eurostat (# 4, 5, 7), European Institute for Gender Equality (# 6); Fiscal Governance Database (# 8, 9); OECD Indicators of Regulatory Policy and Governance (# 10).

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



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

along the lines of listed companies. There is no aggregate financial and non-financial reporting on the SOE sector. Board nomination procedures do not sufficiently protect boards from political interference and board evaluations consist of self-evaluations, do not involve external evaluators and have no visible

implications for the company's board and management. ⁽⁸⁴⁾

⁽⁸⁴⁾ OECD. Database of country practices of the OECD Guidelines on Corporate Governance of SOEs (forthcoming).

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

Table A14.1: Social Scoreboard for Cyprus

Policy area	Headline indicator	
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24, 2022)	8.1
	Share of individuals who have basic or above basic overall digital skills (% of population aged 16-74, 2021)	50.21
	Youth NEET rate (% of population aged 15-29, 2022)	14.7
	Gender employment gap (percentage points, 2022)	12.1
	Income quintile ratio (S80/S20, 2021)	4.23
Dynamic labour markets and fair working conditions	Employment rate (% of population aged 20-64, 2022)	77.9
	Unemployment rate (% of active population aged 15-74, 2022)	6.8
	Long term unemployment (% of active population aged 15-74, 2022)	2.3
	GDHI per capita growth (2008=100, 2021)	98.41
Social protection and inclusion	At risk of poverty or social exclusion rate (% of total population, 2021)	17.3
	At risk of poverty or social exclusion rate for children (% of population aged 0-17, 2021)	19.2
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2021)	37.56
	Disability employment gap (percentage points, 2021)	27
	Housing cost overburden (% of total population, 2021)	2.5
	Children aged less than 3 years in formal childcare (% of population under 3-years-old, 2021)	28.8
	Self-reported unmet need for medical care (% of population 16+, 2021)	0.1
<div style="display: flex; justify-content: space-between; font-size: 8px; font-weight: bold;"> Critical situation To watch Weak but improving Good but to monitor On average Better than average Best performers </div>		

Update of 27 April 2023. Members States are classified on the Social Scoreboard according to a statistical methodology agreed with the EMCO and SPC Committees. It looks jointly at levels and changes of the indicators in comparison with the respective EU averages and classifies Member States in seven categories. For methodological details, please consult the Joint Employment Report 2023. Due to changes in the definition of the individuals' level of digital skills in 2021, exceptionally only levels are used in the assessment of this indicator; NEET: neither in employment nor in education and training; GDHI: gross disposable household income.

Source: Eurostat

Despite a relatively high employment rate, there is still limited outreach to young people not in employment, education or training (NEETs) and other vulnerable groups to increase their labour market participation. Amid solid GDP growth in the

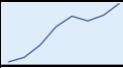

post-COVID-19 period, the employment rate in Cyprus at 78.0% in Q4-2022 was well above the EU average of 74.9%. However, the proportion of young NEETs (aged 15-29) stood at 14.9% in Q4-2022 and above the EU average of 11.7%, with almost no change compared to 2020. In addition, the youth unemployment rate (15-24 age group) remained high and increased to 19.3% in Q4-2022, 4.8 percentage points (pps) above the EU average. Meanwhile, the gender employment gap remained relatively wide at 12.1 pps in 2022 (vs 10.6 pps in the EU) after some decrease of 0.1 pps from 2021. The disability employment gap increased considerably to 27 pps in 2021 from 23.5 pps in 2020, which is above the EU average of 23.1 pps. Yet, there are labour shortages as measured by the vacancy rate of 2.3% in 2021 (in line with the EU average), which are mostly observed in the trade, manufacturing, transport, tourism and ICT sectors. Measures under the European Social Fund Plus (ESF+) in support of active labour market policies for young people, women, non-EU nationals, and persons with disabilities, together with outreach activities for young people under the Cyprus' recovery and resilience plan (RRP), are expected to help address the challenges mentioned above. Furthermore, both the ESF+ and the RRP include support measures to facilitate participation in early childhood education and care and flexible work arrangements. This is expected to further increase labour market participation, especially for working mothers. All this will help Cyprus to reach its national 2030 target of at least 80% of the population aged 20-64 in employment.

Matching the increasing skills needs, including for digital skills, poses a significant challenge that needs to be addressed in light of the green and digital transitions. Digital literacy remains low: 50% of the population had at least basic digital skills in 2021, which is below the EU average of 54%. The early school leaving rate in Cyprus decreased sharply by 1.3 pps, but, at 10.2% in 2021, it is still above the EU average of 9.7%. It is particularly high among non-EU-born people and persons with disabilities (see also Annex 15). Moreover, the 2018 OECD Programme for International Student



Assessment (PISA) results point to pupils' below-average skills in reading, maths, and science (see also Annex 15). To address these challenges, training schemes are being implemented that promote acquiring basic knowledge and skills (for example, literacy, maths skills, digital and technological skills, and interpersonal skills), and they focus particularly on NEETs. The share of people with a tertiary education in Cyprus is well above the EU average (58.3% vs 41.2% in 2021). However, the country still has one of the lowest proportions of science, technology, engineering, and mathematics graduates (see also Annex 15), and only 40% of the working age population are employed in high-skilled jobs. The share of upper secondary students enrolled in vocational education training programmes continued to be the lowest in the EU at 16.8% in 2020, well below the EU average of 48.4%. The share of adults participating in learning (over the past 4 weeks) was below the EU average in 2021 (9.7% vs 10.8%), having increased by 5 pps from 2020 and up from 7.5% in 2015. In response to these challenges, Cyprus has established the systematic forecasting of labour demand and carried out a related study for the 2022-2023 period, including forecasts of labour supply for the first time. The ESF+, the Recovery and Resilience Facility and the Just Transition Fund support measures for strengthening the capacity and quality of vocational training. They include training programmes for upskilling and reskilling, including on green and digital skills. These measures, together with the development of a national skills strategy and the implementation of the e-skills action plan, are expected to address skills needs, improve the labour market relevance of education and training, and contribute towards achieving Cyprus' national 2030 target of at least 61% of adults participating in learning every year.

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

Indicators	Latest data	Trend (2015-2022)	National target by 2030	EU target by 2030
Employment (%)	77.9 (2022)		80	78
Adult learning ¹ (%)	44.8 (2016)		61	60
Poverty reduction ² (thousands)	-8 (2021)		-10	-15 000

(1) Adult Education Survey, adults in learning in the past 12 months

(2) Number of persons at risk of poverty or social exclusion (AROPE), reference year 2019

Source: Eurostat, DG EMPL

The weak growth of household real disposable income and energy poverty are still challenges for Cyprus, along with the high share of people at risk of poverty or social exclusion in certain groups of the population. Cyprus' growth of real gross disposable household income (GDHI) per person was one of the slowest in the EU in 2021. Its growth was below the EU average and was flagged as a 'critical situation' on the Social Scoreboard. To tackle this, Cyprus introduced a universal statutory minimum wage, which took effect on 1 January 2023. It is set at EUR 940 and is expected to have 40 000 direct beneficiaries. In particular, the minimum wage will help young people and female workers. This should also help alleviate the risk of poverty for beneficiaries, especially of in-work poverty, which is one of the highest in the EU for non-EU-born people. The share of people at risk of poverty or social exclusion (AROPE) in 2021 was relatively low in Cyprus at 17.3%, which is below the EU average of 21.7%. However, the rate is higher for specific groups, such as persons with disabilities at 29.1%, although slightly lower than the EU average of 29.7%. Energy poverty is a continuing problem with 19.4% of the total population – and 50% among those at risk of poverty – unable to keep their home sufficiently warm in 2021 (against the EU average of 16.4%) (see also Annex 8). Self-employed people do not have formal access to unemployment benefits or benefits in respect to accidents at work and occupational diseases. The impact of social transfers on reducing poverty for self-employed people is rather limited at 10.8% (25.6% in the EU). ESF+ measures to create a network of social inclusion services, including home-care

support for persons with disabilities, are expected to strengthen equal opportunities and support social inclusion for people in vulnerable situations. In 2019, Cyprus had one of the highest proportions of women aged 65 and over with severe difficulties with personal care and household activities (94.7% vs EU 78.1%), yet long-term care attracts low levels of public funding (at 0.34% of GDP in 2020). Furthermore, staff shortages pose a challenge for the health system (the density of nurses is 5.4 per 1 000 inhabitants, well below the EU average of 8.3). Cyprus' RRP and ESF+ operational programme will help address this problem by supporting long-term care infrastructure and services for older people and persons with disabilities. These measures will also be key in reaching the national 2030 target of reducing the number of persons at risk of poverty or social exclusion by at least 10 000 compared to 2019.

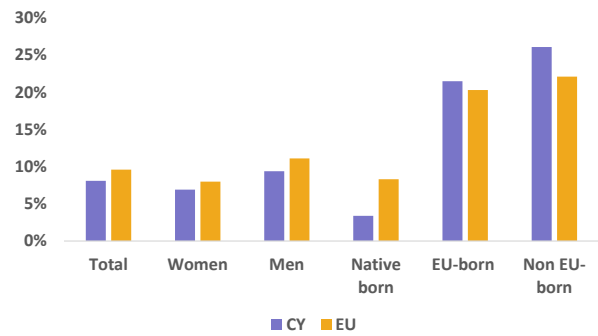
This Annex outlines the main challenges for Cyprus' education and training system in light of the EU-level targets and other contextual indicators under the European Education Area strategic framework, based on the 2022 Education and Training Monitor.

Early leaving from education and training (ELET) has almost doubled since 2015, driven by high rates among foreign-born pupils. The early leaving rate is much higher among non EU-born young people, at 26.1% (EU: 22.1%), with a decreasing trend (-1.2 percentage points (pps) since 2020). By contrast, the rate of native-born early leavers was 3.4% in 2022 vs the EU average of 8.3%. The highest proportion of early leavers in 2022 were reported in urban areas. About two thirds of early leavers are boys. With one of the EU's highest ratios for asylum applicants to inhabitants, integrating asylum seekers into the education system is a key challenge. The proportion of young people (18-34) among recently arrived asylum seekers is especially high (62% in 2018). In order to address the problem, Cyprus provides support to students at risk of dropping out of secondary education under a project financed by the EU's Technical Support Instrument. Early warning systems are in place, but data collection is insufficient and the method most used relies on school-by-school reporting⁽⁸⁵⁾.

The entry of newly qualified teachers into the profession is hindered by a low success rate in the exams required for their appointment. Teacher salaries and working conditions compare favourably with those of their European peers. However, a hiring system that favours candidate seniority over merit has resulted in long waiting times for newly qualified teachers to be recruited. In 2017, Cyprus implemented recruitment based on competitive exams, while the old seniority-based system will continue until 2027. So far, the exams resulted in a high failure rate. As an indication, the highest success rate was achieved by pre-primary candidates with only 42.42% of candidates having scored above the pass mark (10 out of 20).

⁽⁸⁵⁾ Donlevy, V., Day, L., Andriescu, M., Downes, P., ECORYS, European Commission 2019, Assessment of the implementation of the 2011 Council Recommendation on policies to reduce early school leaving, doi 10.2766/599017.

Graph A15.1: Early leavers from education and training (18-24) by sex and country of birth in 2022



Source: Eurostat

Continuing professional development (CPD) increasingly responds to the needs of teachers and schools, but is insufficiently linked to career development and evaluation. The implementation of teacher evaluation is a long-lasting challenge; Cyprus committed to this in its recovery and resilience plan.

Accessible and affordable early childhood education and care (ECEC) remains a challenge despite coordinated efforts. The participation in early childhood education and care from age 3 to the starting age for compulsory primary education is at 91.1%, below the EU average (93%) and the EU-level target for 2030 (96%). Disadvantaged families often cannot afford to pay for their children to participate. Cyprus has committed itself to expanding capacities and improving affordability of ECEC through EU funding. In addition, the country supports families on income and social criteria under the scheme "Subsidy of Tuition of Children up to 4 years old", co-funded by ESF+.

Cypriot pupils perform worse than their European peers in reading, maths and science, and socio-economic disparities are strong. Cyprus has a high proportion of pupils performing low in reading, maths and science and a low proportion of top performers compared with other EU countries, as measured by the Programme for International Student Assessment (PISA) 2018. Even in the top socio-economic quartile, one in three students show low performance, one of the EU's highest rates. In addition, the difference in the share of low achievers between low and high socio-economic status is high (25.4 pps, vs EU 19.3 pps). 39% of pupils from a low socio-economic background underperform in

all three tested subjects simultaneously. Curricula have been revised at all education levels to support the acquisition of skills and competencies (Donlevy V. et al., 2019).

Digital education has been improved. The country has many 16-19-year-olds with at least basic digital skills: 82% compared with a 69% EU average (2021). The use of information and communication technology (ICT) in education increased. At lower secondary level, ICT is a compulsory subject; it has one of the highest numbers of annual hours (135) allocated to it in the EU. To boost digital education, Cyprus allocates substantial amounts of EU funding through the Recovery and Resilience Facility (see also Annex 10) and the European Social Fund Plus. The relevant projects aim to digitally transform schools and to enhance digital and science, technology, engineering and mathematics (STEM) skills.

For example, it is planned to purchase tablets for primary to lower secondary school students and digital equipment for schools. The training of teachers in digital education and the transformation of curricula, along with new educational material for the development of digital and STEM skills, is also envisaged. Tertiary educational attainment is one of the highest in the EU, but the labour market relevance of education needs to be increased. The number of STEM graduates falls short of labour market demand. In 2020, Cyprus recorded the second lowest proportion of STEM graduates among all higher education graduates in the EU (13.1%). In addition, from 2015 to 2020, the proportion of STEM graduates out of all graduates in Cyprus dropped by 4.3 pps. A graduate tracking system is being developed under the Recovery and Resilience Facility in order to analyse graduate pathways after completing higher education and to verify the relevance of education and training with the labour market. There is a significant gender gap in favour of women in tertiary education attainment.

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

Indicator	Target	2015		2022		
		Cyprus	EU27	Cyprus	EU27	
¹ Participation in early childhood education (age 3+)	96%	81.3%	91.9%	91.1% ²⁰²⁰	93.0% ²⁰²⁰	
² Low achieving 15-year-olds in:	Reading < 15%	35.6%	20.0%	43.7% ²⁰¹⁸	22.5% ²⁰¹⁸	
	Mathematics < 15%	42.6%	22.3%	36.9% ²⁰¹⁸	22.9% ²⁰¹⁸	
	Science < 15%	42.1%	21.1%	39.0% ²⁰¹⁸	22.3% ²⁰¹⁸	
Early leavers from education and training (age 18-24)	³ Total < 9%	5.2%	11.0%	8.1%	9.6%	
	³ By gender	Men	7.7%	12.5%	9.4%	11.1%
		Women	3.1% ^u	9.4%	6.9%	8.0%
	⁴ By degree of urbanisation	Cities	3.8% ^u	9.6%	8.6%	8.6%
		Rural areas	8.5% ^u	12.2%	4.8% ^u	10.0%
		Native	3.1%	10.0%	3.4%	8.3%
	⁵ By country of birth	EU-born	17.0% ^u	20.7%	21.5% ^u	20.3%
		Non EU-born	16.6% ^u	23.4%	26.1%	22.1%
⁶ Equity indicator (percentage points)		:	:	25.4 ²⁰¹⁸	19.3 ²⁰¹⁸	
⁷ Exposure of VET graduates to work based learning	Total ≥ 60% (2025)	:	:	41.6% ^u	60.1%	
Tertiary educational attainment (age 25-34)	⁸ Total 45%	54.7%	36.5%	59.2%	42.0%	
	⁸ By gender	Men	44.9%	31.2%	50.7%	36.5%
		Women	63.9%	41.8%	67.1%	47.6%
	⁹ By degree of urbanisation	Cities	60.9%	46.2%	63.2%	52.2%
		Rural areas	45.4%	26.9%	54.7%	30.2%
		Native	62.8%	37.7%	68.9%	43.0%
	¹⁰ By country of birth	EU-born	31.9%	32.7%	40.2%	39.5%
		Non EU-born	34.3%	27.0%	41.7%	35.7%
¹¹ Share of school teachers (ISCED 1-3) who are 50 years or over		21.7%	38.3%	24.3% ²⁰²⁰	39.2% ²⁰²⁰	

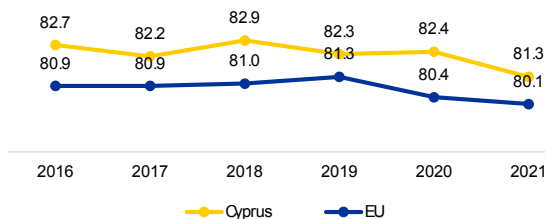
Source: (1,3,4,5,7,8,9,10,11) = Eurostat; 2 = OECD (PISA); 6 = European Commission (Joint Research Centre). Notes: Data is not yet available for the remaining EU-level targets under the European Education Area strategic framework, covering underachievement in digital skills and participation of adults in learning. The equity indicator shows the gap in the share of underachievement in reading, mathematics and science (combined) among 15-year-olds between the lowest and highest quarters of socio-economic status.



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

Despite its recent decline, life expectancy in Cyprus remains among the highest in the EU. Before 2020, and against an overall EU trend of increasing life expectancy, life expectancy appeared to be plateauing in Cyprus. In 2020, both COVID-19 deaths and excess mortality rates were low in Cyprus compared to other EU countries, but in 2021, infection rates were much higher. Life expectancy hence fell in 2021. COVID-19 mortality almost quadrupled in 2021 compared to 2020 and played a key role in this loss of life expectancy⁽⁸⁶⁾. Notwithstanding this, Cyprus fares comparatively well with respect to avoidable mortality, which is also reflected in low cancer mortality. Leading causes of death are diseases of the circulatory system (“cardiovascular diseases”) followed by cancer.

Graph A16.1: Life expectancy at birth, years



Source: Eurostat

Health spending relative to GDP in Cyprus was below the EU average in 2020. The extensive 2019-2020 health system reform to introduce universal health coverage and to unify a previously fragmented system has reduced what was the highest level of out-of-pocket spending in the EU. The reform has rendered healthcare more affordable and has drastically reduced self-reported levels of unmet needs, placing Cyprus among the top 5 performing countries in the EU according to 2021 estimates (also see Annex 14). However, disparities between income groups and waiting lists for certain services persist. Cyprus spends

24% less per capita on outpatient care, 39% less on inpatient care and 87% less on long-term care (as part of reported healthcare expenditure) than the EU overall. The low spending on long-term care can be related to the absence of a dedicated framework for long-term care provision. As regards quality of health spending, under Cyprus’ recovery and resilience plan (RRP), a gradual shift of the healthcare provision and reimbursement framework towards value-based models has already started.

The share of spending on prevention in total healthcare expenditure remains far below the EU average. However, a slight increase in the share of total spending on preventive care was reported in 2020 (1.7%, up from 1.1% in 2019), reflecting similar EU-wide trends. In 2020, spending on prevention in Cyprus amounted to 1.7% of total spending on healthcare (compared to 3.4% for the EU overall). This is comparatively low, with six other Member States also reporting a level below 2%. Between 2019 and 2020, spending on prevention in Cyprus increased by 59% (compared to a 26% increase for the EU overall). Across the EU, this increase was primarily driven by spending on disease detection, surveillance, control and response programmes as part of the public health response to COVID-19. Between 2019 and 2020, a remarkable proportional increase in reported spending was noted for early disease detection programmes. Also related to public health, concerns exist over antimicrobial resistance, both in hospitals and in animal husbandry, also given the high reported levels of antibiotics consumption. Cyprus is among the five EU countries with the highest morbidity and mortality attributable to infections with resistant bacteria⁽⁸⁷⁾. To address this, Cyprus’ RRP contains a measure that aims to set up an electronic platform for the surveillance of hospital antibiotic consumption, antimicrobial resistance and healthcare-associated infections. Between 2019 and 2021, antibiotic consumption in humans in outpatient settings decreased significantly across the EU, with an even more pronounced drop in Cyprus. This decrease was seen in most EU/EEA countries,

⁽⁸⁶⁾ Based on data provided directly by Member States to ECDC under the European Surveillance System (data current as of 13 April 2023)

⁽⁸⁷⁾ See: [ECDC/EFSA/EMA third joint report on the integrated analysis of the consumption of antimicrobial agents and occurrence of antimicrobial resistance in bacteria from humans and food-producing animals \(JIACRA III\)](https://ecdc.europa.eu/en/our-work/reports-and-publications/antimicrobial-resistance/antimicrobial-resistance-in-bacteria-from-humans-and-food-producing-animals) (europa.eu).

Table A16.1: Key health indicators

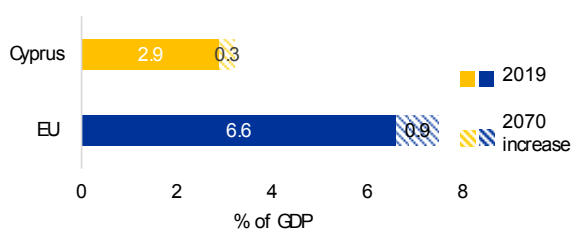
	2017	2018	2019	2020	2021	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	73.9	78.9	77.1	70.5	NA	91.7 (2020)
Cancer mortality per 100 000 population	208.5	204.6	195.4	205.6	NA	242.2 (2020)
Current expenditure on health, % GDP	6.6	6.9	7.0	8.1	NA	10.9 (2020)
Public share of health expenditure, % of current health expenditure	41.5	42.0	55.5	78.1	NA	81.2 (2020)
Spending on prevention, % of current health expenditure	1.3	1.3	1.1	1.7	NA	3.4 (2020)
Acute care beds per 100 000 population	330	318	311	NA	NA	387.4 (2019)
Doctors per 1 000 population *	3.9	4.1	4.3	NA	NA	3.9 (2020)
Nurses per 1 000 population *	5.4	5.4	5.4	NA	NA	8.3 (2020)
Consumption of antibacterials for systemic use in the community, daily defined dose per 1 000 inhabitants per day (total consumption for CZ and CY)**	28.9	28.0	30.1	28.9	25.0	14.5 (2021)

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

Source: Eurostat; except: ** ECDC

most likely as a result of the COVID-19 pandemic.

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



AWG reference scenario

Source: European Commission / EPC (2021)

Public expenditure on health is projected to increase by 0.3 percentage points (pps) of GDP by 2070⁽⁸⁸⁾ (compared to 0.9 pps for the EU overall) (Graph A16.2).

Staff and bed shortages undermine the health system's long-term performance.

The number of doctors per 1 000 population is above the EU average, while the number of nurses is below it, and the number of nursing graduates is falling. The age profile of active physicians (43.6% aged over 55 vs an EU average of 35.9%) raises concerns for the long-term accessibility of health services. For

nurses, the age profile issue is less acute, with only 15.9% aged over 45. In the area of long-term care, the Deputy Ministry of Social Welfare has started mapping needs, yet more concise and evidence-based mapping, also looking at specialised staff, is still needed. Shortages, particularly of nurses, exist in both the healthcare and the long-term care system. The increasing need for long-term care in particular would benefit from more comprehensive measures, aiming at optimal service provision across all aspects of care. Before the pandemic, Cyprus had 3.1 hospital beds per 1 000 people, below the EU average of 3.9 beds in 2019. Private hospital beds and staff were requisitioned as part of the pandemic response.

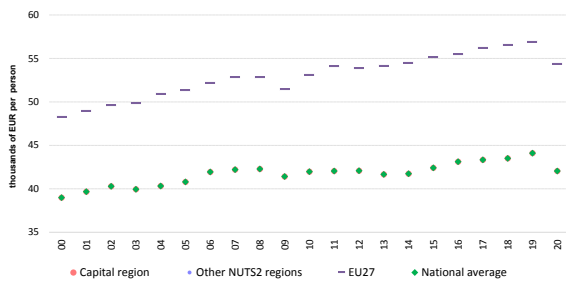
Through its RRP, Cyprus plans to allocate EUR 69.6 million (5.8% of the plan's total value) to investments and reforms in the healthcare sector. Key investments aim to modernise and upgrade state hospitals by refurbishing facilities and by procuring equipment. Cyprus is also focusing on strengthening the performance of the public health system, notably through digitalisation, to align the infrastructure with standards for exchanging data (across national borders within the EU), and to provide interoperable e-health services. Historical levels of investment in healthcare, measured as gross fixed capital formation as share of GDP, are among the lowest in the EU. An impetus for higher investment may come from Cyprus' RRP.

⁽⁸⁸⁾ European Commission (ECFIN) and Ageing Working Group (EPC), *The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070)*. Note that due to limited data availability at the time of the projections, this does not factor in the impact of the health system reform on expenditure in 2019-2021, which is expected to be substantial.

ANNEX 17: ECONOMIC AND SOCIAL PERFORMANCE AT REGIONAL LEVEL

This Annex showcases the economic and social territorial dynamics in Cyprus, providing an update on economic, social and territorial cohesion in the country compared with the EU as a whole and the main economic recovery challenges.

Graph A17.1: Labour productivity, EU-27, Cyprus, 2000-2020



Source: EUROSTAT

In the past decade, Cyprus has not converged on the rest of the EU in terms of its GDP per capita. GDP per capita decreased from 97% of the EU-27 average in 2011 to 91% in 2021. Real GDP per capita grew by an average of 0.15% per annum in 2011-2020. This was slower than in the EU as a whole, which grew by 0.60% per year on average. Cyprus ranked 155th in the Regional Competitiveness Index among all EU regions in 2022, with a score of 86.6. Labour productivity is below the EU-27 average and this gap has remained unchanged since 2000 (Cyprus' labour productivity was 85.8% of the EU average in 2021).

Cyprus is a strong innovator and performed at 106.9% of the EU average, though its performance was below the 114.5% average for strong innovators (European innovation scoreboard 2022). Performance is increasing (37.9 percentage points (pps)) at a much faster rate than for the EU as a whole (9.9 pps). Cyprus has a mixed performance on climate change-related indicators with a much higher share of material resources coming from recycled waste materials but a below-average score on environmental innovation.

Cyprus ranked 20th (up from 24th in 2020) among the 27 EU Member States in the 2022 digital economy and society index (DESI). This relative progress indicates that it is converging on the EU average. Cyprus has improved its performance in almost all the

DESI dimensions, although it still scores below the EU average in most cases. The most significant progress has been made in connectivity, integration of digital technology and digital public services.

Significant socio-economic differences persist in Cyprus between territories. Cyprus' unemployment rate was 7.5% (of the active population) in 2021. It was 7.2% in the cities and 7.1% in rural areas but 9% in the towns and suburbs. The unemployment rate, which had been steadily decreasing since 2016, started to increase again in 2020. It stabilised at 7.2% in the cities in 2021 and started to decrease in rural areas (from 8.0% in 2020 to 7.1% in 2021) but increased from 8.0% in 2020 to 9.0% in 2021 in the towns and suburbs.

There are very significant differences in terms of educational attainment, as well as poverty and social exclusion (ARPE). More than 52.7% of the overall population (aged 25-64) has a tertiary degree but this drops to 42.8% in the towns and suburbs and 33.2% in rural areas. In 2021, the share of early leavers from school and training was highest in the towns and suburbs at 11.2% (Table A17.1). Poverty and social exclusion are worryingly high in rural areas, where one in four people (25.1%) were at risk in 2021, compared with 17.9% in the towns and suburbs and 14.6% in the cities.



Table A17.1: Main socio-economic indicators by degree of urbanisation, Cyprus, 2021

	Unemployment rate (%) in 2021	Population (ages 25-64) with tertiary education (%) in 2021	Early school leavers (%) in 2021	Young People (aged 15-34) neither in employment nor in education and training in 2021	At-risk-of-poverty or social exclusion (% of population)
European Union	7	33.4	10	14.3	21.7
Cyprus	8	47.0	10	15.1	17.3
Cities	7.2	52.7	10.7	14.0	14.6
Towns and suburbs	9	19.2	11	19.2	17.9
Rural areas	7	14.4	8	14.4	25.1

Source: EUROSTAT

The banking sector in Cyprus remains relatively concentrated, while considerable progress has been made with deleveraging and de-risking bank balance sheets. Following the ‘carve-out’ of the distressed assets of the Cyprus Cooperative Bank during its liquidation in 2018, and major recent sales of non-performing loans (NPLs) by commercial banks, banking-sector assets declined sharply and accounted for around 256% of GDP in 2022. This is below the EU average of 277% and significantly below the peak reached in Cyprus of more than 700% before the financial crisis of 2013. The top five lenders hold almost 90% of total banking-sector assets. The banking sector in Cyprus is dominated by domestic banks, which held around 78% of total assets in 2022, slightly lower than the percentage they held pre-pandemic (see Table A18.1).

Overall, the banking sector remains resilient, with adequate capitalisation and elevated liquidity, although profitability has only recently started to rebound. The system-wide capital-adequacy ratio was 21.2% in the third quarter of 2022, above the EU average of 18.6%. This ratio is commensurate with the still-meaningful credit risk on the balance sheet of Cypriot banks. Liquidity remains ample, with deposits growing in 2022. The sector’s profitability improved in the course of 2022, as compared to the very small profit in 2021, and a loss-making 2020. Narrowing interest margins had been weighing on banks’ returns for years and reached a low point in

March 2022. However, rising interest rates should support banks’ interest income in the future, as an exceptionally high share of loans – about 95% – are on variable rates. Banks have made progress in reducing headcount, but staff costs remain high.

After considerable progress in the work-out of NPLs in 2021, NPL levels remained broadly stable in 2022. The NPL ratio remains relatively high, but has been steadily decreasing, including during the pandemic. The overall NPL ratio has been on a downward trend for several years, supported by NPL sales and securitisations by the leading banks, but at 5.2% in the third quarter of 2022, it remains one of the highest in the EU, and is well above the EU average (1.8%). Looking to the future, the worsening macroeconomic environment may increase systemic risk in the Cypriot financial sector. Possible propagation mechanisms include a deterioration of asset quality due to rising inflation and the indirect repercussions of the war in Ukraine. In particular, energy prices are impacting household finances. Financially weaker households may struggle to service their debt. This risk is somewhat mitigated by the fact that low-income households account for proportionally less bank lending. The risks for non-financial corporations are more difficult to quantify as the debt-service capacity of enterprises crucially depends on the magnitude of the expected slowdown in growth.

Table A18.1: Financial soundness indicators

	2017	2018	2019	2020	2021	2022	EU	Median
Total assets of the banking sector (% of GDP)	395.9	322.8	282.7	296.4	299.4	255.9	276.8	207.9
Share (total assets) of the five largest banks (%)	84.2	86.9	85.7	86.5	87.3	-	-	68.7
Share (total assets) of domestic credit institutions (%) ¹	80.9	78.3	78.3	78.6	78.6	77.6	-	60.2
NFC credit growth (year-on-year % change)	0.3	3.5	2.2	1.9	1.7	0.5	-	9.1
HH credit growth (year-on-year % change)	0.0	-0.2	-0.2	3.0	2.5	7.3	-	5.4
Financial soundness indicators: ¹								
- non-performing loans (% of total loans)	30.7	20.2	18.1	11.0	5.6	5.2	1.8	1.8
- capital adequacy ratio (%)	16.3	17.1	19.9	20.3	20.6	21.2	18.6	19.8
- return on equity (%) ²	-11.9	7.1	3.5	-3.3	0.6	2.5	6.1	6.6
Cost-to-income ratio (%) ¹	53.6	62.3	72.3	63.2	71.9	82.6	60.6	51.8
Loan-to-deposit ratio (%) ¹	71.9	60.3	60.0	56.7	46.8	45.6	88.6	78.0
Central bank liquidity as % of liabilities	1.6	1.5	0.0	3.8	10.5	8.7	-	2.9
Private sector debt (% of GDP)	303.6	281.8	265.5	269.8	248.4	-	-	120.7
Long-term interest rate spread versus Bund (basis points)	230.6	177.8	132.3	138.7	74.2	181.8	-	93.3
Market funding ratio (%)	12.7	14.7	18.7	19.8	20.7	-	50.8	40.0
Green bonds issued to all bonds (%)	-	-	-	-	-	-	3.9	2.3

Colours indicate performance ranking among 27 EU Member States.

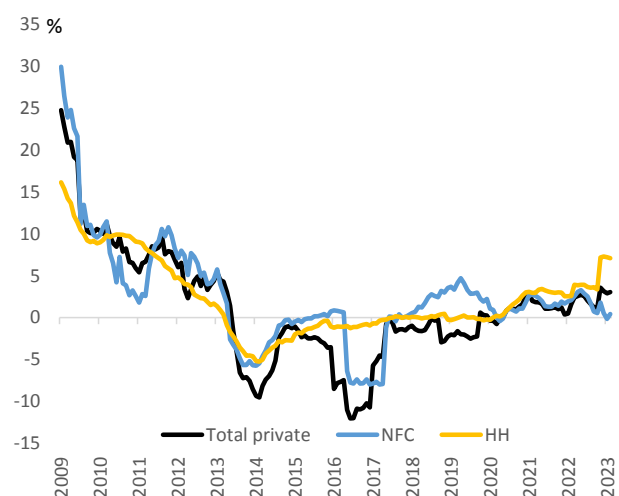
(1) Last data: Q3 2022.

(2) Data is annualized.

Source: ECB, Eurostat, S&P Global Capital IQ Pro.

On the policy side, progress with reforms to facilitate the work-out of NPLs has been mixed. In July 2022, a package of amending laws on credit-acquiring companies and credit servicers was adopted. This package improved the governance and working environment for the management of NPLs. Although the foreclosure framework has been safeguarded in the face of recurrent proposals to amend it, the frequent suspensions of foreclosures have delayed loan restructurings and made the conditions for NPL sales more complicated. These suspensions of foreclosures have also adversely affected efforts by the State-owned asset-management company KEDIPEs to conclude the resolution of its residential property portfolio. Meanwhile, the government continues to work on a mortgage-to-rent scheme, which will expand the scope of KEDIPEs, but in a limited manner.

Graph A18.1: Evolution of credit activity



Source: ECB.

New lending recovered in 2022, with mortgage lending increasing beyond pre-pandemic levels. In 2022, house prices in Cyprus rose less than in other EU countries. The volume of new mortgages surpassed 2019 levels in all subsequent years. Lending to non-financial corporations was robust in 2022, reaching EUR 900 bn in the first half of 2022, above the equivalent values of 2021 and 2020, but below the level for 2019. Lending was supported by the interest-rate subsidy scheme for mortgage and corporate loans, which expired at the end of 2021. The Cypriot government also offered a loan-guarantee

scheme, but launched it relatively late, in November 2021. This means that there was limited uptake of the scheme, and it ended up not having a meaningful impact on lending.

Diversifying the investment and funding possibilities for corporations in Cyprus remains a challenge. Cyprus ranks low in the EU for non-bank financing, as non-financial corporations and households hold their financial assets predominantly as cash and bank deposits. Cypriot businesses are also constrained by a lack of diversity in sources of investment finance. This is because the bulk of external investment finance comes in the form of bank loans (excluding subsidised bank loans, overdrafts, and other credit lines). The local stock and bond markets are small, especially since the crash in the early 2000s and the subsequent 2013 financial crisis. There have not yet been any issuances of green bonds. Alternative investment funds are an area of growth for the fund-management industry in Cyprus, as there is growing interest in authorising companies that fall under the scope of the Alternative Investment Fund Managers Directive. At the same time, the FinTech sector has been growing strongly. Although Cyprus has relatively few FinTechs, they are a high percentage of overall start-ups. Crowdfunding is still a small market in Cyprus, limiting its impact on total retail participation. Nevertheless, it is growing quite rapidly in per capita terms, Cyprus is one of the four EU countries making the greatest use of crowdfunding platforms.

The insurance sector in Cyprus remains overall resilient to adverse market developments, with adequate solvency. High compliance costs, low profitability and the need for consolidation in the sector constitute key challenges going forward. The draft legislation on the single independent supervisory authority was submitted to Parliament at end-2019. While discussions took place in the House of Parliament, the proposal did not gain support. For the time being, the two supervisory authorities remain separate and continue experiencing staff shortages and difficulties to recruit experts (even on a temporary basis).

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

Cyprus' tax revenues as a percentage of its GDP are slightly lower than the EU aggregate, with property taxes particularly low. Table A19.1 shows that Cyprus' tax revenues as a share of GDP were below the EU aggregate in 2021, even though they were 2 percentage points (pps) higher than in 2020. The share of labour taxes in total tax revenues was below the EU average, but revenues from consumption taxes and environmental taxes were slightly above the EU average (as a share of both GDP and total taxation). Revenues from property taxes were relatively low as a percentage of both GDP and total tax revenue, while revenues from recurrent property taxes, which are among the taxes least detrimental to growth, were one of the lowest in the EU (expressed as % of GDP). Tax revenues could therefore be increased by making greater use of currently underused tax

types, such as property taxes.

Cyprus' Recovery and Resilience Plan (RRP) includes a green taxation reform to address environmental challenges related to climate change and air pollution, waste management, water pollution and water management. The reform consists of legislative changes with the introduction of a carbon tax, a gradual levy on water and a charge on household/landfill waste. An impact assessment on the reform's effect on the environment and the economy will be conducted three years after its entry into force.

Cyprus' labour tax burden is relatively low across the various income levels. Graph A19.1 shows that the labour tax wedge for Cyprus in 2022 was much lower than the EU average for both single and second earners, which was the case at the lower as well as higher wage levels. Overall, labour taxation is less progressive in Cyprus than the EU average, in particular for those with a wage level below the average wage. As a result, the tax and benefits system reduces in 2021 income inequality, as expressed by the Gini-coefficient, less than the EU average (Table A19.1).

Table A19.1: Taxation indicators

	Cyprus				EU-27					
	2010	2019	2020	2021	2022	2010	2019	2020	2021	2022
Total taxes (including compulsory actual social contributions) (% of GDP)	31,7	34,2	34,0	36,0		37,9	39,9	40,0	40,6	
Labour taxes (as % of GDP)	11,3	13,4	14,3	14,6		20,0	20,7	21,3	20,9	
Consumption taxes (as % of GDP)	12,2	12,6	11,5	12,4		10,8	11,1	10,7	11,2	
Capital taxes (as % of GDP)	8,2	8,2	8,2	9,0		7,1	8,1	8,0	8,5	
Total property taxes (as % of GDP)	1,2	0,8	0,8	0,7		1,9	2,2	2,2	2,2	
Recurrent taxes on immovable property (as % of GDP)	1,0	0,3	0,2	0,2		1,1	1,2	1,2	1,1	
Environmental taxes as % of GDP	2,7	2,5	2,4	2,3		2,4	2,4	2,2	2,2	
Tax wedge at 50% of average wage (Single person) (*)		18,1	18,1	18,1	18,1	33,9	32,3	31,9	32,1	31,7
Tax wedge at 100% of average wage (Single person) (*)		18,9	19,0	19,5	20,2	41,0	40,1	39,9	39,6	39,7
Corporate income tax - effective average tax rates (1) (*)		10,3	10,3	10,3			19,5	19,4	19,1	
Difference in Gni coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	5,1	6,3	6,3	6,5		8,6	7,7	8,1	7,8	
Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		39,7	41,5				31,6	40,7		
VAT Gap (% of VAT total tax liability, VTTL)		1,4	6,4				11,0	9,1		

(1) Forward-looking effective tax rate (OECD).

(2) A higher value indicates a stronger redistributive impact of taxation.

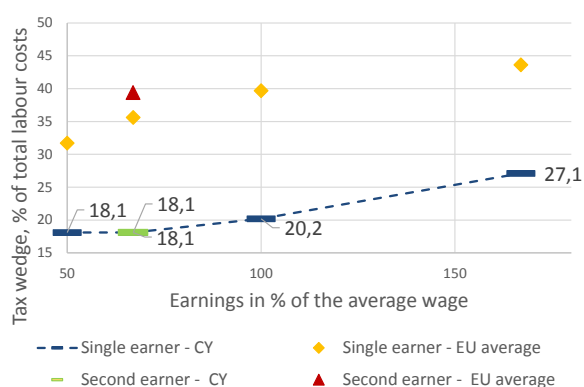
(*) EU-27 simple average

For more data on tax revenues as well as the methodology applied, see European Commission, Directorate-General for Taxation and Customs Union, *Taxation trends in the European Union: data for the EU Member States, Iceland, Norway and United Kingdom: 2021 edition*, Publications Office of the European Union, 2021, <https://data.europa.eu/doi/10.2778/843047> and the *Data on Taxation* webpage, https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.

For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, *VAT gap in the EU: report 2022*, Publications Office of the European Union, 2022, <https://data.europa.eu/doi/10.2778/109823>.

Source: European Commission

Graph A19.1: Tax wedge for single and second earners as a % of total labour costs, 2022



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

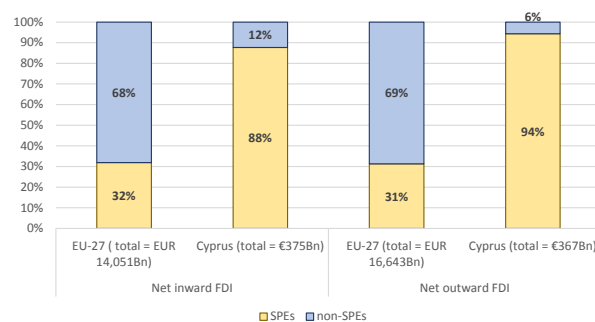
Source: European Commission

Cyprus performs fairly well on tax compliance and administration. Outstanding tax arrears rose slightly from 39.7% in 2020 to 41.5% of total net revenue in 2021. This is just above the EU-27 average of 40.7%. The VAT gap (the gap between revenues actually collected and the theoretical tax liability) increased from 1.4% to 6.4% but remains below the EU-wide gap of 9.1%. Further steps are being taken to enhance tax administration and compliance. The Tax Department announced on 17 January 2023 the start of the gradual implementation of the Tax For All (TFA) Portal, which will replace the TAXISnet platform and other mechanisms. The new Portal is a uniform system of tax administration which will gradually replace the Tax Department's existing non-linked systems once it has been confirmed that it can be safely substituted. The Portal will be adjusted to reflect legislative changes, increase transparency, promote e-services to the taxpayer, provide the tax authorities with a uniform picture of taxpayers and enable the Tax Department to monitor, assess and control them better.

Cyprus is taking steps to tackle aggressive tax planning strategies, which however remains a challenge. High foreign direct investment flows and the high level of dividend, interest and royalty payments as a percentage of GDP suggest that Cyprus is being used by companies engaged in aggressive tax planning. In November 2020, Cyprus suppressed its citizenship by investment regime that could be used to evade taxes. Also, a new law entered into force on 31 December 2022 to partially address the

issue of aggressive tax planning by (a) imposing withholding tax on interest, dividends and royalty payments to jurisdictions included in Annex I of the EU list of non-cooperative jurisdictions for tax purposes; and (b) introducing an extra corporate tax residency test based on incorporation. Cyprus' RRP also aims to prevent double non-taxation by providing for the introduction of new legislation to make outbound payments of dividends, interest and royalties to low-tax jurisdictions subject to withholding taxes or non-deductibility. This new legislation will enter into force by the end of 2024.

Graph A19.2: Share of net inward and outward foreign direct investment (FDI) stock held through special purpose entities (SPEs) as a % of total inward and outward stock, 2021



(1) Net stock data used because asset and liabilities data are unavailable for Cyprus.

Source: European Commission



Table A20.1: Key economic and financial indicators

	2004-07	2008-12	2013-19	2020	2021	2022	forecast	
							2023	2024
Real GDP (y-o-y)	4.9	0.1	2.5	-4.4	6.6	5.6	2.3	2.7
Potential growth (y-o-y)	3.7	2.1	1.2	3.3	3.0	3.5	3.2	3.0
Private consumption (y-o-y)	6.2	0.4	2.1	-6.8	4.5	7.7	1.9	2.2
Public consumption (y-o-y)	2.7	2.4	0.8	11.5	9.0	0.1	1.7	1.6
Gross fixed capital formation (y-o-y)	10.0	-8.1	5.1	4.5	-4.2	6.6	0.8	1.7
Exports of goods and services (y-o-y)	3.5	1.4	7.2	2.2	13.6	13.7	2.8	3.7
Imports of goods and services (y-o-y)	5.9	-0.1	6.9	3.2	9.0	18.8	2.1	2.9
Contribution to GDP growth:								
Domestic demand (y-o-y)	6.5	-1.1	2.3	-1.6	3.6	5.9	1.7	1.9
Inventories (y-o-y)	-0.2	0.4	0.1	-2.0	-0.6	3.7	0.0	0.0
Net exports (y-o-y)	-1.4	0.6	0.1	-0.7	3.6	-3.9	0.7	0.8
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	1.3	0.9	0.4	1.0	0.9	1.4	1.4	1.3
Capital accumulation (y-o-y)	2.0	1.4	0.6	1.2	1.1	1.2	1.1	1.1
Total factor productivity (y-o-y)	0.4	-0.3	0.3	1.1	1.1	0.9	0.8	0.7
Output gap	3.8	0.3	-2.4	-2.7	0.7	2.7	1.8	1.5
Unemployment rate	4.6	7.0	12.4	7.6	7.5	6.8	6.9	6.4
GDP deflator (y-o-y)	3.0	2.0	0.0	-1.2	2.9	6.4	5.0	2.8
Harmonised index of consumer prices (HICP, y-o-y)	2.1	2.7	-0.1	-1.1	2.3	8.1	3.8	2.5
HICP excluding energy and unprocessed food (y-o-y)	1.0	1.7	0.0	-0.6	1.0	5.3	4.9	3.1
Nominal compensation per employee (y-o-y)	3.7	2.8	-0.6	-0.5	3.8	3.8	6.3	4.0
Labour productivity (real, hours worked, y-o-y)	2.1	0.2	0.9	2.1	1.7	1.5	-0.4	-0.4
Unit labour costs (ULC, whole economy, y-o-y)	2.3	2.8	-1.3	2.8	-1.4	1.0	5.6	3.2
Real unit labour costs (y-o-y)	-0.7	0.7	-1.3	4.1	-4.1	-5.1	0.6	0.3
Real effective exchange rate (ULC, y-o-y)	0.7	0.5	-2.1	-1.8	-1.5	-2.1	0.4	-0.2
Real effective exchange rate (HICP, y-o-y)	0.2	0.2	-0.8	-0.3	0.0	-1.8	.	.
Net savings rate of households (net saving as percentage of net disposable income)	1.5	-0.5	-5.8	6.8	5.0	.	.	.
Private credit flow, consolidated (% of GDP)	27.9	18.7	3.1	-1.2	4.3	.	.	.
Private sector debt, consolidated (% of GDP)	244.4	308.0	316.3	269.7	248.4	.	.	.
of which household debt, consolidated (% of GDP)	88.5	116.9	112.8	89.4	83.0	.	.	.
of which non-financial corporate debt, consolidated (% of GDP)	155.9	191.1	203.6	180.4	165.4	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	.	8.9	29.0	9.1	4.7	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-9.9	2.3	4.1	-3.9	-3.2	-6.0	-5.4	-5.8
Corporations, gross operating surplus (% of GDP)	23.7	20.0	21.4	21.1	22.2	21.9	21.6	22.0
Households, net lending (+) or net borrowing (-) (% of GDP)	-7.6	-5.5	-5.0	-0.4	-1.5	-4.8	-3.3	-2.6
Deflated house price index (y-o-y)	6.8	-4.9	0.5	0.7	-4.3	-4.4	.	.
Residential investment (% of GDP)	10.9	8.2	5.0	8.1	7.6	7.6	.	.
Current account balance (% of GDP), balance of payments	-6.2	-7.7	-3.5	-10.1	-6.8	-9.1	-7.3	-6.9
Trade balance (% of GDP), balance of payments	-2.2	-6.4	1.2	-1.4	2.9	-0.4	.	.
Terms of trade of goods and services (y-o-y)	-0.5	-0.4	0.4	-2.0	1.0	0.6	1.2	0.4
Capital account balance (% of GDP)	0.1	0.3	0.3	-0.1	0.4	0.2	.	.
Net international investment position (% of GDP)	-68.2	-123.4	-141.2	-134.5	-117.8	-105.3	.	.
NENI - NIIP excluding non-defaultable instruments (% of GDP) (2)	.	-69.0	-196.7	-111.4	-76.4	-21.7	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	.	621.7	604.1	465.0	435.7	350.6	.	.
Export performance vs. advanced countries (% change over 5 years)	-13.8	-7.1	6.3	39.7	30.6	.	.	.
Export market share, goods and services (y-o-y)	-5.8	-4.2	4.0	13.6	-2.7	9.4	0.2	-0.1
Net FDI flows (% of GDP)	.	9.0	16.3	-34.0	-18.2	-30.2	.	.
General government balance (% of GDP)	-0.9	-4.1	-2.2	-5.8	-2.0	2.1	1.8	2.1
Structural budget balance (% of GDP)	.	.	1.7	-4.5	-2.4	0.7	0.9	1.3
General government gross debt (% of GDP)	60.4	60.4	100.5	113.8	101.2	86.5	80.4	72.5

(1) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.

(2) Net international investment position (NIIP) excluding direct investment and portfolio equity shares.

Source: Eurostat and ECB as of 2 May 2023, where available; European Commission for forecast figures (Spring forecast 2023).

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

1 - Short-term risks to fiscal sustainability are low overall. The Commission's early-detection indicator (S0) does not signal major short-term fiscal risks (Table A21.2).⁽⁸⁹⁾ Government gross financing needs are expected to reach around 5% of GDP in the short term (i.e. in 2024) and to decline compared with the recent peak in 2020 (Table A21.1).⁽⁹⁰⁾ Financial markets' perceptions of Cyprus are favourable as its debt rating continued to be upgraded in 2023. The main credit-rating agencies (except Moody's) now rate Cyprus' sovereign debt at investment grade (two notches within the investment-grade area).

2 - Medium-term fiscal sustainability risks appear medium overall (Table A21.1).

The DSA for Cyprus shows that, under the baseline, the government debt-to-GDP ratio is expected to substantially decline to a low level over the medium-term (at 40.6% of the GDP in 2033) (Table A21.1).⁽⁹¹⁾,⁽⁹²⁾ The

⁽⁸⁹⁾ The S0 is a composite indicator of short-term risk of fiscal stress. It is based on a wide range of macro-financial and fiscal variables that have proven to perform well in the past in detecting situations of upcoming fiscal stress.

⁽⁹⁰⁾ Gross financing needs are determined in line with the methodology described in the European Commission's 2022 Debt Sustainability Monitor, updated based on the Commission 2023 spring forecast.

⁽⁹¹⁾ The assumptions underlying the Commission's 'no-fiscal policy change' baseline notably comprise: (i) a structural primary surplus, before ageing costs, of 2.6% of GDP as of 2024; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years from now); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10; (iv) real GDP growth rates from the Commission 2023 spring forecast until 2024, followed by EPC/OGWG 'T+10 methodology projections between T+3 and T+10, i.e. for 2025-2033 (on average 1.7%); (v) ageing costs in line with the 2021 Ageing Report (European Commission, Institutional Paper 142, November 2020). For information on the methodology, see the 2022 Debt Sustainability Monitor.

assumed structural primary balance (a surplus of 2.6% of GDP) supports these developments. It appears relatively ambitious compared with past fiscal performance. At the same time, the baseline projections up to 2033 benefit from a favourable (although diminishing) snowball effect, with real GDP growth at around 1.7% of GDP over 2025-2033. Government gross financing needs are expected to remain small over the projection period, diminishing to around 3% of GDP in 2033, below the level forecast for 2024.

The baseline projections are stress-tested against four alternative scenarios to assess the impact of changes in key assumptions (Table A21.2). For Cyprus, reverting to historical fiscal trajectories under the 'historical structural primary balance (SPB)' scenario would lead to a higher government debt ratio. If the SPB gradually converged its historical 15-year average (1.5% of GDP), the projected debt-to-GDP ratio would be about 7 pps. of GDP higher than in the baseline in 2033. A permanent worsening of the macro-financial conditions, as reflected under the 'adverse interest-growth rate differential' scenario (i.e. 1 pp. higher than the baseline) would result in a persistently higher government debt-to-GDP ratio, by around 5 pps. of GDP by 2033, as compared with the baseline. A temporary worsening of financial conditions, as reflected in the 'financial stress scenario' (i.e. temporarily increase of interest rates by 1 pp.), would lead to a broadly similar public debt-to-GDP ratio by 2033 compared with the baseline. The 'lower structural primary balance' scenario (i.e. SPB level permanently reduced by half of the cumulative forecast change) would also lead to a slightly higher government debt-to-GDP ratio by 2033 (around +2 pps. of GDP) compared with the baseline.

Stochastic projections show a medium sensitivity of these projections against plausible unforeseen events.⁽⁹³⁾ These

⁽⁹²⁾ Table 1 shows the baseline debt projections and its breakdown into the primary balance, the snowball effect (the combined impact of interest payments and nominal GDP growth on the debt dynamics) and the stock-flow adjustment.

⁽⁹³⁾ The stochastic projections show the joint impact on debt of 2000 different shocks affecting the government's budgetary position, economic growth, interest rates and exchange rates. The cone covers 80% of all the simulated debt paths, therefore excluding tail events.

stochastic simulations point to a 4% probability of the debt ratio in 2027 being greater than in 2022, entailing medium risk given the initial high debt level. In addition, such shocks point to substantial uncertainty (i.e. the difference between the 10th and 90th debt distribution percentiles) surrounding the government debt baseline projections (Table A21.2).

3 - Long-term fiscal sustainability risks for Cyprus appear low overall. ⁽⁹⁴⁾

The S2 indicator (-1.2 pps. of GDP) points to low fiscal sustainability risks. The indicator shows that, relative to the baseline, the SPB would not need to improve to ensure debt stabilisation over the long term. This result is underpinned by a favourable initial budgetary position (-2.2 pps. of GDP), which more than offsets the projected increase in ageing-related costs (contribution of 1.0 pp. of GDP). Ageing costs' developments are primarily driven by the projected increase of public pension expenditure (contribution of 0.9 pp. of GDP) (Table A21.1).

The S1 indicator (-2 pps. of GDP) also points to low fiscal sustainability risks, confirming the overall long-term assessment. The S1 sustainability gap indicator signals that no consolidation effort is needed to bring debt to 60% of GDP by 2070. This result is driven by the favourable initial budgetary position (-2.7 pps. of GDP), which is only partly offset by ageing costs (0.5 pp. of GDP) and the debt requirement (0.3 pp. of GDP) (Table A21.1).

Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors are related to

the recent increase in interest rates, Cyprus' negative net international investment position and risks to the budget balance due to potential expansion of KEDIPES, and potential extension of energy-related measures beyond June 2023. On the other hand, risk-mitigating factors include the lengthening of debt maturities in recent years, relatively stable financing sources (with a diversified investor base), the currency denomination of debt, and the low share of short-term public debt. In addition, the structural reforms under the NGEU/RRF, if fully implemented, could have a further positive impact on GDP growth in the coming years, and therefore help to mitigate debt sustainability risks.

⁽⁹⁴⁾ The S2 fiscal sustainability gap indicator measures the permanent fiscal effort (SPB adjustment) in 2024 that would be required to stabilise public debt over the long term. It is complemented by the S1 fiscal sustainability gap indicator, which measures the permanent fiscal effort required in 2024 to bring the debt-to-GDP ratio to 60% in the long term (by 2070). For both the S1 and S2 indicators, the risk assessment depends on the amount of fiscal consolidation needed: 'high risk' if the required effort exceeds 6 pps. of GDP, 'medium risk' if it lies between 2 pps. and 6 pps. of GDP, and 'low risk' if the effort is negative or below 2 pps. of GDP. The overall long-term risk classification brings together the risk categories derived from S1 and S2. S1 may notch up the risk category derived from S2 when it signals a higher risk than S2. See the 2022 Debt Sustainability Monitor for further details.

Table A21.1: Debt sustainability analysis – Cyprus

Table 1. Baseline debt projections	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Gross debt ratio (% of GDP)	113.8	101.2	86.5	80.4	72.5	67.4	63.2	59.6	56.0	52.4	49.1	46.1	43.3	40.6
Changes in the ratio	23.0	-12.6	-14.7	-6.1	-8.0	-5.1	-4.2	-3.6	-3.6	-3.6	-3.3	-3.0	-2.8	-2.7
of which														
Primary deficit	3.7	0.2	-3.6	-3.2	-3.4	-3.1	-2.8	-2.5	-2.5	-2.7	-2.6	-2.5	-2.4	-2.3
Snowball effect	7.4	-8.2	-9.7	-4.7	-3.0	-2.0	-1.5	-1.1	-1.1	-0.9	-0.7	-0.5	-0.4	-0.4
Stock-flow adjustments	11.8	-4.6	-1.4	1.7	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	25.4	6.3	6.9	8.6	5.0	7.0	8.2	8.0	8.1	7.4	6.5	6.3	3.5	3.3

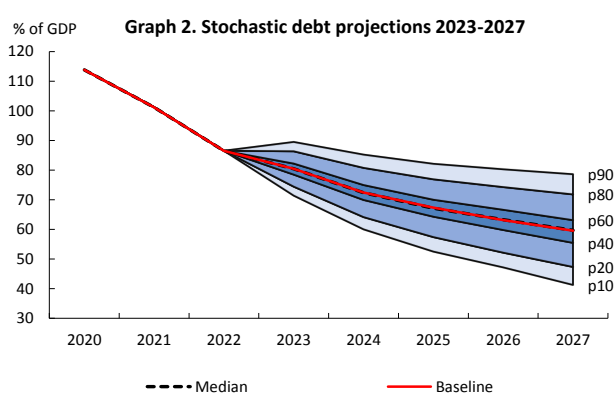
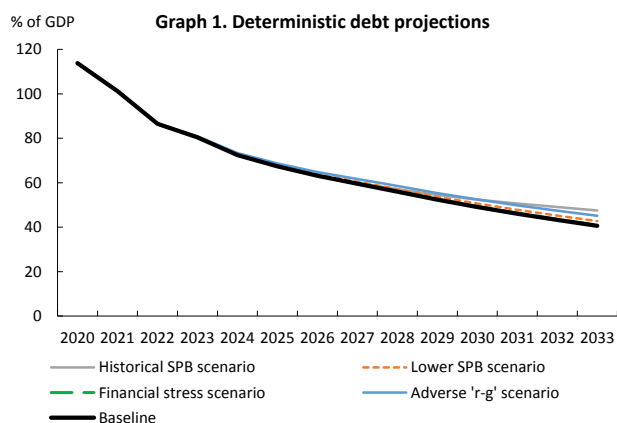


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

	S1	S2
Overall index (pps. of GDP)	-2.0	-1.2
of which		
Initial budgetary position	-2.7	-2.2
Debt requirement	0.3	
Ageing costs	0.5	1.0
of which		
Pensions	0.6	0.9
Health care	0.2	0.3
Long-term care	0.1	0.2
Others	-0.4	-0.4

Source: Commission services.

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

Short term	Medium term - Debt sustainability analysis (DSA)						Long term				
	Overall (S0)	Overall	Deterministic scenarios					Stochastic projections	S2	S1	Overall (S1 + S2)
			Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress				
		Overall	LOW	LOW	LOW	LOW	LOW	MEDIUM			
LOW	MEDIUM	Debt level (2033), % GDP	40.6	47.5	42.7	45.1	40.9		LOW	LOW	LOW
		Debt peak year	2022	2022	2022	2022	2022				
		Fiscal consolidation space	28%	31%	29%	28%	28%				
		Probability of debt ratio exceeding in 2027 its 2022 level						4%			
		Difference between 90th and 10th percentiles (pps. GDP)						37.3			

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

Source: European Commission (for further details on the Commission's multidimensional approach, see the 2022 Debt Sustainability Monitor)

Source: Commission services.



ANNEX 22: MACROECONOMIC IMBALANCE PROCEDURE ASSESSMENT MATRIX

The Macroeconomic Imbalance Procedure matrix presents the main elements of the in-depth review undertaken for Cyprus.⁽⁹⁵⁾ The country was selected for an in-depth review in the 2023 Alert Mechanism Report. This in-depth review on the prevention and correction of macroeconomic imbalances presents the main findings on the gravity and evolution of the challenges identified, as well as policy responses and potential policy needs. Findings cover all areas of vulnerability assessed in the in-depth review.

Cyprus has made progress in reducing high levels of private, public and external indebtedness. Private and government debt ratios decreased substantially in 2021 and 2022, falling below their pre-pandemic levels. The current account deficit widened due mainly to increased energy prices in 2022 and pent up domestic demand after the lifting of COVID-19 related restrictions. The current account deficit remains well above the levels needed to bring the large negative Net International Investment Position (NIIP) to prudential levels in the medium term. Still, the ratio of the country's NIIP relative to GDP improved, helped by strong economic growth. Furthermore, excluding special purpose entities, which pose limited risks to the economy, the NIIP and private debt are considerably lower. GDP growth also had a positive effect on driving down both household and non-financial corporations debt ratios in 2022. In addition, non-performing loans held by the banks continued to decrease.

Going forward, the country's imbalances are projected to continue their correction. Although economic growth is forecast to weaken temporarily in 2023, nominal GDP is still expected to continue supporting the decreasing trends of debt ratios. In the external sector, the correction in energy prices and a further increase in tourism revenues and exports of other services are set to reduce the current account deficit and to improve the NIIP position. Household and non-financial corporations debt-to-GDP ratios are expected to continue their downward paths in 2023 and

2024. Furthermore, credit growth is expected to decelerate amid rising interest rates. The general government debt ratio is also forecast to decrease further, driven by economic growth and fiscal primary surpluses.

Policy progress has been made as Cyprus started implementing measures from the Recovery and Resilience Plan. In particular several measures facilitating the digital transition, and thus strengthening productivity growth, as well as boosting export-oriented sectors and diversification of the economy are under implementation. Grant schemes encouraging investments in photovoltaics and improving the energy efficiency of buildings are expected to alleviate the over-reliance of the economy on oil imports. The authorities started to work on measures that help address excessive private indebtedness. Furthermore, Cyprus made progress with reforms to facilitate the NPL management. Also as part of the RRP, a package of amending laws on credit-acquiring companies and credit servicers was adopted in July 2022, improving their working environment and supporting NPL reduction. As regards the insolvency field, the transposition of the Directive (EU) 2019/1023 on preventive restructuring into Cypriot law was completed in December 2022, while in early 2023 the Department of Insolvency filled in some positions in its organisational structure, including the new director. Following several extensions since the start of the COVID-19 pandemic in March 2020, the suspension of foreclosures came to an end as of February 2023. An operational and effective foreclosure framework is key to encourage borrowers to participate in loan restructuring, further reduce the stock of NPLs in the economy, help reduce private indebtedness and enhance payment discipline in Cyprus

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

⁽⁹⁵⁾ European Commission (2023), In-Depth Review for Cyprus, Commission staff working document (COM(2023) 635 final), in accordance with Article 5 of Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances.

Table A22.1: Assessment of macroeconomic imbalances matrix

	Gravity of the challenge	Evolution and prospects	Policy response
Unsustainable trends, vulnerabilities and associated risks			
External balance	Cyprus maintains a large negative net international investment position. Although the NIIP improved to 105.3% of GDP in 2022 from -114.5% of GDP in 2021, it remains well beyond prudential and fundamental-based benchmarks. Special Purpose Entities in Cyprus contribute significantly to the negative position of the NIIP. When these are excluded, as they are deemed to have limited links with the Cyprus economy, the position hovers around the MIP scoreboard benchmark. The NENDI excluding SPES is positive at 64% of GDP. The current account deficit has widened because of a resilient domestic demand in combination with higher prices, including for oil, on which Cyprus depends heavily. Since 2016, and especially after 2019, the primary income balance has also been contributing considerably to the deficit of the current account.	The reduction of Cyprus's external net debtor position in 2022 was mainly attributed to valuation effects. The current account deficit is expected to narrow as energy and other commodity prices are falling and the exports of services is strengthening. However, it is still not sufficient to bring the net international investment position to prudent levels.	The mix of reforms and investments envisaged and being implemented in a number of areas under the recovery and resilience plan (RRP) have the potential to boost the green transition and to reduce the dependency of the country on oil. Moreover, the plan envisages policies to improve competitiveness through export-oriented businesses related to services as well as light manufacturing and agriculture, to help diversify the export base and improve the resilience of net exports.
Private debt	Private debt remains high, at 217% of GDP in 2022. The debt of non-financial corporations accounted for 142% of GDP and household debt accounted for 75% of GDP. Private indebtedness is inflated by the debt of Special Purpose Entities, which have limited links to the Cypriot economy. The household debt-to-GDP ratio is above the prudential benchmark. The NFC debt ratio is above both the prudential and fundamental-based benchmarks. Nevertheless, without the Special Purpose Entities, the non-financial corporations debt ratio is reduced to 89% of GDP for 2022.	The private sector debt ratio declined by 31 pps. in 2022 and is expected to continue decreasing in 2023 mainly due to real GDP growth and inflation. Both household and non-financial corporations debt ratios were reduced in 2022. New lending was strong in 2022, but is expected to decelerate in 2023 on the back of increasing interest rates. Rising interest rates increase debt burdens and could present challenges to lower-income households.	Under the RRP, the development of a liability monitoring register is under preparation. In addition, there is a strategy for improving financial literacy, which ultimately could help improve debt repayment discipline and prevent future unsustainable borrowing. The strategy should be ready by the end of 2023. In 2022, the government worked on recruiting and filling the organisational structure of the Department of Insolvency. The transposition of the Directive (EU) 2019/1023 on preventive restructuring into Cypriot law was completed in December 2022. An operational foreclosure framework is the core tool that can be used for reducing non-performing loans, encourage debt repayments and strengthen payment culture.
Public debt	General government debt-to-GDP ratio continued its downward path and stood at 86.5% of GDP in 2022. Cyprus is assessed to face low fiscal sustainability risks in the short and long run, while in the medium term risks are medium.	Government debt is forecast to decrease further to 80.4% and 72.5% in 2023 and 2024 respectively, driven by economic growth, and fiscal primary surpluses. The general government balance is expected to remain in surplus of around 2% of GDP in 2023 and 2024. The debt maturity profile is well balanced over the coming years. Government financing needs for 2023 and 2024 are expected to be low, on the back of significant primary surpluses and low redemption needs.	The implementation of RRP measures – aiming at improving tax collection, addressing aggressive tax planning practices and shoring up healthcare system sustainability – should facilitate public debt reduction and its long-term sustainability.
Financial sector	The banking sector's NPL ratio stood at 5.2% at the end of Q3 2022. A majority of the non-performing loans are now held by the credit-acquiring companies (CACs). As of December 2022, CACs held a portfolio of EUR 19.7 bn of non-performing loans, whereas banks had about EUR 2.3 bn of NPLs.	The NPL ratio continued its decline in 2022. The stock of non-performing loans held by the banks has been declining significantly in the last years thanks to asset sales write-offs, cash repayments, debt-to-asset swaps and curings.	As part of the RRP, a package of amending laws on credit-acquiring companies and credit servicers was adopted in July 2022, improving their working environment and supporting NPL reduction. Foreclosure proceedings resumed in February 2023, following a number of suspensions starting with the pandemic.

Source: European Commission