EUROPEAN
COMMISSION

Brussels, 8.9.2022
SWD(2022) 292 final

COMMISSION STAFF WORKING DOCUMENT

Analysis of the recovery and resilience plan of the Netherlands

Accompanying the document

Proposal for a COUNCIL IMPLEMENTING DECISION

on the approval of the assessment of the recovery and resilience plan for the Netherlands

{COM(2022) 469 final}

1. EXECUTIVE SUMMARY

The Dutch economy has recovered quickly from the COVID-19 pandemic, although new headwinds are on their way and structural challenges remain. Economic activity in 2020 saw, compared to other EU Member States, a relatively small contraction with a decrease in GDP of 3.8%. In 2021 the economy rebounded quickly to pre-pandemic levels, with GDP growing by 4.9%. The recovery in global trade resulted in strong exports and net trade making a significant contribution to GDP growth. However, after strong GDP growth in 2021, the Dutch economy is facing new headwinds. Russia's invasion of Ukraine has resulted in further increases in commodity prices and additional supply chain disruptions.

The Dutch government announced substantial increased spending in early 2022 to address key structural challenges. In 2020, the government deficit to GDP ratio reached 3.7% due to elevated spending on healthcare related to the COVID-19 pandemic and on support measures to protect employment and maintain household purchasing power. In 2021, the deficit to GDP ratio declined below the EU threshold of 3%. In the next four years, the government plans to increase spending by EUR 79 billion (9.2% of 2021 GDP), to address challenges such as climate change, biodiversity and water management, rising energy prices and insufficient housing supply.

The Dutch recovery and resilience plan (RRP) amounts to an estimated EUR 4.7 billion. This is to be financed through non-repayable financial support from the Recovery and Resilience Facility (RRF)[1], which allocates a maximum financial contribution of EUR 4.7 billion to the Netherlands. The country has not requested RRF loans. The plan is well-aligned with the Dutch government's 2021-2025 coalition agreement and other sectoral strategic documents. A key focus of the plan is on the green and digital transitions, with measures to improve energy efficiency, develop renewable energy, increase the sustainability of transport and mobility, and support companies in the twin transition. The plan includes measures to improve the functioning of the housing market, reform the labour market, implement the agreed pension system reform and increase the labour market relevance of the education and training system, notably as regards green and digital skills. The RRP also contains measures to improve the resilience and accessibility of the health system and to tackle aggressive tax planning and money laundering. Equal opportunities and social and territorial cohesion are important cross-cutting themes in the plan.

The RRP includes adequate measures to help address the key challenges the Netherlands is facing. The challenges identified in the most recent country-specific recommendations pertain to the following broad policy areas: the green transition and the digital transformation, the debt bias in the housing market, labour market, pensions, education and up- and reskilling, strengthening public healthcare and pandemic preparedness and tackling aggressive tax planning and money laundering. The Dutch RRP includes a set of mutually reinforcing reforms and investments that are expected to contribute to effectively addressing the identified challenges to varying degrees, proportionally with the scale and size of the RRP and its financial allocation. The plan is consistent with the challenges and priorities identified in the most recent euro area recommendation.[2]

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[1] Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility

[2] Council Recommendation of 5 April 2022 on the economic policy of the euro area 2022/C 153/01

The RRP comprehensively covers the six policy pillars as referred to in Article 3 of Regulation (EU) 2021/241 establishing the Recovery and Resilience Facility (henceforth "the RRF Regulation"), with an appropriate overall balance between pillars. The plan follows a comprehensive approach to support recovery and potential growth, while improving socio-economic and institutional resilience. The plan explains in detail how its six components address the six pillars, focussing on the green transition, digital transition, human capital, as well as enhancing the broad resilience of the Dutch economy, in particular through ensuring the integrity of the financial system, and improving the working of the housing market.

The measures envisaged in the Dutch RRP are expected to have a sizeable impact on the economy's growth potential and economic, social and institutional resilience. Measures to promote a green and digital economy are expected to have a positive impact on growth potential and job creation. Through the development of green and digital skills and support to companies and sectors to adapt to and drive the digital transition, as well as green technology development programmes, the plan is expected to promote the economic growth potential of the Netherlands as well as its economic resilience. Measures aimed at supporting the labour market and the uptake of skills should support the green and digital transition and social resilience, while tackling aggressive tax planning and the strengthening of the framework to fight money laundering should contribute to improved institutional resilience. Furthermore, each of the components in the plan is expected to contribute to social and/or territorial cohesion.

The RRP proposes reforms in the labour and housing markets, in the area of education and for the digital transition, which are expected to contribute to the Netherlands' economic and social cohesion. Social cohesion will be supported by measures relating to housing, health care, social protection coverage of the self-employed, and promoting digital skills. Some of these reforms will be accompanied by investments which are expected to contribute to expanding the supply of housing, the capacity of intensive care and foster the acquisition of skills through education and training, thereby contributing to social cohesion.

The green transition is a key priority of the Dutch RRP. The measures included in the plan are expected to contribute to the Netherlands' decarbonisation and energy objectives as identified in the National Energy and Climate Plan 2021-2030 and are important steps to achieve climate neutrality by 2050. At least 47.8% of the financial contribution is expected to go to measures supporting climate change objectives. Dedicated reforms and investments in the area of climate action include significant efforts supporting the deployment of renewable energy sources, the development of a functional hydrogen infrastructure, adaptation of residential neighbourhoods to the consequences of climate change, the improvement of energy efficiency in the built environment, the rollout of climate-friendly mobility solutions, the restoration of biodiversity in natural habitats and the shift towards sustainable agriculture. None of the measures in the Dutch plan are expected to cause significant harm to the environment.

The measures supporting digital objectives account for 25.6% of the plan's total allocation calculated in accordance with the methodology of Annex VII to Regulation (EU) 2021/241. The contribution of the Dutch RRP to the digital transition focuses on accelerating the digital transformation. The implementation of the plan should help long-term sustainable economic growth and technological innovations, with investments in digital technologies, infrastructure and processes. The plan is also expected to maximise the potential of artificial intelligence while removing specific bottlenecks. Investments related to quantum computing will specifically support start-ups and are expected to lead to advances in research and development, networking and sensing. Other aspects of the digital transition are also addressed to varying extents in the plan. This notably includes the support of sustainable mobility by improving signalling systems in the country's motorway network and by digitalising key logistics processes. On the institutional side, the plan contains measures to digitalise the criminal justice system, to improve the government's internal IT systems and to improve the transparency of publicly institutions.

The measures envisaged in the RRP are expected to have a lasting impact on the economy and institutions. In particular, the envisaged measures that aim at fostering the twin transitions are expected to have a positive impact on the resilience, growth potential and economic transformation, through improved efficiency of public administration, innovation and productivity growth and job creation. This notably includes investments aiming to deploy digital solutions in the transport sector, investment in AI technology, as well as reforms fostering digital public services. Measures promoting energy efficiency and fostering the development and uptake of innovative green technologies, as well as those reducing regulatory barriers for investment in renewables are expected to unlock private investments. In addition, measures related to (digital) skills are expected to bring about change in education and training policy and support the twin transition.

The milestones and targets of the Dutch plan are generally evenly distributed across the implementation period and adequately reflect the overall level of ambition of the plan and appear realistic. It should be noted that the implementation of a number of key reforms is only planned for 2025 or 2026 and some of the largest investments, for example in wind energy and the housing market, are expected to take their full effect in 2025 and 2026. The implementation of the 49 measures in the plan is tracked through 127 milestones and targets. The milestones and targets represent the key elements of the measures and are necessary steps to achieve for their implementation.

The plan includes adequate audit and control arrangements. The arrangements in the RRP to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the Facility, including the arrangements aimed to avoid double funding from the Facility and other Union programmes, are assessed to be adequate, conditional on the completion of predefined milestones prior to the submission of the first payment request.

The justification the Netherlands has provided on the amount of the estimated total costs of the RRP is broadly reasonable and plausible. The Netherlands has provided individual cost estimates for all investments included in the recovery and resilience plan. For the large majority of the individual cost estimates the calculations behind the cost estimates are comprehensive and based on sound underlying assumptions. The cost estimates are substantiated by reference costs for the key cost drivers, which are supported by evidence and in line with comparable investments. However, for some measures the calculations of and the link between the cost and the justification thereof is not entirely clear. Overall, the assessment of the cost estimates and inherent supporting documents show that costs are justified and reasonable to a medium extent. The plan contains some recurrent costs, such as personnel costs and maintenance costs, which are essential for the success of the underlying reform or investment and which do not impose a significant burden on the national budget (most are temporary and the non-temporary ones lead to a limited cost for the future), making them all duly justified and acceptable. Finally, the estimated total cost of the recovery and resilience plan is in line with the principle of cost-efficiency and is commensurate to the expected national economic and social impact.

The RRP displays coherence within each component and shows thematic interlinkages and synergies between the different components. The recovery and resilience plan presented by the Netherlands is structured around six coherent components, which support the common objectives of stimulating the recovery of the Dutch economy, contributing to the twin transition and increasing the country's resilience. The plan is coherent across its components, with consistent reforms and investments reinforcing and strenghtening one another. The components reflect the plan's overall ambition to boost progress on the twin transition in recovering from the COVID-19 crisis. Components 2 and 3 on the digital transition and the housing market also contribute to the green transition. Measures to further improve digitisation of the Dutch economy are also found throughout the plan, notably in Component 4 on education. Several components contribute to increase fairness, social cohesion and resilience, notably in the areas of self-employment, education, aggressive tax planning, health and affordable access to housing.

Table 1: Summary of the Dutch recovery and resilience plan assessment for the 11 criteria set by the Recovery and Resilience Facility regulation

(1) Balanced Response	(2) CSRs	(3) Growth, jobs…	(4) DNSH	(5) Green target	(6) Digital target	(7) Lasting impact	(8) M & T	(9) Costing	(10) Control Systems	(11) Coherence
A	A	A	A	A	A	A	A	B	A	A

2. RECOVERY AND RESILIENCE CHALLENGES: SCENE-SETTER

2.1. Macroeconomic outlook

The Dutch economy has shown to be resilient in 2020 and 2021. The high degree of digitalisation of the economy and the timely introduction of government support measures cushioned the economic impact of COVID-19 related confinement measures. Economic activity in 2020 saw, compared to other EU Member States, a relatively small contraction with a decrease in GDP of 3.8%. In 2021 the economy rebounded quickly to pre-pandemic levels, with GDP growing by 4.9%. The recovery in 2021 was driven by a swift rebound in private consumer spending as the vaccination campaigns allowed the economy to open up again. The economy also benefitted from a rebound in exports, with net trade making a significant contribution to GDP growth.

Growth in the second half of 2022 and in 2023 is expected to be subdued as the economy is facing new headwinds. Russia's invasion of Ukraine has increased uncertainty and has resulted in further increases in commodity prices and additional supply chain disruptions. Consumer confidence has dropped sharply while businesses are faced with tightening financial conditions. Growth in consumer spending in the second half of 2022 and 2023 is expected to be relatively weak due to the surging inflation affecting households' disposable income. Investment growth is also expected to be negatively affected, with weakening demand, tightening financial conditions and labour shortages weighing on investment decisions of businesses.

Overall, the Commission's Summer Interim Forecast projects GDP growth of 3.0% for 2022, of which 2.2% is carry-over from 2021. Growth in 2023 is expected to remain subdued at 1.0%, despite benefitting from the planned increase in government consumption and investment. The Dutch government announced in early 2022 that it would increase spending by EUR 79 billion (9.2% of 2021 GDP) during its mandate. This additional spending is planned to address challenges such as climate change, excessive nitrogen deposits, rising energy prices and insufficient housing supply.

Inflation picked up in the second half of 2021 (to 2.8% for the year) and surged further in 2022 following Russia's invasion of Ukraine. Annual inflation in 2022 is forecast at 9.4%. Especially gas and oil price increases have a large impact on the Dutch economy given the energy mix, which relies heavily on these two energy sources. However, more than half of Dutch households have electricity and gas contracts that are longer than a year, which will cushion the impact of rising prices on disposable income to some degree. In addition, the government has taken measures to ease the impact of higher energy prices on household budgets by, among other measures, lowering taxes on energy. The drivers of inflation have broadened in recent months, with especially food prices increasing substantially, while core inflation has also increased to well above 4%. In the course of 2023, energy prices are expected to start to decrease more markedly, which would bring down annual inflation to 3.3%.

The Dutch labour market is increasingly tight, with unemployment continuing to decrease and the number of vacancies well exceeding the number of unemployed. As a result, employers face increasing difficulties to find people with the right skills. Wage growth has been lagging behind the economic recovery in 2021 but has been picking up in recent months. Given the tight labour market and high inflation rate, the trend of increasing nominal wage growth is expected to continue in 2022 and 2023.

The projected GDP growth in the plan is 3.6% for 2022 and 1.7% for 2023. Similar to the Commission, the plan expects that higher inflation rates, persisting supply chain bottlenecks and the increased uncertainty due to Russia's invasion of Ukraine will pose challenges to the Dutch economy. The differences between the Commission's summer interim forecast and the macroeconomic scenario underpinning the plan are due to differences in cut-off date – with the forecast underpinning the plan being finalized when especially the inflation outlook was more benign. This results in a more benign outlook for GDP for 2022 and 2023.

Table 2: Comparison of macroeconomic developments and forecasts

	2019	2020		2021		2022		2023		2024	2025
	COM	COM	RRP	COM	RRP	COM	RRP	COM	RRP	RRP	RRP
Real GDP (% change)	2.0	-3.9	-3.8	4.9	4.8	3.0	3.6	1.0	1.7	2.0	1.7
Employment (% change)*	2.2	0.6	-2.7	1.8	2.2	2.0	2.9	1.1	0.9	1.1	0.6
Unemployment rate (%)	4.4	4.9	4.9	4.2	4.2	4.0	4.0	4.2	4.3	4.4	4.4
HICP inflation (% change)	2.7	1.1	1.1	2.8	2.6	9.4	5.7	3.3	2.4	2.4	2.5
General government balance (% of GDP)	-1.7	-3.7	-4.2	-2.5	-4.4	-2.7	-2.5	-2.1	-2.3	-2.5	-2.9
Gross debt ratio (% of GDP)	48.5	54.3	54.3	52.1	55.1	51.4	53.8	50.9	53.1	52.7	53.1

Sources: Commission Summer Forecast 2022 for real GDP and HICP inflation and Commission Spring Forecast 2022 *for other variables (COM). Recovery and resilience plan and CPB CEP 2022 (RRP). *COM figures based on total employment in FTE, RRP figures based on total hours worked.*

2.2. Challenges related to sustainable growth, cohesion, resilience and policies for the next generation

Despite its overall good performance, the Dutch economy faces a set of interconnected challenges. The Netherlands is among the most advanced countries in the EU in terms of GDP growth dynamics, sound public finances, living standards, productivity and connectivity. Nevertheless, intertwined challenges exist in several areas, with the key areas being the labour and housing market. In addition, structural reforms and well targeted investments in green and digital infrastructure, as well as skills, are needed to contribute to a more sustainable and inclusive growth.

The Dutch labour market is performing well overall but is still experiencing significant skills and labour shortages in many sectors. Ensuring the availability of skilled workers is one of the main challenges for the Netherlands, including in information and communication technologies, construction and the hospitality sector. Although shortages were already part of the challenges the Dutch labour market was facing before, the COVID-19 pandemic has increased both their intensity and impact on additional sectors. This shortage of skilled workers calls for continuous investments in up- and re-skilling, also in view of the green and digital transitions.

Overall labour market performance is good, with high participation and low unemployment, but important challenges remain with regard to labour market segmentation. The high level of flexible employment requires further attention in terms of equal opportunities in the labour market, fair working conditions and adequate social protection. Certain groups (mostly the young, low(er) skilled, people with a migrant background or disabilities), along with the self-employed without employees, were hit hardest during the pandemic and faced a (considerable) drop in income. In addition, the Netherlands has a high share of women in part-time employment (62.5% in 2021), which results in one of the largest gender pay (and pension) gaps in the EU.

While the pension system performs well on pension adequacy and fiscal sustainability, the occupational (second pillar) pension system has drawbacks in terms of intergenerational fairness, transparency of pension rights and flexibility. Second-pillar pension contributions are high and potentially large adjustments to contributions could be needed to absorb imbalances in pension funds' balance sheets. The large mandatory savings also contribute to the current account surplus. The implementation of the reform of the pension system agreed between the social partners and the government could make pension funds more resilient to shocks.

The Covid-19 pandemic has aggravated housing shortages while distortions in the housing market have contributed to rapidly rising house prices. This rise in house prices has been fuelled by low interest rates and, in 2021, by increased household budgets due to excess savings that were accumulated during the pandemic. The mortgage indebtedness in the Netherlands is higher than the average rate in the EU Member States, with households borrowing large amounts in relation to the value of their new home and to their income. These high mortgage debts make households financially vulnerable to changes in property prices and interest rates. This reinforces the cyclicality of the Dutch economy.

The 2022 Commission's Macroeconomic Imbalances Procedure (MIP) identified two macro-economic imbalances which the Netherlands faces: high private sector debt level and large

current account surplus.[3] The high mortgage debt substantially contributes to the high private sector debt level in the Netherlands. Besides mortgage debt, the intra-group debt of large multinationals also contributes to the large debt position of the private sector. The other macro-economic imbalance identified in the MIP concerns the large current account surplus, which, at 8.4% on average in the past three years, well exceeds the relevant benchmark (6% of GDP). From a sectoral perspective, high savings and low domestic investment of non-financial corporations are the main structural drivers of the continued high current account surplus.

Decreases in educational performance and the existence of significant disparities in the education system are a concern in the Netherlands. The gap in educational outcomes linked to socio-economic and migration background is high. Investments are lacking to increase the inclusiveness of education systems and improving their performance to ensure that skills taught better match those required by the labour market. The COVID-19 crisis hit hardest vulnerable groups that lack necessary basic and professional skills. It has lowered general educational outcomes, but also aggravated the already high inequalities in the educational outcomes of vulnerable learners.

The Dutch health system fared comparably well in coping with the unprecedented pressures from the pandemic, but the pandemic has also highlighted some shortcomings. The crisis has shown that a more resilient health system would not only help to manage potential future shocks, but also to tackle more structural challenges, such as a shortage of certain health workers. While the Dutch healthcare system performs very well in terms of universal access to quality healthcare at reasonable cost, the COVID-19 pandemic highlighted difficulties to provide e-health services due to a lack of relevant e-health tools.[4]

The Netherlands is among the countries with the largest flows of inward and outward foreign direct investment worldwide and faces significant money laundering risks. Although the Dutch government has taken several measures to combat the misuse of company and legal structures for money laundering purposes several important challenges remain when it comes to compliance with anti-money laundering. The Netherlands is identified as one of the Member States whose tax rules are used by companies engaging in aggressive tax planning. The fight against aggressive tax planning is essential to make the Dutch tax system more efficient and fairer.

2.3. Challenges related to the green and digital transition

Green dimension

The recovery and resilience plan should contribute to the green transition and at least 37% of the financial allocation needs to contribute to climate objectives. The measures in the plan should contribute to achieving the 2050 climate neutrality objective, and the 2030 energy and climate targets, taking into account Member States' national energy and climate plans. They should also contribute to meeting environmental targets for waste, water, pollution control, biodiversity protection and restoration, marine and water resources, and support the transition to sustainable

[3] In-depth review for the Netherlands, SWD(2022) 636 final

[4] In this context, it is important to take into account the Commission proposal for a Regulation of the European Parliament and of the Council on the European Health Data Space (COM/2022/197 final).

food systems as well as to a circular economy as appropriate, while ensuring that nobody is left behind.

Greenhouse gas emissions

The Netherlands has made good progress in reducing greenhouse gas (GHG) emissions, but more is needed to reach EU and national targets. The major challenge for the Netherlands in terms of meeting climate targets relates to the presence of relatively large energy-intensive industry and transport sectors. In addition to electrification, these sectors will need to rely on other energy carriers such as renewable hydrogen to become climate neutral. The Netherlands has overachieved its 2020 target of reducing emissions in sectors not covered by the EU Emission Trading System (ETS) by 13 percentage points (see Table 3), although this is partially attributable to the impact of the pandemic rather than structural reductions. Furthermore, total GHG emissions (excluding LULUCF and including international aviation) in 2020 were about 24% lower compared to 1990. By 2030, total GHG emissions are estimated to be 38% to 48% below 1990 levels with current policies. The Dutch government 2021-2025 coalition agreement has increased the ambition and aims at having at least 55%, whilst aspiring to achieve 60% lower net emissions in 2030 compared to 1990[5].

Renewable energy

The Netherlands is amongst the Member States with the lowest share of renewable energy in gross inland consumption. Fossil energy carriers continue to account for the majority of the energy mix with 39% oil and petroleum and 44% natural gas. In addition, the Netherlands has one of the largest gaps between 2020 shares of renewables (14%) and the EU 2030 target (27%).

Realizing the full potential of renewable energy sources in the North Sea faces number of key challenges. Recently, the government has increased the target for offshore wind energy production by 2030 from 11.5 GW to 21 GW. However, meeting this target will require overcoming challenges related to the ecological integration of offshore wind parks into the North Sea environment, the use of North Sea space by many different actors and the integration of offshore wind parks into the onshore energy system.

The Netherlands has the potential to be a frontrunner in the production of green hydrogen in Europe but scaling up remains a challenge. The government has set a target of 3-4 GW of electrolysis capacity by 2030 and is looking to increase this ambition in light of the European Commission's proposal for the revision of the EU Renewable Energy Directive and the ambitions set out in the REPowerEU Communication[6]. The achievement of this target requires additional innovation and scaling up efforts to substantially decrease costs throughout the entire supply chain from production to storage to use.

Growing capacity constraints in the Dutch electricity grid delay the implementation of new onshore renewable energy projects. Capacity constraints are especially acute in the provinces of Flevoland, Drenthe and Limburg and additional investments in network infrastructure as well as technical staff are needed to overcome network bottlenecks. The lack of a sufficiently 'smart'

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[5] Indicative target of 25.4-31 Mton fewer emissions by 2030.

[6] Communication on REPowerEU: Joint European Action for more affordable, secure and sustainable energy, COM(2022) 108 final, (8.3.2022)

energy grid to accommodate variable renewable energy further limits the effectiveness and speed of the energy transition.

The deployment of additional renewable energy source capacity is limited by complex and lengthy administrative procedures. The government has already taken several measures in recent years to simplify the permitting of energy projects, but bottlenecks remain, notably at local level, to authorize renewable energy projects, given the high density of population.

Energy efficiency

The Netherlands has made good progress towards meeting its energy efficiency targets but efforts need to be kept up to ensure it remains on track for achieving its 2030 targets, in particular as regards primary energy consumption. While its 2020 final energy consumption target was easily reached, its primary energy consumption target would not have been met without the impact of the COVID pandemic. Despite a wide range of energy efficiency policies and support programmes in all sectors, care has to be taken that a narrow policy focus on GHG emission reductions does not jeopardise the implementation of energy efficiency measures, which are often the most cost-efficient way to reduce emissions, in particular in industry. Energy efficiency will also be crucial in supporting the achievement of other objectives, specifically regarding security of gas supply and renewables[7].

CO2 emissions from the built environment decreased substantially between 1990 and 2021, but need to be reduced at a much faster pace to meet the 60% reduction target by 2030 set by the Dutch government 2021-2025 coalition agreement. The energy consumption of buildings continues to be a major source of CO2 emissions in the Netherlands due to the combustion of fossil fuels to generate energy and heat. Additional efforts to reduce the energy consumption of buildings as well as to install alternative energy generation solutions are therefore needed to reduce the CO2 emitted by the built environment from the current 22 Mton to the national objective of 10 Mton in 2030.

Biodiversity and water management

Excessive nitrogen deposits in agriculture are harming the environment, with more than three quarters of the protected habitats and species having unfavourable conservation status. The nitrogen surplus in the Netherlands is four times the EU average, with ammonia emissions per hectare being among the highest in Europe (60 kg NH3/ha). Nitrogen deposition exceeds the Nitrates Directive thresholds, hinders biodiversity objectives and affects the quality of water. Following a ruling of the Council of State in 2019, the government was urged to take action to reduce nitrogen deposits in Natura 2000 areas and surrounding areas. The ruling has affected existing and new building permits, constraining construction activity in 2020 and creating uncertainty for agricultural activity. Against this background, there is urgency for the Netherlands to substantially strengthen its nitrate action programme in line with the obligations under the Nitrates Directive. Additional efforts are also needed to ensure that the objectives of the Water Framework Directive, Natura 2000 and air quality legislation are achieved.

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[7] Shnapp, S., Paci, D. and Bertoldi, P., Untapping multiple benefits: hidden values in environmental and building policies, EUR 30280 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-19983-0, doi:10.2760/314081, JRC120683.

The shift toward sustainable agriculture remains a challenge but is necessary to reduce nitrogen deposits. The Netherlands is the country with the largest livestock density in the EU and the agricultural sector as a whole is responsible for 45% of nitrogen deposits.

Sustainable mobility

The Netherlands has a very dynamic deployment of zero-emission vehicles and a high share of electrification in its railway network, but further investments in sustainable mobility could help to remove bottlenecks. The Netherlands is a frontrunner in the roll-out of charging infrastructure for electric road vehicles. In addition, the country is also leading in efforts to decarbonise inland waterway transports. At the same time, the Dutch rail and road infrastructure is among the most congested in Europe, mostly due to intensive use. Investments in sustainable mobility solutions will not only address transport bottleneck but may also have positive spillover effects for the single market, given the importance of Dutch transport hubs such as the Port of Rotterdam and Schiphol airport.

The table below gives an overview of the Netherlands' objectives, targets and contributions under Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

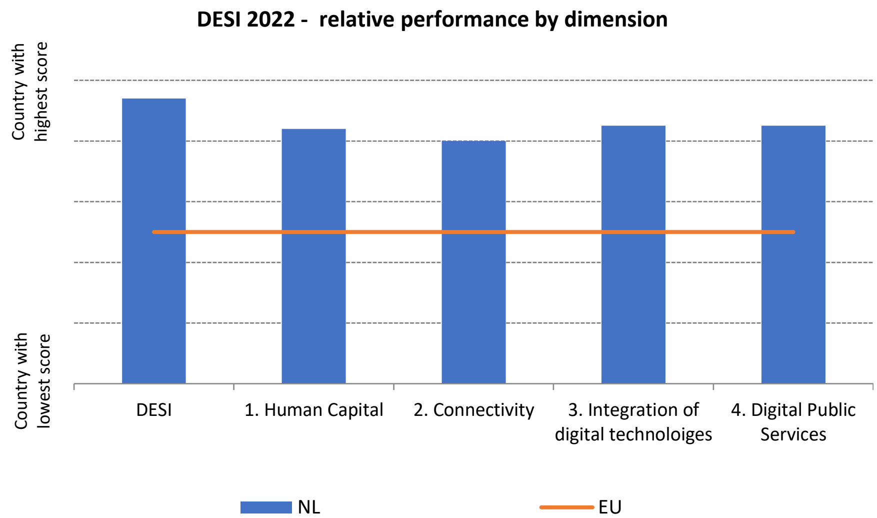
Table 3: Overview of the Netherlands' energy and climate objectives, targets and contributions

	National targets and contributions	Latest available data	2020	2030	Assessment of 2030 ambition level
	Binding target for greenhouse gas emissions compared to 2005 under the Effort Sharing Regulation (%)	29% (2020 proxy data)	-16% (ESD Target)	-36% (ESD Target	As in ESR
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)	14%	14%	27%	Sufficient ambition
	National contribution for energy efficiency:				
	Primary energy consumption (Mtoe)	58.42 (2020)	60.7	46.6	Sufficient ambition
	Final energy consumption (Mtoe)	45.54	52.2	43.9	Modest ambition
	Level of electricity interconnectivity (%)	>15%	>15%	37%	N.A.

Source: Assessment of the final national energy and climate plan of the Netherlands, SWD (2020) 918 final.

Digital dimension

The recovery and resilience plan should contribute to the digital transition and at least 20% of the financial allocation needs to contribute to digital objectives. The measures in the plan should, inter alia, contribute to the digital transformation of the economic and social sectors (including public administration, public services, and the justice and health systems). The objective of the measures in the plan should be to improve not only the competitiveness, but also the resilience, agility and security of companies and public actors, while ensuring inclusiveness throughout.



Note: EU aggregate corresponds to EU27, based on 2022 DESI report

The Netherlands is one of the top performers in the digital domain in the EU. It ranks third among EU Member States in the overall ranking of the 2022 Digital Economy and Society Index (DESI). The Netherlands performs particularly well on the uptake of digital technologies by enterprises and use of online services. It also performs well in connectivity, with a high level of 5G and Very High-Capacity Network coverage. However, despite the high 5G coverage, the quality, dependability and capacity of the Dutch 5G network can be further improved by accelerating the assignment of the remaining frequencies. Moreover, broadband prices in the country are consistently higher than the EU average.

The Dutch population has generally high levels of basic and advanced digital skills. At the same time, however, the country also faces a persistent shortage of digitally skilled professionals, including in artificial intelligence, data and cybersecurity. Even though the proportion of ICT specialists in the workforce is above the EU average, the share of ICT graduates is the fifth lowest in the EU. This adds to the difficulty for companies to find digitally qualified personnel and, as a result, the share of enterprises reporting difficulties to fill ICT vacancies remains very high (71.3% compared to 55.4% at EU average in 2020). The proportion of female ICT specialists has been increasing slowly over recent years but is still slightly below the EU average. Addressing these challenges through suitable investments in digital skills education and in digital skills development more generally can contribute to maintaining the Netherlands' position as a digital leader.

Box 1: Progress towards the Sustainable Development Goals

Overview of the Sustainable Development Goals and the four dimensions underpinning the Annual Sustainable Growth Strategy

The objectives of the Sustainable Development Goals are integrated in the European Semester since the 2020 cycle. This provides a strong commitment towards sustainability in coordination of economic and employment policies in the EU. In that context, this section outlines the Netherlands' performance with respect to SDGs with particular relevance for the four dimensions underpinning the 2021 Annual Sustainable Growth Strategy and of relevance to the recovery and resilience plans (green transition, fairness, digital transition and productivity, and macroeconomic stability), indicating possible areas where investments and reforms in line with the objectives of the Facility could further accelerate the progress on the SDGs.

Green Transition

The Netherlands performs very well on several SDG indicators related to environmental sustainability (SDG 2, 9, 11, 12, 13 and 15) and is improving on the indicator on affordable and clean energy (SDG 7). With respect to addressing 'Affordable and clean energy' (SDG 7) the country has made considerable progress on the share of renewable energy in total energy consumption, which increased from 5.7% in 2015 to 14% in 2020 but is still below the EU average (22.1% in 2020). The Netherlands also improved on indicators like 'primary energy consumption' and 'final energy consumption', but consumption remains above the EU average. Further reduction of ammonia emissions from agriculture production would lead to progress on SDG 2 'Environmental impacts of agricultural production'.

Fairness

The Netherlands ranks generally high on indicators assessing the fairness of society and economy (SDG 1, 2, 3, 4, 5, 8 and 10). The country outperforms the EU average in most indicators related to poverty, health and education (SDGs 1, 3, 4). It historically performs very well on economic growth and employment (SDG 8). The employment rate increased from 77.9% in 2016 to 81.7% in 2021, which makes the Netherlands one of the best performers in the EU (EU average: 73.1% in 2021).

Digital transition and productivity

The Netherlands performs better than the EU average in nearly all the indicators related to productivity (SDG 4, 8, 9). For instance, the country has the highest share of people with at least basic digital skills (79% in 2021, compared to the EU average of 54%), and one of the highest shares of adult participation in learning (SDG 4). The share of households with access to high-speed internet in 2021 (90.6%) is well above the EU average (70.2%) and represents significant progress on this indicator since 2016 (31.2% in 2016). The Netherlands has increased its share of GDP on R&D from 2.1% in 2015 to 2.3% in 2020 and now meets the EU average (2.3% in 2020).

Macroeconomic stability

The Netherlands performs very well on SDG indicators related to macroeconomic stability (8 and 16). In particular, the indicators on "peace, justice and strong institutions" (SDG 16) have further improved. The country also outperforms the EU average on indicators related to employment and decent work (SDG 8). Although the percentage of the population reporting crime, violence or vandalism decreased from 17.4% in 2014 to 15.7% in 2020, it is still above the EU average (11% in 2019) (SDG 16).

3. OBJECTIVES, STRUCTURE AND GOVERNANCE OF THE PLAN

3.1. Overall strategy of the plan

The Dutch recovery and resilience plan aims to act as a catalyst for more sustainable, smarter and inclusive growth, strengthening social cohesion and making the Dutch society more resilient to crises (such as pandemics) and climate change. The dimensions of sustainable and resilient growth complement each other in the RRP. Measures to achieve productivity growth and macroeconomic stability also contribute to environmental sustainability. The Dutch broader reform and investment agenda, which includes the RRP, has been shaped in accordance with these principles.

The RRP is structured according to six priorities, which cover all six pillars of the RRF Regulation. The six priorities of the Dutch RRP, which are described in 6 components, are: (1) Promoting the green transition, (2) Accelerating the digital transformation, (3) Improving the housing market and making buildings more energy efficient, (4) Strengthening the labour market, pensions and future-oriented education, (5) Strengthening public healthcare and pandemic preparedness, and (6) Tackling aggressive tax planning and money laundering.

Table 4: Overview of components and associated costs.

Component		**Costs (EUR million)**
Promoting the green transition	1.1 Speeding up climate and energy transition	1 836
	1.2 Addressing nitrogen	
Accelerating the digital transformation	2.1 Promotion of innovative technologies and digital skills	1 072
	2.2 Future-proof mobility	
	2.3 Future-proof IT in public administration	
Improving the housing market and making buildings more sustainable	3.1 Improving the housing market	1 387
	3.2 Making buildings more sustainable	
Strengthening the labour market, pensions and forward-looking education	4.1 Strengthening the labour market and a good pension	241
	4.2 Future-proof education and research	
Strengthening public health care and pandemic preparedness	5.1 Strengthening the public health sector and pandemic preparedness	172
Tackling aggressive tax planning and money laundering	6.1 Tackling aggressive tax planning and money laundering	0
Total		4 708

The first component of the plan aims at **promoting the green transition** and reducing GHG and nitrogen emissions. One of the main reforms included in the component, the Energy Law, is of particular relevance for the Netherlands to be able to move to a greener economy. This reform is accompanied by fiscal reforms in the fields of energy taxation, car taxation, industrial CO2 emission taxation and air travel taxation, all intended to stimulate the greening of the economy. The investments 'Offshore wind' and 'Green power of hydrogen' aim to support the production of more sustainable energy and increase the share of energy consumed from renewable energy sources in the Netherlands. The component also includes investments to move towards more sustainable transport, by supporting the transition towards cleaner technology in both air and water transport. The component contributes to reducing nitrogen emissions, by investing in nature restoration and supporting the rehabilitation of pig farms.

The second component focuses on **accelerating the digital transformation**. This component focusses on innovation and improving scientific research and includes a package of investments promoting advanced technologies, such as quantum technology and artificial intelligence. Further digitalisation in education and the logistics sector are supported by targeted investments. The component also addresses the Dutch challenges related to transport bottlenecks by supporting investments in rail traffic (advancing the implementation of the European Rail Traffic Management System) and road traffic (improving roadside stations and smart mobility solutions). These investments are expected to lead to increased energy efficiency, security and digitalisation in infrastructure. In addition, government IT systems are planned to be modernised which will improve the efficiency, transparency and accessibility of the public administration. To enable this, the component includes a reform in the public administration as well as further digitalisation of the criminal justice system and updating the IT systems of the Ministry of Defence.

The third component aims at **improving the housing market and make buildings more energy efficient**. This component includes a package of reforms expected to speed up the construction of housing and to make the housing market fairer and more accessible for all. A first reform aims to make social rent more income-dependent by allowing higher rent increases for tenants with higher incomes whereas a duo of tax reforms will increase the vacant possession value ratio[8] ("leegwaarderatio") in the Dutch tax system as well as the tax exemption of gifts to finance home purchases for young households. The remaining two reforms will promote the supply of housing by setting-up binding agreements with provinces and municipalities for the realisation of new dwellings and removing bottlenecks in the planning and permitting procedures for construction processes in the Netherlands. The construction of new dwellings is further supported by an investment aimed to provide the means to municipalities to undertake the necessary investments before residential construction can start. Lastly, the component includes two investments that aim to contribute to the energy efficiency of the built environment: a subsidy scheme to improve the energy efficiency of public real estate and an investment subsidy scheme to building owners for the implementation of energy savings measures

The fourth component aims at **strengthening the labour market, the pension system and education**. This component contains several important reforms such as the reduction of the tax deduction for self-employed, the introduction of a mandatory disability insurance for self-employed, and measures to tackle bogus self-employment (including an amendment to the law to better define employment relationships). The combined effect of these measures should lead to improved social and institutional resilience and help level the playing field between self-employed and employees, fostering equal opportunities for all. Another major reform included in this component is the reform of the pension system, which should lead to a more adequate and transparent pension system. Investments in human capital are planned to support people to develop their careers and find jobs through reskilling, contributing to addressing labour market and skills shortages and fostering the green and digital transitions. The component aims at making education and research suited for the future by investing in a national education lab and by supporting vulnerable students (by providing more finances to schools to support newcomers, last year students and online education).

The fifth component focuses on **strengthening the public health sector and pandemic preparedness**. It includes investments to reduce the shortage of human resources in the care sector in times of a health crisis and to increase the Intensive Care capacity during the COVID-19 pandemic. In addition, measures are planned to enable remote healthcare through the use of e-services and to strengthen data exchange between health institutions and for research.

The sixth and final component focuses on **tackling aggressive tax planning and money laundering**. This component includes a reform package to combat tax avoidance. In particular, the reforms aim at tackling tax avoidance by: (i) imposing a conditional withholding tax on interests, royalties and dividends paid to low-tax jurisdictions, (ii) introducing a law on countering

[8] The vacant possession value ratio adjusts the appraisal value of rented property, effectively introducing a tax discount for buy-to-let owners of property. Increasing the ratio will reduce the tax discount or eliminate it completely (as the ratio is raised to 100% in most cases).

mismatches in the application of the arm's length principle, (iii) preventing an exemption via a specific interest deduction limitation, (iv) limiting liquidation and cessation arrangements, and (v) limiting loss relief. In order to achieve decisive results, the measures against tax avoidance aim to go beyond the requirements of the European Directives (ATAD1 and ATAD2). This component also includes a reform aimed at reducing money laundering.

The timeline of the plan is relatively balanced with reforms and investments being fairly evenly distributed over the RRF period.

3.2. Implementation aspects of the plan

Consistency

The plan is aligned with key national and European programmes and initiatives. The RRP ensures consistency, and leverages synergies, with:

- the National Climate Agreement and Fund (section 2.1);
- the digitalisation priorities expressed in the Dutch government 2021-2025 coalition agreement (section 2.2);
- the National Housing Agenda (section 2.3);
- priorities identified by the Commission for the Regulation of Work (section 2.4);
- the Dutch health policy, prioritising e-health and pandemic preparedness (section 2.5); and
- the national policy on tax avoidance, following the recommendations from the Advisory Committee on Taxation of Multinational Enterprises (section 2.6)

The plan is broadly consistent with the challenges and priorities identified in the most recent Council Recommendation on the economic policy of the euro area.[9] Major investments focus on the green agenda and digital transition, thus supporting fiscal measures towards investments that promote a sustainable and inclusive recovery, consistent with the green and digital transitions (euro area recommendation 1). The reforms in the plan on tackling aggressive tax planning and money laundering counter tax evasion and tax avoidance to ensure fair and efficient tax systems (euro area recommendation 2). Reforms and investments in the area of the labour market and education are intended to mitigate to a certain degree labour shortages, contribute to the upskilling and reskilling of the work force and strengthen inclusive quality education and training systems (euro area recommendation 2).

The Technical Support Instrument (TSI) provides expertise in building capacities to implement the plan in a number of areas relevant for the green and digital transitions, such as hydrogen-powered transport and mobility and cybersecurity education.

Administrative organisation

The programme directorate at the Ministry of Finance is responsible for monitoring and coordinating the implementation of the plan. This includes reporting on progress with the implementation of milestones and targets, monitoring the implementation of the audit and control

[9] Council Recommendation of 5 April 2022 on the economic policy of the euro area (OJ C 153, 7.4.2022, p.1)

strategy, quality control of all financial data and submitting payment requests. The directorate is further responsible for identifying and correcting early on any potential undesirable developments. To this end, but also to ensure coherence with the use of other sources of Union funding, the directorate is in close contact with the line ministries that are in the lead on the implementation of specific reforms and investments. It will remain the technical contact point with the European Commission in the implementation phase of the recovery and resilience plan.

Gender equality

The RRP contains measures that are expected to help the Netherlands address the challenges in the area of gender equality and equal opportunities for all. The plan describes these challenges in the field of gender equality and explains how reforms and investments in the plan will be instrumental to address them and further improve on past achievements, e.g. the relatively high employment rate of women. The plan contains three measures in the digital area, namely ‘Quantum Delta NL’, ‘AiNed and AI Learning Communities’ and ‘National Education Lab AI’ that, among other goals, aim to increase the participation of women in this sector. Equal opportunities are a cross-cutting theme in the plan. Measures that are designed to improve the labour market by reducing institutional differences, notably between self-employed and employees, are expected to contribute to providing more equal opportunities for all. Equal opportunities are also expected to be reinforced by investments supporting education and access to employment of youth through career advice and training activities.

Stakeholder consultation

Based on the framework set out in the Dutch government 2021-2025 coalition agreement of 10 January 2022, a first concept of the RRP was published on 28 March 2022. During the subsequent consultation process, advice and information was sought from relevant stakeholders. This included meetings with co-authorities (municipalities, provinces and water boards), social partners and organisations working to promote gender equality and equal opportunities for all. In addition, an internet consultation was launched where every citizen was able to his/her views and give input on the first concept of the Dutch recovery plan.

The Dutch authorities state in the RRP that the meetings with *co-authorities* proved to be valuable in determining trade-offs in the process of reducing the size of the RRP and they led to more balanced measures in the areas of the housing market, renewable energy and energy efficiency. In the consultation process, municipalities and provinces stressed the importance of their involvement in the implementation of the reforms and investments included in the RRP.

Civil society organisations working on *gender equality and equal opportunities*, stressed the importance of monitoring the positive or negative impact of policy interventions on inequality during the implementation phase of the RRP. Since the publication of the first draft of the Dutch RRP, the plan was discussed several times in the regular consultation structure between the Government (chaired by the Ministry of Social Affairs and Employment) and the *social partners*, contributing especially to the measures for the labour market, pension reform and education.

A public internet consultation on the RRP was held on the Dutch authorities’ webpage for official internet consultations (www.internetconsultatie.nl) from 28 March 2022 to 6 May 2022. The social media channels of the Ministry of Finance drew the attention of stakeholders and interested parties to this consultation. A total of 38 replies were received to the consultation. The responses came from a wide range of (interest) organisations active in different areas such as energy, transport and elderly care givers. The Ministry of Finance held a technical briefing on the first version of the plan in the Dutch Parliament, later on followed by debates with MPs (both in the plenary and in the Finance Committee).

Cross-border and multi country projects

The plan does not include cross-border or multi-country projects, but several projects have positive spillover effects on other Member States. This applies notably to the measures in the green transition component, such as the investment 'Aviation in transition' which addresses the strategically important issue of reducing emissions from aviation. Another relevant investment concerns the European Rail Traffic Management System to align the Dutch system to the European standard for train protection and control.

Security self-assessment

In accordance with the RRF Regulation, the plan identified cybersecurity as a significant concern for one measure in the plan (updating the IT systems of the Ministry of Defence). The plan does not provide a detailed security self-assessment for this measure but confirms that appropriate cybersecurity systems are already in place and that the relevant strategies are up-to-date for the implementation of this investment. This specific investment includes the design of a Security Operations Centre, including a monitoring system, identification and access management, digital access control and additional security measures for strictly confidential work. It complies with NATO standards and is also explicitly linked to the EU's open strategic autonomy by making careful choices in IT service providers and diversifying key supply chains.

The plan also references the Dutch Cybersecurity Agenda, which includes several initiatives to safely seize the economic and societal opportunities of digitalisation and to protect national security in the digital domain.

No measures regarding 5G and high-speed connectivity are included in the plan.

Communication

The plan indicates a clear commitment by the authorities to meeting the RRF Regulation's requirements on communication. This refers in particular to making public all information regarding the implementation of the plan and the labelling of projects as financed by the RRF ('funded by the European Union – NextGenerationEU').

In its communication, the Netherlands aims to increase awareness of the RRF background and objectives and of the content and process of the national RRP. Communication will focus on substantively affected stakeholders, such as social partners, civil society organisations and local government, and the general public. Messages and developments will be placed on multiple channels so that communications are mutually reinforcing:

- Social media (Twitter, LinkedIn and Instagram) will focus on reaching the general public and stakeholders involved in content. A key objective of this commitment is knowledge sharing, for example during the process of achievement of milestones.

- The website www.rijksoverheid.nl/financienEU will serve as a basic platform for all communications on the RRF and Dutch RRP. It will contain a separate page which will list all official documents, major developments and results.
- Specific (visual) content will continue to be developed in the coming years to contribute to the achievement of communication goals.
- For all projects receiving funding through the RRF and the Dutch plan, arrangements are under way to mention the role of the EU under the RRF and NextGenEU.

Once a year, the results of the communication will be measured by means of media reviews and figures on social media and the website. This will assess the extent to which the communication objectives are being achieved and what additional actions, if any, are needed. Throughout the implementation of the plan, the Dutch authorities should continue to review the focus of its communication activities and notably how cooperation with the European Commission can contribute to this.

State aid

State aid and competition rules fully apply to the measures funded by the RRF. Union funds channelled through the authorities of Member States, like the RRF funds, become State resources and can constitute State aid if all the other criteria of Article 107(1) TFEU are met. When this is the case and State aid is present, these measures must be notified and approved by the Commission before Member States can grant the aid, unless those measures are covered by an existing aid scheme or comply with the applicable conditions of a block exemption regulation, in particular the General Block Exemption Regulation (GBER) declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 TFEU. When State aid is present and it requires notification, it is the duty of the Member State to notify State aid measures to the Commission before granting them, in compliance with Article 108(3) TFEU. In this respect, the State aid analysis carried out by the Netherlands in its RRP cannot be deemed a State aid notification. In as far as the Netherlands considers that a specific measure contained in the RRP entails de minimis aid or aid exempted from the notification requirement, it is the responsibility of the Netherlands to ensure full compliance with the applicable rules. In addition to complying with the EU's State aid rules, measures taken under this framework should be compatible with the EU's international obligations, in particular under World Trade Organization rules.

4. SUMMARY OF THE ASSESSMENT OF THE PLAN

4.1. Comprehensive and adequately balanced response to the economic and social situation

The plan follows a holistic approach to foster the recovery, addressing many challenges related to all six pillars referred to in Article 3 of the RRF Regulation. The plan aims to support the recovery and potential growth of the Dutch economy, while improving socio-economic and institutional resilience. The plan explains in detail how it addresses the six pillars referred to in Article 3 of the RRF Regulation, namely: (i) green transition, (ii) digital transformation, (iii) smart, sustainable and inclusive growth, (iv) social and territorial cohesion, (v) health and economic, social and institutional resilience, and (vi) policies for the next generation. All pillars are covered by at least one component, while some components contribute to several pillars. The range of actions of the plan corresponds to the one of the Facility with an appropriate overall balance between pillars. The coverage of the Dutch plan's components compared to the six pillars is summarised in Table 5.

Table 5: Coverage of the six pillars of the Facility by the Dutch RRP components

	Green transition	Digital transformation	Smart, sustainable & inclusive growth	Social and territorial cohesion	Health, and economic, social and institutional resilience	Policies for the next generation
C1: Promoting green transition	●		●			
C2: Accelerating digital transformation	○	●	●	●	○	○
C3: Improving the housing market and sustainably built environment	●			●	●	
C4: Strengthening the labour market, pensions and future-oriented education		○	●	○	●	●
C5: Strengthening the public health sector and pandemic preparedness		●			●	
C6: Tackling aggressive tax planning and money laundering			●		●	

Key: "●" investments and reforms of the component significantly contribute to the pillar; "○" the component partially contributes to the pillar.

Green transition

Facilitating the green transition is one of the main policy objectives underlying the plan and is addressed by investments and reforms in Component 1 and 3.

The plan supports reaching the Netherlands' decarbonisation objectives as set out in the National Energy and Climate Plan. Several measures contribute to achieving the 2030 and 2050 climate and energy objectives and to reducing the country's energy dependency on Russia. In particular, Component 1 contains dedicated measures to accelerate the green transition and the climate transition of industry, through investments in green technologies (enabling the building of wind turbines and supporting research into green hydrogen) and reforms (increasing CO_2 taxation for industry and reforming other aspects of energy taxation). A dedicated measure is also expected to reduce the amount of nitrogen emissions in agriculture, in particular near Natura 2000 areas.

Moreover, investments in Component 1 are expected to support the development of innovative technologies such as green hydrogen, zero-emission aviation and shipping, and

sustainable mobility solutions. In addition, Component 3 includes investment support for energy efficiency improvements in housing and for public building renovations.

Digital transformation

Investments and reforms in Components 2, 4 and 5 support the digital transition of the economy.

Most digital measures are included in Component 2, which has ten reforms and investments to support long-term sustainable economic growth through technological innovations, with investments in digital technologies, infrastructure and processes. The plan aims to maximise the potential of artificial intelligence (AI) by removing specific bottlenecks such as slow speed of innovation or lack of data exchanges and by including a talent programme for AI researchers. The 'Quantum Delta NL' programme will specifically support digital start-ups and is expected to lead to advances in quantum computing research and development, networking and sensoring. The 'Digital Infrastructure Logistics (DIL)' initiative aims to accelerate and facilitate the digitalisation and decarbonisation of the logistics sector and hence its sustainable growth.

The plan also supports the digital transformation in mobility, thereby promoting sustainable mobility covering various means of transport. Component 2 supports the rollout of digital infrastructure in the traffic management system of trains (ERTMS). Investments are planned in digital road side stations and in facilitating the transition to smart mobility.

The digital transition is also supported through measures aiming at improving the digitalisation of public administration and services and a better access to information (Component 2). The plan provides for a completely renewed IT infrastructure of the Ministry of Defence. The entry into force of the 'Open Government Act', part of the measure 'Public information management', is expected to improve citizens' access to information via a digital platform while the digitalisation of the criminal justice chain is designed to help citizens to access the criminal justice system.

Additional investments contribute to developing digital skills at different levels of the education system and digital inclusion in both education and health in the Netherlands. The plan contains measures to foster digitalisation in vocational and higher education institutions and to improve students' and teachers' digital skills through the establishment of "Centres for Teaching and Learning" (Component 2). A dedicated investment in Component 4 also aims to improve education by discussing and proposing scalable artificial intelligence solutions for the learning process in primary and secondary education. The plan also supports the development of nationally integrated health data, research infrastructure and e-health applications through a dedicated measure in Component 5.

Smart, sustainable and inclusive growth

The plan contributes to ensuring smart, sustainable and inclusive growth, with measures in Components 1, 2, 4 and 6.

Measures in these components are expected to enhance the productive capacity of the economy and promote sustainable growth, as well as climate mitigation and adaptation. The support to the development and application of new technologies in the green domain (Component 1) should help the Dutch economy to grow in a smart and sustainable way. Component 6 contains a comprehensive package of reforms that tackle tax avoidance and aim at addressing money laundering related challenges, which will contribute to creating a sustainable economy that works for all with a fair tax system.

Component 4 of the plan is expected to contribute to economic cohesion, inclusive growth, productivity and competitiveness via skill acquisition. By equipping the labour force with skills for the future, the plan aims to improve the employability of workers facilitating job-to-job transitions and is thus expected to enable citizens to make use of the opportunities of the twin transition.

Research, development and innovation measures are included in different components of the plan. A measure is included in Component 4 linked to the digital transformation of the education systems. Measures in Component 1 relate to innovation and new technologies for clean energy production. Measures in Component 2 are expected to develop the potential of artificial intelligence and quantum technology for the Dutch economy and society. A dedicated investment in Component 5 aims to stimulate innovation in life sciences and the health sector.

Social and territorial cohesion

The plan includes several measures in Components 2, 3 and 4 intended to enhance social and territorial cohesion. Territorial cohesion will be fostered through measures in Component 2 with investments into railways and smart mobility which are expected to reinforce the integration of transport networks and to promote safe, sustainable and smart mobility for both people and goods. Investments to substantially upgrade the railway network in the Netherlands (Component 2) will make it more attractive for citizens and enterprises to use the railways as a means of transport and strengthen territorial cohesion by improving connectivity between regions.

Social cohesion will be fostered through education and training measures, directly contributing to the implementation of the European Pillar of Social Rights. Measures targeting education (Component 4) are expected to have a positive impact on social cohesion, with measures focusing on students in their last year and students who recently migrated to the Netherlands ("*newcomers*"). Component 4 also includes investments to increase up- and reskilling opportunities to facilitate participation in the labour market of vulnerable groups.

Social cohesion will be further strengthened through investments in the housing market and the reform of the pension system. Dedicated measures in Component 3 are designed to make the housing market fairer and reduce inequality by removing distortions and by both unlocking and accelerating construction activities with a focus on affordable housing. Additionally, rent paid by tenants in the social rental sector will become more income-dependent by allowing higher rent increases for middle-and high-income tenants. Through a strengthening of the long-term sustainability of the pension system (Component 4), the plan is expected to also improve social cohesion by making the pension system more transparent, fairer and better suited for a changing labour market.

Health, and economic, social and institutional resilience, with the aim of, inter alia, increasing crisis preparedness and crisis reaction capacity

The resilience of the Dutch social, health, economic and institutional system is expected to improve as a result of the measures proposed in Components 2, 4, 5 and 6. The resilience of the Dutch health system in times of an acute crisis is expected to be improved through targeted measures in Component 5. These measures aim to reduce staff shortages in the care sector in times of a health crisis and to increase the intensive care capacity during the COVID-19 pandemic. In addition, investments are planned to enable remote healthcare through the use of e-services and to strengthen data exchange between health institutions and for research. A stronger and more resilient health system will thus be better placed to absorb surges in healthcare demand.

The resilience of the Dutch economy is expected to be improved with measures tackling to some extent inefficiencies in the housing market in Component 3. Several reforms related to the housing market and the rental market are expected to moderate the demand for buying a house. At the same time, several supply side measures are aimed at increasing the supply of (affordable) housing and are expected to contribute to a dampening of the strong house price increases. Although distortions in the housing market are expected to remain, the combined set of reforms and investments in the plan are expected to contribute to a more stable housing market, thereby improving macroeconomic resilience.

Component 4 includes three important reforms aiming to reduce the risks of labour market segmentation, as far as self-employed (notably those without employees) are concerned, thus helping to strengthen economic and social and institutional resilience. The plan includes measures to level the playing field between employed and self-employed in particular via the reduction of the tax deduction for self-employed and measures to reduce bogus self-employment by providing clarity on the definition of employment and increasing enforcement as well as the abolishment of the enforcement moratorium of the 2016 Employment Relationships Deregulation Act ("Wet deregulering beoordeling arbeidsrelaties, wet DBA"). In addition, it includes measures to improve social protection coverage for the self-employed via the introduction of a mandatory disability insurance. In combination, these labour market reforms will decrease institutional differences between categories of workers on the Dutch labour market. In addition, an important reform is included to address key vulnerabilities of the pension system. Together these measures are expected to make the labour market and pension system less vulnerable to economic shocks.

Institutional resilience will be supported through actions to ensure efficient public administration and sound governance. Component 6 contains a comprehensive package of reforms that tackle tax avoidance and address money laundering related challenges. Component 2 also aspires to promote institutional resilience by accelerating the digitalisation of the Dutch government, in particular the digitalisation of the criminal justice chain and upgrades to the IT systems of the Ministry of Defence.

Policies for the next generation, children and the youth, such as education and skills

The Dutch RRP contains policies for the next generation, children and the youth through its dedicated measures on training and education in Component 4 and several measures in Component 2. Additional resources for education will benefit the next generation. Component 4 contains measures aimed at newcomers and students in the last year, to combat the education losses during the COVID-19 pandemic. These measures are complemented by an investment to equip pupils with laptops or tablets. Dedicated measures are included to help match students' skills with demand from the labour market through training and learning activities. The future generation is also expected to benefit from an investment in Component 2 which aims to equip students and teachers with digital skills in secondary and higher education and one in Component 4 on developing AI solutions for learning processes in primary and secondary education.

Taking into consideration all reforms and investments envisaged by the Netherlands, its recovery and resilience plan represents, to a large extent, a comprehensive and adequately balanced response to the economic and social situation, thereby contributing appropriately to all six pillars referred to in Article 3 of the RRF Regulation, taking the specific challenges and the financial allocation of the Netherlands into account. This would warrant a rating of A under the assessment criterion 2.1 in Annex V to the RRF Regulation.

4.2. Link with country-specific recommendations and the European Semester

The Dutch RRP is expected to address a significant subset of the challenges identified in the relevant 2019, 2020 and 2022 country-specific recommendations. The plan includes an extensive set of mutually reinforcing reforms and investments aimed at fostering the green, digital and energy transitions, supporting sustainable agriculture, transport and research and innovation. These measures are expected to boost the growth potential of the economy in a sustainable manner. The plan includes measures to improve the resilience of healthcare, tackle aggressive tax planning, to reform the pension system and increasing the social protection coverage for self-employed. As such and taking into account the size of the financial contribution, the plan satisfactorily addresses most of the 2019, 2020 and 2022 country-specific recommendations (CSRs). However, in some cases, the measures in the plan alone are not sufficient to ensure that the CSRs are addressed adequately. This is notably the case for the CSR related to the debt bias and distortions in the housing market which has only been addressed in a partially satisfactory manner as the plan does not sufficiently address the debt bias in the housing market, where generous mortgage interest deductibility remains in place. In addition, while important reforms are included to reduce incentives for workers to be self-employed, the plan lacks sufficient measures or envisaged policy options to reduce the incentives to use flexible and temporary employment. Although the plan contains several measures to increase digital skills, the focus of the plan on labour and skills shortages in general is more limited. Limited attention is given to comprehensive life-long learning and up- and reskilling of the inactive and those at the margins of the labour market. The Netherlands has also taken additional measures outside the scope of the plan that address policy challenges in the areas of anti-money laundering, wages and wage development and skills development. The latter is also expected to be followed-up by use of other EU funding programs, notably the Just Transition Fund (JTF) and the European Social Fund Plus (ESF+). See table 6 for a mapping of the challenges identified in the 2019-2020-2022 CSRs and the components in the Dutch RRP.

Several reforms are included in the plan aimed at tackling more effectively aggressive tax planning and money laundering (CSR 1 in 2019 and CSR 4 in 2020) in the Netherlands. The RRP includes several reforms, like the introduction of a withholding tax on dividends, interests and royalty payments to low-tax jurisdictions and in situations that constitute tax abuse under the Dutch anti-abuse regulations, aiming at tackling tax avoidance via the Netherlands. Some of the measures taken, which focus primarily on tax avoidance, also broaden the tax base and ensure a more balanced taxation of multinationals. The Netherlands is among the countries with the largest flows of inward and outward foreign direct investment worldwide and therefore subject to high money laundering risks. In the area of anti-money laundering the plan describes in its narrative the various measures taken by the Netherlands to tackle money laundering. Measures are included in the plan which aim at deterring criminals from laundering money and strengthening investigation, improving the effectiveness of the gatekeeper function and prosecution capacity.

The pension reform included in the plan aims to address the main shortcomings in the second-pillar pension system (CSR 1 in 2019 and CSR 1 in 2022). The planned reform will maintain the strengths of the Dutch pension system while addressing the key vulnerabilities in terms of inter-generational fairness, transparency and shock resilience. The plan specifies that the legislative process is expected to be finalised in 2022, with the new legislation entering into force in 2023 and the new system gradually being phased in thereafter.

The plan includes investments and reforms to accelerate the development of renewables and improving energy efficiency, in particular in buildings (CSR 3 in 2019, CSR 3 in 2020 and CSR 4 in 2022). The plan focuses on further developing energy from offshore wind and renewable hydrogen. An ambitious investment programme ('Offshore wind') aims at increasing the wind power generation in the North Sea ensuring the necessary entry and integration costs of offshore wind farms whilst also limiting negative externalities on the environment. The deployment of additional capacity from renewable energy sources is also supported by the 'Energy Law', a comprehensive reform providing the legal framework for necessary investments by system operators to modify the grid to accommodate the expected increase in the transmission of energy generated by renewable energy sources. Moreover, the reform aims to optimise permitting procedures for renewable energy projects. The transition towards clean and efficient energy generation and use is further reinforced by a package of fiscal greening reforms which aim to influence the behaviour of citizens and businesses towards supporting the green transition. A substantial financial envelope is reserved in the plan to improve the energy efficiency of the built environment. In particular, via the measure 'Subsidy scheme for sustainability of public sector real estate', which promotes renovations focusses on improving the energy efficiency of public sector buildings, and the investment 'Investment subsidy for sustainable energy and energy savings (ISDE)', which awards grants for investments in small-scale heat pumps, solar boilers, insulation and heat connections.

Important measures are included to accelerate investments in sustainable transport and sustainable agriculture (CSR 3 in 2019 and CSR 4 in 2022). Excessive nitrogen deposits are harming the environment and holding back construction. The plan includes two investments supporting the mitigation of the impact and root causes of nitrogen emissions, the 'Nature programme' and the 'Aid scheme for the rehabilitation of pig farms'. These measures are expected to have a positive impact on the recovery of biodiversity and to enable the shift towards a more sustainable agriculture in the Netherlands. When it comes to sustainable transport, the plan includes important steps towards the deployment of ERTMS in the Dutch railway system. Moreover, the projects 'Inland waterway energy transition, project ZES' and 'Aviation in transition' will promote the development and use of zero emission vehicles used for water and air transport. In addition, investments are included to promote safe and sustainable mobility including intelligent traffic control systems and digital data mobility systems and the roll-out of intelligent roadside stations to improve traffic flows.

The plan contains various measures aimed at increasing public and private investment and promoting research and innovation (CSR 3 in 2019 and CSR 3 in 2020). In the area of housing, the plan includes an investment project aimed at unlocking housing construction. The plan also contains measures to unlock investments in the green transition, including by removing obstacles for the development of offshore wind farms and by stimulating the roll-out of heat pumps. With regard to the digital transition, the plan includes measures that promote research and innovation which aim to leverage private investments in AI and quantum technology. Furthermore, the plan contains investment support for green hydrogen projects, including support for small and large-scale demonstration projects as well as a research programme focusing on the production, storage, transport and use of green hydrogen and investments to support the development of lightweight structures and electrical systems for flying hydrogen combustion and hydrogen fuel cell electric demonstrators. In 2020, the Dutch government announced the launch of a National Growth Fund (NGF). The aim of the fund is to support projects aimed at increasing the long-term growth potential of the Dutch economy. Several NGF projects have been selected to receive funding under the RRP, thereby increasing their ambition by setting their goals in concrete milestones and targets.

The plan contains measures to address the pandemic and to strengthen the resilience of the health system, including by tackling the existing shortages of health workers and stepping up the deployment of relevant e-health tools (CSR 1 in 2020). The plan includes investments which are expected to mitigate the shortage of human resources in the care sector in times of a health crisis via for example the establishment of a national care reserve and the increase of the Intensive Care capacity during the COVID-19 pandemic. In addition, measures are planned to enable remote healthcare through the use of e-services and to strengthen data exchange between health institutions and for research.

The plan partially addresses the need for investment in skills, education and training (CSR 2 in 2019, CSR 3 in 2020 and CSR 3 in 2022). The plan includes measures focussed on digital skills developments and contributes to addressing the shortage of ICT professionals by investing in the digital capacity of teachers and students at different levels of education, as well as by funding postgraduate and postdoctoral research in AI and quantum technology. The plan includes measures to improve access to digital public services via for example the digitalisation of criminal justice chains and the reform of transparency requirements for public bodies, but the Netherlands will need to pay continued attention to the accessibility of digital services for all citizens. The plan includes investments via the 'Regional Mobility Teams' and the 'Netherlands continues to learn' programme to strengthen up- and reskilling opportunities, for instance through the provision of career advice. However, given the remaining challenges related to labour and skills shortages and the need to support the green, digital and energy transitions, further investments to strengthen comprehensive lifelong learning opportunities are needed and targeted support for up- and reskilling remains necessary, in particular for the inactive and those at the margins of the labour market. The Netherlands has indicated that it aims to also use support via ESF+ and JTF to promote up- and reskilling activities for persons at the margins of the labour market (ESF+) or affected by the climate transition (JTF and, to a lesser extent, ESF+). Furthermore, (new) policy measures to strengthen comprehensive lifelong learning are expected to be announced in the autumn of 2022.

Reforms and investments related to the functioning of the labour market, including measures to reduce the incentives for self-employed without employees, partially address the structural challenges as identified (CSR 2 in 2019, CSR 2 in 2020 and CSR 3 in 2022). The combined effect of the labour market reforms included in the plan is expected to help level the playing field between employed and self-employed, contribute to tackling bogus self-employment, including via increasing public enforcement, and increase the social protection coverage of self-employed (by extending it with a disability insurance). Therefore, these measures in combination are expected to contribute to address the identified structural challenges related to reducing the incentives for self-employed without employees. However, further measures will be needed to reduce the incentives to use flexible or temporary employment contracts (in line with CSR 3 in 2022). The plan includes specific measures to temporarily alleviate the shortage of health care workers in times of an acute crisis but does not sufficiently address labour shortages in many other sectors of the Dutch economy, nor the structural labour shortages in the health sector.

The plan partially addresses the challenges related to the housing market and high private debt in the Netherlands (CSR 1 in 2019 and CSR 1 in 2022). The plan contains extensive proposals to boost housing supply, through investment support and reforms to speed up the planning process. On the demand side, the possibility of tax-free donations for house purchases is abolished, thereby lowering the incentive to take a large debt to purchase a house. The plan also contains measures with regard to the rental market, to reduce distortions in the social rental market and reform the taxation of private rental houses. However, several distortions in the housing market remain unaddressed by the plan. The debt bias created by the generous mortgage interest deductibility remains in place, despite a gradual reduction in the deductibility rate in recent years. Borrowing limits also remain high in international comparison. This creates incentives for households to hold large debt positions, which makes them vulnerable to economic shocks. Finally, the plan does not contain measures to significantly expand the private rental market, which is expected to remain small and therefore rather expensive.

The recommendation to support wage growth and increase disposable income has not been addressed in the plan, but is expected to be partly accommodated by measures taken outside of the plan (CSR 1 2019). While no specific measures to boost wage growth and disposable income are included in the plan, the authorities took measures in 2020 to reduce the tax burden on labour; they also decided on an extra minimum wage increase in 2023. Moreover, the authorities introduced measures in 2022 to cushion the impact of high inflation on households' purchasing power and boost disposable income.

European flagship initiatives

The reforms and investments of the plan are aligned with the European "flagship initiatives" of the 2021 Annual Sustainable Growth Strategy: power up (for example via the projects 'Offshore wind' and 'Green power of hydrogen'), renovate (for example via the subsidy schemes 'Investment subsidy for sustainable energy and energy savings (ISDE)' and ' Subsidy scheme for sustainability of public sector real estate'), recharge and refuel (for example, the 'Aviation in transition' project and the measure ' Inland waterway energy transition, project ZES'), modernise (for example via the 'Digitalisation of the criminal justice chain' and investments in E-health), scale-up (for example via investments under 'Quantum Delta NL') and up- and reskilling (for example via the 'Regional Mobility Teams' and the 'Netherlands continues to learn').

Taking into consideration the reforms and investments envisaged by the Netherlands, its recovery and resilience plan is expected to contribute to effectively addressing all or a significant subset of challenges identified in the country-specific recommendations, or challenges in other relevant documents officially adopted by the Commission under the European Semester, and the recovery and resilience plan represents an adequate response to the economic and social situation of the Netherlands. This would warrant a rating of A under the assessment criterion 2.2 in Annex V of the RRF Regulation.

Table 6: Mapping of country challenges identified in 2019-2020-2022 country-specific recommendations and the Dutch recovery and resilience plan components [1]

Country challenges (as identified in section 2)	Associated CSR (2019-2020-2022) and European Semester recommendations	Component 1- promoting the green transition	Component 2 – accelerating the digital transformation	Component 3 - Improving the housing market and built sustainably environment	Component 4 - Strengthening the labour market, pensions and future-oriented education	Component 5 - Strengthening the public health sector and pandemic preparedness	Component 6 - aggressive tax planning and anti-money laundering
Renewable energy, energy infrastructure & networks	CSR 2019.3 CSR 2020.3 CSR 2022.4	●		○			
Transport	CSR 2019.3 CSR 2022.4	●	●				
Environmental policy and resource management – sustainable agriculture	CSR 2022.4	●					
Wages & wage setting	CSR 2019.1 [2]						
Research and Innovation and public and private investment	CSR 2019.3 CSR 2020.3	●	○	○			
Pension systems and active ageing	CSR 2019.1 CSR 2022.1				●		
Housing	CSR 2019.1 CSR 2022.1			○			
Functioning of the labour market and poverty and social inclusion	CSR 2019.2 CSR 2020.2 CSR 2022.3				○	○	
Skills, Vocational Education and Training & adult learning	CSR 2019.2 CSR 2020.3 CSR 2022.3		○		○		

Country challenges (as identified in section 2)	Associated CSR (2019-2020-2022) and European Semester recommendations	Component 1- promoting the green transition	Component 2 – accelerating the digital transformation	Component 3 - Improving the housing market and sustainably built environment	Component 4 - Strengthening the labour market, pensions and future-oriented education	Component 5 - Strengthening the public health sector and pandemic preparedness	Component 6 - aggressive tax planning and anti-money laundering
Tax administration, tax evasion & tax avoidance and Anti-money laundering	CSR 2019.1 [3]CSR 2020.4 [3]						●
Healthcare	CSR 2020.1					●	

Key: "●" investments and reforms of the component significantly address the challenge; "○" the component partially addresses the challenge

[1] The recommendations related to the immediate fiscal policy response to the pandemic can be considered as being addressed outside the plan. The Netherlands has generally responded adequately and sufficiently to the immediate need to support the economy through fiscal means in 2020, 2021 and 2022, in line with the provisions of the General Escape Clause.

[2] This CSR was partially addressed by the adoption of measures not included in the plan

[3] This CSR was also addressed by the adoption of a substantial set of measures not included in the plan.

4.3. Growth potential, job creation, economic, institutional and social resilience, European Pillar of Social Rights, mitigating the impact of the crisis, and social territorial cohesion and convergence

Fostering economic growth and jobs

The plan is expected to contribute positively to GDP growth. Reforms and investments are fairly evenly distributed over the timeframe of the RRF. Some of the largest investments, for example on wind energy and the housing market, are expected to take their full effect in 2025 and 2026. Key labour and energy market reforms will be implemented in 2025 and 2026. According to the plan, the short-term growth impact will be limited, with only a noticeable positive impact on GDP growth of 0.1% in 2021. However, many channels through which the plan is expected to contribute to growth both in the short and the longer term according to the national *qualitative* impact assessment are not reflected in the national *quantitative* modelling. For example, neither spillover effects of other member states' RRPs are considered, nor the productivity improvements due to public investments. According to the qualitative assessment, in the medium and longer term, the plan is indeed expected to enhance productivity and contribute to long-term growth, due to measures related to education, research and development and the further digitalisation of the Dutch economy as well as energy and labour market reforms. There is no national estimate of the long-term growth impact of the measures. According to the Commission's QUEST model, the positive long-term real GDP effect is 0.2% of GDP in 2030 and 0.1% in 2040 (see Box 2). The national impact assessment also cites the Commission's estimates. The direct impact of the plan on job creation is estimated to be rather limited. However, some measures in the plan are expected to support the supply of labour through education and training and will contribute to more efficient matching between supply and demand.

Box 2: Stylised NGEU impact simulations with QUEST – The Netherlands

Model simulations conducted by the Commission using the QUEST model show that the economic impact of Next Generation EU (NGEU) in the Netherlands could lead to an increase of GDP of between 0.4% and 0.6% by 2026[10] and this impact would decrease gradually afterwards. After 20 years, GDP could be 0.1% higher. Spillovers account for a large part of such impact. [11]

According to these simulations, which assume spending to have started in 2021 and spread over 6 years, this would translate into up to 22,000 additional jobs, about 0.2% of total jobs in the Netherlands in Q2 2022. Cross border spillovers account for 0.4 of pps of GDP in 2026, showing the value added of synchronised expenditure across Member States (line 2 of Table 7). Even in a scenario with a lower productivity of NGEU funds, it would still lead to a significant impact (line 3).[12]

Table 7: QUEST simulation results (deviation of real GDP level from non-NGEU case, linear disbursement assumption over 6 years)

Scenario	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040
Baseline	0.4	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.2	0.1
of which spillover	*0.3*	*0.4*	*0.5*	*0.5*	*0.5*	*0.4*	*0.4*	*0.3*	*0.2*	*0.1*	*0.0*
Low productivity	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.1	0.0

This stylised scenario does not include the possible positive impact of structural reforms, which can be substantial. A model-based benchmarking exercise shows that undertaking structural reforms that would result in halving the gap vis-à-vis best performers in terms of indicators of structural reforms

[10] RRF amounts to roughly 90% of NGEU, which also includes ReactEU, Horizon, InvestEU, Joint Transition Fund, Rural Development and RescEU.

[11] Pfeiffer, P., Varga, J., in 't Veld, J. (2021), "Quantifying Spillovers of Next Generation EU Investment", ECFIN Discussion paper 144. https://ec.europa.eu/info/sites/default/files/economy-finance/dp144_en.pdf. For consistency reasons, the simulations are based on the allocations assumed in Pfeiffer et al. (2021). In June 2022, 30% of the allocation of non-repayable financial support has been updated on the basis of outturn data. This resulted in a final allocation to the Netherlands of EUR 4.7 billion compared to the allocation of EUR 6 billion assumed in the simulation. Therefore, the direct effects of the NGEU stimulus in the Netherlands (i.e. the impact that does not stem from spillovers) can be about 20% lower than indicated in Table 7.

[12] Technically, the low productivity scenario considers a significantly reduced output elasticity of public capital.

could raise the Netherlands' GDP by 11% in 20 years' time, in line with what was found for the EU average (Varga & in 't Veld, 2014).[13]

Due to the differences in the assumptions and methodology, **the results of this stylized assessment cannot be directly compared to the numbers reported in chapter 4 of the Dutch RRP.**

Strengthening social and territorial cohesion and convergence

The plan is expected to further improve social cohesion in the Netherlands, through investments into education and training, directly contributing to the implementation of the European Pillar of Social Rights, as well as in energy efficiency and affordable housing. Social cohesion will be supported through measures aiming at education and training, targeting disadvantaged groups or pupils with educational deficits caused by the pandemic (Component 4). The same component also includes investments to increase the up- and reskilling opportunities to facilitate participation in the labour market of vulnerable groups.

In light of recent energy price hikes, social cohesion is also expected to be strengthened by two large measures increasing investments into energy efficiency (Component 3). They are expected to increase jobs and investments temporarily while permanently reducing energy bills, which account for a larger proportion of income of less wealthy households' than that of wealthier ones. Improving energy efficiency is also a cost-efficient way of realising the country's target of achieving climate neutrality by 2050.

The measures to improve conditions on the housing market (Component 3) are expected to contribute to social cohesion. Strong increases in house prices over recent years have worsened housing affordability significantly and measures in Component 3 are expected to increase supply of housing and thereby improve affordability by limiting future price increases. The abolishment of tax-free donations to first-time home buyers, a subsidy that mainly supported individuals from better-off families in acquisition of property for own use, is also expected to level the playing field on the demand side of the housing market to some degree.

The plan includes measures that aim at enhancing territorial cohesion, in part by investing in digital infrastructure and sustainable mobility (Component 2). Investments into railways and smart mobility cover the whole territory and reinforce the integration of transport networks. It will promote safe, sustainable and smart mobility for both people and goods. Investments to improve the digital infrastructure and digital skills can support territorial cohesion by allowing more members of society to reap the benefits of working arrangements that are no longer tied to physical office spaces in cities.

Investments in the health sector are also expected to foster territorial cohesion and convergence (Component 5). An investment included in the plan supported the use of e-health applications during the pandemic allowing vulnerable groups to receive health care at a distance.

[13] Varga, J, in 't Veld J. (2014), "The potential growth impact of structural reforms in the EU: a benchmarking exercise", European Economy Economic Papers no. 541. http://ec.europa.eu/economy_finance/publications/economic_paper/2014/pdf/ecp541_en.pdf.

A more widespread use of e-health tools not only fostered social cohesion during the pandemic but may also contribute to territorial cohesion when applied in less densely populated areas.

Reducing vulnerability and increasing resilience

By further developing digital infrastructure and digital skills, the plan makes the Dutch economy more resilient to external shocks. The Netherlands' advanced digital infrastructure has helped the country weather the pandemic relatively well economically. Measures in the plan related to digitalisation of public administration (Component 2) are expected to improve its ability to adjust to shocks. Digital skills in the population can be expected to further improve through investments to provide pupils with better IT equipment and by introducing a systematic approach to the inclusion of digital education at different levels of the education system (Components 2 and 4).

Several measures in the plan contribute to reduce vulnerabilities linked to energy crises and the consequences of climate change. Investments into renewable energy and increased incentives to decarbonise the economy (Component 1) will make the country less dependent on fossil fuel energy imports while investments into renovations and energy efficiency improvements (Component 3) are expected to reduce energy demand substantially. Resilience against the consequences of climate change is improved by investments into climate change adaptation in the public space (Component 3).

The plan also includes reforms to improve the resilience of the pension system and the labour market. The combination of the proposed labour market reforms in Component 4 will decrease institutional differences on the labour market between employed and self-employed and are therefore expected to contribute to more equal opportunities for all on the labour market while also improving social protection coverage for the self-employed. In addition, by reducing the incentives for self-employed and tackling bogus self-employment, these reforms are expected to make the labour market less vulnerable to shocks. Furthermore, the reform of the second pillar of the pension system is expected to contribute to make pension funds more resilient to shocks.

Several measures in the plan support the public health sector and help to make it pandemic prepared (Component 5). This includes measures to expand intensive care during the COVID-19 pandemic. The plan further builds on the experience gained during the COVID-19 pandemic and creates a national reserve of former health care professionals and equipment to deal with future pandemic crises and emergencies. At the same time, the plan supports the development of nationally integrated health data, research infrastructure and e-health applications. These measures have helped increase resilience in the short term during the pandemic and are expected to make the health system more resilient in the future for acute crises.

Finally, the plan contains several measures to reduce vulnerabilities related to aggressive tax planning and money laundering. Measures in Component 6 are expected to broaden the tax base including by ensuring a more balanced taxation of multinationals. Anti-money laundering measures included in the same component are also expected to contribute to more institutional resilience. Together, these measures are expected to ensure efficient public administration and sound governance.

Taking into consideration all reforms and investments envisaged by the Netherlands, its recovery and resilience plan is expected to have a high impact on strengthening the growth potential, job *creation, and economic, social and institutional resilience of the Member State, on contributing to the implementation of the European Pillar of Social Rights, including through the promotion of policies for children and youth, and on mitigating the economic and social impact of the COVID19 crisis, thereby enhancing the economic, social and territorial cohesion and convergence within the Union. This would warrant a rating of A under the assessment criterion 2.3 of Annex V of the RRF Regulation.*

Box 3: Employment and social challenges in light of the Social Scoreboard accompanying the European Pillar of Social Rights

The European Pillar of Social Rights provides the compass for upward convergence towards better working and living conditions in the European Union. The implementation of its twenty principles on equal opportunities and access to the labour market, fair working conditions, social protection and inclusion, supported by the 2030 EU headline targets on employment, skills and poverty reduction, will strengthen the Union's drive towards a digital, green and fair transition. This box provides an overview of the Netherlands' progress in achieving the goals under the European Pillar of Social Rights.

The Dutch labour market performs well overall, but significant challenges remain in terms of labour market segmentation and the unfavourable employment and social situation of certain groups. The employment rate in the Netherlands is well above the EU average (82.5% versus 74.5% in Q1 2022). However, the high level of both non-standard flexible and temporary contracts and the number of self-employed without employees, which have been growing strongly over the last decade, remain a concern and require further attention in terms of challenges related to equal opportunities, fair working conditions and adequate social protection. The COVID-19 pandemic exacerbated risks in an already highly segmented labour market. People with flexible contracts (in particular young people, lower skilled, people with a migrant background and/or with disabilities) were among the groups hit the hardest, together with the self-employed without employees. While the gender employment gap is on average 8.2 pps in 2021, part-time employment remains widespread, in particular among women. As a result, the gender pension gap in the Netherlands is one of the largest in the EU. Under the European Social Fund Plus (ESF+), the Netherlands will continue to invest in the active inclusion of vulnerable groups, among which people with a migrant background. ESF+ resources will be used to provide up and reskilling opportunities to workers at the margins of the labour market and to prevent job losses.

Increasing labour and skill shortages and inequalities in terms of access to education, adult learning and up- and reskilling pose challenges, also in view of the green and digital transition. Improving the labour market outcomes of groups in an unfavourable employment and/or vulnerable social situation would also help tackle labour shortages and activate the untapped labour and skills potential. After several years of weak growth, adult participation in learning over the past four weeks decreased in 2020, but much less than in most countries (by 0.7 pps compared to 2019), and at 18.8% it was still more than double the EU average (9.1%). Following a break in time series, the participation rate increased to 26.6% in 2021 (EU 10.8%). However, outreach to those in a vulnerable labour market situation poses a challenge. Continued investment in improving basic, technical and digital skills, increasing cross-sector mobility and employability, as well as strengthening the quality and inclusiveness of education and training for all, is key for the Netherlands to contribute to reaching the 2030 EU headline target on skills. The Netherlands committed to ensuring at national level that by the end of the decade at least 62% of adults will have participated in learning each year in the preceding 12 months.

While the at-risk-of-poverty or social exclusion rate in the Netherlands is stable and well below the EU average, challenges remain for specific groups, such as people with a migrant background and those with disabilities. In 2020, 36% of the non-EU-born living in the Netherlands were at risk of poverty or social exclusion, 22.5 pps higher than among the native-born. For people with a non-EU migrant background, the gap is driven by a more prevalent risk of poverty (29.7% versus 11.1% for the native-born), linked partly to a more unfavourable employment situation, by a higher rate of severe material deprivation (8.9% versus 1.1%) as well as greater prevalence of in-work poverty (14.9% versus 4.6%). More than a quarter (29.3%) of children with foreign-born parents were at risk of poverty in 2020, which is over three times higher than for children with native born parents (9%). In addition, 24.9% of people with disabilities were at risk of poverty or social exclusion in 2020 (versus 12% of those without). In-work poverty risks are higher for people on flexible and/or temporary contracts as well as for the self-employed without employees. Challenges in terms of access to adequate social protection also remain for the self-employed without employees, while the planned introduction of a mandatory disability insurance for self-employed is an important step in the right direction. The Netherlands committed to lift 163 000 people out of poverty or social exclusion by the end of the decade to contribute to reaching the 2030 EU headline target on poverty reduction.

Social Scoreboard for THE NETHERLANDS		
Equal opportunities and access to the labour market	Early leavers from education and training (% of population aged 18-24) (2021)	5.3
	Individuals' level of digital skills (% of population 16-74) (2021)	79.0
	Youth NEET (% of total population aged 15-29) (2021)	5.5
	Gender employment gap (percentage points) (2021)	8.2
	Income quintile ratio (S80/S20) (2020)	4.2
Dynamic labour markets and fair working conditions	Employment rate (% population aged 20-64) (2021)	81.7
	Unemployment rate (% population aged 15-74) (2021)	4.2
	Long term unemployment (% population aged 15-74) (2021)	0.8
	GDHI per capita growth (2008=100) (2020)	106.9
Social protection and inclusion	At risk of poverty or social exclusion (in %) (2020)	16.0
	At risk of poverty or social exclusion for children (in %) (2020)	15.8
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP) (2020)	36.8
	Disability employment gap (ratio) (2020)	25.4
	Housing cost overburden (% of population) (2020)	8.3
	Children aged less than 3 years in formal childcare (% of under 3-years-olds) (2020)	67.6
	Self-reported unmet need for medical care (% of population 16+) (2020)	0.2

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

As presented in annex 12 of the 2022 Country Report for the Netherlands (SWD/2022/621 final). 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 2022. 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.

4.4. The principle of 'do no significant harm'

The Regulation establishing the RRF stipulates that no measure included in the recovery and resilience plan should lead to significant harm to any of the six environmental objectives within the meaning of Article 17 of the Taxonomy Regulation[14]. In line with the RRF Regulation and the Technical Guidance on the Application of 'do no significant harm' under the RRF Regulation (hereafter 'DNSH Technical Guidance'[15]), Member States provide a 'do no significant harm' (DNSH) assessment, on which basis the Commission assesses whether each measure of the plan complies with the DNSH principle. The Netherlands has submitted a detailed DNSH assessment for each measure included in its plan.

The evidence provided on the criteria used for the selection and design of measures is sufficient to conclude that no measure in the plan is expected to do significant harm to environmental objectives. Many measures included in the plan contribute substantially to environmental objectives, or have no or an insignificant foreseeable impact on environmental objectives, and are therefore considered DNSH compliant from the outset (e.g. certain measures in education and training, labour market, public administration, and health care). Other (sub-) measures are designed in such a way to ensure compliance with DNSH, such as the subsidy scheme to produce green hydrogen and the investment programme to ensure shipping safety near offshore wind parks. For measures requiring a 'substantive DNSH assessment' according to the DNSH Technical Guidance (e.g. sustainable mobility, industrial policy, digitalisation), the Netherlands has provided an assessment and substantiated that the measures do not lead to significant harm.

For measures whose impact on the six environmental objectives necessitate close scrutiny, the description of measures, milestones and targets defines the specific safeguards and commitments that are required during their implementation. In particular, for the emergency response towing vessels under 'Offshore wind', DNSH compliance is safeguarded by the inclusion of specific conditions in the measure description specifying that: (a) the vessels shall exclusively use green methanol compliant with the Renewable Energy Directive (EU) 2018/2001 (RED II), (b) the green hydrogen used for the production of green methanol shall comply with life cycle greenhouse gas emissions savings requirement of 73.4% for hydrogen and (c) the green methanol shall achieve at least 70% emissions savings in accordance with RED II and related implementing and delegated acts. For the 'Nature programme' and 'Offshore wind' measure safeguards are included to ensure that Environmental Impact Assessments (EIA) shall be completed in accordance with Directive 2011/92/EU (Environmental Impact Assessment Directive). For the hydrogen demonstration facilities under 'Green power of hydrogen' the target description specifies that the measure shall support: the production of hydrogen from electrolysis using renewable energy sources as defined in Directive (EU) 2018/2001 (Renewable Directive) or electricity from the electricity grid, or hydrogen activities that meet the requirement of 73.4% life-cycle savings of greenhouse gas emissions for hydrogen (resulting in life-cycle GHG emissions below 3 t. CO_2e/tH_2) and 70% for hydrogen-based synthetic fuels compared to a fossil fuel comparator of

[14] The six environmental objectives comprise (1) climate change mitigation, (2) climate change adaptation, (3) sustainable use and protection of water and marine resources, (4) the circular economy, (5) pollution prevention and control, and (6) protection and restoration of biodiversity and ecosystems.

[15] COM (2021) C58/01, Technical Guidance on the Application of 'do no significant harm' under the Recovery and Resilience Facility Regulation

94g CO2e/MJ, similar to the approach set out in Article 25 (paragraph 2) of and Annex V to Directive (EU) 2018/2001.

The measures 'Green power of hydrogen' and 'Investment subsidy for sustainable energy and energy savings (ISDE)' could potentially lead to investments being made in installations falling within the scope of the EU Emission Trading System (ETS). DNSH compliance of these measures is ensured by the safeguard that only projects with emissions substantially below ETS benchmark are eligible for support under the measures. The DNSH Technical Guidance sets out that for economic activities where there is no technologically and economically feasible alternative with low environmental impact, Member States may demonstrate that a measure does no significant harm by adopting the best available levels of environmental performance in the sector. In the context of the EU ETS, this is particularly relevant for the climate change mitigation objective. Among other conditions, the Netherlands has sought to ensure DNSH compliance by making the selection of supported projects conditional upon achieving GHG emissions that are at least below the relevant benchmarks established for the free allocation of ETS emission allowances[16]. Where the emission reductions are not substantially lower than the relevant benchmarks, the Netherlands has committed to provide an explanation on why this level of emission reductions cannot be achieved.

The building construction and renovation measures included in the plan comply with the DNSH principle. Whereas these measures have a positive impact on emission reductions, they generally create construction waste. In the DNSH self-assessment for these measures, the Netherlands invokes national legislation (in particular Article 8.8 of the Building Decree *"Bouwbesluit"*, Article 10.4 of the Environmental Protection Act *"Wet Milieubeheer"* and the Waste Landfills and Prohibition of Landfill Decree "*Besluit Stortplaatsen en Stortverboden Afvalstoffen"*), to ensure that no significant harm is done to the circular economy objective and that at least 70% (by weight) of the non-hazardous construction and demolition waste generated on the construction sites will be prepared for reuse, recycling and other material recovery. In this regard, the Netherlands also confirms that is has a 99.9% ratio of construction and demolition waste which is prepared for re-use, recycled or subject to material recovery, including through backfilling operations. The Netherlands has provided a similar confirmation for all demolition works to be undertaken as part of the 'Aid scheme for the rehabilitation of pig farms'. In addition, the plan highlights that the measures involving building construction and renovation will not include support for the installation of gas-condensing boilers. The 'Investment subsidy for renewable energy and energy savings (ISDE)' finances only the heat pumps for producing renewable energy and not the gas boiler in the case of a hybrid installation.

Taking into consideration the assessment of all the measures envisaged, no measure for the implementation of reforms and investments projects included in the Netherlands' recovery and resilience plan is expected to do significant harm to environmental objectives within the meaning of Article 17 of the Taxonomy Regulation (EU) No 2020/852 (the principle of 'do no significant harm'). This would warrant a rating of A under the assessment criterion 2.4 of Annex V to the RRF Regulation.

[16] Benchmarks as set out in the Commission Implementing Regulation (EU) 2021/447.

4.5. Green transition

Climate target

The Dutch plan dedicates EUR 2.25 billion to the climate objectives, which represents 47.8% of the plan's total allocation in non-repayable financial support. This exceeds the minimum climate target of 37% as set out in the RRF Regulation. Table 8 presents the contribution of all measures that contribute to the climate change objectives. The investments included in the Component 'Promoting the Green Transition' (Component 1) make up the largest share of the total climate contribution of the plan. These investments contribute towards climate change objectives through a variety of interventions, ranging from broad investments supporting the deployment of offshore wind energy and the restoration of Natura 2000 areas, to more specific investments upscaling the production of green hydrogen and introducing sustainable mobility solutions. These investments are complemented by a package of fiscal greening reforms having the objective of setting a fair price for GHG emissions and energy consumption so that citizens, businesses and social institutions have a stronger incentive to adapt their behaviour towards supporting the green transition.

The tagging is based on a correct application of the methodology for climate tracking as set out in Annex VI to the RRF Regulation, by identifying intervention fields, and corresponding coefficients for the calculation of support to climate change objectives. For broad measures, the climate contribution is computed at sub-measure level to ensure that intervention fields are accurately selected and to avoid any overestimation of the overall contribution of individual measures to the climate objectives. Whenever a selected intervention field includes specific additional conditions, these are substantiated in the description of the respective measure as well as reflected by specific provisions in the milestones and targets to ensure that the characteristics of the measures conform to the conditions set out in Annex VI to the RRF Regulation. The Dutch plan does not propose to increase the climate coefficient for any of the measures.

Table 8: Contribution to climate objectives per measure

Measure		Cost (EUR mln)	Climate contribution (EUR mln)	Climate contribution (%)*
P1.1I1	Offshore wind	693.7	469.48	10.0
P1.1I2	Green power of hydrogen	68.5	68.5	1.5
P1.1I3	Inland waterway energy transition, Project ZES	56.0	56.0	1.2
P1.1I4	Aviation in transition	28.7	28.7	0.6
P1.2I1	Nature programme	714.3	285.7	6.1
P1.2I2	Aid scheme for the rehabilitation of pig farms	275.1	110.0	2.3
P2.1I3	Digital Infrastructure Logistics (DIL)	36.2	14.5	0.3
P2.2I1	European Rail Traffic Management System (ERTMS)	149.0	59.6	1.3
P2.2I2	Safe, smart and sustainable mobility	55.3	22.1	0.5
P2.2I3	Intelligent Roadside Stations (IWKS)	128.9	51.6	1.1
P3.1I1	Unlocking new construction projects	538.0	236.2	5.0
P3.2I1	Subsidy scheme for sustainability of public sector real estate	225.3	225.3	4.8
P3.2I2	Investment Subsidy Scheme for Renewable Energy and Energy Saving (ISDE)	624.0	624.0	13.3
Total		**3 358.6**	**2 251.8**	**47.8**

** Please note that the climate contribution (%) is calculated based on the Netherlands' total allocation (EUR 4,707 million)*

The recovery and resilience plan contributes to the Netherlands' green transition, addresses the related challenges and is well aligned with the priorities of the European Green Deal and its 2030 climate target plan as well as the goal to make the EU climate-neutral by 2050. The measures included in the plan will increase investments in the climate transition of industry as well as energy efficiency in housing, contribute to the development of renewable energy sources, encourage sustainable transport modes, restore biodiversity in natural habitats and support the shift toward sustainable agriculture. Investments and reforms also address the following flagships as put forward in the 2021 Annual Sustainable Growth Strategy: power up ('Offshore wind', 'Energy Law'), renovate ('Subsidy scheme for sustainability of public sector real estate', 'Investment subsidy for renewable energy and energy saving (ISDE)') and recharge and refuel ('Aviation in transition', 'Inland waterway energy transition, project ZES'). Moreover, the investments and reforms included in the plan will contribute towards reaching the ambitions set out in the REPowerEU Communication.

Renewable energy

The plan includes investments to support renewable energy generation and use. The plan focuses on further developing energy from offshore wind and renewable hydrogen. An ambitious investment programme aims at increasing the wind power generation in the North Sea by 10.7 gigawatts (GW) to a total of 21.0 GW. Rather than focusing on the construction of offshore wind parks themselves, which is expected to be covered by private investments indirectly financed through the electricity price, the programme focuses on the entry and integration costs and the mitigation of negative externalities that are prerequisites for the deployment of these parks, such as ensuring shipping safety, nature enhancement and species protection as well as the integration of the power connection to land. The Netherlands will also invest considerably in the development of the green hydrogen ecosystem in the Netherlands with the objective of testing the feasibility of large-scale electrolysis, to further develop the technology and to ensure sufficient supply of trained personnel. The upscale of green hydrogen production is expected to result in significant price reductions for businesses and consumers. Finally, the deployment of additional capacity from renewable energy sources is also supported by the 'Energy Law', a comprehensive reform providing the legal framework for necessary investments by system operators to modify the grid to accommodate the expected increase in the transmission of energy generate by renewable energy sources. Moreover, the reform aims to optimize permitting procedures for renewable energy projects.

Green fiscal policy

The transition towards clean and efficient energy generation and use is further reinforced by a package of fiscal greening reforms. An ambitious 'Energy taxation reform' seeks to incentivise businesses and households to switch to more climate-friendly energy sources by simultaneously increasing the tariff for gas consumption and decreasing the tariff for electricity consumption. In addition, the reform also abolishes tax exemptions for highly emitting sectors such as glasshouse horticulture as well as metallurgy and mineralogy. The energy transition by industry is supported by the measure 'Introduction and tightening of the CO2 levy for industry', defining a minimum price for CO2 emissions by industry (in case the price set by the European Emissions Trading System is lower than this price floor), with an expected CO2 reduction target of 18.3m tonnes by 2030. Finally, the 'Reform of car taxation' and the increase in the rate for the 'Increase in the Air Travel Tax (ATT)' are expected to reduce GHG emissions by road and air transport. GHG emissions by road transport are also expected to be reduced by the digital mobility solutions included in Component 2 (Digital Transformation) that have the objective to optimise traffic flows ('Safe, smart and sustainable mobility', 'Intelligent roadside stations' and 'Digital Infrastructure Logistics (DIL)').

Energy efficiency

The plan earmarks a substantial financial envelope to improve the energy efficiency of the built environment. The 'Subsidy scheme for sustainability of public sector real estate' aims to incentivise the owners of buildings with a social function (i.e. local and regional authorities, educational institutions, health institutions and other cultural and welfare institutions) to improve the energy performance of their buildings through renovation actions. The 'Investment subsidy for renewable energy and energy savings (ISDE)', providing grants for investments in small-scale heat pumps, solar boilers, insulation measures and heat connections, is extended using RRF funds to increase the subsidy rate for heat pumps from 20% to 30% per installation. By reducing the energy consumption of buildings and using alternative forms of energy generation in buildings, both measures contribute towards the Netherlands' objective to achieve maximum CO2 emissions by the built environment of 10 Mton in 2030.

Sustainable mobility

Several measures in the plan are dedicated to promoting the development and use of zero emission vehicles used for water and air transport. The ambitious project ‘Inland waterway energy transition, project ZES’ provides investment support for the use of interchangeable Modular Energy Containers (MECs), which can be charged with green electricity at several loading sites in new and converted inland waterway vessels. Breaking away from the traditional model wherein a skipper owns an entire vessel including the propulsion system, the project aims to offer a future-proof, affordable and scalable solution for zero emission inland shipping. ZES is not only expected to reduce CO2 emissions per vessel by an average of 1250 tonnes but is also expected to benefit the Netherlands’ structural approach to nitrogen, given that vessels making use of MECs do not emit nitrogen. The measure ‘Aviation in transition’ promotes the development of ultra-efficient aircrafts using hydrogen as an energy carrier. This includes investment support for the development and modification, in-flight testing and demonstration of components and systems in flight based on hydrogen combustion or hydrogen fuel cells. The programme will contribute towards making the aviation sector more sustainable, in view of achieving climate neutrality of the sector by 2050.

The transition towards sustainable mobility is also supported by measures discouraging the use of road and air transport. The ‘Reform of car taxation’ will introduce a system of pay-for-use by making the car tax rate for cars and vans dependent on the number of kilometres driven. In addition, the reform will phase out the purchase tax exemption for fossil-fuelled commercial vans, while maintaining the exception for electric vans. With an expected CO2 reduction of 2.5m tonnes in 2030, the reform is expected to contribute significantly towards reaching the national reduction target that has been set for the mobility sector. The flat rate charged to travellers using air transport ‘Increase in the Air Travel Tax (ATT)’ leads to relatively high costs for short distance flights and is expected to increase the attractiveness of the international trains as an alternative means of transport. Finally, the implementation of the ‘European Rail Traffic Management System (ERTMS)’ will increase rail network capacity and make it easier and faster for trains to cross national borders, making the use of trains even more attractive.

Climate change adaptation and mitigation through biodiversity actions

Making residential neighbourhoods in the Netherlands more resilient to the consequences of climate change is supported by a measure in Component 3. The main purpose of the investment ‘Unlocking new construction projects’ is to help municipalities finance public infrastructure to enable private residential construction projects to start. In many cases, these necessary works in the public space include ambitious climate change adaptation actions regarding flooding, but also against heat, drought and to improve nature inclusiveness.

The plan aims to restore biodiversity and reduce nitrogen depositions, which is one of the main environmental challenges the Netherlands is facing. The comprehensive ‘Nature programme’ aims to contribute towards achieving favourable or improved conservation status conditions for all species and habitats under the Birds and Habitats Directives. The programme includes a measure to restore nature, with a particular focus on system restoration in and around congested nitrogen-sensitive Natura 2000 sites. The ‘Aid scheme for the rehabilitation of pig farms’ aims at reducing the odour nuisance attributable to livestock manure for nearby residents and nitrogen depositions by providing subsidies to pig farmers who permanently and irrevocably cease their pig farming activities.

Taking into consideration the assessment of all the measures envisaged, the recovery and resilience plan is expected, to a large extent, to make a significant contribution to the green transition or to address the challenges resulting from it and ensures that at least 37% of its total allocation contribute to the climate target. This would warrant a rating of A under criterion 2.5 of Annex V of the RRF Regulation.

4.6. Digital transition

Digital tagging

Reforms and investments contributing to digital objectives account for 25.6% of the plan's total allocation. A substantial contribution stems from Component 2 focusing on accelerating the digital transformation. This component consists of three sub-components: (i) promoting innovative technologies and digital skills, (ii) developing smart mobility solutions and (iii) modernising IT in public administration. In addition, measures on digital education (Component 4) and e-health (Component 5) are expected to make notable contributions to facilitating the digital transition.

The plan correctly follows the methodology for digital tagging set out in Annex VII of the RRF regulation, by identifying intervention fields, and applying corresponding coefficients for the calculation of support to the digital objectives, for each measure (the table in Annex presents the detailed application of the digital tagging methodology). The Dutch plan does not propose to increase the digital coefficient for any of the measures. It should be noted that some measures of the RRP have been split into sub-measures. For each sub-measure, the intervention field is indicated and the digital contribution is computed. This concerns in particular a measure on AI in Component 2 of the plan, which consists of separate sub-measures for developing AI applications for the economy as well as for academic programmes promoting further research into AI. The choice of intervention fields for the digital transition is well justified and reflects the nature, focus, objective or expected outcome of the investments.

Table 9: Contribution to digital objectives per measure

Measure		Cost (EUR mln)	Digital contribution (EUR mln)	Digital contribution (%)*
P2.1I1	Quantum Delta NL	263.9	263.9	5.6
P2.1I2	AiNed and applied AI learning communities	59.9	59.9	1.3
P2.1I3	Digital education impulse	209.4	209.4	4.4
P2.1I4	Digital Infrastructure Logistics (DIL)	36.2	36.2	0.8
P2.2I1	European Rail Traffic Management System (ERTMS)	149.0	149.0	3.2
P2.2I2	Safe, smart and sustainable Mobility	55.3	55.3	1.2
P2.2I3	Intelligent Roadside Stations (IWKS)	128.9	128.9	2.7
P2.3I1	Groundbreaking IT (GrIT)	94.1	94.1	2.0
P2.3I2	Digitalisation of the criminal justice chains	75.2	75.2	1.6
P4.2I1	National education lab AI	36.0	36.0	0.8
P4.2I5	Laptops and tablets for online and hybrid education to combat and mitigate learning losses	24.0	24.0	0.5
P5.1I3	Set COVID-19	50.0	50.0	1.1
P5.1I4	Health Research Infrastructure (HRI)	22.0	22.0	0.5
Total		**1 203.8**	**1 203.8**	**25.6**

** Please note that the digital contribution (%) is calculated based on the Netherlands' total allocation (EUR 4,707 million)*

Digital transition

The plan contains several measures that are expected to contribute to the digital transition and to address challenges resulting from it in a lasting manner. The plan focusses on promoting innovative technologies, digital education, digital mobility and upgrading IT systems used by the public sector. This includes measures to foster digitalisation in lower and tertiary education, quantum computing, artificial intelligence, digital logistics management, ERTMS, improving the efficiency and safety of passenger transport, digitalisation of the justice system and e-health. Investments and reforms also address the following flagships as put forward in the Annual Sustainable Growth Strategy: modernise ('Groundbreaking IT (GrIT)', 'Digitalisation of the criminal justice chain') and up- and reskilling ('Digitalisation education impulse', 'Digital Infrastructure Logistics (DIL)').

The actions put forward in the plan are coherent with the relevant national strategies and plans in the digital domain. Investments in quantum, AI, digitalisation of the justice system, improvement of IT systems in the public sector, and investment in digital skills and education are in line with the actions set out in the Dutch Digitalisation Strategy, first adopted in 2018, and updated in 2019, 2020 and 2021 by the Ministry of Economic Affairs and Climate Policy[17]. This

[17] https://www.nederlanddigitaal.nl/documenten/publicaties/2021/06/22/the-dutch-digitalisation-strategy-2021-eng

strategy brings together all central government policy on digitalisation, in close conjunction with the Dutch Cybersecurity Agenda and the Digital Government Agenda. Current priorities of the strategy are (i) artificial intelligence, (ii) better and responsible use of data, (iii) digital government, (iv) digital connectivity, (v) digital security and resilience, and (vi) digital skills and inclusion. To prepare its population for future developments, the Netherlands has launched a foresight report 'Digitalisation 2030'[18], which describes major economic, technological and societal trends likely to be impacted by the digital transition.

The measures in the plan are expected to contribute to three of the four strategic priorities identified at EU level. These were also reaffirmed in the recent communication on Europe's Digital Decade[19]: digital skills, digital infrastructures digital transformation of businesses and digitalisation of public services. The plan does not contain any planned participation in Important Projects of Common European Interest (IPCEI) for advanced technologies, even though it includes investment measures in quantum and artificial intelligence.

The plan foresees several measures to make best use of the opportunities of the digital transition in the public sector. A reform of the law on open government aims to make all public authorities and semi-public authorities more transparent. The law is expected to make public sector information more easily findable, interchangeable and easy to access digitally for citizens, journalists, Members of Parliament and staff. Investments into the justice system aim to digitalise relevant steps in criminal proceedings. These investments will enable the sharing of documents digitally and it will make audio and video material related to cases available to all parties involved. The investments aim to increase the efficiency of criminal proceedings by doing away with existing inefficiencies, in particular those linked to processing of the relevant paperwork. The plan also includes an investment aimed to renew the IT infrastructure of the Ministry of Defence by setting up a new IT infrastructure to enable the Ministry to use reliable, secure, future-proof and flexible systems.

The Dutch plan contains notable measures to support the development of digital skills and the application of new digital solutions could help mitigate skills and labour shortages. In the area of education, the Dutch plan contains measures that will improve students' access to IT equipment and introduce a systematic approach to the inclusion of digital education at different levels of the education system. These measures are expected to improve the ICT skills of the workforce in the long term, which could contribute to meeting some of the unmet demand for ICT professionals across the different sectors of the economy.

The plan includes investments in innovative technologies that are fundamental to the digital transition. In particular, the plan allocates sizeable funding to quantum technologies and AI. Regarding AI, the Netherlands is committed to European cooperation and appropriate ethical and legal frameworks. The Netherlands seeks to connect with other EU Member States through a learning approach to develop and exploit AI on a human-centric basis and by involving SMEs in order to make the best use of AI. The measure on quantum technology will contribute to the already strong quantum ecosystem in the Netherlands. The Quantum Delta NL foundation coordinates the

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[18] https://www.rijksoverheid.nl/documenten/kamerstukken/2021/04/26/toekomstverkenning-digitalisering-2030

[19] COM(2021) 118 - 2030 Digital Compass: the European way for the Digital Decade, 9 March 2021

national quantum technology agenda, which facilitates cooperation between and innovation by students, researchers, engineers and entrepreneurs.

Investments in digital mobility are expected to help addressing accessibility and sustainability in a densely populated country that is prone to congestion. The digital logistics measure aims to improve cooperation between logistics firms to make more efficient use of goods transport capacity. Digitalisation in this sector could achieve efficiency gains and prevent trucks from driving empty. The measures ‘Safe, smart and sustainable mobility’, ‘Intelligent roadside stations’ and ‘European Rail Traffic Management System (ERTMS)’ focus on a more efficient use of existing infrastructure, which is expected to reduce the distance driven and reduce congestion.

Finally, the digital measures included in the plan will make the Netherlands more resilient. In particular, many of the digitalisation measures included in the plan pay attention to cyber security aspects. This is relevant for the digital systems of the public sector, in particular in the case of the investment in the digital systems of the Ministry of Defence (‘Groundbreaking IT (GrIT)’), but also in highly innovative and competitive areas of digital enterprise, including investments in quantum computing and artificial intelligence. The proposed reforms and investments aim at improving the efficiency of public services, including the justice system, and at improving the security of hybrid working by public officials. Furthermore, investment in e-health are expected to improve the resilience of the healthcare system.

Taking into consideration the assessment of all the measures envisaged, the recovery and resilience plan is expected, to a large extent, to make a significant contribution to the digital transition or to address the challenges resulting from it and ensures that at least 20% of its total allocation contribute to support digital objectives. This would warrant a rating of A under criterion 2.6 of Annex V of the RRF Regulation.

4.7. Lasting impact of the plan

Structural change in administration and institutions

Measures included in the digital component of the plan are expected to lead to a lasting improvement in efficiency of public services (Component 2). Investments into the digitalisation of the criminal justice system are expected to result in efficiency gains. Investments in the IT systems of public institutions will improve their efficiency both internally and in dealing with external stakeholders.

Structural change in policies

The Dutch energy market is expected to undergo structural changes as a result of the reform included in the plan. The “Energy Law” (Component 1) is expected to facilitate investments into the electricity grid, allowing consumers to sell self-produced energy and harnessing data for smarter electricity grids. The reform as a whole is expected to lead to a broad overhaul of the regulatory framework of the Dutch electricity and gas market.

Other measures in Component 1 imply changes in green fiscal policy which have structural effects. The tax incentives framework will be influenced for years to come by the fiscal reforms that are designed to dis-incentivize the use of fossil fuels and reduce greenhouse gas emissions. The ‘Energy taxation reform’, ‘Introduction and tightening of the CO2 levy for industry’, the

‘Reform of car taxation’ and the ‘Increase in the Air Travel Tax’ are expected to contribute durably to behavioural changes resulting in lower fossil fuel consumption and less road congestion.

The plan contains several measures to address features of the Dutch tax system that facilitate aggressive tax planning. As part of its RRP (Component 6), the Netherlands is structurally addressing the aggressive tax planning features of the Dutch tax system by implementing withholding taxes on interest, royalties and dividends paid to low-tax countries. At the same time, the plan describes the Dutch action plan on anti-money laundering, from which two actions, namely the introduction of a limit for cash payments and the expansion of the efforts of the Dutch Financial Intelligence Unit, will be implemented as part of the RRP.

Many reforms and investments included in the RRP are key priorities of government policy over the next years. All commitments taken in the RRP by the Netherlands are consistent with and backed up by the agenda of the Dutch government expressed in its 2021-2025 coalition agreement. The pension reform in Component 4 is the result of intensive negotiations between social partners and the government. The impact of the reform will be felt over the next decades. Reforms on the housing market are also expected to have effects well beyond the time frame of the RRF (Component 3). The reform ‘Centralised planning to increase housing supply’ foresees binding agreements between the government and local governments to build 900 000 dwellings until 2030. Measures to speed up the residential construction process are also expected to have an impact on housing supply in the Netherlands beyond the time frame of the RRF.

Lasting impact

The measures included in the plan are expected to have lasting positive effects on the Dutch economy and boost its green and digital transitions. The plan is expected to strengthen the growth potential of the economy and to facilitate job creation, innovation and competitiveness by investments into renewable energy, the further digitisation of the Dutch economy as well as the education system.

The digital and technology-oriented measures in the plan are expected to provide benefits to the Dutch economy over the longer term. Future-oriented investments into the digitalisation of the Dutch economy, for example through more widespread use of AI or quantum computing are expected to have a long-lasting impact on competitiveness and productivity, while measures supporting digital skills development may contribute to addressing the shortages of ICT professionals in many sectors of the economy in the medium term.

The measures in the plan are expected to strengthen the growth potential of the economy and its inclusiveness by levelling the playing field in the labour market and making the education and research systems future proof. For example, the reforms related to self-employed people will tackle some of the structural challenges identified, while stimulating up- and reskilling opportunities will contribute to creating a labour pool able to quickly adapt to changing circumstances. The focus on education and research will benefit the economy in the long-term.

The plan also includes measures that contribute to a structural reduction of nitrogen emissions from agriculture, industry and transport with the aim of meeting the legislated nitrogen targets. For example, the ‘Aid scheme for the rehabilitation of pig farms’ aims to reduce nitrogen depositions providing subsidies for pig farmers who permanently and irrevocably cease their pig farming activities. The ‘Nature programme’ aims to realize a lasting favourable conservation status of overloaded nitrogen-sensitive habitats and species.

Taking into consideration all reforms and investments envisaged by the Netherlands in its recovery and resilience plan, their implementation is expected, to a large extent, to bring about a structural change in relevant policy areas and to have a lasting economic and societal impact. This warrants a rating of A under criterion 2.7 in Annex V to the RRF Regulation

4.8. Milestones, targets, monitoring and implementation

Adequacy of the structure tasked with the implementation of the plan, monitoring of progress and reporting

The implementation of the Dutch recovery and resilience plan will be based on the Netherlands’ existing system of budgetary management and governance. In line with this system, the policy directorates in the various ministries are the primary bodies responsible for the implementation of the measures in the RRP. The milestones and targets of the measures included in the RRP will be included in an annex to the annual plans of the various ministries. The financial economic affairs directorates (FEZ) of the various ministries will monitor the policy directorates in relation to the progress of the milestones and targets and the monitoring process of the policy directorates. A dedicated RRF Programme Directorate in the Ministry of Finance will act as the coordinating body and will in that role be responsible for the overall coordination of the Dutch recovery and resilience plan, reporting on the progress of milestones and targets, submitting the payment requests and drawing up of the management declaration. As a result, and in accordance with existing structures, the Programme Directorate will rely on a decentralised system of departmental budgets and sub declarations. A milestone to be achieved before the first payment request relates to the formalisation of the role of the coordinating body as foreseen in the plan (see also 4.10).

The plan describes the institutional actors that are responsible for the implementation of the individual reforms and investments at component level. The various actors that will be in charge of the implementation of the measures, mainly policy directorates in various ministries and authorities under their control, are indicated in the description of the components of the plan. Close technical cooperation between the Ministry of Finance, various ministries and independent public bodies will be critical for the plan’s implementation. More broadly, involving the national Parliament, local authorities, social partners and civil society will be key to ensure the successful implementation of the reforms and investments under the plan.

The plan describes adequately the intended monitoring and reporting mechanisms. The Programme Directorate will prepare general guidelines for a model annex which will define how milestones and targets are to be reported, accompanied by additional evidence. This annex will become part of the annual reports of the various ministries, and it will be integrated in the internal planning and control cycle. The Financial Economic Affairs Directorates (FEZ) of each ministry will supervise the implementing bodies on the progress of the milestones and targets. Via the annex and sub declarations implementing bodies will have to provide information on the progress related to milestones and targets. The information is systematically maintained in the departmental IT systems and shared with the Programme Directorate on biannual basis as part of the reporting obligations and to ensure consistency and continuity. The data will also be stored in a central repository. This central repository will be developed and, as far as possible, linked to existing European and national IT systems. A milestone is included in the plan for the development of the central repository system (see also 4.10).

The necessary administrative resources for the management and supervisory function of the plan will be provided mostly within the institutions' existing resources. The administrative capacity of the central services charged with implementation and coordination of the RRP, namely the Programme Directorate for the recovery and resilience facility of the Ministry of Finance, the policy directorates and the financial economic affairs directorates (FEZ) is adequate to conduct their foreseen roles and tasks. The control and monitoring task required for the RRF will be integrated in the standard planning and control cycle. Therefore, the resources and knowledge already in place related for these tasks at the national level can be capitalised on. This should ensure smooth and appropriate implementation as the institutions involved possess the necessary knowledge and skills, while not creating a disproportionate administrative and financial burden. Furthermore, the administrative capacity of the coordinating body central service charged with implementing and coordinating the RRP are sufficiently detailed in the RRP (see also 4.10).

Milestones and targets

The plan includes 72 milestones and 55 targets that are relatively evenly distributed across the implementation period. The 21 reforms and 28 investments included in the RRP are supported by milestones and targets spread throughout the implementation period, although it should be noted that the implementation of a number of key reforms is only planned for 2025 or 2026 and some of the largest investments, for example on wind energy and the housing market, are expected to take their full effect in 2025 and 2026. The milestones and targets reflect the key steps towards the implementation of reforms and investment and are considered realistic and sufficiently ambitious to address the relevant challenges.

The milestones and targets in the plan are clear and realistic and the proposed indicators are relevant, acceptable and robust. Milestones and targets are realistic and in line with the costing estimates provided by the Netherlands. The number of milestones and/or targets per measure is a realistic reflection of the different elements and stages of implementation of the corresponding reforms and investments. Milestones generally describe the main elements and objectives of planned reforms and reflect the decisive steps towards the complete implementation of a specific reform. They mostly concern reforms taking the form of a legal act and refer to the entry into force of a new piece of legislation to capture the actual implementation of new provisions. In some instances, milestones refer to the publication of a law with subsequent milestones covering its implementation. The performance of investments is mainly captured by the achievement of targets that generally refer to concrete outputs such as the number of ships converted to zero emission vessels, the number of intelligent roadside stations installed and the number of energy efficiency measures subsidised.

The arrangements proposed by the Netherlands in its recovery and resilience plan are expected to be adequate to ensure effective monitoring and implementation of the recovery and resilience plan, including the envisaged timetable, milestones and targets, and the related indicators. This would warrant a rating of A under the assessment criterion 2.8 of Annex V to the RRF Regulation.

4.9. Costing

The Netherlands has provided individual estimated costs for all investments and reforms that entail a cost in the recovery and resilience plan.

The cost breakdown is generally detailed and well-substantiated. For almost all cost estimates the assumptions used are well described and clear. The Netherlands provided detailed information and evidence on costs using the standard template tables, which was supplemented by separate documents including more elaborate descriptions of the methodology underlying the cost calculations as well as the budgetary implications of measures. The estimates are mainly based on actual data, business cases, market research and comparisons with past investments of similar nature. The Netherlands did not provide an independent validation of the cost estimates by an independent fiscal institute but several of the measures have been reviewed by relevant independent committees.

The assessment of the cost estimates and inherent supporting documents shows that the majority of the costs are well justified, reasonable, plausible and do not include costs covered by existing or planned EU financing and are commensurate to the expected economic and social impact of the envisaged measures.

Reasonable costs

To support the cost estimates, the Netherlands provided an extensive list of documents to justify and explain the amounts proposed and gave explanations on how those amounts were computed. The evidence supporting cost estimates provides a reasonable explanation of the key cost drivers of the proposed measures, even though the degree and depth of the evidence provided varies across measures. For the most part, previous projects, business cases, pilot projects or other comparative cost data for the main cost drivers were used as a basis for deriving cost estimates. While the calculations were generally clearly spelled out and it was possible to identify the methodology used, for a limited number of investments the information provided was less clear. Nevertheless, there is no evidence that would shed doubts on the costing estimates provided.

The reforms and investments included in the Dutch recovery and resilience plan comply with the eligibility criteria set out in the RRF Regulation. All costs supported by the RRF are incurred for reforms and investments (to be) implemented after 1 February 2020 and the agreed milestones and targets are set in such a way that no RRF funding is to be requested after 31 August 2026. Value-added tax (VAT) is not part of the cost estimates. The plan contains several recurrent costs, such as personnel costs and maintenance costs. These are duly justified and acceptable. The plan provides justifications to show that these costs are essential for the success of the reforms and investments to which they correspond and that they do not represent a significant burden on the national budget. Most of these costs are temporary and the non-temporary ones lead to a limited cost for the future.

In this context, it is deemed that the reasonability of the cost estimates has been established to a medium extent.

Plausible costs

The amount of the estimated total costs of the recovery and resilience plan is in line with the nature and type of the envisaged reforms and investments. The Netherlands provided a large set of documents and links to online sources to substantiate the cost estimates. For the most parts, explanations were added to how past projects or market research for key cost drivers relate to the cost estimates of the investments in the RRP, enabling a full assessment of the plausibility of the costs. Nevertheless, in a limited number of instances the comparability of past projects to the ones proposed in the plan could not be established, partially due to the novelty of the measure. For some investments the costing was deemed relatively high compared to costs of similar investments. Depending on the significance of the shortcomings identified, these limited set of measures, are assessed as having "medium" or "low" plausibility.

Considering the limitations of an ex-ante assessment of cost estimates, the submitted evidence and the overall amounts proposed for financing were deemed appropriate and seen as establishing the plausibility of the cost estimates to a medium extent.

No double EU financing

The individual components provide clear information about additional investments from other Union funds. The Netherlands has indicated for each individual measure that the costs to be financed by the RRF will not be funded at the same time by other Union funding sources. In a dedicated chapter of the Dutch recovery and resilience plan, assurance is given that, the necessary procedures and arrangements for the prevention of double funding are put in place to ensure that the reforms and investments included in the plan do not finance the same costs as other Union funds. For each measure, a funding sheet and a declaration from the project manager that there is no double funding will be prepared. In the funding sheet, the policy directorates will also provide information on possible co-financing. This will help to identify the measures for which there may be a risk of double funding (see also 4.10).

The 2021-2027 Partnership Agreement and Programme has been agreed but several programmes are still under negotiation, and as such a completely developed delineation is not possible at this moment. However, the Commission did a preliminary check to reduce the risks of double Union financing, and no evidence of clear risks has been identified.

Commensurate and cost-efficient costs

The total estimated cost of the plan is commensurate with the expected social and economic impact of the envisaged measures. The recovery and resilience plan is expected to effectively help address a significant subset of challenges identified in the country-specific recommendations (CSRs). Moreover, the recovery and resilience plan contains measures supporting the recovery from the COVID-19 crisis and laying the foundation for long-term growth. The main objectives of the plan are to foster the twin transition, improve the Netherlands' growth potential and economic, social and institutional resilience, thereby reducing vulnerability to shocks. The plan contributes to strengthening social cohesion and social protection and to the implementation of the European Pillar of Social Rights. The plan enhances the economic, social and territorial cohesion and convergence within the Union. The economic and social impact of the plan in combination with the positive cost assessment, indicates that the cost is in line with the principle of cost-efficiency.

The justification the Netherlands provided on the amount of the estimated total costs of the recovery and resilience plan is, to a medium extent reasonable and plausible, in line with the principle of cost-efficiency and is commensurate to the expected national economic and social *impact. The Netherlands provided sufficient information and evidence that the amount of the estimated cost of the reforms and investments of the recovery and resilience plan to be financed under the Facility is not covered by existing or planned Union financing. This would warrant a rating of B under the assessment criterion 2.9 of Annex V to the RRF Regulation.*

4.10. Controls and Audit

A robust national internal control system should ensure the protection of the EU financial interests (prevent, detect and correct fraud, corruption, double funding and conflicts of interest), as well as ensure the accuracy of the data underlying milestones and targets.

Robustness of internal control system and distribution of roles and responsibilities

The monitoring, control and audit systems put in place for the implementation of the RRP are based on robust existing national structures which follow a more decentralized approach. The authorities responsible for planning, implementing and verifying the recovery and resilience plan are part of the national management and control system. A dedicated Programme Directorate for the RRF in the Ministry of Finance will be appointed as the coordinating body and as such will have the overall responsibility ("systeemverantwoordelijk") for the monitoring and implementation of the plan and the protection of the Union's financial interests. It will also hold the responsibility for submitting the payment requests and for drawing up the management declaration. Policy directorates in the relevant ministries and agencies/consortiums are specified to ensure the reporting and implementation of the measures mentioned while the Financial Economic Affairs Directorates (FEZ) of each ministry will supervise and monitor the policy directorates and in particular progress towards the milestones and targets. Via sub declarations (management Declaration at the level of the implementing organisation) implementing bodies will confirm the respect of the sound financial management and confirm the reliability of the reported data on the milestones and targets. These sub declarations will be verified and signed by the financial economic affairs directorates of each ministry. The audit authority "Auditdienst Rijk", an independent service within the Ministry of Finance, will carry out regular audits of the management and control systems including substantive testing. It will also prepare a summary of the audits carried out which will be included in the payment requests. The anti-fraud coordination service is part of the Ministry of finance and will have central role in fraud coordination under the RRP in the Netherlands.

Adequacy of control systems and other relevant arrangements

Robust audit arrangements have been put in place. The role of audit authority is assigned to the "Auditdienst Rijk", which is also the responsible body for auditing structural funds. The audit authority will prepare the audit strategy and will carry out regular audits of the management and control systems and substantive testing. In particular, the audits of the management and control system will assess that the monitoring and implementation arrangements provide complete and reliable data on the indicators defined in the RRP and that the implementation system ensures that funds are managed in accordance with the rules and capable of preventing, detecting and correcting fraud, conflict of interests, corruption and double financing. During the implementation of the plan on a regular basis, system audits will take place to prepare the summary of audits. Furthermore, as a first step a baseline check of the data system for milestones and targets will take place to ensure that possible issues with double funding or conflict of interest can be detected in an early stage. Serious irregularities will be included in the management declaration. The Netherlands Court of Audit ("de Algemene Rekenkamer"), an external independent body, will act as an extra layer of control.

All information related to the implementation and monitoring of the plan will be stored in a central repository system that will be developed for the implementation of the RRP. The implementing bodies will collect and store all the data as referred to in article 22(2) point d) of the RRF regulation. The information will be stored in the departmental IT systems and shared with the coordinating body on a six-monthly basis as part of the reporting obligations and to ensure consistency and continuity. The Netherlands also confirmed that they will apply the appropriate solutions to verify information related to foreign contractors and final recipients. Furthermore, the data shall also be stored in a central repository system. This repository will be developed and, as far as possible, linked to existing European and national IT systems. A milestone is included in the Plan for the development of this central repository system that will be used at the level of the coordinating body. The repository system will contain the information related to milestones and targets and collect, store and ensure access to the data in line with article 22(2) point d) of the RRF regulation. The Netherlands has also committed to use Arachne, the Commission's data mining and risk scoring tool. The central repository system that will be developed will also be linked to Arachne.

The institutional framework and processes put in place to prevent, detect and correct fraud, corruption and conflict of interest give sufficient assurances. Several measure and actions are already or will take place to prevent fraud, corruption and conflict of interests. This also includes a complete risk analysis which will be done by the policy directorates to prevent conflicts of interest, fraud, corruption and double funding. This risk analysis will then feed into concrete actions and additional supervision to facilitate the early detection of problems. A first workshop with policy directorates and financial economic directorates already took place. The policies as laid out in the general administrative law act form the basis for the corrective measures as required under the RRF regulation. Additional measures should be taken in case of suspicion of fraud or abuse. This could possibly lead to a declaration, so that the case can be examined in criminal proceedings. In the event of actual fraud or abuse, or in case the suspicions are serious, the case shall be transferred to the criminal justice actors. All criminal law issues will in principle be referred to the European Public Prosecutor's Office (EPPO), which will proceed with the case, unless the EPPO decides to leave it to the National Public Prosecutor's Office. The EPPO will have access to the Central Data Repository upon request. In addition, the audit authority will also verify that the system put in place can prevent, detect and correct cases where there is a risk of conflict of interest, corruption or fraud.

Adequacy of arrangements to avoid double EU funding

Adequate arrangements to avoid double EU funding are put in place. In a dedicated chapter of the Dutch recovery and resilience plan, assurance is given that the necessary procedures for the prevention of double funding are put in place to ensure that the reforms and investments included in the plan do not finance the same costs as other Union funds. For each measure, a funding sheet and a declaration from the project manager that there is no double funding will be prepared. In the funding fiche, the policy directorates will also provide information on possible co-financing. This will help to identify the measures for which there is a risk of double funding. On the basis of this information, risk analyses can be carried out. In addition, all final beneficiaries should provide on a regular basis an updated overview of other external sources of funding, outside the RRF, which they receive as an entity. It should be clearly stated in the grant decisions that the policy directorates and audit bodies will have access to all the necessary information. For existing arrangements it will be verified which information is available and this will be included in the risk analysis, additional measures can be taken to prevent, detect and/or correct double funding.

In order to avoid double financing, a central data system will be developed in which information on the final beneficiaries of the RRF funds is kept. This central data system, in combination with Kohesio and the Financial Transparency System (FTS), will be used to verify that that there is no risk of double funding. Additional checks will be carried out by the Financial Economic Affairs Directorates, the Programme Directorate and the audit body. In the event that double funding actually occurred, appropriate action will be taken and if needed the case will be sent to the European Public prosecutor. A case of double funding will be reported in the summary of audits.

Legal empowerment and administrative capacity of control function

The RRP provides adequate information regarding the administrative capacity of coordinating and implementing bodies. The administrative capacity of the coordinating body, the program directorates for the RRF, is sufficiently detailed. 13 FTE are currently assigned to the program directorate for the RRF, the coordinating body, and it will be evaluated on an ongoing basis if the administrative capacity is sufficient. Guarantees have been given that the necessary financial resources will be made available. The capacity of the financial economic directorates in the implementing bodies which are responsible for the supervision and control of the recovery and resilience plan has increased significantly in 2021. In addition, given the integration of the control and monitoring task required for the RRF in the standard planning and control cycle, the resources and knowledge already in place related for these tasks at the national level can be used. Staff responsible for monitoring and ensuring compliance with the provisions of the RRF Regulation will receive training to familiarise them with the specificities of the programme, including for example the use of Arachne. A preliminary assessment has been made by the Audit body which indicated a need for 10 extra FTE to perform the required task. Additional funding will be made available to provide for these extra resources.

The formalisation of the legal mandate of the audit body and the coordinating body will take place before the first payment request. The mandates of the audit body (“Auditdienst Rijk”) and the coordinating body (“Programme Directorate”) -will be adjusted to ensure that they have the legal mandate as foreseen in the description of the plan. For these purposes, additional milestones have been defined and added to the plan which should be completed before the first payment request.

The arrangements proposed by the Netherlands in the recovery and resilience plan to prevent, detect and correct corruption, fraud and conflicts of interest when using the funds provided under the Facility, including the arrangements aimed to avoid double funding from the Facility and other Union programmes, are assessed to be adequate subject to the enactment of the regulation setting out the legal mandate of the different bodies involved in the implementation of the plan before the first payment request. This would warrant a rating of A under the assessment criterion 2.10 of Annex V of the RRF Regulation.

4.11. Coherence

The Dutch RRP is structured around six coherent components, which support the common objectives of stimulating the recovery of the Dutch economy, contributing to the twin transitions and increasing the country's resilience. Each component is built around sub-components containing reforms and investments of mutually reinforcing or complementary nature as explained hereafter.

Mutually reinforcing measures

The plan is coherent within its components, with consistent reforms and investments that reinforce and strengthen one another. In Component 1, reforms of taxation and energy markets provide incentives for electrification, greenhouse gas emission reduction and sustainable mobility that support investments in hydrogen, zero-emission vessels and aviation. Measures to improve the environment complement the actions to accelerate the energy and climate transition. In the digital component (Component 2), the actions put forward are expected to contribute to the four strategic priorities identified at EU level and reaffirmed in the recent communication on Europe's Digital Decade[20]: skills, infrastructures, digital transformation of businesses and digitalisation of public services. Component 3 contains both measures that increase the supply of housing and remove elements of the tax system that distort the demand for housing. The measure included in Component 4 are expected to contribute to equal opportunities for all and a comprehensive package to reduce the incentives for self-employed without employees is included. The various measures that deal with health (Component 5) and taxation (Component 5 6) do not contradict each other or negatively affect each other within their component.

Complementarity of measures

All components together reflect the plan's overall ambition to boost progress with the twin transitions in recovering from the COVID-19 crisis, while contributing to increasing fairness and social resilience.

The measures in Component 2 and 3 contribute to the green transition. In Component 2, investments in the digitalisation of logistics and ERTMS support sustainable mobility. The 'Digital Infrastructure Logistics (DIL)' initiative aims to accelerate and facilitate the digitalisation and decarbonisation of the logistics sector and hence its sustainable growth. The deployment of ERTMS in railways in the digital component increases railway capacity thereby supporting green transportation. In Component 3, the 'Investment subsidy for sustainable energy and energy savings (ISDE)' will allow for support in the installation of heat pumps and isolation to improve energy efficiency.

Measures to further improve digitisation of the Dutch economy are found throughout the plan. The education sub-component includes not only the provision of digital equipment in schools but also the development of national AI laboratory for education, complementing investments in the digitalisation of the education system as well as the development of learning communities in artificial intelligence that are part of the digital components. Furthermore, in

[20] COM(2021) 118 - 2030 Digital Compass: the European way for the Digital Decade, 9 March 2021

Component 5 reforms are planned to enable remote healthcare through the use of e-services and to strengthen data exchange between health institutions. Finally, the reform of the 'Energy Law' in Component 1 will allow to open up energy data, creating new opportunities for digitalisation.

Several components contribute to increase fairness and social resilience. Component 3 and 6 contain several reforms related to moderate the demand for buying a house and increase the supply of (affordable) housing and are expected altogether to contribute to a dampening of the strong house price increases. Component 4 contains measures to level the playing field between employed and self-employed, to reduce bogus self-employment and to improve the social protection coverage for the self-employed via the introduction of a mandatory disability insurance. Sub-component 4.2 includes several measures to support learning deficiencies of school pupils. Component 5 includes measures to increase the capacity of the health system in case of a health crisis. Component 2 reinforces the provision of digital public services, including the justice system. Finally, Component 6 contains measures to tackle tax avoidance and that aim at addressing money laundering related challenges. In order to promote wider coherence across instruments, notably with the European cohesion policy funds, a balanced territorial allocation of resources is encouraged.

Taking into consideration the qualitative assessment of all the components of the Netherlands' plan, their individual weight (importance, relevance, financial allocation) and their interactions, the plan contains measures for the implementation of reforms and public investments, which, to a high extent, represent coherent actions. This warrants a rating of A under assessment criterion 2.11 in Annex V to the RRF Regulation.

ANNEX: CLIMATE AND DIGITAL TAGGING TABLE

Note: While the total cost of the Dutch recovery and resilience plan exceeds the total allocation of non-repayable financial support to the Netherlands, the Netherlands will ensure that all spending related to the measures mentioned in this table as contributing to climate objectives are fully financed by the funds from the Recovery and Resilience Facility.

Int. Field = intervention field

Coeff. = Coefficient for the calculation of support to climate change objectives and to digital transition, on the basis of Annex VI and Annex VII of the RRF Regulation

(Sub)-Measure ID	(Sub-)Measure Name	Cost (EUR mln)	Climate		Digital	
			Int. Field	Coeff. %	Int. Field	Coeff. %
P1.1I1-1	Offshore wind – ensuring shipping safety	260	074	100%		
P1.1I1-2	Offshore wind – electric re-charging points at sea and in the quay	60	077	100%		
P1.1I1-3	Offshore wind – strengthening and protecting the North Sea ecosystem	131	050	40%		
P1.1I1-4	Offshore wind – proper integration of the power connection to land	243	050	40%		
P1.1I2-1	Green power of hydrogen – demonstration facilities	30	032	100%		
P1.1I2-2	Green power of hydrogen – research programme	34	022	100%		
P1.1I2-3	Green power of hydrogen – human capital agenda	5	01	100%		
P1.1I3	Inland waterway energy transition, project ZES	56	074	100%		
P1.1I4-1	Aviation in transition – development and modification, in-flight testing and demonstration of components and systems in flight technology demonstrators based	10	022	100%		

(Sub)-Measure ID	(Sub-)Measure Name	Cost (EUR mln)	Climate		Digital	
			Int. Field	Coeff. %	Int. Field	Coeff. %
	on hydrogen combustion					
P1.1I4-2	Aviation in transition – floating vision	19	027	100%		
P1.2I1	Nature programme	714	049	40%		
P1.2I2	Aid scheme for the rehabilitation of pig farms	275	049	40%		
P2.1I1	Quantum Delta NL	264			021quater	100%
P2.1I2-1	AiNed and applied AI learning communities – development of highly specialised AI support services	44			021ter	100%
P2.1I2-2	AiNed and applied AI learning communities – development of digital skills	16			108	100%
P2.1I3	Digitalisation education impulse	209			012	100%
P2.1I4	Digital Infrastructure Logistics (DIL)	36	084bis	40%	084bis	100%
P2.2I1	European Rail Traffic Management System (ERTMS)	149	071	40%	071	100%
P2.2I2	Safe, smart and sustainable mobility	55	076bis	40%	076bis	100%
P2.2I3	Intelligent Roadside Stations (IWKS)	129	063bis	40%	063bis	100%
P2.3I1	Groundbreaking IT (GrIT)	94			011	100%
P2.3I2	Digitalisation of the criminal justice chain	75			011quater	100%
P3.1I1	Unlocking new construction projects – removal of bottlenecks	109	048	40%		
P3.1I1	Unlocking new construction projects – reducing nitrogen deposition	3	049	40%		
P3.1I1	Unlocking new construction projects – climate change adaptation	191	037	100%		

(Sub)-Measure ID	(Sub-)Measure Name	Cost (EUR mln)	Climate		Digital	
			Int. Field	Coeff. %	Int. Field	Coeff. %
P3.2I1	Subsidy scheme for sustainability of public sector real estate	225	026bis	100%		
P3.2I2	Investment subsidy for sustainable energy and energy savings (ISDE)	624	026bis	100%		
P4.2I1	National Education Lab AI	36			012	100%
P4.2I5	Laptops and tablets for online and hybrid education to combat and mitigate learning losses	24			012	100%
P5.1I3	SET COVID-19	50			013	100%
P5.1I4	Health Research Infrastructure (HRI)	22			013	100%