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The climate and energy transition component of the Spanish National Recovery and Resilience Plan

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Theme

The authors analyse the aspects of Spain's National Recovery Plan related to sustainability and 'green' investments.

Summary

This paper analyses in detail the climate and energy transition components of the Spanish National Resilience and Recovery Programme. Over 40% of the Plan's €69.5 billion will be invested in a variety of projects related to sustainability and the fight against climate change. Moreover, sustainability cuts across a substantial part of the investments foreseen, while a number of regulatory changes are also to be implemented. After carefully reviewing the key 'green' reforms and investments, the paper addresses some of the Plan's shortcomings, which are mainly related to its administrative capacity. In sum, the Spanish Plan is well defined in terms of what to do but not so much as to how to do it. If its main deficiencies are addressed, the Plan might provide the key tools for a real green transformation.

Analysis

(1) Introduction: the Spanish National Recovery Plan

The Spanish National Recovery and Resilience Plan (NRRP) –officially named 'Recovery, Transformation and Resilience Plan' and based on the document *España Puede*– will entail a significant volume of public and private investment in the coming years.

As shown in Figure 1, Spain expects to receive €155 billion from Next Generation EU (NGEU), of which €141 billion will come from the Recovery and Resilience Facility (RRF, €69.5 billion in the form of grants and €71.6 in the form of loans). Access to these €141 billion requires the approval of the NRRP by the Commission and the European Council, which was presented to the Commission on 30 April. For the moment, the Plan provides details only as regards the €69.5 billion in grants, although loans will eventually be used. The €69.5 billion account for 5.8% of Spain's 2019 GDP.

Figure 1. NGEU Funds for Spain, 2021-23

NGEU Funds	Amount (€ mn)
NGEU, total	154,996
of which:	
REACT-EU	12,800
RRF, grants	69,528
First tranche (70%)	46,603
Second tranche (30%) (1)	22,925
RRF, loans (1)	71,600
Just Transition Fund (2)	339
EAFRD (rural development)	729

(1) Estimate.
(2) The Just Transition Fund totals €790 million, comprising €339 million from NGEU and the remaining €451 million from the MFF 2021-27.
Source: the authors.

Spain's NRRP is only linked to the RRF funds, but not to the €12.8 billion of the REACT-EU[1] funds or to other minor funds included in NGEU. It is also unrelated to the €79 billion to come from the EU structural and agricultural funds included in the EU budget for 2021-27.[2]

The Plan will be used to facilitate the reforms and investments necessary for a lasting recovery, to improve the country's economic and social resilience and to support green and digital transformations. As mentioned above, it will deal only with the distribution of the RRF's €69.528 billion in grants in three years (2021-23) to maximise its impact on the recovery. However, the idea is to subsequently use the remaining €71.6 billion in loans to complement the funding of ongoing projects.

The €69.528 billion will be significantly concentrated in the areas of green transformation (40.29%, €28 billion) and digital transformation (29.58%, €20.56 billion). There will also be a clear commitment to education and training (10.5%, €7.3 billion), R&D&I (7%, €4.87 billion) and the reinforcement of social inclusion and cohesion throughout the country. This paper will analyse in detail the climate and energy transition part of the Spanish NRRP.

[1] REACT-EU, the second of the two major instruments, will provide Spain with access to around €12.8 billion within the framework of the Cohesion Policy, subject to specific conditions and with greater flexibility in their management, in response to the pandemic, especially on the fields of health and education. The programming and implementation of these funds will be carried out through the Autonomous Communities.
[2] Spain will receive over €79 billion of the Multiannual Financial Framework (MFF) from the structural funds and under the Common Agricultural Policy for 2021-27.

(2) The transversal axes

The Spanish NRRP is structured around four transversal axes that provide the backbone for transforming the economy: ecological transition, digital transformation, gender equality, and social and territorial cohesion. These axes will guide the entire recovery process and inspire the structural reforms and investments to be implemented.

Figure 2. The four guiding principles (transversal axes) of the *España Puede* plan

Guiding principles	Content
1. A Green Spain	Ecological transition
2. A Digital Spain	Digital transformation
3. Spain, a country without gender gaps	Gender equality
4. A cohesive and inclusive Spain	Social and territorial cohesion

Source: the authors, based on the *España Puede* plan.

Greening and digitalising the economy are shared goals in almost every EU country, following the Recovery Fund's rules. The Spanish government, however, is also strongly committed to gender equality and social and territorial cohesion.

(2.1) The green transversal axis: 'a green Spain'

The green transversal axis is the most important in terms of funds (40,29%, €28 billion) and reflects the clear priority for the Spanish government to accelerate the ecological transition as a key element in the reconstruction and transformation phase. This axis builds on the previously adopted strategic framework for energy and climate as a reference for the transition of the energy system. The NRRP also supports the circular economy as a lever for industrial modernisation,[3] the management of water and its infrastructure, the resilience of the coastline and the quality of the soil, and good land management.

In the context of the European Green Deal and using the Integrated National Energy and Climate Plan (INECP) as a blueprint for decarbonisation, the government aims to accelerate the ongoing greening of the economy, mainstream sustainability and ensure a just transition, leaving no one behind. Moreover, the plan explicitly links economic recovery and regional development, which is also expected to contribute to sustainability.

The green axis envisions accelerated decarbonisation (to be completed in 2050), new transport and water infrastructures, increased energy efficiency, the deployment of renewable energies, investment for the protection of biodiversity, the electrification of the economy and the development of energy storage. Other stated goals are the adaptation

[3] This implies a transition from a linear extraction-production-use-disposal model where programmed obsolescence is the norm to a model in which a systemic approach is taken towards the design and use of products in striving for sustainable development avoiding product obsolescence. A circular economy mimics natural systems in the way resource use and waste is minimised.

to climate change and the use of ecological transformation to promote industrial modernisation and a better participation of Spanish companies in global value chains.

(2.2) The legal framework for Green Spain

The INECP, submitted to the European Commission in May 2020, provides the guiding framework for this investment and reform programme. The implementation of the INECP will also have an important effect on economic growth, estimated at 1.8% of GDP in 2030, and on a greater creation of quality employment, estimated at 250,000 to 360,000 additional jobs between 2020 and 2030. The EU funds will help accelerate the actions included in the Integrated National Energy and Climate Plan by reinforcing public and private investment to realign the productive model with climate goals. In particular, the Spanish government brought forward its 2025 energy transition targets contained in its NECP to 2023 in order to boost the country's economic recovery.

As part of the government's Strategic Framework for Energy and Climate, the INECP is complemented by other legislative and executive initiatives that constitute the general framework for transition. These initiatives include the Climate Change and Energy Transition (framework) Law that makes climate neutrality legally binding, the Circular Economy Strategy and its sectoral developments, the National Climate Change Adaptation Plan, the Green Infrastructure Strategy and the new hydrological planning cycle, and the Long-term Decarbonisation Strategy. This guiding regulatory framework is key to implement the European Green Deal.

(3) The structural reform levers and lines of action

The Recovery, Transformation and Resilience Plan is structured around 10 levers that will drive activity and employment towards the modernisation of the Spanish economy: (I) the urban and rural agenda, the fight against rural depopulation and the development of agriculture; (II) resilient infrastructures and ecosystems; (III) a just and inclusive energy transition; (IV) an Administration for the 21st century; (V) modernisation and digitisation of the industrial fabric and SMEs, recovery of the tourism sector and promotion of Spain as an entrepreneurial nation; (VI) a pledge for science and innovation and strengthening the capabilities of the national health system: (VII) education and knowledge, lifelong learning and capacity building; (VIII) the new care economy and employment policies; (IX) the promotion of the culture and sports industries; and (X) the modernisation of the tax system for inclusive and sustainable growth.

These 10 levers break down into 30 components or lines of action that articulate, in a comprehensive and complementary way, the different drivers of structural reform, both regulatory and investment-focused, designed to reach the Plan's general objectives. Each project or line of action revolves around a challenge or specific objective and includes specific drivers: reforms and investments to enhance natural, technological and human capital to increase productivity and job-creating growth potential.

These 30 lines of action have an assigned budget (more or less identified with projects or national strategies) and a specific contribution in terms of the general objectives or axes. Figure 3 shows the 10 levers and 30 lines of action with their total assigned budget and climate contributions, defined as high (over 40%), medium (between 10% and 40%)

or low (less than 10%). An additional column reflecting the weighted average climatic contributions has been included, obtained from the detailed files (more than 2,000 pages) published a few days after the Plan's official delivery to the Commission. These contribution percentages are supposed to be the result of applying the official percentages of Annex VI of the EU Regulation on the RRF (100%, 40% or 0%) to the different sub-components (unfortunately not available) within each component.

Figure 3. The 10 structural levers and 30 components of the Spanish National Recovery and Resilience Plan and its climatic contribution

		Total amount		Climatic contribution	
		€ mn	%	Level	Weighted average (%)
Levers	Components/Lines of action				
I. Urban and rural agenda, fight against depopulation and development of agriculture	1. Action plan for sustainable, safe and connected mobility in urban and metropolitan environments	6,534	9.4	High	74.00
	2. Housing rehabilitation and urban regeneration plan	6,821	9.8	High	82.00
	3. Environmental and digital transformation of the agri-food and fisheries systems	1,051	1.5	Medium	40.00
II. Resilient infrastructures and ecosystems	4. Conservation and restoration of ecosystems and their biodiversity	1,642	2.4	High	46.00
	5. Preservation of coastal space and water resources	2,091	3.0	High	59.00
	6. Sustainable, safe and connected mobility	6,667	9.6	High	76.00
III. Just and inclusive energy transition	7. Deployment and integration of renewable energies	3,165	4.6	High	100.00
	8. Electrical infrastructure, promotion of smart grids and deployment of flexibility and storage	1,365	2.0	High	100.00
	9. Renewable hydrogen roadmap and its sectoral integration	1,555	2.2	High	100.00
	10. Just transition strategy	301	0.4	High	50.00
IV. An Administration for the 21st century	11. Modernisation of public administrations	4,315	6.2	Medium	25.00

		Total amount		Climatic contribution	
Levers	Components/Lines of action	€ mn	%	Level	Weighted average (%
V. Modernisation and digitisation of the industrial and SME fabric, recovery of tourism and promotion of entrepreneurship	12. Industrial Policy Spain 2031	3,782	5.4	Low	37.01
	13. Boost to SMEs	4,894	7.0	Low	0.00
	14. Plan for modernisation and competitiveness of the tourism sector	3,401	4.9	Medium	17.00
	15. Digital Connectivity, Cybersecurity Boost and 5G Deployment	3,999	5.8	Low	1.00
VI. Pact for science and innovation. Strengthening the capacities of the National Health System	16. National Strategy for Artificial Intelligence	501	0.7	Low	0.00
	17. Institutional reform and strengthening of capacities of the national science, technology and innovation systems	3,381	4.9	Low	4.11
	18. Renewal and expansion of the capacities of the National Health System	1,069	1.5	Low	0.00
VII. Education and knowledge, continuous training and capacity building	19. National Plan for Digital Skills	3,593	5.2	Low	0.00
	20. Strategic plan to promote Vocational Training	2,074	3.0	Low	8.00
VIII. New Care Economics and employment policies	21. Modernisation and digitisation of the education system, including early education from ages 0 to 3	1,641	2.4	Low	0.00
	22. Shock plan for the care economy and reinforcement of inclusion policies	2,492	3.6	Medium	24.47
	23. New public policies for a dynamic, resilient and inclusive labour market	2,363	3.4	Low	9.41
IX. Boosting the culture and sports industry	24. Revaluation of the cultural industry	325	0.5	Low	0.00
	25. Spain audiovisual hub of Europe (Spain AVS Hub)	201	0.3	Low	0.00
	26. Plan to promote the sports sector	301	0.4	Low	44.65

		Total amount		Climatic contribution	
Levers	Components/Lines of action	€ mn	%	Level	Weighted average (%)
X. Modernisation of the tax system for inclusive and sustainable growth	27. Measures and actions to prevent and combat tax fraud	0	0.0	Low	0.00
	28. Adaptation of the tax system to the reality of the 21st century	0	0.0	Low	0.00
	29. Improving the effectiveness of public spending	0	0.0	Low	100.00
	30. Long-term sustainability of the public pension system within the framework of the Toledo Pact	0	0.0	Low	0.00
TOTAL		69,528	100.0		
Of which:					
Green transformation		28.013	40,29		
Digital transformation		20.566	29,58		
Education and training		7.300	10,50		
R&D&I		4,867	7.00		

High contribution: over 40%; medium contribution: between 10% and 40%; low contribution: less than 10%. Source: the authors, based on the España Puede Plan.

As can be seen, it is the three first levers that concentrate the green contribution (Urban and rural agenda, fight against rural depopulation and agricultural development; Resilient infrastructures and ecosystems; and just and inclusive energy transition). The total components with an average climate contribution defined as High amount to €30.1 billion and those with an average climatic contribution defined as Medium account for €15 billion.

In terms of effective climate contribution (which cannot be broken down due to the lack of information about its subcomponents), these figures translate into a total investment in green transformation of €28 billion (the result of applying the official percentage of 40.29% to the total of €69.5 billion). The Spanish plan includes an additional classification by 'driver projects', but it essentially coincides with the classification by components and does not add much information (it is included in the Annex).

Box 1. Understanding the figures of the Spanish NRR Plan

The figures for green investment included in the Plan are confusing. The available information can be summarised as follows:
The total spending in green transformation amounts to 40.29% of the €69,528 million, equivalent to €28,013 million. This percentage is given in the Plan as a global figure, which approximately coincides with the application of effective percentages include in the last column of Figure 3 to the amount of each component.
The components with an average 'climate contribution' defined as 'High' amount to €30,141 million. Those with an average 'climate contribution' defined as 'Medium' amount to €15,041 million.
A comparison of these figures with those of other plans presented by other member States of the EU and other analysts is not easy, as some plans present figures mixed with other EU grants (such as REACT-EU), some mix grants and loans and some mix EU funds with national budget funds.

Source: the authors.

The following sections develop the green components in detail.

(3.1) Green levers and lines of action

(3.1.1) Lever I. Urban and rural agenda, fight against depopulation and development of agriculture (€14.4 billion)

This lever targets a sustainable, safe and connected mobility in urban and metropolitan areas, bearing in mind that cities play a fundamental role in the socio-economic transformation. The idea is to develop more accessible, sustainable, smart, dynamic and inclusive urban environments. At the same time, the welfare of people living in rural areas must be considered, so specific measures are needed for underpopulated areas. In this regard, supporting and increasing the competitiveness of the agri-food sector are essential to maintain population, employment and economic activity in rural areas.

Lever I is composed of three lines of action: an action plan for mobility, an urban refurbishing plan and a transformation plan for the agricultural and fisheries sectors.

(1) Action plan for sustainable, safe and connected mobility in urban and metropolitan environments (€6.5 billion).

Specific projects include a massive deployment of charging infrastructure to encourage the use of electric vehicles, reinforcement of public transport and fleet modernisation with nationally-produced zero emission vehicles.

This includes the establishment of low emission zones (in municipalities of more than 50,000 people) and a massive deployment of charging infrastructure to encourage the use of electric vehicles, which is expected to bolster the capital goods industry and the development of new business models. It also foresees the reinforcement of public transport and fleet modernisation with nationally-produced zero emission vehicles, offering transport alternatives, and reducing operating costs for public transport companies and authorities.

The Government plans to achieve a fleet of at least 250,000 electric vehicles in 2023, as a milestone to achieve 5 million electric vehicles in 2030. The deployment of the

charging infrastructure will guarantee between 80,000 and 110,000 new charging points.

This action plan must be analysed alongside line 6 within Lever II (a general sustainable mobility plan).

On 7 March 2021 the government announced its participation in what might become the first Strategic Project (PERTE) of the Plan, the creation of a large public-private consortium with the Volkswagen Group and Iberdrola to set up one of the first battery plants in Europe in Barcelona's industrial zone (to be abandoned by Nissan by the end of 2021).

(2) Housing rehabilitation and urban regeneration plan (€6.8 billion)
The second-largest chapter of the plan (if considering lines 1 and 6 together) is dedicated to the rehabilitation of housing, worth €6,820 million. It will consist of the installation of solar panels and a deep renovation of homes to make them more energy sustainable and accessible. Of the €6.8 billion, rehabilitation will use up €5.8 billion, the remainder being earmarked for social housing for rent. Rehabilitation and sustainable mobility altogether amount to €20 billion.
This line of action will promote the widespread installation of solar panels on roofs and the deployment of distributed renewable energy and smart and efficient street lighting, aiming to reduce energy and economic costs for municipalities. It also includes an energy transition plan for the so-called 'emptied Spain' (*España vaciada*), which seeks to promote sustainable and accessible energy in municipalities of less than 5,000 inhabitants as a tool for employment generation and business attraction.
The rehabilitation programme for larger municipalities, also designed by the Ministry of Transport, Mobility and Urban Agenda, will absorb most of the funds and contemplates various actions depending on the scale: from works in buildings to entire neighbourhoods.
In buildings, communities of owners will be subsidised with 35% to 70% of the cost,[4] depending on the amount and the energy savings achieved. To encourage homeowners, projects with longer payoff time will receive more financing, later saved on electricity or gas bills. Energy savings will be at least 30% (the minimum required by the EU). The Commission envisions 'deep rehabilitation' energy savings exceeding 60%. Rehabilitation will not only include installations, solar panels, windows or facades but also accessibility improvements (eg, lifts).
In neighbourhood regeneration projects, which not only include building improvements but also urban environment improvements, subsidies will range from 70% to 100%. The maximum subsidy will be reserved for urban areas in danger of social exclusion. If there is no possibility of financing a part through energy companies, the non-subsidised part of the works can be deducted from later savings in the energy bills.
Construction companies, energy companies and even banks will be able to associate and process groups of projects, including planning, construction and the

[4] There are no details yet of which costs will be covered, but it is thought that they will be similar to the already existing Programme for the Energy Rehabilitation of Buildings (PREE) which covers spending for improvement in energy efficiency of the thermal envelope, improvement of energy efficiency and use of renewable energies in thermal installations for heating, air conditioning, refrigeration, ventilation and sanitary hot water or improvement of the energy efficiency of lighting installations.

management of aid. This can speed up the plans and allow them to be scaled up. Additionally, the recovery of tax deductions for rehabilitation is currently being studied. These could reach 30% if rehabilitation actions achieve a certain energy saving and 60% if rehabilitation improves the energy rating of the building (according to the current seven-letter scale).
The rehabilitation of public government buildings (central, regional and local government buildings, hospitals and schools) is also foreseen.

(3) Environmental and digital transformation of the agri-food and fisheries system (€1.1 billion).
This component tries to promote quality, sustainability, the circular economy and ecological production, as well as seasonal and local consumption, reducing food waste, creating value and jobs around the agri-food and fisheries system, from the primary sector up to commercial distribution and with a particular focus on rural areas. The environmental aspect tries to reduce water consumption in agriculture by modernising existing irrigation systems, linking them to the use of renewable energies and water reuse.

(3.1.2) Lever II. Resilient infrastructure and ecosystems (€10.4 billion)

Infrastructures have the capacity to mobilise large volumes of short-term investment and generate a structural impact on society and the economy as a whole. The development of nature-based solutions, the reinforcement of adaptation and climate resilience in infrastructure, taking advantage of digital tools to develop early detection and early warning capabilities, especially in coastal and flood-prone areas, and including adaptation measures in vulnerable areas and renaturation and de-construction projects, allow the optimisation of investments and increasing the resilience of infrastructure to meet new demands and challenges, while preserving and protecting the country's natural capital. It includes projects in:

(4) Conservation and restoration of ecosystems and their biodiversity (€1.6 billion)
This line of action will try to mobilise investments in green infrastructure to facilitate ecological connectivity and to promote restoration programmes. It will include reforestation policy (aimed at the sustainable use of forest areas) and the fight against desertification, land degradation and the loss of biodiversity, as well as encompass an active policy of climate mitigation and adaptation.

(5) Preservation of coastal space and water resources (€2.1 billion)
This line includes investments to reduce the vulnerability of coastal natural spaces and water resources facing the effects of climate change, through restorations and interventions on infrastructures to reduce risks. It also includes actions to boost integrated water management (promoting the coordinated management and development of water), land and related resources.
Specifically, these actions will focus on nature-based solutions for water purification (green filters), water sanitation and reuse, the optimisation of water sector infrastructure, and river restoration and aquifer recovery.

(6) Sustainable, safe, and connected mobility (€6.7 billion)
This includes a major plan for the modernisation, digitisation, security and sustainability of key transport and intermodal infrastructures and the development of the main European corridors.
This component, together with the Action Plan of the same name and devoted to urban areas only (Line 1) will form the National Strategy for Sustainable, Safe and Connected Mobility (with a total funding of €13,2 billion).

(3.1.3) Lever III. A just and inclusive energy transition (€6.4 billion)

The development of a decarbonised, competitive and efficient energy sector is expected to enable the mobilisation of significant private investment by providing certainty and a predictable regulatory framework. It includes the following projects:

(7) Deployment and integration of renewable energies (€3.2 billion)
This lever aims at developing renewable electrical power and bolstering the industrial value chain and competitiveness in energy-intensive industrial sectors. It includes a specific subplan aimed at the development of sustainable energy in insular territories. This component will include the National Strategy for Self-supply and the integration of renewables in construction and across all productive sectors, extending renewable generation throughout the territory, promoting local employment, the reduction of energy costs for families and companies and a greater potential for the digitisation and electrification of consumption derived from mobility and air conditioning, among others. It also includes the strategic development of less mature renewables, storage or hybridisation solutions or other factors such as adequate integration into the territory or with agricultural activities or other uses.
More specifically, it features a biogas roadmap (favouring waste recovery to obtain sustainable biogas for electricity generation, thermal and mobility uses) and a roadmap for the take-off of offshore wind energy and related support programmes for technological development associated with the blue economy (actions will be developed in new renewable energy technologies in the marine field, taking advantage of the employment opportunities and the competitiveness linked to this sector, as well as the enhancement of the Spanish maritime industry and geography). Likewise, energy communities, start-ups and innovative initiatives will be promoted.

(8) Electrical infrastructure, promotion of smart grids and deployment of flexibility and storage (€1.4 billion)
This foresees boosting the deployment and the technological update of electrical energy transmission and distribution networks integrating renewable energies, demand management, fostering the development of independent aggregators and distributed energy resources, and the progressive electrification of mobility and the construction sector. It will also support the deployment of storage technologies to accelerate decarbonisation, while promoting new business models and innovative projects in smart-sector integration.

(9) Renewable hydrogen roadmap and its sectoral integration (€1.6 billion)
The hydrogen roadmap reflects Spain's commitment to renewable hydrogen with the aim of decarbonising the economy, reducing energy costs for industry, the service sector and households, and promoting competitiveness. It includes developing the

entire value chain, the generation of dedicated knowledge and technological capabilities, the promotion of pilot and commercial projects and the accompaniment of sectors that demand hydrogen, decarbonising the current consumption of hydrogen of fossil origin and taking advantage of its potential as an energy vector for sectoral integration and support for the electricity system.

The Spanish Government's roadmap establishes two stages for the consolidation of the new energy vector. The first stage, up to 2024, is to decarbonise the production of hydrogen that has so far been powered by fossil fuels and has generated an appetite in other sectors for this technology. From 2025 to 2030 the second stage seeks to make green hydrogen competitive in price with grey and blue (natural gas) and bring it to maturity.

This project falls under the Hydrogen Roadmap adopted by the Government in October 2020, which provides a Vision 2030 and 2050 in line with the objectives set out in the Integrated National Energy and Climate Plan (INECP). Vision 2030 foresees an installed capacity of 4 GW of electrolysers and a series of milestones in the industrial, mobility and electricity sectors, for which it will be necessary to mobilise investments estimated at €8.9 billion during the 2020-30 period. However, as an intermediate milestone to reach the 4GW objective, it is estimated that by 2024 it would be possible to have between 300 MW and 600 MW of installed capacity of electrolysers.

On 19 November 2020 the Ministry for Ecological Transition and the Demographic Challenge called for expressions of interest on 'Tractor projects for a just and inclusive energy transition: Renewable Hydrogen' which lasted until 19 December 2020 and that had very positive responses. The proposals of the three largest utilities (Endesa, Naturgy and Iberdola) exceeded the figures expected by the Ministry.

(10) A Just Transition Strategy (0.3 billion)

To guarantee the preservation of employment opportunities and the creation of economic activity in the territories affected by the energy transition, through support to sectors and groups at risk, the strategy seeks to contribute to preventing depopulation and the generation of new economic opportunities.

(3.1.4) Other levers and lines of action

The Plan also considers that the line of modernisation of the public administration (€4.3 billion) has a 'medium' climatic contribution, reducing the energy demand of buildings and public infrastructures and dependence on fossil fuels, introducing high energy-efficient technologies and promoting renewable energy sources, self-consumption and distributed generation.

The line of modernisation and competitiveness plan for the tourism sector (€3.4 billion) promotes environmental restoration, adaptation to climate change of tourist destinations and its infrastructures, sustainability certifications, circular economy measures in public services, management of public use in natural spaces, enhancement of ecosystem services, communication and awareness of residents and tourists, improvement of the urban environment, development of tourist destinations in inland Spain and reconversion of tourist areas. The shock plan for the care economy and reinforcement of inclusion policies (€2.5 billion) will have a 'medium' climatic contribution, through improvements in energy efficiency of public buildings.

(3.2) Summary of measures

Figure 4. Summary of green interventions in Spain's NRR Plan (lines with an average 'high' climatic contribution)

Sector	Intervention	Amount € bn	Climate and env. objective	Policy instr. with positive impact	Policy instr. with negative impact	Cross-border coop.
Transport	Charging infrastructure to encourage EVs, reinforcement of public transportation fleet modernisation	6.53	Mitigation, Pollution prevention	Subsidies, PPP, Regulation		No
Transport	Intermodal transport infrastructure and corridors	6.67	Mitigation, Pollution prevention	Subsidies, public procurement		Yes
Construction	Building refurbishment: solar panels, windows, and other energy-efficiency measures	6.82	Mitigation	Subsidies, Tax deductions		No
Agriculture / fisheries	Transformation of agri-food and fisheries systems	1.05	Mitigation	Several unspecified		No
Natural resources (forests, land)	Conservation and restoration of the ecosystem	1.64	Mitigation, Adaptation, Resource protection	Several unspecified		No
Natural resources (water)	Preservation of the littoral. Water and land management	2.09	Mitigation, Resource protection	Subsidies. Regulation. Information		No
Energy	Renewable generation	3.17	Mitigation	Subsidies, PPP		No
Energy	Grid improvement and electricity storage	1.37	Mitigation	Subsidies, PPP		No
Energy	Renewable hydrogen roadmap	1.36	Mitigation	Subsidies, PPP		No

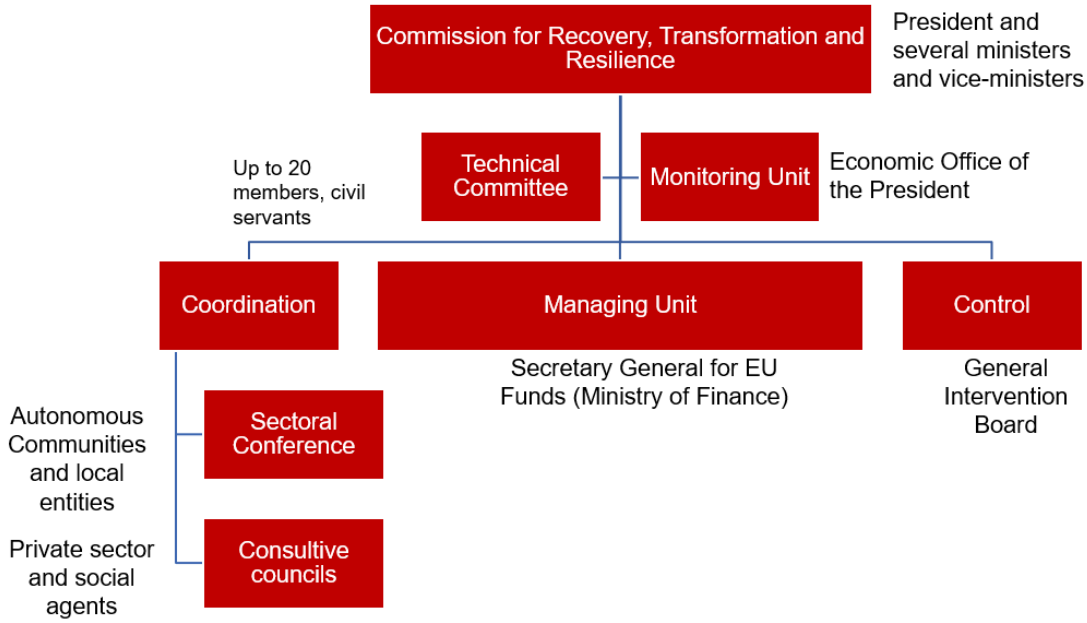
Projects are included for their total amount (some €31 billion), although the Plan estimates the amount of investment with green contribution in €28 billion.
Source: the authors, based on the *España Puede* plan and on Vivid Economics (2020).

(4) Governance and practical implementation

(4.1) Institutional governance

From a governance structure point of view, the Recovery Plan will lead to the creation of several temporary structures and the upgrading and reinforcement of other already-existing administrative departments. The new structures will be an inter-ministerial commission (presided by the Prime Minister, in charge of leading the Plan and approving the projects), a technical committee (to provide support and standardise procedures), a sectoral conference (to coordinate with the regional governments) with its technical coordination commission, and several consultative councils with civil society to ensure they essential participation of the private sector. The reinforced already-existing departments will be the Economic Office of the Prime Minister (which will act as a monitoring unit), the Ministry of Finance's department for EU funds (which will act as the managing unit) and the General Intervention Board of the State Administration (IGAE, acting as control and audit unit).

Figure 5. The governance of the Spanish NRRP



Source: the authors.

(4.2) Definition of projects: preliminary call for proposals or expressions of interest

The idea of the Spanish Recovery Plan is to approve a wide list of driver strategic projects (strategic projects for recovery and economic transformation, or PERTE). As this is not an easy task, and there is no time for trial-and-error strategies, the government has made an informal call for proposals by regional governments and large-scale private companies. In the past few months, regional governments, usually supported by big consulting groups, have provided lists of potential projects to be financed. In some cases, companies (especially the biggest ones) have proposed large-scale initiatives from which they could clearly lead and benefit; in other cases, companies have just provided their knowledge and even technical support for general proposals from which they would not benefit.

This brainstorming process has also resulted in formal calls for several expressions of interest launched by different Ministries (see Figure 4 in the Annex), several of which were initiated by the Ministry for the Ecological Transition and the Demographic Challenge.

These calls for proposals are simply the way for the government and its Ministries to define what types of projects could be proposed in the future. They should be interpreted as a source of knowledge and not as a list of projects to be financed. In fact, all calls for proposals explicitly state that participation 'does not generate any right to access the potential financing' and that 'failure to submit an expression of interest will not limit the possibility of submitting proposals in a possible future call'. Therefore, participation in these calls does not generate rights for companies nor obligations for the Administration.

Conclusion

The Spanish government has a clear idea of what to do to modernise the economy and the 'green' component of the Spanish Plan is the largest (amounting to 40,29% of the €69.5 billion detailed in Spain's NRRP). Moreover, sustainability cuts across a substantial part of the investment projects are foreseen. However, the Plan faces two big constraints. First, there is an inefficient administrative bureaucracy, aged and slow, with many excellent professionals but no flexibility or resources to take advantage of their will and expertise. The government has decided to use the already-existing administrative network to spend EU funds effectively and efficiently, and that might prove to be a mistake, because no efficient spending is possible without an efficient administration. A significant amount of the plan devoted to rehabilitation of buildings (energy efficiency) reflects the need to spend on projects that are easy to define, tender and award.

On the other hand, modernising the economy can only be done with large-scale projects that ensure a structural transformation. The PERTE are big strategic projects that aim at radically changing the economic environment. They follow very closely the EU definition of IPCEI projects, compatible with State aid, but defining what can be financed does not automatically create good projects. The definition is being done through calls for expressions of interest of several Ministries (mainly Economic Affairs and Digital Transformation, Ecological Transition, and Trade, Industry and Tourism). Whether good projects arise from this brainstorming remains to be seen.

The general impression is that the Spanish NRRP is well defined in terms of what to do, but not so much in terms of how to do it. The business community –especially small- and medium-sized companies– and regional governments are complaining about the lack of information regarding awarding procedures, technical requirements and other crucial elements for them to be prepared when the funds become available. Strategic projects seem to be defined top-down, and the way medium-sized companies (or EU companies, which by law cannot be excluded) can benefit from the funds is unclear at this stage.

The governance structure of the Spanish Recovery Plan is quite weak. It is an administrative super-structure with no clear operative functioning nor any well-defined accountability. The choice of the Secretariat General for Structural Funds of the Ministry of Finance as the managing unit does not seem a good idea. It is true that Finance has

competent civil servants familiar with EU funds, but Finance is a department made for control, not spending, and EU funds are, above all, economic policy tools.

Also, in a transformation such as the green process, public information is crucial so that citizens have a clear picture not only of the benefits but also of the sacrifices and costs during transition. The Just Transition Fund is thought of as mainly dealing with polluting industries, but the transition has many other horizontal components that should be clearly understood to avoid misconceptions that could later derive in a political backlash.

If procedures are streamlined, public managing units are reinforced (especially in terms of capacity building), governance is improved through information and continuous evaluation and more political consensus is provided. The Spanish Recovery, Resilience and Transformation Plan has all the elements in terms of projects, targets and reforms to guarantee a true green transformation for Spain.

Annex

Figure 6. Calls for expressions of interest in 'green' projects (up to 25/IV/2021)

Expressions of interest	Ministry	Scope	From	Until
Identification of projects associated with the entire renewable hydrogen value chain	Ministry of Ecological Transition and the Demographic Challenge	National	19/XII/20	19/XII/20
Identification and location of solvent projects with an impact on the demographic challenge and the fight against depopulation	Ministry of Ecological Transition and the Demographic Challenge	National	24/XII/20	23/XII/20
Identification of projects associated with electric mobility: infrastructure for recharging, innovation and electrification of the mobile park	Ministry of Ecological Transition and the Demographic Challenge	National	30/XII/20	29/I/21
Identification of projects of local energy communities	Ministry of Ecological Transition and the Demographic Challenge	National	22/I/21	23/II/21
Identification of projects associated with sustainable energy on the islands	Ministry of Ecological Transition and the Demographic Challenge	National	22/I/21	23/02/21
Identification of projects to promote the circular economy in the field of the company	Ministry of Ecological Transition and the Demographic Challenge	National	27/I/21	26/II/21
Identification of projects for the deployment of renewables, integration in productive sectors or buildings, innovation and value chain	Ministry of Ecological Transition and the Demographic Challenge	National	29/I/21	26/II/21
Identification of power infrastructure projects, promotion of smart grids and deployment of energy storage	Ministry of Ecological Transition and the Demographic Challenge	National	29/I/21	26/II/21
Identification of Sustainable and Digital Transport projects	Ministry of Transport, Mobility and Urban Agenda	National	12/II/21	03/III/21
Expressions of interest on low-emission zones and support for public transport	Ministry of Transport, Mobility and Urban Agenda	Regional		
Projects for the Impulse Plan for the rehabilitation of public buildings	Ministry of Transport, Mobility and Urban Agenda	Regional		
Expressions of interest on the Rehabilitation Programme for the economic and social recovery of residential environments	Ministry of Transport, Mobility and Urban Agenda	Regional		

Source: the authors.