



Pathways2Resilience

Regional Climate Resilience Strategy of Castile and León

ADAPT2CYL

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This Investment Plan is not a substitute for proper due diligence on all investments listed within. All parties must seek appropriate legal, financial and commercial advice for any project in which they are involved.

1 Introduction

1.1 Local profile

This Climate Resilience Investment Plan applies to the entire territory of the Autonomous Community of Castile and León, including its nine provinces and 2,248 municipalities. Its territorial scope coincides with that defined in the Regional Climate Resilience Strategy and in the 2026–2030 Action Plan, ensuring coherence between the diagnosis, strategic planning, and financial implementation.

Castile and León presents a combination of factors that condition the financial structuring of adaptation:

- High municipal dispersion and heterogeneity of technical capacities,
- Marked population ageing,
- High dependence on climate-sensitive sectors (agriculture, livestock farming, forestry),
- Extensive forest areas and increasing pressure on water resources.

From an institutional perspective, the Community has well-established sectoral structures in areas such as forest management, water planning, agriculture, and civil protection. However, cross-cutting climate adaptation is still in a consolidation phase, particularly with regard to:

- Explicit budget integration,
- Climate tagging of public expenditure (climate budget tagging),
- Systematic economic appraisal of adaptation investments,
- Structured mobilisation of private investment.

Coordination of the process is organised within the framework of the ADAPT2CYL project, led by the Castile and León Natural Heritage Foundation, with the participation of the Regional Government of Castile and León, the City Council of Valladolid, the Provincial Council of Valladolid, and AEICE – the Efficient Habitat Cluster. This structure has served as the driving core of strategic planning and provides the basis for moving towards a progressively more structured financial architecture.

This document forms part of the adaptation investment cycle promoted by Pathways2Resilience (hereinafter P2R) and represents an intermediate stage between strategic definition (E2), operational programming (E3), and the future consolidation of specific financial instruments.

1.2 Priorities

The priorities guiding this Investment Plan derive directly from the climate risks identified and prioritised in the **Regional Climate Resilience Strategy**, and are structured into six priority adaptation pathways:

- Priority pathway for reducing water vulnerability
- Priority pathway for the prevention and management of wildfires
- Priority pathway for protecting health against climate impacts
- Priority pathway for the resilience of the agri-livestock system
- Priority pathway for territorial and ecosystem resilience
- Priority pathway for the protection of strategic assets

From a financial perspective, these priorities translate into three vectors for action:

- A. Progressive integration into existing budgetary instruments:** Adaptation-related investments are initially channelled through sectoral regional budgets (water, natural environment, agriculture, health, civil protection, and infrastructure), as well as through multiannual programming linked to European and national funds.
- B. Strengthening institutional capacities and enabling conditions:** A significant share of the 2026–2030 actions is aimed at consolidating governance, information systems, and technical capacities as a prerequisite for more advanced financial structuring.
- C. Progressive mobilisation of external financing and innovative mechanisms:** The catalytic role of European projects is acknowledged as a driver of public policy development and financial experimentation. Complementary value-capture and economic return mechanisms will also be explored, such as:
 - Energy Savings Certificates (ESCs).
 - Instruments for valuing natural assets.
 - Integration of resilience criteria into public procurement.
 - Potential synergies with climate mitigation finance.

El presente Plan de Inversión no constituye todavía un instrumento presupuestario autónomo de adaptación, sino una arquitectura estratégica para orientar, alinear y estructurar la financiación necesaria para el despliegue progresivo de los itinerarios definidos.

2 Financing context

2.1 Budgetary Process and Public Financial Management Framework

The budgetary framework of the Autonomous Community of Castilla y León is structured through the **General Budget of the Junta de Castilla y León**, which is approved annually by the regional Parliament (Cortes) and executed by the Ministry of Finance. This budget serves as the **primary instrument for regional economic policy, integrating current expenditures, investments, and transfers** aimed at providing public services and developing sectoral policies.

Economic and financial activities are governed by Law 2/2006, on Public Finance and the Public Sector of Castilla y León, which establishes an **annual budget system with multiannual budget programming**. While each fiscal year requires the approval of a specific Budget Law, its preparation must be consistent with three-year budgetary scenarios, which project the expected evolution of revenues, expenditures, and fiscal balances for the following three years.

This medium-term programming provides greater stability and predictability for public policies that require financial continuity, such as strategic infrastructures, structural sectoral programmes, or investments with significant territorial impact, including those related to climate resilience.

The budgetary process includes the following phases:

- Annual approval of the Order for the preparation of the Budget, which sets political and economic guidelines, strategic priorities for the year, and limits for non-financial spending, in line with the budgetary stability and financial sustainability objectives established by national regulations (LOEPSF).
- Formulation of proposals by sectoral ministries, which identify programmes, investment projects, and financing needs.
- Integration and preparation of the Draft Budget by the Ministry of Finance, incorporating revenue forecasts (ceded taxes, own taxes, fees, state transfers, and European funds) and expenditures.
- Parliamentary approval by the Cortes of Castilla y León, which grants legal coverage to budget credits.
- Execution, monitoring, and control, through internal auditing bodies and external control by the Council of Accounts and other relevant organisations.

Capital expenditures (CAPEX) are included in the various budgetary programmes, detailing their financing (which typically combines own resources with European funds or other earmarked transfers) and allowing for their continuity in subsequent fiscal years when the nature of the investment requires it.

Currently, **climate change adaptation does not constitute a specific budgetary section nor does it have a consistent cross-cutting labelling**. Investments contributing to climate resilience are channelled through existing sectoral programmes (water management, wildfire prevention, agro-livestock modernisation, infrastructure, civil protection, or public health) without a differentiated budgetary identification.

The absence of a unified climate budget marker limits the visibility and specific tracking of investments aimed at climate adaptation. This means that many expenditures directly contributing to resilience are not easily quantifiable from the current budget.

On the other hand, the programming of European and national resources constitutes a significant component of the financial planning process, especially for cross-cutting policies or those requiring operational capacities beyond those available at the regional level.

In this context, the financial planning for climate adaptation in Castilla y León **moves from a logic of sectoral coherence and the use of existing instruments towards a logic of progressive financial structuring**, as proposed in this Investment Plan.

2.2 Revenue and capital investment process

While the previous section describes the institutional and regulatory framework of the regional budget, this section examines how income and capital investment proposals are developed, justified, and prioritised within this framework.

The ability of the Autonomous Community to generate its own revenues **is conditioned by the state's regional financing system**. Consequently, the introduction of specific fiscal instruments aimed at climate adaptation is limited and depends on the state regulatory framework.

In practice, the financing of actions related to climate resilience is mainly structured through:

- Prioritisation of expenditure within existing budgetary programmes
- Mobilisation and programming of European funds
- State co-financing in sectoral areas
- Cross-cutting integration of adaptation into established public policies

European projects play a particularly important role as **generators of technical capacity, experimentation instruments, and co-financing mechanisms** for strategic investments.

Capital investment (CAPEX) proposals are formulated by the sectoral ministries in alignment with:

- Current strategic and sectoral plans
- Annual political priorities defined in the Budget Preparation Order
- Multiannual budgetary scenarios
- Availability of external co-financing

Each project must justify its technical feasibility and its alignment with the objectives of the corresponding budgetary programme. The economic evaluation is conducted in a heterogeneous manner depending on the sector. In certain areas, technical analyses of economic or financial feasibility may be included; however, **there is currently no homogeneous framework that systematically requires the use of standardized financial indicators** such as:

- Benefit-Cost Ratio (BCR)

- Internal Rate of Return (IRR)
- Net Present Value (NPV)
- Explicit cost of capital applied to climate projects.

In the case of actions related to climate adaptation, the justification is usually based on:

- Reduction of risks and potential damages (avoided costs).
- Compliance with regulatory obligations.
- Protection of strategic assets.
- Improvement of the continuity of essential public services.

This Investment Plan identifies as a **priority area for improvement the progressive incorporation of explicit climate resilience criteria in the economic evaluation of projects**, including:

- Specific cost-benefit analysis for adaptation.
- Multicriteria evaluations that integrate climate risk.
- Improvement of financial traceability of investments related to resilience.

This progress would strengthen the coherence between strategic planning and budget allocation, as well as improve the capacity to mobilise external funding.

2.3 Budget envelope

The purpose of this section is not to estimate the total investment volume in climate adaptation, but rather to **describe the general framework of public financing potentially available** to support the implementation of the 2026–2030 Action Plan of the Regional Climate Resilience Strategy.

During the 2026–2030 period, public financing that will support actions related to climate resilience will mainly come from:

- Ordinary budget of the Junta de Castilla y León
- Multiannual sectoral programming (water, natural environment, agriculture, health, infrastructure, civil protection)
- European structural and investment funds
- Earmarked state transfers
- Co-financing linked to specific programmes

Benchmark indicators on the general financial framework:

- **Annual regional budget: €15.715 billion (2026)**
This budget volume will not directly translate into climate adaptation expenditure, but it provides a reference for the magnitude of public resources prioritised for public policies and sectoral investments.
- **Capital expenditure (CAPEX): Around €2.4 billion (in recent years)**
This value helps to gauge the amount of public investment available for cross-cutting policies (including adaptation). This annual investment profile highlights the capacity to mobilise public resources for structural investments, which is relevant for climate resilience actions when sectoral and cross-cutting criteria are integrated.
- **European funds: Around €1.6–1.7 billion in RRP/REACT-EU allocations (estimate until 2026)**
Structural European funds and the recovery plan funds represent a significant complementary source of financing for the region. These resources make a notable contribution to the regional public investment effort, including programmes that can directly or indirectly contribute to climate resilience, provided resilience criteria are integrated into their design and execution. This range is indicative and not exhaustively consolidated by the Junta.

Since climate adaptation currently does not have a separate budget section, actions are integrated within existing sectoral programmes. Consequently, the "available budgetary framework" should be understood as the aggregated capacity of the regional public sector to prioritise and integrate resilience actions within its ordinary spending and investment programmes.

The effective availability of funding for adaptation during the 2026–2030 period will be conditioned by several structural factors:

- Evolution of the state funding system for regional governments
- Compliance with budgetary stability and expenditure rules
- Level of regional tax revenues
- European multiannual financial framework and programming of structural funds
- Continuity of state-specific transfers
- Regional co-financing capacity
- Evolution of the macroeconomic context

Additionally, the mobilisation of resources for adaptation will depend on the ability to integrate resilience criteria into:

- Sectoral plans
- Existing investment programmes
- Public procurement
- Complementary financial instruments

Since climate adaptation currently does not have a separate budget section, the financing capacity should be understood as a function of the integration of resilience criteria within the general budgetary framework and the mobilisation of capital investments. In this context, three indicative scenarios are proposed:

Scenario	Budgetary Integration	CAPEX Mobilisation	European Funds	Implications for Resilience
Upper Scenario	Systematic integration of resilience criteria in multiple sectoral programmes. Partial or progressive climate labelling.	Strategic reorientation of a significant portion of the annual CAPEX towards resilient investments (adaptive infrastructure, water management, fire prevention, strategic assets).	High capture and alignment of European funds 2021–2027 and future instruments.	Structural acceleration of regional resilience. Improvement in traceability and economic evaluation.
Central Scenario	Progressive and selective integration into priority sectoral programmes. No formal labelling.	Incorporation of resilience criteria in new investments, but without large-scale reconfiguration of existing CAPEX.	Stable maintenance of European and state co-financing.	Gradual progress in resilience, with sectoral improvements but no systemic transformation.
Lower Scenario	Limited or reactive integration of resilience criteria.	Low prioritisation of adaptive investments within available CAPEX.		

These scenarios do not represent quantified financial commitments but potential trajectories for integrating resilience within the general budgetary framework of the Autonomous Community.

Given that the annual regional budget exceeds €15,000 million and the volume of annual public investments is around €2,000 million, even moderate variations in sectoral prioritisation can have a significant impact on the regional capacity to finance adaptation actions. In this regard, the primary determinant of the investment effort in climate resilience is not solely the overall volume of public resources but the **degree of strategic integration of adaptation criteria into the ordinary budget programming and the capture of European funding**.

Strategic reading

The analysis highlights that the main financial challenge for adaptation in Castilla y León is not solely the total volume of public resources, but:

- The capacity for prioritisation within the existing budget
- The improvement of traceability of spending related to resilience
- The progressive structuring of specific financial mechanisms
- The complementary mobilisation of European and private funding

In this sense, the present Investment Plan is aimed at strengthening the financial architecture that will allow for greater quantification and systematisation of the investment effort in climate resilience in subsequent cycles.

2.4 Costs of climate change and near-term investment needs

This section aims to provide a structured overview of the economic impacts associated with climate change in Castilla y León and the short- and medium-term investment needs identified.

Financial impacts of historic weather events

Castilla y León has experienced significant wildfires, prolonged droughts, extreme heat events, and intense precipitation episodes in recent years, impacting infrastructure, agri-livestock activities, and public services.

Although there is currently no consolidated database that aggregates the total economic cost of these events at the regional level, the impacts include:

- Extraordinary expenses in firefighting and recovery after wildfires
- Losses in productivity in the agricultural and livestock sectors associated with droughts and thermal stress
- Increased operational costs in water management
- Specific damages to local infrastructures and supply networks
- Public health impacts resulting from heatwaves

In many cases, these costs are distributed across different administrative levels and private actors, making their aggregate quantification difficult.

Costs of climate change (inaction)

Currently, there is no consolidated regional estimate of the economic cost of climate inaction for Castilla y León. However, available sectoral evidence and national and international economic literature agree that:

- Preventive investment in adaptation significantly reduces future repair and reconstruction costs
- Anticipatory risk management improves budget predictability
- Protection of strategic assets reduces exposure to economic shocks

In the absence of structural adaptation measures, the growing frequency and intensity of extreme events could lead to:

- Greater budgetary volatility
- Increased extraordinary emergency expenses
- Cumulative losses in climate-sensitive productive sectors
- Higher insurance and financial costs

Short-term investment needs (2026–2030)

Based on the prioritised pathways in the Regional Climate Resilience Strategy and the 2026–2030 Action Plan, investment needs are identified in the following areas:

- Water efficiency and modernisation
- Structural prevention of forest fires
- Adaptation of the agri-livestock system
- Protection of critical infrastructure

- Strengthening early warning systems
- Adaptive ecosystem management
- Strengthening institutional capacities and information systems

These needs are not yet translated into an aggregated financial estimate, as their deployment is progressively integrated into existing sectoral programmes and depends on annual and multi-year budget decisions.

Information gap and opportunity for improvement

The analysis highlights a significant gap in terms of:

- Systematic quantification of the costs of climate events
- Economic evaluation of inaction
- Traceability of resilience-related spending

The consolidation of a regional economic information system on climate impacts, linked to the monitoring, evaluation, and learning system, is an enabling condition to improve future financial planning and strengthen the economic argument for adaptation.

2.5 Existing planned investments

During the 2026–2030 period, the Autonomous Community of Castilla y León plans the **continuation or development of significant public investments in strategic sectors**. While these investments are not specifically labelled as climate adaptation actions, they **directly interact with the objectives of regional resilience**.

These investments constitute the structural base on which the climate variable can be progressively integrated.

Water management and the water cycle

The sectoral programming includes actions related to:

- Modernisation and improvement of supply networks
- Hydraulic infrastructures and purification
- Digitalisation of the water cycle
- Water efficiency programmes and loss reduction

These investments are directly connected to the pathway for reducing water vulnerability and offer opportunities to integrate anticipatory criteria for scenarios of scarcity and extreme events.

Forest prevention and management

Sectoral planning in forestry includes:

- Management of vegetal fuel
- Restoration of forest areas

- Fire prevention infrastructures
- Strengthening of operational means

These actions align with the pathway for fire prevention and management and allow for the gradual incorporation of adaptive management approaches and landscape planning.

Agri-livestock modernisation and irrigation

Within the framework of the Common Agricultural Policy (CAP) and complementary regional programmes, investments are being developed for:

- Modernisation of irrigation systems
- Innovation in farms
- Energy efficiency and digitalisation
- Improvement of agro-environmental practices

These investments can integrate climate resilience criteria focused on reducing productive vulnerability to droughts, thermal stress, and climate variability.

Public infrastructure and strategic assets

The investment programme for public infrastructures includes:

- Healthcare and social healthcare facilities
- Educational centres
- Road infrastructure
- Municipal equipment
- Public building rehabilitation

Integrating adaptation criteria into the design, location, and maintenance of these infrastructures is key to the pathway for protecting strategic assets.

Public health and civil protection

Investments are linked to:

- Alert and emergency systems
- Strengthening of operational capacities
- Digitalisation of information systems
- Equipment for risk management

These actions can reinforce adaptive capacity against heatwaves, floods, or other extreme events.

Energy and renewable heat networks

The regional energy programme includes the promotion of:

- Biomass-based district heating systems
- Energy efficiency in public buildings
- Integration of renewable energy sources

In addition to contributing to mitigation, these investments can strengthen territorial energy resilience and create synergies with preventive forest management.

Strategic reading

The analysis of planned investments highlights that Castilla y León already has a significant volume of structural public investment in sectors with high climate exposure. The main challenge is not just to increase the total volume of investment, but to:

- Systematically integrate climate resilience criteria into sectoral planning
- Incorporate climate risk assessment in capital projects
- Improve the traceability of spending with adaptation impacts
- Leverage synergies between mitigation and adaptation

In this sense, the present Investment **Plan** serves as a **guiding framework to progressively align existing investments with the climate resilience objectives defined.**

3 Climate resilience objectives

3.1 Planning objectives

This Investment Plan is based on the objectives defined in the Regional Climate Resilience Strategy and operationally developed in the 2026–2030 Action Plan. No new strategic objectives are introduced; rather, they are reinterpreted from an economic and investment perspective.

The central challenge identified is the growing exposure of the territory, productive sectors, and public services in Castilla y León to structural climate risks, within a context of high territorial dispersion, an ageing population, and dependence on natural resources.

Primary adaptation objectives

- OP 1. Reduce structural water vulnerability
- OP 2. Decrease the impact of forest fires
- OP 3. Protect the health and well-being of the population against climate impacts
- OP 4. Strengthen the resilience of the agri-livestock system to climate change
- OP 5. Strengthen territorial and ecosystem resilience to climate risks
- OP 6. Protect strategic assets against the impacts of climate change

Secondary adaptation objectives

- OS 1. Strengthen governance and multi-level coordination for adaptation
- OS 2. Strengthen capacities, information systems, and financial mechanisms for resilience

From the perspective of this Investment Plan, these objectives translate into **priorities for the allocation of public resources** and the need to **integrate resilience criteria into sectoral investment decisions**. The secondary objectives serve as enabling conditions to ensure that public investments generate sustainable results over time.

3.2 Economic rationale

Climate adaptation in Castilla y León follows an economic logic based on efficient risk management. The investment in resilience is justified by:

Reduction of future costs associated with damage and reconstruction

Reduction of budgetary volatility due to extreme events

Protection of regional natural and productive capital

Maintaining the competitiveness of strategic sectors

Safeguarding public assets of social and economic value

Although there is currently no aggregate estimate of the economic cost of climate inaction at the regional level, sectoral evidence and recent experience show that **climate impacts generate recurrent costs distributed among public administrations, businesses, and citizens**. From the perspective of public finances, adaptation can be interpreted as:

- Preventive investment against systemic risks

- Correction of market failures associated with climate externalities
- Provision of public goods related to territorial stability and social cohesion
- Protection of the value of infrastructure and equipment funded with public resources

In this regard, this Investment Plan aims not only to mobilise additional resources but also to improve the efficiency of existing public spending through the systematic integration of climate risk into sectoral planning.

3.3 Just resilience considerations

Climate resilience in Castilla y León presents a differentiated territorial and social dimension, associated with municipal dispersion and inequality in technical capacities, population ageing, dependency on activities vulnerable to climate change, or varying capacities for absorbing costs by municipalities and sectors.

From a financial perspective, these inequalities imply that the allocation of public resources should consider territorial equity criteria and proportionality in investment efforts. Thus, the Investment Plan incorporates the principle of just resilience through:

- Prioritisation of territories with greater exposure and lower adaptive capacity
- Strengthening technical capacities in small municipalities
- Avoiding disproportionate burdens on actors with lower financial capacity
- Promoting balanced co-financing mechanisms

The incorporation of this approach not only responds to social criteria but also to principles of economic efficiency, as concentrated structural vulnerability can amplify future costs for the entire regional system.

4 Strategic sources, instruments and barriers evaluation

This chapter forms the core of the Investment Plan. While Chapter 2 described the general budgetary framework and Chapter 3 provided the economic justification, this chapter translates these elements into a concrete financial architecture, identifying both existing capacities and opportunities for improvement.

4.1 Financial sources and instruments for adaptation

This section identifies the financial sources and instruments that currently enable (or could enable) the mobilisation of resources for the implementation of the Regional Climate Resilience Strategy.

Since adaptation does not have a specific budgetary instrument, funding is structured through existing sectoral sources and complementary mechanisms. The following categorisation distinguishes between currently operational sources and instruments and those that could be strategically developed in the short and medium term.

4.1.1 Existing sources and instruments

Currently, the financing of actions with an impact on climate resilience in Castilla y León is primarily integrated into sectoral financial frameworks and instruments already operational at the regional, national, or European level. These sources are not specifically labelled as adaptation funding, but they contribute directly or indirectly to the objectives defined in the Regional Strategy.

Existing sources			
Source	Sector	Purpose	Indicative amounts of finance
Source	Sector	Purpose	Indicative Financing Amounts
General Budget of the Junta de Castilla y León	Public	Ordinary financing of sectoral policies with resilience impact	> €15,000 million annually (global budget)
Regional Capital Investments (CAPEX)	Public	Infrastructure, sectoral modernisation, public equipment	> €2,000 million annually
FEDER Funds	Public (EU)	Infrastructure, innovation, digitalisation, environment	Programming 2021–2027
FEADER / CAP	Public (EU)	Agri-livestock modernisation, agro-environmental practices	Current CAP programming
Recovery and Resilience Mechanism (PRTR)	Public (EU + State)	Ecological transition, energy efficiency, digitalisation	Allocations 2021–2026

The above sources are channelled through specific financial instruments that determine how resources are allocated, managed, and executed.

Existing instruments

Instrument	Sector	Purpose	Indicative amounts of finance for adaptation
Sectoral Grants	Public	Support to municipalities, agri-livestock sector, forest management	Variable depending on the call
Direct Public Investment	Public	Strategic infrastructure and equipment	Integrated into annual CAPEX
Interadministrative Agreements	Public	State-Regional co-financing	Variable by sector
Competitive European Programs (LIFE, Interreg, Horizon)	Public (EU)	Innovation, pilot projects, experimentation	Specific projects
Public Procurement	Public	Execution of works and services	Part of current and capital expenditure

4.1.2 Additional strategic sources and instruments

In addition to the currently operational sources and instruments, strategic opportunities are identified to diversify and strengthen the financial architecture for adaptation in Castilla y León. These options do not necessarily imply the immediate creation of new instruments but represent potential pathways to improve resource mobilisation and generate economic returns associated with resilience.

Additional sources

Source	Type (public, private or hybrid)	Rationale	Indicative amounts of finance that could be raised
Energy Saving Certificates (CAE)	Hybrid	Monetisation of energy savings linked to district heating and efficiency	Dependent on technical structuring
Forest Sink Valorisation	Hybrid	Generation of additional income through absorption certification	Variable according to voluntary market
Private Sector Investment	Private	Integration of resilience in agri-industry, building, energy	Progressive
Public-Private Partnership (PPP)	Hybrid	Resilient infrastructure and energy management	To be assessed sectorally

These sources could be channelled through specific instruments that strengthen the investment capacity for adaptation.

Additional instruments

Source	Type (public, private or hybrid)	Rationale	Mobilisation potential
Climate Labelling of the Budget	Public	Improvement of traceability and prioritisation	High structural impact
Rotating Funds for Municipal Adaptation	Public	Support for municipalities with lower financial capacity	Medium
Green or Social Bonds	Public / Hybrid	Financing resilient infrastructure	Requires prior evaluation
Mandatory Integration of Resilience Criteria in Procurement	Public	Mainstreaming without budget increase	High qualitative impact
Regional Aggregation of Projects for CAE	Hybrid	Improvement of scale and efficiency	Medium

4.2 Mitigation financing synergies

Climate adaptation financing in Castilla y León presents significant synergies with the instruments, platforms, and initiatives developed in the field of mitigation and energy transition. While adaptation and mitigation follow differentiated logics, in practice, they share physical infrastructures, territorial assets, regulatory frameworks, financial instruments, and European platforms for technical support, among others.

Leveraging these intersections allows for an expanded financial base for resilience without the need to create entirely new instruments.

Within the framework of European climate policy, mechanisms have been developed to facilitate the financial structuring of climate investments, especially in urban environments. These platforms are mainly aimed at mitigation, but their methodology is transferable to adaptation investments. The involvement of cities in initiatives such as the Mission for Climate-Neutral and Smart Cities has promoted:

- Development of integrated project portfolios
- Improvement in financial structuring capacity
- Access to specialised technical assistance
- Connection with instruments like the *Climate City Capital Hub*

In Castilla y León, **Valladolid's participation in the Cities Mission** constitutes a relevant experience that can help strengthen the regional capacity for structuring climate investments, both in mitigation and adaptation.

At the regional level, areas are identified where mitigation financing can generate clear co-benefits for adaptation:

- Biomass-based district heating systems, which reduce emissions and contribute to the preventive management of forest areas
- Sustainable forest management, combining carbon absorption with fire risk reduction

- Urban green infrastructure, improving thermal regulation and reducing risks associated with heatwaves
- Energy rehabilitation of public buildings, reducing emissions and improving thermal comfort during extreme events
- Modernisation of irrigation systems, improving water efficiency and reducing energy consumption

Strategic reading

The integration between mitigation and adaptation financing allows for:

- Optimising the use of public resources
- Increasing project eligibility for European funding calls
- Facilitating the aggregation of investment portfolios
- Enhancing attractiveness for private financing
- Reducing administrative costs through joint structuring

In this regard, the experience gained in the field of urban climate neutrality can serve as a methodological laboratory for developing a more robust financial architecture for adaptation at the regional scale.

4.3 Barriers to financing

Despite the existence of relevant financial sources and opportunities for integration with mitigation policies, the systematic mobilisation of resources for climate adaptation in Castilla y León faces a series of structural barriers, including:

- The cross-cutting nature of adaptation
- Competency fragmentation
- The historical absence of specific economic quantification
- Technical and administrative limitations

Explicitly identifying these barriers allows the Investment Plan to be directed towards the progressive overcoming of these constraints.

Type of Barrier	Description	Impact on financing	Possible lines of improvement
Institutional	Absence of a specific adaptation budgetary instrument	Hinders visibility and prioritisation of resilience spending	Development of climate labelling of the budget
Information	Lack of aggregated quantification of the economic cost of climate inaction	Reduces economic argumentation capacity and prioritisation	Development of regional economic tracking system for impacts

Economic Evaluation	Non-systematic use of cost-benefit analysis in climate-related investments	Hinders objective comparison between projects	Progressive integration of economic risk analysis methodologies
Municipal Capacity	Limited technical and financial capacity in small municipalities	Hinders access to calls for funding and project structuring	Regional technical assistance and aggregation mechanisms
Competency Fragmentation	Shared competencies in water, fires, and territorial management	Complexity in co-financing and coordination	Improvement of inter-administrative coordination
Dependence on EU Funds	High relevance of EU funding for climate projects	Vulnerability to changes in financial frameworks	Progressive diversification of financial instruments
Climate Financial Culture	Nascent integration of climate risk in investment decisions	Risk of under-investment in prevention	Technical training and mainstreaming in public procurement

The analysis of barriers highlights that the main challenge is not only the availability of financial resources but also the institutional and methodological structuring necessary to mobilise them effectively. The present Investment Plan **does not aim to resolve all these limitations immediately but seeks to establish a roadmap** to:

- Improve the traceability of climate expenditure
- Strengthen the economic justification for adaptation
- Reinforce technical capacities
- Diversify financial instruments

5 Investment strategies for adaptation pathways

5.1 Investment strategies for adaptation pathways

This section does not constitute an approved budget or a firm financial commitment but provides an aggregated estimate of the investment needs associated with the implementation of the 2026–2030 Action Plan. The figures presented have been developed based on:

- Comparative benchmarking with similar actions implemented in other Spanish and European regions
- Sectoral order of magnitude analysis
- Qualitative adjustment to the territorial and competency context of Castilla y León
- Review of the technical nature of each action included in section 2.1 of the Action Plan (E3)

Since there is currently no regional climate budget labelling system or detailed economic-financial evaluation per action, the estimates should be interpreted as indicative and subject to adjustment in later phases of the adaptation investment cycle.

The investment needs directly stem from the actions defined in the Action Plan (E3), structured into six preferred pathways:

1. Preferred pathway for reducing water vulnerability
2. Preferred pathway for forest fire prevention and management
3. Preferred pathway for health protection against climate impacts
4. Preferred pathway for the resilience of the agri-livestock system
5. Preferred pathway for territorial and ecosystem resilience
6. Preferred pathway for protecting strategic assets

To facilitate economic reading and avoid literal repetition action by action, the estimates are grouped financially by investment type, not by pathway. This grouping does not alter the strategic structure of E3 but allows for identifying cost patterns, analysing relative investment intensity, and designing differentiated financial strategies. Each action in E3 can be traced to one of the financial blocks defined below.

Physical infrastructure and structural actions

This is the block with the highest capital intensity (CAPEX), associated with direct physical interventions on the territory.

- Modernisation of irrigation systems
- Biomass-based district heating systems
- Integrated flood risk reduction actions at the basin scale
- Large-scale ecosystem restoration
- Ecological connectivity
- Operational reinforcement in high fire risk areas
- Urban renaturalisation and climate shelters

Adaptive territorial, forest, and productive management

These are structural actions, but with more distributed territorial investment and significant participation from the productive sector.

- Adaptive forest management
- Agroforestry landscape planning
- Pilot adaptive silviculture
- Conservation agriculture
- Crop adaptation

Systems, digitalisation, and early warning

These are medium-cost technological and organisational investments aimed at improving anticipation and decision-making.

- Flood warning systems
- Heatwave warning systems
- Water availability indicator system
- Regional integrated climate information system
- Surveillance of climate change-associated vectors

Governance, regulations, and capacity building

This block presents lower investment intensity but high enabling value for the sustainability of the entire Plan.

- Municipal plans for fire and flood management
- Multi-level water governance
- Regulatory integration of risk mapping
- Identification of vulnerable critical infrastructures
- Vulnerability assessment of heritage
- Technical training programmes
- Awareness programmes

Based on the comparative analysis and aggregation by blocks, three indicative scenarios are established for the 2026–2030 period:

Scenario	Estimated Aggregated Investment 2026–2030	Relative Intensity
Upper Scenario	~€300 million	~€300 million
Central Scenario	~€450 million	~€450 million
Lower Scenario	~€600 million	~€600 million

The central scenario (€450 million) represents approximately €90 million annually, between 4% and 5% of the annual capital expenditure of the Community, and a progressive integration within the ordinary budgetary framework described in section 2.

In this central scenario, the approximate distribution would be:

Block	Estimated %	Order of Magnitude
Physical Infrastructure	~55%	~€250 million
Territorial and Productive Management	~25%	~€110 million
Systems and Digitalisation	~12%	~€55 million
Governance and Capacities	~8%	~€35 million

Strategic reading

The estimated volume should not be interpreted as an additional independent financial burden, but as a progressive reorientation of public and co-financed investment towards explicit climate resilience objectives.

In relative terms, the proposed investment effort:

- Is consistent with the territorial and sectoral magnitude of Castilla y León
- Is compatible with the regional budgetary framework described in Chapter 2
- Can be largely integrated into existing instruments
- However, requires improvements in traceability, prioritisation, and financial structuring

This aggregated framework constitutes the basis for developing, in the following sections, the financing strategy by investment type and the financial gap analysis.

5.2 Enabling activities for financing the pathways

The financing strategy of the 2026–2030 Action Plan is based on the progressive integration of the identified investment needs from Section 5.1 into the ordinary budgetary framework, along with the complementary mobilisation of European funds and other instruments.

Since the estimates are indicative and adaptation does not have a specific budget line, the strategy is structured by investment type, rather than by individual action.

Investment Block	Estimated Investment	Main Sources	Predominant Instruments	Estimated Coverage Level
Physical Infrastructure	~€250 million	Regional CAPEX budget, FEDER, PRTR, state co-financing	Direct public investment, sectoral grants, inter-administrative agreements	Medium-high
Territorial and Productive Management	~€110 million	FEADER/PAC, sectoral budget, EU environmental funds	Agro-environmental grants, forestry programmes, sectoral incentives	Medium

Investment Block	Estimated Investment	Main Sources	Predominant Instruments	Estimated Coverage Level
Systems and Digitalisation	~€55 million	FEDER, PRTR, ordinary budget	Technological public procurement, competitive European projects	High
Governance and Capacities	~€35 million	Ordinary budget, competitive European programmes	Technical assistance, training, municipal plans	Medium

5.2.1 Qualitative Analysis by Investment Block

Physical infrastructure and structural actions

These investments are capital-intensive and have a multi-year horizon. In this case, the financial strategy should focus on:

- Prioritisation for integration into the regional CAPEX
- Co-financing with structural funds
- Utilisation of state funding calls
- Evaluation of potential hybrid mechanisms in energy networks

The potential coverage is relatively high for actions aligned with existing European programmes but may require internal budget prioritisation.

Territorial, forest, and adaptive productive management

These actions can be partially integrated into existing instruments such as:

- CAP
- Forestry programmes
- Agro-environmental incentives

However, absorption will depend on the design of funding calls, sector participation, and territorial technical capacities.

Systems, digitalisation, and early warning

This block has higher eligibility for:

- FEDER
- PRTR
- Public digitalisation programmes

Potential financing is high, provided that projects are properly structured.

Governance, regulations, and capacity building

Although of lower economic volume, this block may face a higher risk of under-financing as it does not generate immediate visible returns. It requires:

- Ordinary budget commitment
- Cross-cutting integration
- Use of European technical assistance

5.2.2 Indicative Financial Gap

To offer a more precise reading of the estimated investment effort, the following provides an indicative approach to the financial gap in the central scenario (€450 million for the 2026–2030 period).

This estimate does not rely on formally committed budget allocations but on a qualitative analysis of the potential eligibility of each investment block concerning existing financial sources and instruments. The purpose of this table is not to precisely quantify a budget deficit, but to identify where greater financial structuring and strategic prioritisation needs may concentrate.

Investment Block	Estimated Investment	Identified Potential Coverage	Indicative Gap
Physical Infrastructure	~€250 million	60–75%	Moderate
Territorial Management	~€110 million	50–65%	Moderate
Systems and Digitalisation	~€55 million	70–85%	Low
Governance and Capacities	~€35 million	40–60%	Moderate

The estimate suggests that:

- Investments in systems and digitalisation are easier to cover due to their alignment with European digitalisation and administrative modernisation programmes.
- Structural actions in physical infrastructure and territorial management represent the highest economic volume and, therefore, the main financial structuring challenge.
- Governance and capacity-building actions, while less capital-intensive, could face under-financing risks if not explicitly prioritised in sectoral budgets.

In aggregate terms, the central scenario could achieve a potential coverage level of 60–75% through integration into existing instruments, provided that inter-departmental coordination mechanisms are consolidated, access to European funding is maintained, and technical capacities for project structuring are strengthened.

The remaining indicative gap should not be interpreted as an immediate structural deficit, but rather as an opportunity for improvement in the strategic orientation of public investment, the

traceability of climate expenditure, and the progressive development of complementary instruments.

This analysis reinforces the importance of the facilitative activities described in Section 5.3, aimed at consolidating a more mature adaptation financial architecture in later cycles.

Strategic reading

The analysis indicates that the greatest financial tension is concentrated in physical infrastructure and territorial management. Technological systems are easier to finance, while enabling actions may be underrepresented if not explicitly prioritised.

In aggregate terms, the central scenario (€450 million) could achieve a potential coverage level of 60–75% through existing instruments, provided that:

- Resilience criteria are integrated into sectoral programming
- Access to European funds is maintained
- Technical structuring capacities are strengthened

The identified financial gap should not necessarily be interpreted as an automatic need for new budgetary resources, but as an opportunity to improve the internal prioritisation of expenditure, reinforce the traceability and visibility of investments with resilience impacts, and advance the progressive development of complementary instruments, as noted in Chapter 4. In this sense, the main challenge lies not only in expanding the financial allocation but in more effectively structuring the mobilisation and strategic orientation of the already available resources.

5.3 Facilitating activities for financing adaptation

The investment needs analysis (Section 5.1) and the indicative financial gap analysis (Section 5.2) highlight that the viability of the 2026–2030 Action Plan does not solely depend on the volume of available resources but also on the institutional capacity to structure, prioritise, and mobilise these resources strategically.

In line with the barriers identified in Chapter 4, this section defines a set of facilitating activities aimed at:

- Improving the financial traceability of adaptation
- Strengthening the technical capacity for project structuring
- Integrating climate risk into public investment decisions
- Diversifying complementary financial instruments

These activities do not represent additional sectoral investments but enabling conditions that make the adaptation pathways defined in E3 financially viable and scalable.

Facilitating Activity	Financial Objective	2026–2030 Horizon	Expected Impact on Financing
Progressive development of climate labelling of the budget	Improve traceability and visibility of adaptive spending	Methodological design 2026–2027, gradual implementation 2028–2030	Increased transparency and internal prioritisation
Integration of climate risk in public investment analysis	Improve quality and robustness of CAPEX decisions	Methodological guide development 2026, gradual application 2027–2030	Enhanced efficiency and economic justification
Technical assistance for structuring municipal projects	Reduce technical barriers to accessing funds	2026–2030	Increased absorption of European funds
Regional aggregation of small-scale projects	Improve eligibility and economies of scale	2027–2030	Increased financial coverage
Incorporation of resilience criteria in public procurement	Mainstreaming without direct budget increase	2026–2030	Qualitative reorientation of ordinary expenditure
Exploration and strategic use of complementary instruments (CAE, forest valorisation)	Generate financial returns associated with co-benefit actions	Pilots 2026–2028, evaluation 2029–2030	Progressive diversification of funding sources

Below, each of the facilitating activities listed in the previous table is developed, maintaining the same structure and terminology to ensure traceability between the strategic framework and the proposed operational measures.

Development of climate budget labelling

The current absence of a systematic system for identifying adaptation spending limits visibility and strategic prioritisation of investments. During the 2026–2030 period, it is proposed to progress towards:

- Designing a basic methodology for identifying resilience-impacting budget lines
- Progressive integration into the MEL system
- Preparation of annual indicative reports on adaptive investment

This does not entail a full *climate budgeting system* in the first cycle, but rather a gradual approach compatible with the existing institutional framework.

Estimated Impact: Improvement of transparency and internal prioritisation capacity for resilience-impacting spending.

Integration of climate risk in public investment analysis

To enhance the quality and sustainability of public investment, the progressive incorporation of the following will be promoted:

- Climate vulnerability assessment in critical infrastructure projects
- Consideration of climate scenarios in sectoral planning
- Cost-benefit analysis with a climate horizon when relevant

This integration does not necessarily require new resources but aims to improve the robustness and efficiency of public spending.

Expected Impact: Reduced risk of poor investment allocation and improved economic justification for adaptive actions.

Technical assistance for structuring municipal projects

Municipal fragmentation and the heterogeneity of technical capacities constitute a structural barrier to mobilising financing, especially European funds. The following complementary dimensions are proposed:

- Strengthening provincial technical assistance for project structuring
- Development of regional aggregation mechanisms for small-scale actions, especially in rural municipalities

Technical assistance and aggregation are addressed in an integrated way due to their close operational interdependence: aggregation improves eligibility and efficiency, while technical assistance facilitates the preparation of mature projects.

Estimated Impact: Potential increase in the absorption of external funds and improved financial coverage in blocks with moderate gaps.

Incorporation of resilience criteria in public procurement

Public procurement is one of the main tools for executing ordinary and capital expenditure. During the 2026–2030 period, the following will be promoted:

- Gradual inclusion of resilience criteria in technical specifications
- Integration of adaptation-related requirements in infrastructure, building, and services
- Internal training for procurement teams

This activity does not involve a direct budget increase but a qualitative reorientation of existing spending towards more robust solutions against climate risks.

Expected Impact: Structural integration of resilience in public investment without the need to create new specific budget lines.

Exploration and strategic use of complementary instruments (cae, forest valorisation)

In line with Chapter 4, the following will be prudently explored:

- Strategic use of Energy Savings Certificates (CAE) in energy-related actions
- Potential valorisation of forest assets with climate co-benefits
- Integration of resilience into existing green financing instruments

These lines will initially be developed in pilot format, assessing their technical, legal, and financial feasibility before potential scaling.

Expected Impact: Progressive diversification of funding sources and generation of complementary returns associated with co-benefit actions.

The facilitating activities described here are the key elements for transforming a set of sectoral actions into a coherent and scalable financial architecture for adaptation.

In the central scenario estimated for 2026–2030, the financial success of the Plan will largely depend on the **institutional capacity to improve the budgetary traceability of resilience-related spending, systematically integrate climate risk into public investment decisions, strengthen technical capacities at the regional and local levels, and progressively diversify complementary financial instruments** to broaden and stabilise available funding sources.

These activities lay the foundation for Castilla y León to evolve towards a more mature climate financing model in subsequent cycles, with greater resource mobilisation capacity and shared responsibility between public and private actors.

6 Action Portfolio

This portfolio integrates all the actions planned in the 2026–2030 Action Plan (E3), organised by the preferred adaptation pathways and linked to the investment blocks defined in Chapter 5.

Its purpose is to:

- Ensure traceability between strategic planning (E3) and financial structuring (E4)
- Identify the economic nature of each action
- Facilitate prioritisation and financial monitoring
- Serve as a basis for future updates of the Investment Plan

The cost estimates included are indicative and based on orders of magnitude derived from the aggregated analysis presented in Chapter 5.

Pathway 1 – Reduction of water vulnerability

Code	Action	Investment Block	Intensity	Horizon	Remarks
HIDR01	Use of regenerated water	A	Medium	2026–2030	Eligible for FEDER / CAPEX
HIDR02	Water indicator systems	C	Medium	2026–2028	High digital eligibility
HIDR03	Water efficiency plans	A	Medium	2026–2030	Local co-financing
HIDR04	Water governance	D	Low	2026–2030	Ordinary budget

Pathway 2 – Fire prevention and management

Code	Action	Investment Block	Intensity	Horizon	Remarks
INCE01	Agroforestry landscape planning	B	Medium	2026–2030	Potential FEADER funding
INCE02	Pilot adaptive silviculture	B	Medium	2026–2028	Pilot projects
INCE03	Municipal fire plans	D	Low	2026–2028	Technical assistance
INCE04	Fire operations reinforcement	A	High	2026–2030	Sectoral CAPEX
INCE05	Legal framework for prevention	D	Low	2026–2027	Regulatory cost
INCE06	Biomass district heating networks	A	High	2026–2030	Potential CAE

Pathway 3 – Health protection

Code	Action	Investment Block	Intensity	Horizon	Remarks
SAL01	Vector surveillance	C	Medium	2026–2030	Health budget

Code	Action	Investment Block	Intensity	Horizon	Remarks
SAL02	Strengthening rural services	D	Medium	2026–2030	Sectoral integration
SAL03	Heat alert systems	C	Medium	2026–2028	Eligible for digital
SAL04	Urban renaturalisation	A	Medium	2026–2030	Urban FEDER funding
SAL05	Climate refuge network	A	Medium	2026–2030	Municipal investment

Pathway 4 – Agro-Livestock Resilience

Code	Action	Investment Block	Intensity	Horizon	Remarks
AGRO01	Crop adaptation	B	Medium	2026–2030	CAP funding
AGRO02	Modernisation of irrigation	A	High	2026–2030	High CAPEX intensity
AGRO03	Conservation agriculture	B	Medium	2026–2030	Agro-environmental incentives

Pathway 5 – Territorial and ecosystem resilience

Code	Action	Investment Block	Intensity	Horizon	Remarks
TERR01	Ecological connectivity	A	Medium	2026–2030	FEDER / Environmental funding
TERR02	Ecosystem restoration	A	High	2026–2030	Intensive territorial focus
TERR03	Protected areas management	B	Medium	2026–2030	Sectoral programs
TERR04	Adaptive forest management	B	Medium	2026–2030	FEADER funding

Pathway 6 – Protection of strategic assets

Code	Action	Investment Block	Intensity	Horizon	Remarks
ACTIV01	Flood alert systems	C	Medium	2026–2028	Eligible for digital funding
ACTIV02	River basin actions	A	High	2026–2030	State co-financing
ACTIV03	Integration of risk mapping	D	Low	2026–2028	Regulatory framework
ACTIV04	Municipal flood plans	D	Low	2026–2028	Technical assistance
ACTIV05	Critical infrastructure assessment	D	Low	2026–2027	Technical diagnosis
ACTIV06	Heritage vulnerability	D	Low	2026–2028	Technical cost

Cross-cutting actions

Code	Action	Investment Block	Intensity	Horizon	Remarks
TRANSV01	Technical capacity building	D	Low	2026–2030	Enabler
TRANSV02	Awareness-raising	D	Low	2026–2030	Communication
TRANSV03	Climate information system	C	Medium	2026–2028	Digitalisation

The investment intensity (High / Medium / Low) is based on the technical nature of the action:

- High: Large-scale physical infrastructure or territorial interventions
- Medium: Sectoral, technological investments or structural programmes
- Low: Regulatory, organisational, or capacity-building actions

This portfolio constitutes a dynamic tool and may be updated as financial structuring progresses and more precise economic estimates become available.

7 Governance

Climate adaptation financing in Castilla y León is developed within an institutional context characterised by:

- Absence of a specific adaptation budget instrument
- Sectoral integration of investments
- High territorial fragmentation
- Need for multi-level coordination

In line with the governance defined in E3, this Investment Plan does not propose the immediate creation of a new independent institutional structure but rather the progressive strengthening of existing mechanisms, incorporating specific functions related to the financial structuring of resilience.

7.1 Institutional structure for financing

The institutional architecture for climate resilience financing is structured at three levels:

Strategic Level - Autonomous Leadership

Main Responsible	Involved Parties
Junta de Castilla y León	The Ministry of Finance plays a key role in integrating financial considerations into the budgetary cycle. The Fundación Patrimonio Natural and the competent ministries act as technical nodes for sectoral integration.

Functions

- ▷ Integration of resilience criteria into sectoral programming
- ▷ Prioritisation of investments in regional CAPEX
- ▷ Interdepartmental coordination
- ▷ Promotion of progressive climate labelling
- ▷ Dialogue with the General State Administration and the European Union

Technical-Operational Level - Structuring and Assistance

Main Responsible	Involved Parties
Competent Sectorial Ministries	
SOMACYL	
Provincial Councils	
Functions	
▷ Identification of mature projects ▷ Technical and financial structuring ▷ Aggregation of municipal projects ▷ Support for the absorption of European funds ▷ Integration of resilience in public procurement	

Territorial Level - Local Implementation

Main Responsible	Involved Parties
Municipalities	The city of Valladolid, due to its experience in climate financial structuring, can act as a methodological reference transferable to other intermediate cities.
Provincial Councils	
Sectorial Managing Entities	
Functions	
▷ Implementation of actions ▷ Integration into urban and sectoral planning ▷ Application of resilience criteria ▷ Participation in monitoring systems	

7.2 Maturing the financial governance model

The model described for the 2026–2030 period should be understood as a **phase of progressive consolidation towards more mature financial governance**. During this first cycle, the following is expected:

- Systematic integration of adaptive investment reviews into the annual budget preparation process
- Progressive development of tools to identify spending with resilience impact

- Formalisation of interdepartmental coordination mechanisms for climate financing
- Consolidation of technical capacities for multi-level financial structuring

Looking beyond 2030, the model could evolve towards:

- Fully consolidated budgetary climate labelling
- Specific financial instruments or structured lines for adaptation
- Greater involvement of the private sector and hybrid financing schemes
- Closer alignment with European climate investment structuring platforms

The maturing of the model does not necessarily imply the creation of new formal structures but rather the progressive integration of resilience into the ordinary procedures of planning, budgeting, and public investment.

This gradual approach helps to reduce institutional resistance, improve political feasibility, consolidate internal capacities, and strengthen coherence between climate strategy and economic policy.

8 Monitoring, evaluation and learning (MEL)

The monitoring of the Investment Plan for climate resilience will be integrated into the monitoring, evaluation, and learning (MEL) system defined. This chapter does not create an independent system but rather expands the existing framework by incorporating a **specific dimension for financial monitoring and investment execution**. The goal is to ensure that:

- The planned investments are implemented consistently with the defined pathways
- Resource mobilization becomes progressively more efficient
- The identified financial gap can be reviewed and adjusted
- Learning is generated for future cycles

8.1 Monitoring and scrutiny arrangements

Financial monitoring will be structured at three complementary levels:



A. Indicative budget monitoring

During the 2026–2030 period, there will be a progressive identification of budget items with an impact on climate resilience, allowing:

- Estimating annual investment linked to adaptation
- Analysing distribution by investment blocks
- Reviewing consistency with the scenarios defined in Chapter 5

This monitoring will initially be indicative and evolve as the climate budget labeling is consolidated.

B. Investment block monitoring

A periodic analysis will be conducted on the progress made in the four investment blocks considered (physical infrastructure, territorial and productive management, systems and digitalization, governance and capacities). This approach will allow for identifying:

- Blocks with execution above or below expectations
- Possible deviations in financial coverage
- Needs for adjustments in project structuring

C. Facilitating activities monitoring

The degree of implementation of the facilitating activities described in Chapter 5.3 will be monitored, including:

- Development of the labelling methodology

- Integration of climate risk in investment analysis
- Strengthening of municipal technical assistance
- Inclusion of resilience criteria in procurement

Progress in these activities will be key for evaluating the maturation of the financial governance model.

8.2 Indicators

For the implementation of the MEL system, a specific set of indicators is defined, aimed at measuring not only the physical execution of actions but also the quality of the financial structuring of the Investment Plan. These indicators are grouped into three dimensions: financial mobilization, budget integration quality, and institutional maturation.

Indicator	Type	Baseline 2025	Target 2030	Frequency	Source	Responsible
Estimated annual investment with resilience impact (M€) ¹	Financial	Not systematized	> 75 M€/year average 2026–2030	Annual	Regional budget	Ministry of Finance
% of regional CAPEX with identified resilience component	Financial	Not available	> 4%	Annual	Budget execution	Ministry of Finance
% of investment blocks with > 60% coverage relative to central scenario ²	Financial	0%	> 75% of blocks	Biennial	Investment Plan Report	Regional Government
Number of projects structured with integrated climate risk analysis ³	Financial Governance	0	> 30 accumulated projects	Annual	Sectoral reports	Competent Ministries
Number of municipalities with	Territorial Governance	Not systematized	> 150 municipalities	Annual	Provincial governments	Provincial Governments

¹ The first two indicators help verify if the Plan is advancing towards the central scenario (~€450M accumulated) without the need for a separate budget line.

² This indicator directly connects with the financial gap identified in Section 5.2. It evaluates whether the financing strategy is working without focusing solely on executed expenditure.

³ The indicator of projects with integrated risk analysis directly responds to facilitating activity 5.3.3. It measures investment quality, not just volume.

Indicator	Type	Baseline 2025	Target 2030	Frequency	Source	Responsible
technical support for financial structuring ⁴						
Existence of formal climate budget labelling methodology ⁵	Institutional Governance	No	Yes (methodology approved before 2028)	2028 Review	Regional Government	Ministry of Finance
Number of sectoral calls incorporating explicit resilience criteria ⁶	Regulatory Integration	Low	> 50% of relevant calls	Annual	Call bases	Sectoral Ministries

8.3 Learning

The financial model for climate resilience defined in this Investment Plan should be understood as a **system in a phase of progressive consolidation**. Given the indicative nature of the investment scenarios, the initial absence of a fully developed climate labeling system, and the need to strengthen multi-level technical capacities, the adopted approach prioritizes institutional stability during the 2026–2030 period and focuses the structural review at the end of the cycle.

The **first comprehensive evaluation of the financial model will be conducted in 2030**, coinciding with the completion of the implementation period of the Plan and the first full cycle of multi-year planning. This review will allow for an aggregated analysis of:

- The actual volume of investment mobilized and its distribution across investment blocks
- The evolution of the financial gap estimated in Section 5
- The degree of integration of climate risk in public investment decisions
- The effectiveness of facilitating activities to improve resource structuring and absorption

Beyond the quantitative analysis, the 2030 review should include a **qualitative assessment of the institutional maturity achieved**, identifying persistent barriers, improvements in interdepartmental coordination, and progress in technical capacities at the regional and local levels.

This approach avoids introducing premature strategic reviews in a model still in the consolidation phase and allows for structural adjustments based on accumulated results and real implementation experience. Based on this review, the next cycle will adjust financial

⁴ The number of municipalities supported technically is critical in Castilla y León due to its territorial fragmentation.

⁵ The target is the existence of an approved methodology, not its full implementation, which is institutionally realistic.

⁶ The target of at least five pilot projects with complementary instruments is prudent and consistent with the gradual approach.

scenarios, consolidate budget traceability tools, and, if necessary, explore more advanced climate financing instruments.

Thus, the Investment Plan is configured as **a dynamic framework, oriented towards progressive learning and the structural integration of climate resilience into regional economic policy.**

9 Next steps

This Investment Plan, together with documents E1, E2, and E3 that form the Regional Climate Resilience Strategy, constitutes an **initial integrated framework to address climate adaptation in Castilla y León** from a strategic, economic, and institutional perspective.

However, the process developed to date presents gaps and challenges that must be explicitly recognized to guide the following planning cycles. Among the main identified limitations are:

- Absence of a consolidated database on the economic costs of climate impacts at the regional scale
- Lack of a prior climate budget labeling system
- Difficulty in accurately estimating the investment required for individual actions
- Still incipient integration of economic analysis of climate risk into sectoral decisions
- Heterogeneous technical capacity at the municipal level
- Significant dependence on European instruments for certain types of investment

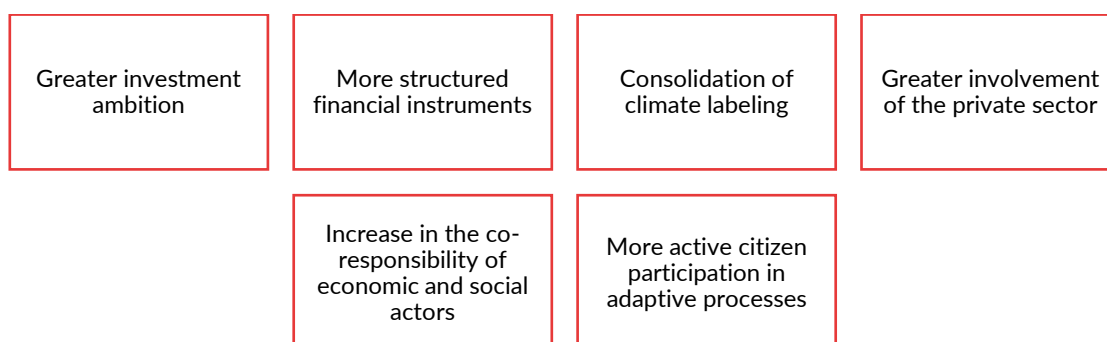
These limitations do not invalidate the strategic framework built but do **condition the degree of precision and financial maturity achieved in this first cycle**.

As repeated in the various deliverables, the Regional Climate Resilience Strategy is conceived as a **long-term framework, with a horizon beyond 2030, whose deployment will be articulated through successive multi-year action plans**. Each cycle will allow:

- Adjusting financial scenarios
- Incorporating institutional learning
- Improving budget traceability
- Refining economic evaluation methodologies
- Gradually expanding the scope and ambition of investments

The 2026–2030 period represents a phase of institutional and methodological consolidation, focusing on integrating resilience into regular sectoral programming, developing basic financial tracking tools, strengthening multi-level technical capacities, and establishing interdepartmental coordination mechanisms.

In later cycles, and based on accumulated experience, progress may be made towards:



This gradual approach follows a **logic of progressive maturation of the financial and climate governance model**. Resilience is not conceived as an isolated program, but as a structural transformation of public planning that requires time, learning, and institutional consolidation.

In this regard, **this document does not constitute an endpoint, but a starting point towards a more integrated, robust, and co-responsible model of climate adaptation financing in Castilla y León.**