LIFE Project Number

LIFE16 IPC/ES/000001

Final Report

Covering the project activities from 02/10/2017 to 31/12/2025

Reporting Date[1]

31/05/2026

LIFE PROJECT NAME or Acronym

LIFE-IP NAdapta-CC

Project Data	
Project location:	Foral Region of Navarre (Spain)
Project start date:	02/10/2017
Project end date:	31/12/2025
Total budget:	15,565,090 €
EU contribution:	9,339,055 €
(%) of eligible costs:	60,00

Data Beneficiary	
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[1] Include the reporting date as foreseen in part C2 of Annex II of the Grant Agreement

Package completeness and correctness check

This table comprises an essential part of the report and should be filled in before submission. The evaluation of your report may only commence if the package complies with all the elements in this receivability check. The evaluation will be stopped if any obligatory elements are missing. All elements are expected in electronic version only.

Obligatory elements	**✓ or N/A**
Technical report	
The correct latest template for the type of project (i.e. integrated project) has been followed and all sections have been filled in, in English.	✓
Index of deliverables with short description annexed, in English.	✓
Interim report: Covers the phase concluded; Deliverables due in the phase being reported on (or due in previous phase(s) and not yet submitted) annexed. Final report: Covers the entire project duration (see instructions on exceptions to this in next page); Deliverables not already submitted with the Interim reports annexed including the Layman's report and after-LIFE plan. Deliverables in language(s) other than English include a summary in English.	✓
Financial report	
The reporting period in the financial and technical reports is the same; the period corresponds to the duration of the phase being reported on. For the Final report, an additional consolidated financial statement covering the entire project duration is included. In the case of corrections / changes to costs submitted in a previous period: • An updated financial statement for the previous period is provided with the changes highlighted in a different colour; • The difference (+ or -) per cost category is included in the financial statement of the new period in the related cost category at the bottom in one single line 'changes to financial statement XX/XX/XX – XX/XX/XX'; • The auditor has validated the changes (if needed); • Explanations on the changes are provided in section 9 of the technical report.	✓
Consolidated Financial Statement with all 5 forms duly filled in and signed and dated. *Preferred: electronic version signed with a Qualified Electronic Signature + full Excel file* *Alternatively, a pdf of the blue-ink signed* consolidated financial statement + full Excel files (the originally signed document should be kept by beneficiary in case of future audit).*	✓
Financial Statement(s) of the Coordinating Beneficiary, of each Associated Beneficiary and of each affiliate (if involved), with all forms duly filled in. The Financial Statement(s) of Beneficiaries with affiliate(s) include the total cost of each affiliate in 1 line per cost category. *Preferred: electronic version signed **by each beneficiary** with a Qualified Electronic Signature + full Excel files.* *Alternatively, a pdf of the blue-ink signed* financial statement(s) + full Excel files (the originally signed documents should be kept by beneficiary in case of future audit).*	✓
Names and other data (e.g. bank account) are correct and consistent with the Grant Agreement / across the different forms, and amounts are consistent across the different forms (e.g. figures from the individual statements are the same as those reported in the consolidated statement).	✓
Beneficiary's certificate(s) included for beneficiaries claiming 100% cost for durable goods. *Preferred: electronic version signed with a Qualified Electronic Signature* *Alternatively, a pdf of the blue-ink signed* beneficiary certificate(s) (the originally signed documents should be kept by beneficiary in case of future audit).*	✓
Certificate(s) on financial statement (if required, i.e. for beneficiaries with EU contribution ≥750,000 €) once the cumulative amount of payment requests reaches 325,000 €). *Preferred: electronic version signed with a Qualified Electronic Signature* *Alternatively, a pdf of the blue-ink signed* certificate(s) on financial statement (the originally signed documents should be kept by beneficiary in case of future audit).*	✓

Other checks	
Clarifications and supporting documents requested in previous letters from the Agency.	✓
This table, page 2 of the Interim / Final report, is completed - each tick box is filled in.	✓

**original signature by a legal or statutory representative of the beneficiary / affiliate concerned*

Instructions:

Please refer to the General Conditions annexed to your Grant Agreement for the contractual requirements concerning an Interim/Final Report.

The first Interim Technical Report shall report on progress from the project start-date; the following Interim Technical Reports shall detail progress during the Phase reported although where necessary a consolidated assessment of progress since the start of the project may be required, in particular when discussing the project's contribution to the targeted Plan / Strategy and progress towards the attainment of the project objectives. Final Technical Reports shall report on progress from the project start-date, except for sections 6.3 and 9.4 which may refer only to the final phase (in addition section 8 is not applicable to them).

Interim Reports must be submitted to the Agency as indicated in the Annex II. The Final Report must be submitted to the Agency no later than 3 months after the project end date.

Please follow the reporting instructions concerning your technical report, deliverables and financial report that are described in the document "Guidance on how to report on your LIFE 2014-2020 projects", available in the Reporting section of the LIFE website. Note the specific guidance given for financial reporting at the Final report stage.
Please download the guidance anew with each report to ensure you have the latest version as it is regularly updated.
Additional guidance concerning deliverables, including the layman's report and after-LIFE plan, are given at the end of this reporting template.

Regarding the length of your report, try to adhere to the suggested number of pages while providing all the required information as described in the guidance per section within this template.

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List of keywords and abbreviations

AEAS: Spanish Association of Water Supply and Sewerage

AEMET: Spanish Meteorological Agency

ACH: areas of homogeneous behaviour

API SITNA: JavaScript API that enables to include an interactive map viewer.

AR5: IPCC Fifth Assessment Report

ARPSIS: flood risk areas

BEQ-AMBIUN: Biodiversity and Environmental Quality Data Analysis Group of the Department of Environmental Biology of the University of Navarre.

CC: Climate Change

CDB: Communication and Dissemination Board

CICC: Interdepartamental Commission of Climate Change

CINEA: The European Climate, Infrastructure and Environment Executive Agency

CITA: Aragon Agri-Food Research and Technology Center

CoM: Covenant of Mayors

CoMO: Covenant of Mayors Office

COVID19: Coronavirus disease 2019

CSO: Combined Sewer Overflows

CTWG: Crosscutting technical working group

CTE:Technical building code

CTP: Working Community of the Pyrenees

DFA: Diputación Foral of Alava. Provincial Council of Álava.

DFG: Diputación Foral of Gipuzkoa. Provincial Council of Gipuzkoa.

DG: General Management / General Direction

DRyMA: Department of Rural Development and Environment

DSS: Overflowing of the sewage system during rainfall events

DSU: Unitary Systems Downloads

EA: External assistance

FMP: forest management plans

Foresna – Zurgaia: Asociación de pequeños propietarios forestales y entidades públicas

GA: Grant Agreement

GAN-NIK: Environmental Management of Navarre

GDB: common geodatabase

GENVCE: Spanish groups for the evaluation of extensive crops

GHG: Greenhouse gas

GIP: global intervention project

GIS: Geographical information system

GN: Government of Navarre

HCCN-KLINA (SCCN): Climate Change Roadmap (Strategy) of Navarre

HVE: high environmental value

IDAE: Spanish Institute for the Diversification and Saving of Energy

IDENA: Infrastructure of Spatial Data of Navarre

INTIA: Institute of Agrifood Technology and Infrastructures of Navarre

IP: Integrated Project

IPCC: Intergovernmental Pannel on Climate Change

IPM: Integrated Pest Management

ISPLN: Institute of Public and Labour Health of Navarre

JRC: Joint Research Center

KPI: Key Project-level Indicators

LEC: Local Energy Communities

LIFE NAdapta: LIFE-IP NAdapta-CC

NAdapta: LIFE-IP NAdapta-CC

LFCCTE: Law on Climate Change and Energy Transition of Navarre

MITERD: Ministry of Ecological Transition and the Demographic Challenge

NASERTIC: Services and Technologies of Navarre

NASUVINSA: Land and Housing of Navarre

NILSA: Local Infrastructures of Navarre

OPCC: Pyrenaic Climate Change Observatory

PC: Project Coordinator

PCR: polymerase chain reaction

PMB: Project Management Board

PMO: Project Management Office

PNIEC: Integrated National Plan on Energy and Climate

PTB: Project Technical Board

R&D: Research and Development

R&D&I: Research and Development and Innovation

RDI: Regulated Deficit Irrigation

Red NELS: network of local entities for sustainability of Navarre

RP: Reforestation Plan

SAD Ebro: Decision Alert System from the Ebro basin

SAIH Ebro: Automatic Hydrological Information System from the Ebro basin

SAR: Servicio de Asesoramiento al Regante

SARS-CoV-2: Severe acute respiratory syndrome coronavirus 2

SDG: Sustainable development goal

SEAIC: Spanish Society of Allergology and Clinical Immunology

SECAP or PACES: Sustainable Energy and Climate Action Plan

SG: Spain Government

SIE: Energy Efficiency Management Platform

SITNA: Territorial information System of Navarre

SNS: Health Service of Navarre

SUDS: Sustainable Urban Drainage System

UNED: National University of Distance Education

UPNA: Public University of Navarre

WS: Warning Station

WWTP: Waste Water Treatment Plants

ZEC: Special Conservation Zone

1. Executive Summary

Over the period 2017–2025, the LIFE-IP NAdapta-CC project has become a **reference initiative for climate action in Navarre**, acting as the main instrument for the implementation of the regional Climate Change Roadmap (KLINa). Throughout its eight-year duration, the project has demonstrated how an integrated approach can effectively translate strategic planning into tangible actions and measurable results, while gradually transforming governance systems and embedding climate considerations into public policy.

The project has achieved a **significant structural impact** on the way climate change is addressed in the region. What initially started as a strategy-based process has evolved into a fully institutionalised framework where adaptation and mitigation are systematically incorporated into decision-making. The approval and implementation of the **Climate Change and Energy Transition Law (LFCCTE) (March 2022)** has been a decisive milestone in this evolution, providing a stable legal foundation and ensuring continuity beyond the project itself. In parallel, the transition from the initial Agora KLINa to a structured system combining interdepartmental coordination, social participation and citizen deliberation reflects a clear consolidation of regional climate governance and a sustained commitment to multi-level approaches.

This evolution is closely linked to the capacity of LIFE NAdapta to mobilise stakeholders and foster cooperation across sectors and institutions. Climate action is no longer confined to a single policy domain but has progressively been integrated into areas such as water management, forestry, agriculture, health, infrastructure and spatial planning. This integration stands out as one of the project's most relevant achievements, reinforcing the incorporation of climate considerations into everyday public decision-making.

Beyond governance aspects, LIFE NAdapta has delivered **substantial and measurable results** across all thematic areas. At local level, the deployment of climate action plans under the Covenant of Mayors represents one of the most visible successes. By the end of the project, **226 municipalities** had committed to climate action, covering **91.7% of the population and 73.3% of the territory**, and contributing to a total emission reduction commitment of **1,008 ktCO_2e**. This outcome reflects not only the scale of implementation but also a **structural shift in local planning practices**, where climate considerations have become a core component of municipal policies.

In the water sector, the project has **considerably strengthened resilience** to climate risks, particularly floods. The deployment of early warning systems, combined with the development of local self-protection plans and advanced monitoring networks, has enhanced the capacity to anticipate and manage extreme events. A total of **50 municipalities** are now equipped with flood protection plans (17 developed under LIFE NAdapta), supported by **82 monitoring sensors** and integrated digital systems. As a result, **more than 100,000 inhabitants benefit from improved protection**. These achievements highlight the value of combining technological solutions with territorial planning and public awareness.

In the forestry sector, LIFE NAdapta has promoted a transition towards **ecosystem-based adaptation**, strengthening the resilience of forest systems under changing climatic conditions. Large areas are now managed according to adaptive principles, supported by digital tools and vulnerability assessments.

The implementation of silvopastoral practices has led to a **68.55% reduction in biomass fuel**, substantially reducing wildfire risk and reinforcing ecosystem stability. This result illustrates the effectiveness of nature-based solutions as long-term adaptation strategies.

The agricultural sector has also shown a **high adaptive capacity**. Through innovative practices and decision-support tools, the project has improved water efficiency, reduced inputs and enhanced system resilience. Around **10% water savings** have been achieved through deficit irrigation strategies, while the Early Warning System has reached **over 7,000 users**, supporting more efficient and sustainable farming practices. In parallel, reductions in mineral fertiliser use have generated **savings exceeding €11 million**, underlining the link between climate action and economic performance.

Public health represents another area with a **direct and tangible impact**. Surveillance systems covering the **entire population of Navarre (683,854 inhabitants in 2025)** have been developed to monitor climate-related risks such as heatwaves, air quality, pollen levels and vector-borne diseases. These systems strengthen prevention and preparedness, contributing to increased resilience to climate-related health impacts.

In addition, the project has supported the integration of climate considerations into infrastructure, housing and energy systems. Nearly **50% of dwellings** now have an energy certificate, and more than **5,500 dwellings** have been renovated, improving both efficiency and living conditions. At the same time, the promotion of Local Energy Communities —supported by legal analysis and targeted local engagement— has encouraged replication, reaching **more than 40 initiatives** across the region. These actions demonstrate how adaptation and mitigation can be effectively incorporated into territorial development.

A key feature of LIFE NAdapta has been its capacity to generate a **substantial leverage effect**, mobilising additional funding and amplifying its impact beyond the initial budget. More than **€327 million have been spent** on complementary actions, while over **€521 million have been committed** across multiple funding sources, illustrating the effectiveness of the Integrated Project approach in aligning European, national and regional investments.

In terms of implementation, the financial execution can be considered **highly satisfactory**, with a final declared expenditure of **€15,219,304.06 (97.78% of the initial budget)**. This slight underspending has not affected the achievement of objectives; on the contrary, in several cases **targets have been met or exceeded**, reflecting an efficient use of resources and a strong delivery capacity.

Innovation has been a consistent feature throughout the project, not only in technological terms but also in governance and planning methodologies. The development of monitoring systems, early warning tools and climate data platforms has enhanced decision-making and operational efficiency. Approaches such as **grouped SECAPs** have enabled small municipalities to access climate planning, significantly increasing territorial coverage. These solutions present a **clear potential for replication** both within Navarre and at European level.

Another important legacy is related to **capacity building and societal awareness**. More than **20,000 people** have participated in training and dissemination activities, including over **4,900 professionals**. Climate change is now more widely understood, and stakeholders are increasingly engaged in both the design and implementation of solutions. This represents a key enabling factor for long-term impact.

The project also provides relevant lessons for the European context. It demonstrates that **integrated approaches, robust governance structures and sustained support to local action** are essential to deliver effective climate policies. At the same time, it highlights the complexity of managing Integrated Projects, particularly regarding the coordination of complementary actions and funding sources, as well as the need to simplify and better align existing financial frameworks. Participation processes also require careful design and long-term commitment to ensure their effectiveness.

Feedback to EC policy units

Building on these lessons, the experience of LIFE-IP NAdapta-CC offers several key insights for EU policy implementation. The project confirms that **robust governance** frameworks and **multi-level coordination mechanisms** are critical to successfully mainstream climate action across sectors. In Navarre, the consolidation of climate governance —supported by the Climate Change and Energy Transition Law and dedicated coordination bodies— has enabled the effective integration of climate considerations into sectoral policies and planning instruments. The widespread deployment of local climate action plans (SECAPs), together with the strong mobilisation of municipalities, demonstrates that **local-level implementation is a powerful driver of both mitigation and adaptation outcomes**. In addition, the use of digital tools, monitoring systems and data platforms has proven essential to support evidence-based decision-making and improve operational capacity.

At the same time, the project highlights structural challenges that are relevant for future Integrated Projects. The **diversity and complexity of funding instruments**, with different rules and timelines, can make it difficult for regional and local actors to identify and mobilise the most appropriate sources of funding, requiring additional coordination efforts. Similarly, stakeholder participation processes do not always lead to consistent engagement, underlining the need for sustained and well-structured approaches. Based on this experience, further **simplification and harmonisation of funding frameworks**, together with reinforced support for local implementation and governance structures, would significantly facilitate the replication and scaling-up of integrated climate action across EU regions.

Finally, the sustainability of LIFE NAdapta results is strongly ensured. The integration of its tools, methodologies and governance systems into legal frameworks and public policies guarantees their continuity beyond the project lifetime. The continuation of these actions is estimated to require **7 full-time equivalent staff** and an **estimated annual budget of €1 million,** which is considered feasible within the regional institutional context.

In conclusion, LIFE-IP NAdapta-CC clearly demonstrates that **regional climate transition is achievable** when combining governance, investment, innovation and stakeholder engagement. Its main legacy is not only a set of technical results, but a deep structural transformation of public policy and institutional capacity, positioning Navarre as a leading European region in climate adaptation and integrated climate action.

2. Project relation to the Plan

The LIFE-IP NAdapta-CC project is integrated into KLINa with the specific objective of contributing to the implementation of the climate change strategy. The project's areas respond to the main objectives and activities of the adaptation and crosscutting measures of KLINa. Thanks to the complementary measures (action D.1 of the project) and regional climate governance, the project also contribute to implementing mitigation measures. The main references to the project and its contribution to KLINa are included in the roadmap document available online.

In terms of CC mitigation, KLINa strategy is structured based on the sectors of the GHG emissions inventory: electricity generation, industry, transport, residential and services, primary sector and waste. These mitigation areas fit therefore with the GHG emissions sectors. It is developed with 18 lines of action (MI-L) and mitigation measures (M).

With regard to CC adaptation, the areas of action are: natural environment, rural, urban, and crosscutting measures, and are linked to the strategic areas of LIFE-IP NAdapta-CC (hereafter "LIFE NAdapta"): Water, Forestry, Agriculture, Health, Infrastructure and territorial planning, and horizontal actions (such as capacity building, funding mechanisms, dissemination…). The strategy structure counts with several action lines (AD-L) and crosscutting adaptation measures (TR-L).

The following tables show how the project objectives and activities respond to KLINa adaptation targets. The "climate matrix" (links between the project and the strategy) is the same since the start of LIFE NAdapta.

IMPORTANT: the links between KLINa pilars, LIFE Nadapta actions, complementary measures and KPIs are shown in annex **AC_Final Report Part2_4**, using to the template proposed by CINEA. It is detailed in the annex due to the extended size of the table that shows the data and links between each parts.

NATURAL MEDIUM			
AD-L1 Restoration and conservation of the environment	AD1	C.2 ADAPTATIVE WATER MANAGEMENT	C.2.6 Drafting preliminary river space recovery projects for conservation and reduction of the flooding impact
AD-L2 Prevention and management of climate emergencies	AD2	C.3 ADAPTATIVE FOREST MANAGEMENT	C3.3: Review management comprehensive models in Mediterranean agroforestry systems to increase its ecologic value and minimising risks
	AD3	C.3 ADAPTATIVE FOREST MANAGEMENT	C3.4: Analysis of planning tools to incorporate adaptive management measures for the different types of masses.
	AD4	C.3 ADAPTATIVE FOREST MANAGEMENT	C3.5: Develop and apply models of forestry growth under different CC scenarios to evaluate productivity changes.
	AD5	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.4: Plague and emerging diseases warning system.
	AD6	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.5: Adaptation to animal emerging diseases due to the climate change.
	AD7	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.6: Pastures, livestock and silvipastoralism management to fight against fires
RURAL MEDIUM			
AD-L3 Environment, agriculture and climate	AD8	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.1: Optimization of the adaptability of agrosystems to climate change through organic matter, crops and soil management strategies.
	AD9	C.3 ADAPTATIVE FOREST MANAGEMENT	C3.2: Selection of autochthonous seed sources adapted to the environment.
	AD10	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.3: Environmental adaptation to climate change of vegetative material
AD-L4 Water management and flood prevention	AD11	C.2 ADAPTATIVE WATER MANAGEMENT	C2.7: Evaluation of hydric resources, derived from climate change scenarios and from demand exploitation model. Demand management plan (supply, irrigation, etc.)
	AD12	C4. ADAPTATIVE AGRICULTURE AND LIVESTOCK MANAGEMENT	C4.2: Adaptative water management in the agricultural sector

URBAN MEDIUM			
AD-L5 Reduction of the exposure to climate change	AD13	C.6 INFRASTRUCTURES AND TERRITORIAL PLANNING	C6.2 / C6.3 / C6.5 / C6.11: Study of climate variability on a local scale, and adaptation of the built environment to climate change.
	AD14	C.6 INFRASTRUCTURES AND TERRITORIAL PLANNING	C6.1: Landscape adaptative management
AD-L6 Reduction of the vulnerability to climate change	AD15	C.6 INFRASTRUCTURES AND TERRITORIAL PLANNING	C6.4 / C6.7 / C6.8 / C6.9 / C6.10: Pilot projects to adapt the public residential buildings, rural areas, public buildings and economic áreas to the climate change.
	AD16	C.2 ADAPTATIVE WATER MANAGEMENT	C2.1: Development of an early warning system facing possible environmental emergencies in waste-water treatment plants.
	AD17	C.2 ADAPTATIVE WATER MANAGEMENT	C2.2: Development of a monitoring network for sewage systems overflows, and diagnosis of its environmental impact.
	AD18	C.2 ADAPTATIVE WATER MANAGEMENT	C2.3: Adaptation of the urban sewage networks through the implementation of sustainable drainage systems in urban areas.
AD-L7 Prevention and management of climate emergencies in urban areas	AD19	C.5 HEALTH	C5.1: Development of new surveillance and information systems, analysing the consequences of climate change on human health.
	AD20	C.5 HEALTH	C5.2: Surveillance of working conditions and climate change consequences, as well as extreme temperatures on workers' health
	AD21	C.5 HEALTH	C5.3: Improvement of the air quality surveillance and evaluation tools about the effects on health
	AD22	C.5 HEALTH	C5.4: Improve the surveillance of emerging risks as result of the climate change
	AD23	C.5 HEALTH	C5.5: Development of a surveillance system to detect invasive vectors of human diseases
	AD24	C.5 HEALTH	C5.6: Improve the surveillance of pollen composition, and the variation of pollination periods regarding the climate change
	AD25	C.2 ADAPTATIVE WATER MANAGEMENT	C2.4: Flood risk warning and automatic alert software platform.
	AD26	C.2 ADAPTATIVE WATER MANAGEMENT	C2.5: Development and promotion of flood self-protection plans in local authorities
	AD27	C.6 INFRASTRUCTURES AND TERRITORIAL PLANNING	C6.6: Analysis of vulnerability of key infrastructures within the transport sector, potentially threatened by climate change
CROSSCUTTING APPROACH FOR ADAPTATION STRATEGY			
TR-L1 Sustainable and resiliente territory	TR1	C.6 INFRASTRUCTURES AND TERRITORIAL PLANNING	C6.1. Landscape adaptative management
	TR1	C.2 ADAPTATIVE WATER MANAGEMENT	C2.3: Adaptation of the urban sewage networks through the implementation of sustainable drainage systems in urban areas.
TR-L2 Cooperation with international and national networks	TR2	E. Public awareness and dissemination of results	E.3 Networking with other projects
TR3-A2 Establecimiento de una plataforma multiagentes	TR3	A. PREPARATORY ACTIONS	A.2 Creation of a multi-agent platform
TR 4 Covenant of Mayors for Climate and Energy-type adaptive management of the local environment	TR4	C.1 CLIMATE CHANGE MONITORING	C.1.2 Adaptive management of the local environment, through the Covenant of Mayors for the Climate and Energy
TR 5 Coordination with funding mecanisms	TR5	C.7. HORIZONTAL ACTIONS	C.7.2. Coordination with other Funding Mechanisms
TR-L3 Innovation and Knowledge Transfer with regard to adaptation to climate change	TR6	C.1 CLIMATE CHANGE MONITORING	C.1.1. Monitoring of territorial indicators of climate change in Navarra
	TR7	C.2 WATER C.3 FORESTRY C.6 TERRITORY	C.2.7 / C.3.5 / C.6.2 Regionalised climate projections for Navarre.
	TR9	E. Public awareness and dissemination of results	E.4 Climate change information point and communication events
	TR10	C.7.1 CAPACITY BUILDING	C.7. HORIZONTAL ACTIONS
	AD28	C.3 ADAPTATIVE FOREST MANAGEMENT	C3.1: Identify and map the most vulnerable forest territories aiming at setting out action priorities. Vulnerability models.

3. Administrative part

Project management

Figure 1 "Project management structure of LIFE-IP NAdapta-CC" shows the management structure of the project. It is the same coordination system since the beginning of the project, which has proven to be efficient to reach all the project goals. In 2020 (phase 2), PC and PMO added a new function – a Project Technical Coordinator (PTC) – to support the PC day-to-day tasks and responsibilities. It is the person in charge of the management of the whole project: goals, milestones, tasks, deadlines, reporting, and dissemination of the strategy, as well as general support to the partnership and relation with ELMEN and CINEA.

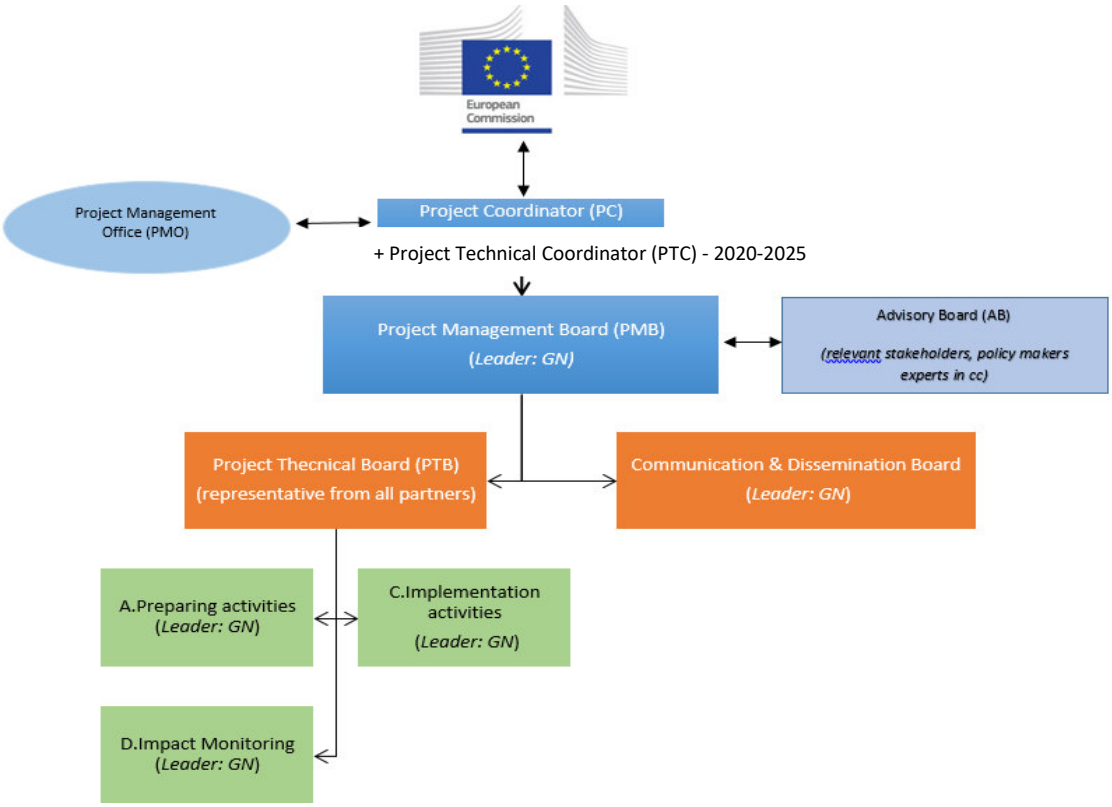


Figure1. Project management structure of LIFE-IP NAdapta-CC

Since the start of the project, PC has changed four times. In October 2024 (phase 4), Government of Navarre created the regional Climate Change Office (*Servicio de la Oficina de Cambio Climático de Navarra - SOCCN*) which leads to a new project coordinator. **Table 1** gathers the updated share of responsibilities among Project Management Office (PMO), and the different Project Coordinators (PC).

Table 1. PC and PMO during the four phases of the project

Function	**Name**	**Organization**
PC (phases 1 and 2)	Mrs Delia SOLA	DRyMA
PC (phase 3)	Mr Javier VERA	DRyMA
PC (phase 3 and 4)	Mr Isaías BAUTISTA	DRyMA
PC (**new** since oct.2024)	Fernando SEÑAS BEA	Climate Change Office, DRyMA

Technical Coordinator (PTC)	Joël DOZZI	OREKAN (1)
Coordination team	Itziar ALMARCEGUI	DRyMA
Coordination team	Miguel Ángel GONZÁLEZ	DRyMA
Financial officer	Ion ZUZA	DRyMA
Administration officer	Maitane LOYOLA	DRyMA
External Assistance	Josmary PÉREZ	EUROVÉRTICE (private company)

NOTE (1): since the 1st of January 2025, the partner GAN-NIK changed its brand name. The new name of the organization is "OREKAN". Still, administrative data are the same, as stated in the Grant Agreement. This new brand and image were communicated to ELMEN and CINEA by email on the 16th of June 2025.

NOTE (2): since January 2025, the beneficiary UPNA has a new legal representative due to the appointment of the **new Vice Rector for Research**, Martin Larraza Quintana, who replaces Francisco Javier Arregui San Martin (link to the official communication). Since then Sr Larraza signs the official documents of the UPNA beneficiary.

The mechanism put in place to manage the project is based on different levels of meetings and follow up system within the partnership. PMO organises project coordination meetings for the global follow-up of LIFE NAdapta. It aims at analysing and monitoring all actions, adapting the project planning, and setting management procedures. Those meetings also serve to monitor the financial development of the project, and evaluate possible budget changes. The coordination meetings are also the place to monitor the compliance of the beneficiaries' obligations according to the Grant Agreement, and to organise the reporting towards CINEA.

The day-to-day follow up is a key part of the project management. This activity relies on internal technical meetings organized with PMO and one given beneficiary. These events are very important to evaluate work progress and solve difficulties encountered at any level in relation to specific actions (budget, deadlines, technical difficulties, communication and events...).

Since phase 2, PMO and PMB put in place several crosscutting technical meetings on water management (C.2) and agriculture (C.4), SECAP (C.1.2) and water (C.2), emerging risks and diseases due to invasive vectors for animals (C.4.5) and for humans (C.5.5), as well as on forestry (C3) and extensive livestock (C4.6).

In the area E, the Communication and Dissemination Board (CDB) organized *ad hoc* meetings to coordinate the communication actions especially in the first mid-part of the project. This was necessary to put the basis and tasks for a good communication of the project, and to work under the same internal rules and objectives. In phases 3 and 4, dissemination issues were also evaluated in the consortium meetings (coordination meetings).

PC and PMO have together an intensive coordination thanks to internal meetings on a weekly basis, for the day-to-day follow up of the coordination activity. **Table 2** summarizes the type and number of meetings held by PMO to manage the project during the full period of implementation.

Table 2. Project management meetings

Type of meetings	**Participants**	**Total Number 2017-2025**
Project coordination meetings	All partnership	15
Internal technical meeting	PMO + beneficiary	97
Crosscutting technical meetings	PMO + beneficiaries	15
Communication meetings	PMO + beneficiaries	17
Internal meetings	PMO	237

With regard to HCCN-KLINa strategy, PC and PMO have a direct relation with the team in charge of KLINa management. There is a constant collaboration since both teams are part of the same Department of rural development and environment of Government of Navarre. The synergy is based on internal meetings and exchange of information (emails and phone), with the aim to align work within shared fields of action.

Stakeholder involvement, working method, and problems encountered

Stakeholders' involvement in LIFE NAdapta depends on different levels of relationship with external agents. It is possible to analyse it according to territorial level (regional, national, European and international), or depending on the purpose (strategical and policy issues, or technical issues). The work with stakeholders depends directly on the activity of each project partner in its respective area, but also on the PTC and PMO for strategical networking.

At the beginning, there was a major step that put the "foundations" to mobilise stakeholders create synergies. Government of Navarre put in place **AGORA KLINa** as a multi-agents platform to work with experts and the civil society on climate change issues and strategies. From 2020 to 2022, Government of Navarre developed and approved the new Foral Law on Climate Change and Energy Transition (LFCCTE) (link). In the latter, new **governance systems** are defined, and replace then AGORA KLINa.

On the one hand, the Social Council on Climate Change and Energy Transition Policy has the function (art.8) of analysing the evolution of the fulfilment of the objectives in the fight against CC. It will also analyse the integration of energy and climate change policies in the different sectorial plans of the Government of Navarre, and formulate proposals and initiatives to the Interdepartmental Commission on CC and Energy Transition (CICCTE).

On the other hand, the creation the Citizen Climate Assembly that is a civil society participation body, supported by an official Group of Experts. Both work together and constitute a forum for participation and deliberation associated with the CC decision-making process. The Group and the Assembly started its activity on February 2025, with different sessions and debates on four topics. The first one was on food distribution and consumption, agriculture, and territorial planning. The second block focused on industry, energy and mobility; the third one on social dimension including health and education, and the last one on ecosystems, environment and biodiversity. Those meetings took place from February to June, and the Assembly gave back to Government of Navarre a set of proposals, in September 2025. Since then, the SOCCN evaluates the proposals made by the civil society to be included in the new Energy and Climate regional planning.

All along the project, stakeholders involvement is quite high and relies mainly on two levels of participation: on one side they take part to the governance tools above-mentioned, and on another side they share information and take part to joint activities thanks to events organization, events participation, as well as synergies through networks and platforms. This leads to share knowledge, transfer technical or strategical contents, and create opportunities to replicate NAdapta's results. A good example of the involvement of stakeholders at a technical level is the governance scheme put in place to boost, manage and support the draft, development and implementation of the SECAP, for more than 210 municipalities out of 272 in Navarra. Their participation is – and has been – a great success during the project and it is expected to remain active it in the next years.

The main difficulties encountered during the full period of the project are linked to the changes in the coordination team, but also in some beneficiary staff. This alters the follow-up of the networking activity in itself, and contacts with new agents. Nevertheless, after the covid19 pandemic that had a quite negative impact due to several lockdowns, the synergies with stakeholders are definitely much

better and easier through in-person events, workshops, congresses and capacity building courses. Even, the combination with streaming option during an event opens more opportunities to make contacts with stakeholders, which is a positive impact after the pandemic.

Cooperation between the coordinating/associated beneficiaries and the management of the complementary actions, public and private funds involved the working method, and problems encountered.

During the eight years of the project, LIFE NAdapta teams had regular meetings and contacts with the KLINa staff to monitor complementary actions, and to draft the new KLINa report. After the covid19 pandemic, face-to-face meetings were then possible and made the work much more efficient on a day-to-day basis.

LIFE NAdapta teams could also **cooperate** with other departments, services and entities of the Government of Navarre for the identification and follow-up of complementary actions. The working channels used are those previously established with the crosscutting climate change commission (CICC) until the end of the pandemic. After the approval of the new Foral Law on Climate Change and Energy Transition (LFCCTE) in March 2022, Government of Navarre renewed in February 2023 the former CICC and added in its definition the Energy Transition, then named CICC**TE**. The latter started its activity with strategical meetings once a year and other sessions of the technical committee that goes deeper on practical issues related to the CICCTE's decisions and orientations. LIFE NAdapta has a direct contact and synergies with them on adaptation issues, but also on promotion, transfer and replication of results, and new projects opportunities.

Communication with CINEA and Monitoring team.

Contacts with both the CINEA and ELMEN (previously EASME and NEEMO until 2021) have been constant throughout the project. The relation has been always smooth and efficient, with a good assessment level. The new system put in place with ELMEN using a monitoring helpdesk works very well with very fast and clear answers.

Regarding the monitoring of the project, the visits were quite demanding in phase 1 since the integrated project system was new for everybody. In phase 2, the online monitoring visits were also a bit difficult because everybody had to work under special conditions due to the covid19 pandemic. In phases 3 and 4 it became easier, and the frequency of the controls was lower with only one visit at the end of each phase. The monitoring visits were always well managed and field visits were organized each time it was possible.

In February 2024 (beginning of phase 4), both ELMEN and Bernd Decker from CINEA visited the project and Navarra (forestry adaptation to CC in experimental chestnut plots), in order to evaluate the progress of the actions and be aware of the major impacts of the project. The last in-person monitoring visit took place on the 26th and 27th of November 2025 before the submission of the final report.

In total, during the project LIFE NAdapta had eight monitoring visits: two visits in 2018, one per year from 2019 to 2022, one visit in 2024 and the last one in November 2025. The last two ones were both with CINEA and ELMEN.

4. Project impact and analysis of contribution to implementation of the Plan

LIFE-IP NAdapta-CC represents the main instrument of the Government of Navarre to implement adaptation measures under the KLINa climate change (CC) roadmap over its eight-year duration. The project shows a high level of impact in the adaptation of the regional territory across key thematic areas such as monitoring, municipal action plans, water, forestry, agriculture and livestock, health, and territorial planning and infrastructure. Moreover, its most significant contribution lies in its horizontal and cross-cutting dimension, including capacity-building activities and its strong policy impact.

Throughout its implementation, LIFE-IP NAdapta-CC has played a key role in fostering coordination, dialogue and synergies among policy makers and stakeholders. It has supported the implementation of KLINa, enhanced the integration of climate change into cross-sectoral policies, and promoted its incorporation into regional plans and programmes. The project has progressively strengthened governance among partners and key regional actors, consistently promoting stakeholder engagement and interdepartmental coordination. During Phase 3, KLINa published an updated progress report and planning framework, and the Parliament of Navarre approved the Climate Change and Energy Transition Law (LFCCTE) on 17 March 2022.

Building on the results achieved in earlier phases, the project has continued to strengthen engagement with stakeholders and participation in local, national and international networks. Through ongoing networking and strong dissemination efforts (see section 6.2), LIFE-IP NAdapta-CC has received numerous requests for information and participation in events and training activities, increasing its visibility and facilitating knowledge sharing. This has also created opportunities for transfer and replication of project methodologies, results and governance approaches, including the regional climate strategy framework (KLINa, LFCCTE).

4.1. Environmental benefits

4.1.1 Direct / quantitative environmental benefits

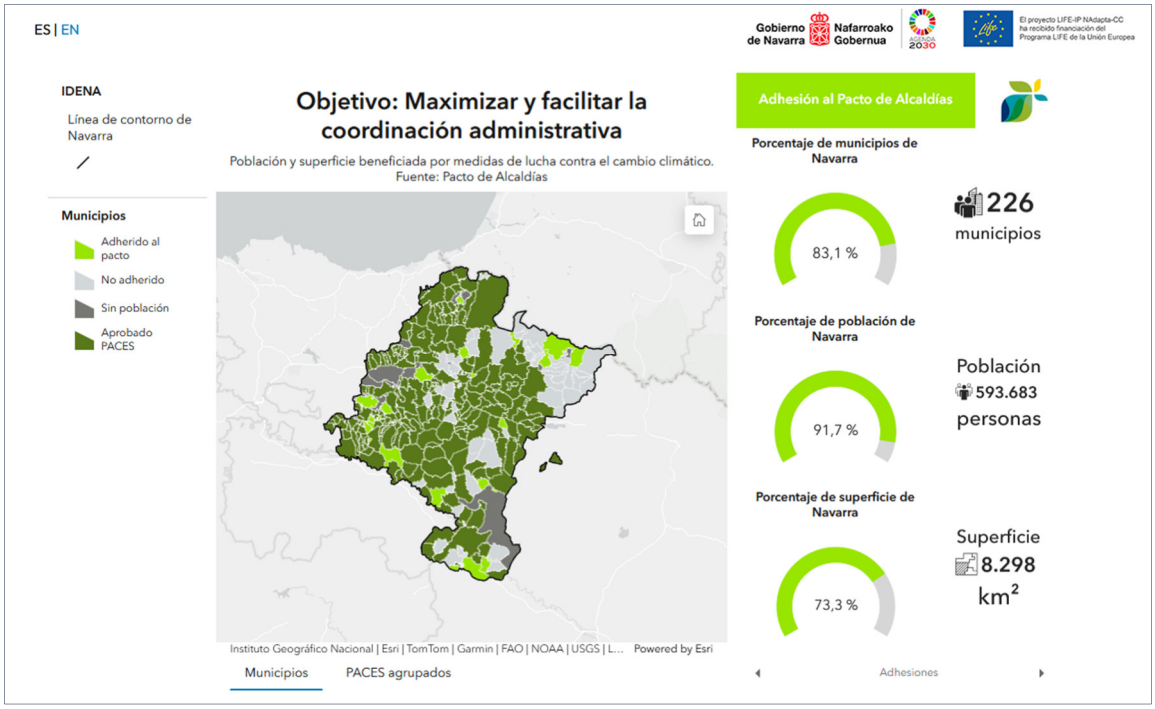
Climate change monitoring in Navarre

At the end of the project, the monitoring website (action C1.1) contains **123 updated climate change indicators and provides geographical information through 289 maps**. It contributes to increasing environmental knowledge, particularly regarding climate hazards such as river floods, forest fires, heatwaves and droughts, while also supporting the assessment of exposure and vulnerability and the tracking of impacts and adaptation measures. The climate monitoring system has been consolidated as a key infrastructure for public decision-making. **The monitoring portal has exceeded 30,000 cumulative visits**, demonstrating its use as a strategic tool by public administrations and technical stakeholders for tracking climate change and evaluating policies. In addition, it goes beyond a simple indicator platform by integrating impact chains, climate variables and vulnerability analyses, thus supporting evidence-based climate policy.



Mitigation and local climate governance

The deployment of the Covenant of Mayors stands out as one of the most significant achievements of the project. Navarre has moved from a situation of limited initial participation to becoming one of the European regions with the highest territorial and population coverage. With **226 signed commitments**, the region has clearly exceeded both 2025 and 2030 targets. This means that **91.7% of the population** and **73.3% of the territory** are now covered by local climate commitments—an achievement reached by very few European regions. The print screen below of the Covenant of Mayors & SECAP website in Navarra has been made at the end of the LIFE NAdapta project (December 2025). The figure is also available in LPI deliverable DF2_4. Since then, the figures have increased since the action still goes on with other funds.



The committed emissions reduction amounts to **1,008 ktCO_2e**, demonstrating that mitigation has been structurally integrated into municipal planning. This progress is not only quantitative: it reflects the incorporation of climate considerations into energy, mobility, building and urban planning policies across hundreds of municipalities.

Water cycle adaptation and flood risk reduction

The water sector has undergone an unprecedented transformation. The implementation of early warning systems, the progressive digitalisation of wastewater management and the strengthening of municipal planning have significantly improved the resilience of Navarre's water system.

- **50 municipalities** now have flood self-protection plans (target: 40).
- **82 online sensors** have been installed in wastewater treatment plants (target: 45).
- **37 overflow points** are being monitored, alongside 28 WWTPs under continuous monitoring.
- **17 flood risk management plans** developed, protecting **more than 100,000 people**.

These improvements have made it possible to anticipate flood events up to 48 hours in advance, improve emergency response and reduce damage and risks for the population. The digitalisation of wastewater systems enables real-time detection of overflow events, optimisation of treatment plant operations and reduction of pollution during heavy rainfall episodes. More information on data and operative issues are available in annex AC2.5.1 submitted in phase 2.

This progress is complemented by the development of a fully operational and integrated management system, including overflow inventories, real-time monitoring networks and early warning platforms connected to civil protection services. In addition, the project has produced a portfolio of river restoration projects aimed at recovering fluvial space and reducing flood impacts under future climate scenarios, reinforcing long-term adaptation planning.

Adaptive forest management and wildfire risk reduction

All the figures on environmental impacts of forestry actions are available in deliverable DD2_4.

The forest sector has undergone a qualitative shift towards ecosystem-based adaptation. Adaptive forest management has reached a significant territorial scale, with more than **190,000 hectares under updated management plans** and over **300,000 hectares integrated into digital planning tools**, enabling data-driven and long-term resilience-oriented decision-making.

Silvopastoralism has been one of the most notable achievements, achieving a **68.55% reduction in biomass fuel**, meaning nearly **70% less combustible material**. This result highlights the effectiveness of nature-based solutions in reducing wildfire risk under increasingly extreme climatic conditions.

The project has also promoted the selection and conservation of **climate-resilient seed sources**, the recovery of traditional species such as chestnut with strong ecological and cultural value, and the development of a regional forest vulnerability map, which has become a key tool for strategic planning. More details are shown in action C3.5 annex AC3.5.4_4 Guías Gestión Adaptativa Cantábrica. Below, a sample of chestnut maps in the north of Navarra, and a picture of CINEA & ELMEN visit in Feb.2024.



Figura 17: Castaños en Baztan



Figura 18: Localización de castañares en la biorregión



Picture: CINEA & ELMEN monitoring visit on the 7th of February 2024 with a new chestnut plantation

Agriculture and livestock: water efficiency, soil and plant health

All the information and data set out below are contained in deliverable DD2_4. Still, more figures and technical details are available in specific action deliverables and/or annexes. In that sense, deliverable DC4.2_4 show that the agricultural sector has demonstrated a strong adaptive capacity. Deficit irrigation strategies have achieved approximately **10% water savings without yield loss (in the specific case of broccoli and peas, the pilot schemes show that it is possible to save around 30%)**, representing an important improvement in a context of increasing water scarcity.

Both deliverables DC4.4_4 and DC4.5_4 demonstrate that the Early Warning System has become an essential tool for the sector, with **7,000 registered users**, **11,000 consultations** and more than **700 trained farmers and technicians**. This system has improved pest management, reduced costs and increased overall sustainability.

Beyond these results, the project has driven structural changes in resource efficiency. **Significant reduction in mineral fertilizer use** has been recorded, alongside increased use of organic matter, contributing to both environmental and economic sustainability. As stated in deliverable DC4.1_4, more than **100 vulnerable soil plots** have been analysed, enabling the identification of risks related to erosion, fertility loss and climate-related degradation. Soil management improvements are particularly relevant: measured increases in soil organic carbon, reaching values of up to **75 t/ha in pilot areas**,

highlight the potential of agriculture not only as an adaptation strategy but also as a **carbon sink**. At the same time, the early detection of emerging pests and pathogens has strengthened the anticipatory capacity of the sector under changing climatic conditions.

Public health and climate surveillance

Public health is one of the areas where the project has had the most direct and visible impact. Climate-related surveillance systems now cover the **entire population of Navarre** (678,338 inhabitants in 2024, (683,854 in 2025). Monitoring capacity has been expanded through **67 mosquito traps**, around **1,800 annual samples** and more than **2,200 daily subscribers** receiving pollen level alerts. These systems enable the anticipation of heatwaves, air quality variations, pollen peaks and vector-related risks, strengthening the preventive capacity of the health system and improving resilience to climate-related health impacts. More figures and technical information are shown in deliverables DC5.1_4, DC5.3_4, DC5.5_4 and DC5.6_4, as well as deliverable DD2_4 and DD3_4 (project's impact indicators).





LEFT: Heatwaves prevention poster in Navarra RIGHT: Tiger mosquito prevention leaflet

Infrastructure, energy and territorial planning

The project has driven a gradual but significant integration of climate considerations into territorial planning and energy systems. In the building sector, the transformation is particularly notable: nearly **50% of dwellings** now have an energy certificate, with a steady increase in high-efficiency ratings. More than **5,500 dwellings have been renovated**, improving thermal comfort, reducing energy consumption and contributing to a decrease in emissions in the residential sector, which have declined to approximately **0.54 tCO_2eq per capita**. At the same time, climate considerations have been integrated into spatial planning tools:

- **49.7% of private dwellings** have energy certification
- **6.8%** achieve A–B rating
- **192 landscape units** include adaptation measures
- **32 specific landscape studies** have been completed
- More than **40 Energy Communities** have been promoted

These results – all gathered in deliverable DD2_4 - demonstrate that both adaptation and mitigation have been effectively embedded into urban planning, building design, mobility and energy systems. Additional tools, such as digital platforms for public building energy management and residential vulnerability mapping, have further improved decision-making and planning capacity.

4.1.2 Qualitative environmental benefits

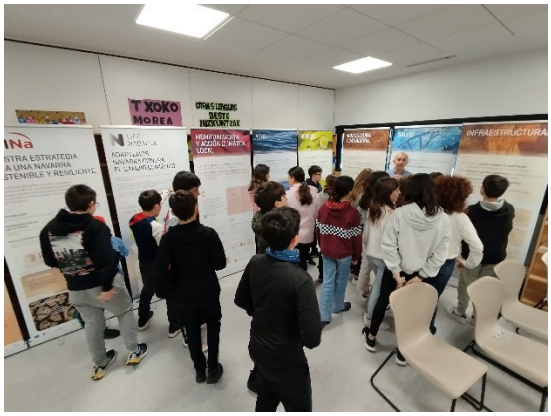
Beyond quantitative results, the LIFE NAdapta project has generated a set of qualitative benefits that have transformed the way climate action is conceived, organised and implemented in Navarre. These benefits are not always directly measurable, but they are essential to understand the structural change achieved in the region.

One of the most significant advances has been the consolidation of a **mature and institutionalised climate governance system**, capable of coordinating multiple stakeholders and integrating both adaptation and mitigation into public decision-making processes. The creation and strengthening of governance bodies such as the Interdepartmental Commission on Climate Change and Energy Transition (CICCTE), the Climate Change Coordination Commission (CICC), the Social Council on Climate Change and Energy Transition, and the Citizens' Climate Assembly have reinforced the institutional architecture while creating stable spaces for dialogue, participation and shared responsibility. As a result, climate action has evolved from isolated initiatives into a sustained public policy, ensuring continuity beyond political cycles.

The project has also contributed to strengthening the **climate awareness and culture of society**, which is essential for long-term sustainability. The participation of more than **20,000 people** in training, awareness-raising and dissemination activities has led to a noticeable shift in public perception. Citizens are now better informed, more aware of climate risks and more engaged in identifying solutions. Initiatives such as citizen science on climate-related vectors have demonstrated that society can play an active role in environmental monitoring, reinforcing the preventive capacity of public systems. More details and information are available in deliverables DE2_4 (communication materials), DE4_4 (communication activities and events) and annex AC7.1_4 (capacity building and training), as well as deliverable DD2_4 and DD3_4 on projects impacts.



LEFT: street campaigns on climate adaptation and LIFE NAdapta project



RIGHT: Raising awareness of climate challenges in schools in Navarra

From a technical perspective, the project has introduced **methodological and technological innovations** that have transformed territorial and environmental management. The digitalisation of the water cycle, the implementation of sustainable urban drainage systems (SUDS), the Early Warning System for agriculture, and the development of climate and energy data platforms and vulnerability mapping tools have enabled decision-making processes to be increasingly based on accessible, real-time and high-quality data. These tools have improved operational efficiency, reduced uncertainty and strengthened coordination between departments and local authorities.

Another key qualitative outcome has been the **mainstreaming of climate considerations into sectoral policies**. Climate change has been progressively integrated into planning, strategies and regulatory frameworks in areas such as urban planning, health, agriculture, forestry, energy and territorial management. This cross-cutting approach is one of the project's most important achievements, as it ensures that climate action is not confined to a specific policy area but embedded across the entire public policy system.

Finally, the project has triggered a **profound organisational and cultural change within the administration**. Interdepartmental cooperation, which was initially limited and fragmented, has become a common practice. The Technical Working Group on vectors, for example, has demonstrated the value of cross-sector collaboration between health, environment, agriculture and livestock sectors to address complex climate-related risks. This evolution represents one of the most lasting legacies of the project, strengthening institutional capacity and readiness to respond to future climate challenges.

Multi-benefit approach

The LIFE NAdapta project has clearly demonstrated that climate action generates benefits that go well beyond its direct environmental objectives. Its cross-cutting nature has enabled synergies across sectors, improved the efficiency of existing public policies and delivered positive impacts in areas such as public health, the economy, territorial cohesion and governance.

Firstly, the project has strengthened **alignment with European climate policies**. The implementation of the Covenant of Mayors, the contribution to the EU Adaptation Strategy, the integration of climate criteria into water management planning and the promotion of Energy Communities illustrate how Navarre has progressed in line with —and in some cases ahead of— European priorities. This alignment has not only improved policy coherence, but also facilitated access to European funding and reinforced Navarre's position as a reference region in climate adaptation.

Secondly, from a social perspective, the project has generated important co-benefits that directly improve quality of life. Measures aimed at reducing flood risk, improving air quality, enhancing energy efficiency in buildings and strengthening public health surveillance systems contribute to a safer, healthier and more resilient environment. Initiatives addressing energy poverty, for example, have delivered both environmental and social benefits, particularly for vulnerable households.

In economic terms, climate action has acted as a driver of innovation and new opportunities. The digitalisation of the water cycle, adaptive forest management, climate-resilient agriculture and the development of Local Energy Communities have fostered emerging sectors combining sustainability, technological innovation and competitiveness. These activities not only generate employment, but also strengthen the overall resilience of the regional economy to climatic and energy-related shocks.

The project has also played a key role in **strengthening territorial cohesion**. The widespread uptake of SECAPs across rural municipalities, combined with targeted training and support, has enabled climate action to reach all parts of the territory. Access to data, tools and planning instruments has helped reduce disparities between urban and rural areas, enhancing the adaptive capacity of regions that are often more vulnerable.

Finally, the project has generated additional environmental benefits beyond those initially expected. These include improvements in water quality associated with the implementation of SUDS, the conservation and enhancement of resilient forest species, and the reduction of wildfire risk through silvopastoral practices. These outcomes reinforce the value of ecosystem-based adaptation as an effective, efficient and multi-purpose strategy.

4.2. Economic and social benefits

The socio-economic impact of LIFE NAdapta has been as significant as its environmental impact. Several actions of of the project have **direct or indirect economic impacts**. The results achieved confirm that climate action not only protects natural resources, but also acts as a driver of economic development, social well-being and territorial cohesion. Moreover, the creation of the new portal to monitor KLINa is a powerful tool for **policy makers** to analyze and select the most cost-effective measures, with economic benefits at medium and long term. The high majority of the following analysis is based on D.3 Socioeconomic indicators (deliverable DD3_4) as well as climate indicators and climate chain (IPCC methodology) displayed in the CC Monitoring website (action C1.1).

From an economic perspective, the project has mobilised substantial levels of investment at regional and local level. By the end of the project, the Government of Navarre had spent a **total amount of €327.1 million for complementary measures** (see chapter 5 and 6.3 as well as deliverable DD1_4) that contribute to amplify the impacts across key sectors of the LIFE project and KLINa roadmap.

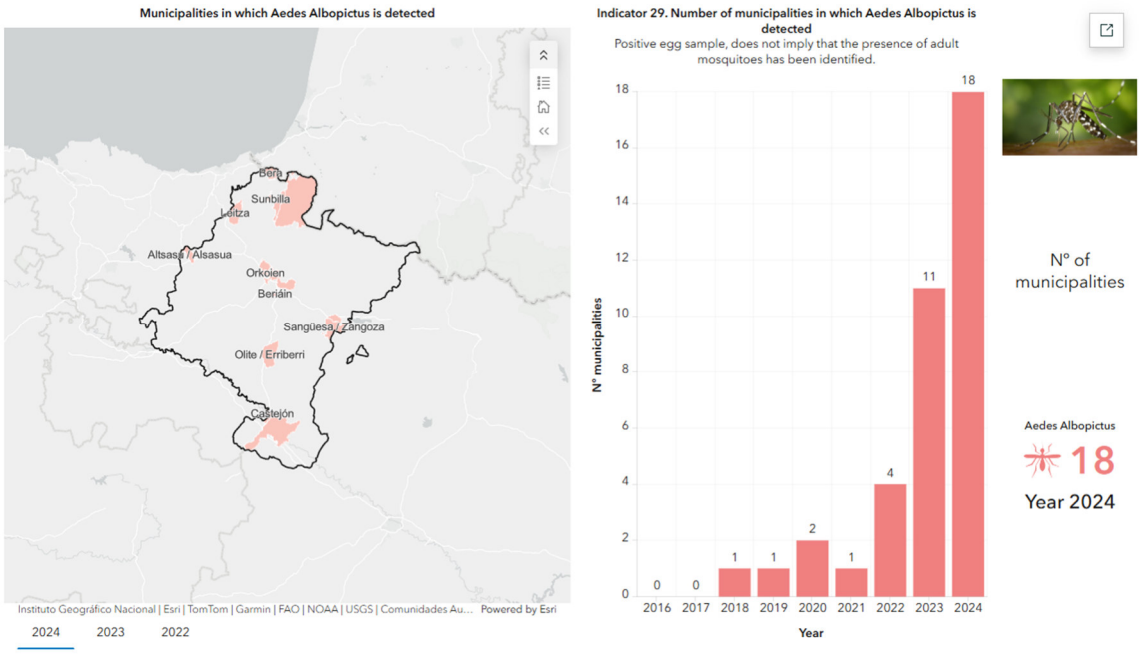
Energy renovation policies have been particularly relevant, with **more than €26 million in public support** enabling the refurbishment of **over 5,500 dwellings**. In the forestry sector, the economic value of certified timber has reached **€63 million**, significantly exceeding initial expectations. In agriculture, reductions in mineral nitrogen use have generated **savings of over €11 million**, while the development of climate-adapted crop varieties has achieved an economic value exceeding **€1 million**.

The project has also contributed to improving efficiency and reducing operational costs. Measures such as deficit irrigation have achieved water savings from **10% to 30%** depending on the crop variety, while the Early Warning System has optimised phytosanitary treatments. Similarly, the digitalisation of wastewater management has increased efficiency and reduced maintenance and operational costs. Local Energy Communities, with more than **40 initiatives underway**, are further supporting the energy transition by promoting decentralised renewable energy production and reducing dependence on fossil fuels.

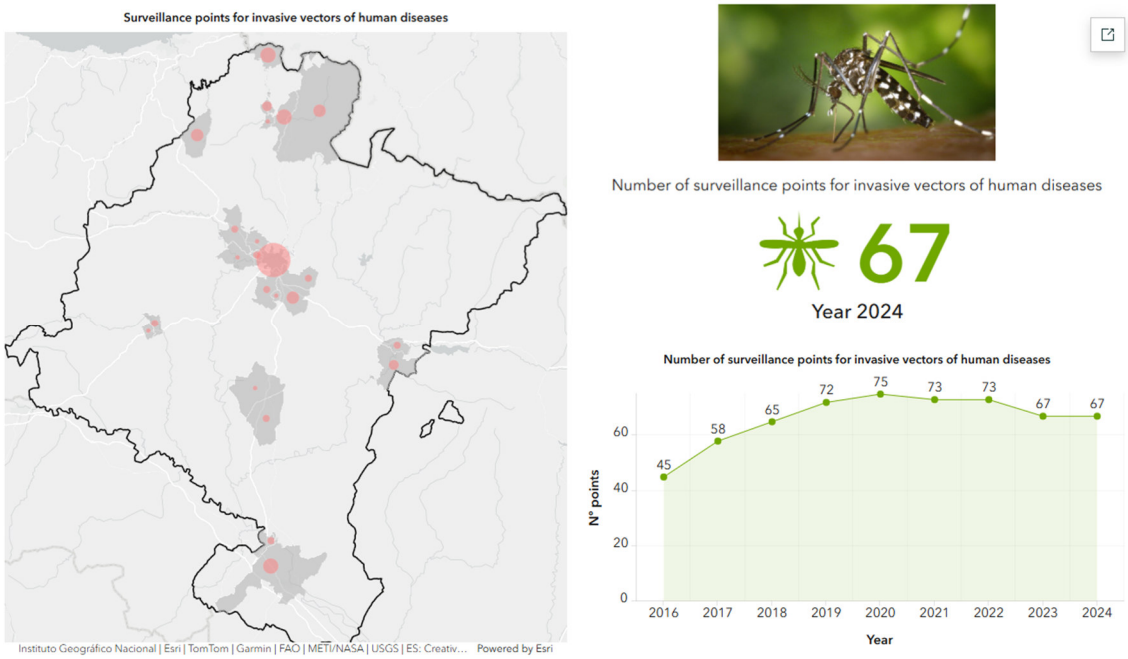
From a social perspective, the benefits are equally significant. Climate-related health surveillance now covers the entire population, strengthening protection against heatwaves, air pollution and vector-borne risks. More than **3,000 workers** have received training on occupational health and climate change, and citizen science initiatives have actively involved the education sector, including **more than 100 schoolchildren**, fostering awareness and engagement from an early age. Almost **2,000 people**

benefit from the pollen forecast warning service aimed at people with allergy risks. With respect to emerging deseases vectors, population can benefit progressively of a **better surveillance** on the risk areas. The vector-borne diseases impact chain available on the C1.1 Monitoring website shows that the number of municipalities where *Aedes Albopictus* is detected is increasing, and as consequence the surveillance spots is also higher in order to anticipate prevention actions to protect population.

BELOW: CC Monitoring portal in Navarra – Indicator 29 - Municipalities with presence of tiger mosquito.



BELOW: CC Monitoring portal in Navarra – Indicator 180 - Surveillance spots for invasive vectors



With regard to climate local action, the expansion of SECAPs to **over 180 municipalities**, many of them rural, has played a key role in strengthening territorial cohesion. Local authorities now have access to

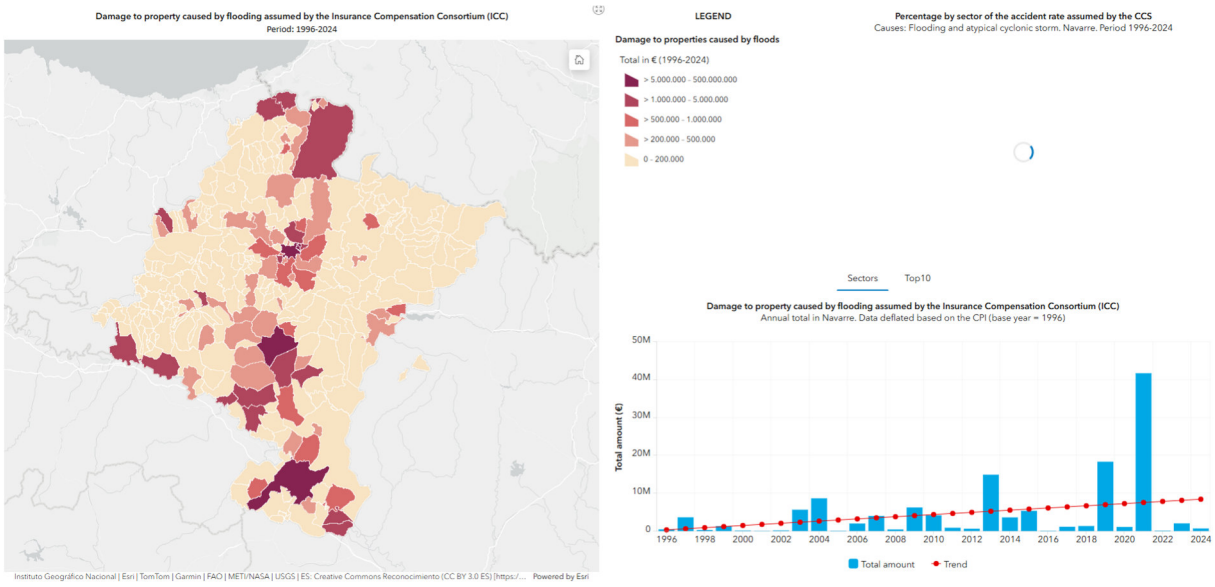
planning tools, data and technical support that enable them to address climate risks more effectively. This widespread coverage ensures that climate action is not concentrated in urban areas but extended across the entire territory. Local climate action has proven to be a powerful mechanism for mobilising investment. By the end of Phase IV, **local entities had mobilised approximately €17.5 million in adaptation measures and more than €53 million in mitigation actions**, reinforcing the role of SECAPs as key instruments to drive climate investment at municipal level.

Summary table of socio-economic benefits

LIFE NAdapta actions o areas	**Amount (€)**
Investment mobilised for adaptation (local level – SECAPs)	17,500,000
Investment mobilised for mitigation (local level – SECAPs)	53,000,000+
Economic value of certified timber (forestry sector)	63,000,000
Savings from reduction of mineral nitrogen use (agriculture)	11,000,000+
Value of climate-adapted crop varieties	1,000,000+
Public support for energy-efficient housing renovation	26,000,000+
Complementary measures funded by the Government of Navarre	327,100,000

The project has contributed to improving safety and overall well-being. More than **100,000 people** are now better protected against flood risks thanks to local planning instruments. As an example, the flood in Tafalla (July 2019) caused an estimated €22 million in damages, of which €16 million were covered by insurance. By contrast, implementing an emergency plan within LIFE NAdapta costs around €9,000 on average, generating an **estimated return of €2,500 for every euro invested**. Flood damage in Navarra for the period 1996–2021 is mapped and shows the highest impacts in the northern river basin and the south of the region.

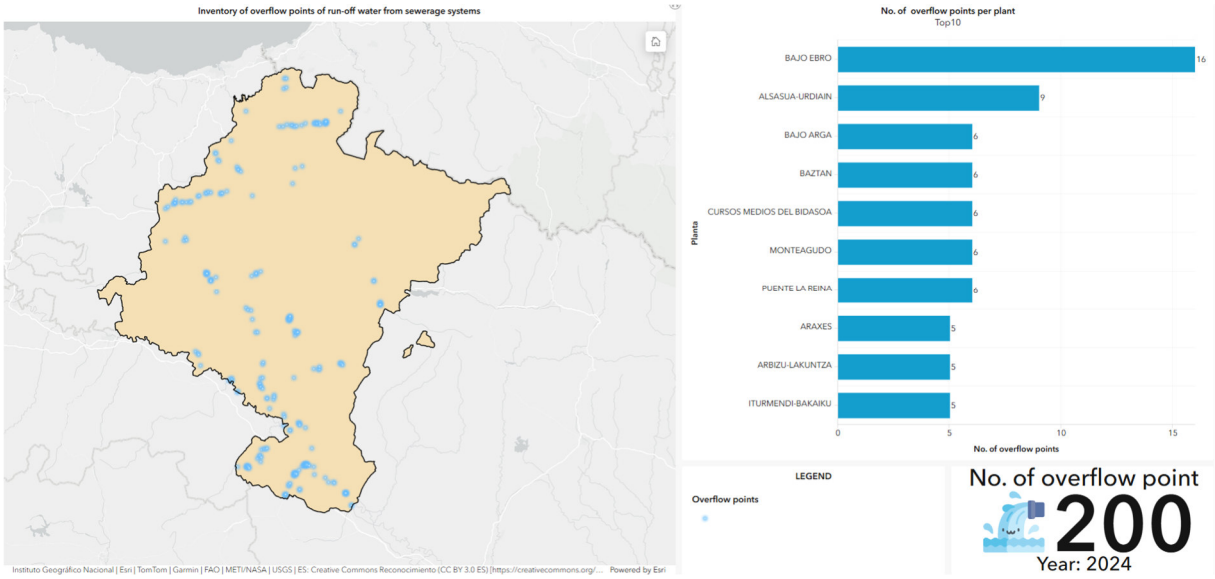
BELOW: CC Monitoring portal in Navarra - Indicator 103 - Damages to property caused by flooding.



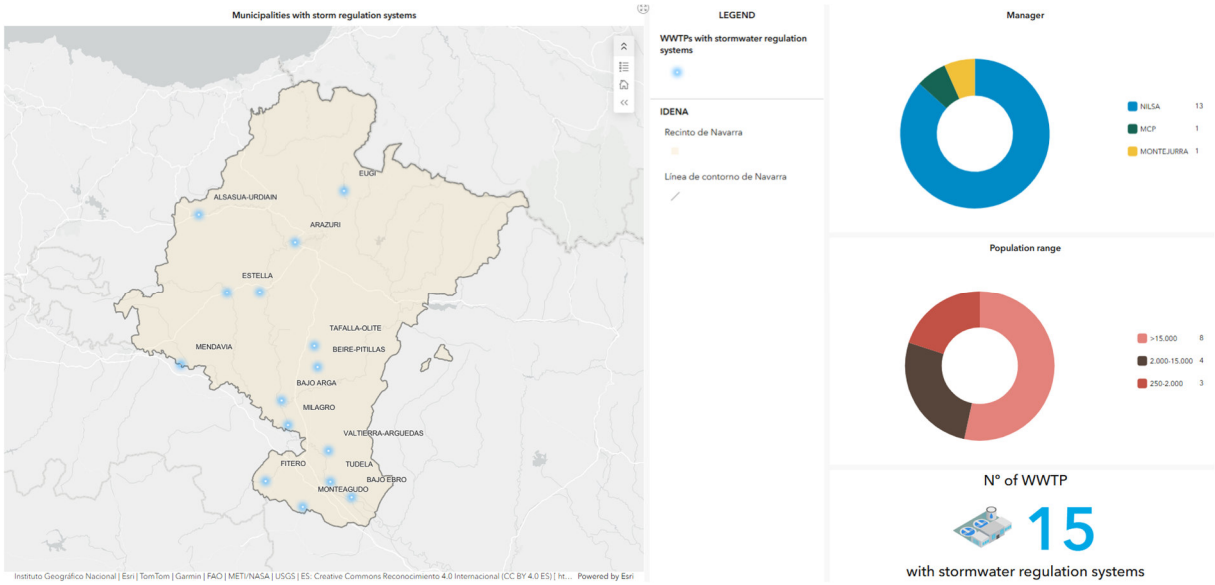
With regard to water quality, wastewater treatment systems (actions C2.1 to C2.3) and river space recovery projects (action C2.6) contribute to a **better quality of rivers' environment**, with a special social value. Several indicators on the C1.1 web portal show the evolution of supply and sanitation

systems (link), like for instance indicator 9 - Inventory of overflow points during rainfall events, or indicator 40 - WWTP with storm water regulation systems (storm tanks).

BELOW: CC Monitoring portal in Navarra - Indicator 9 - Overflow points during rainfall events



BELOW: CC Monitoring portal in Navarra - Indicator 40 - Storm water regulation systems



With respect to population and quality of life on a context of adaptation to climate change (CC), energy-efficient renovation has contributed to reducing energy poverty, while improved air quality monitoring and real-time pollen information systems have enhanced the quality of life, particularly for vulnerable populations. Overall, the project demonstrates that **climate action can deliver tangible economic and social benefits**, supporting a transition towards a more resilient, inclusive and sustainable development model.

4.3. Innovation, demonstration, replicability, transferability, cooperation and transboundary effects

LIFE NAdapta has acted as a laboratory for climate innovation, enabling the testing, validation and demonstration of solutions under real operating conditions. Throughout the project, a wide range of technical, organisational and governance innovations have been implemented, providing practical evidence of how climate adaptation and mitigation can be effectively integrated into regional policies.

Among the most significant innovations are the digitalisation of the water cycle, the implementation of Sustainable Urban Drainage Systems (SUDS), the deployment of deficit irrigation strategies, the Early Warning System for agriculture, silvopastoral practices and the development of operational tools such as the Climate Change and Urban Planning Guide. These solutions have been tested in diverse environmental and socio-economic contexts, demonstrating their feasibility and effectiveness.

The project's **demonstration value** has been particularly evident in the development of grouped SECAPs, an innovative model in Spain that has enabled small and medium-sized municipalities to jointly plan and implement climate action. This approach has significantly reduced technical and administrative barriers, making climate planning accessible to municipalities with limited resources. Similarly, certain pilot experiences have generated strong interest beyond the region. Silvopastoralism, with its demonstrated **68.55% reduction in biomass fuel**, has emerged as an effective nature-based solution for wildfire prevention. Climate and energy data platforms have also proven the value of digital tools and climate services in supporting evidence-based decision-making at different governance levels.

Replicability has been one of the project's major strengths. Several solutions developed under NAdapta-CC have already been replicated or scaled up within Navarre and beyond. The climate monitoring portal has been adapted and extended by regional services; the approach has been transferred to municipal platforms such as GoGreen Pamplona; SUDS solutions have been replicated in other municipalities; and Local Energy Communities (LEC) have evolved from pilot initiatives into more than **40 operational or planned projects**, including pioneering experiences in industrial areas.

The project has also actively contributed to **knowledge transfer and dissemination at European level**. The grouped SECAPs model has been presented as a best practice in Brussels and within international networks such as the Open Government Partnership, attracting interest from other European regions seeking to implement similar approaches.





LEFT: Covenant of Mayor's Practitioners' Group in Brussels (11/05/2023) – See the news online.
RIGHT: Covenant of Mayor's Best practices event in Berlin (7/12/2023) – See the news online.

Cooperation has been a cross-cutting element throughout the project. Strong collaboration has been established between regional departments, public companies, research centres, universities and local authorities. This collaborative framework has facilitated the integration of diverse expertise and ensured the coherence of actions across sectors.

A notable example is the Technical Working Group on climate-related vectors, later formalised as an official coordination body, which brings together experts from health, environment, agriculture and livestock sectors under a **One Health approach**. This type of cooperation demonstrates the importance of interdisciplinary coordination when addressing complex climate risks.

Finally, the project has generated **transboundary and international effects**. Its participation in international conferences and networks, the integration of multiple datasets into European platforms, and the growing interest from other regions in the Navarrese model of climate governance have positioned the project as a reference case within the European context.

Overall, LIFE-IP NAdapta-CC demonstrates that innovation in climate action is not limited to technological solutions, but also involves new governance models, planning approaches and cooperation mechanisms that can be adapted and replicated across different territories.

4.4. Policy implications and feedback

Since 2018, climate action in Navarre has been structured around the KLINa Roadmap, which has progressively evolved into a fully integrated system within the regional policy framework. Throughout the project, both mitigation and adaptation have been systematically mainstreamed into key sectoral policies — including energy, water management, agriculture, health, territorial planning and mobility — thus consolidating a genuinely cross-cutting climate policy approach.

The approval of the **Navarre Climate Change and Energy Transition Law (Law 4/2022)** in March 2023 represents a major structural milestone. This legal framework establishes binding instruments for climate governance, planning and monitoring, and ensures the integration of climate considerations into public policies, regulatory frameworks and budgetary processes. As such, it provides a solid basis for the long-term sustainability of the project's results.

The project has contributed directly to this policy integration process. The incorporation of adaptation measures into the legal framework, the consolidation of new governance bodies and the integration of SECAPs into regional planning instruments represent key structural advances that will ensure continuity beyond the project lifecycle.

LIFE NAdapta has also influenced **sectoral policies** in a tangible way. In urban planning, the Climate Change and Urban Planning Guide has supported the revision of municipal regulations and planning criteria. In the water sector, the digitalisation of systems and climate risk analysis have been integrated into hydrological planning processes. In public health, climate-related surveillance has strengthened preventive planning and response mechanisms. In the energy sector, the promotion of Local Energy Communities has contributed to shaping regional strategies and the development of institutional frameworks supporting the energy transition.

The project has also addressed a range of institutional, technical and social barriers. Governance structures such as the interdepartmental commissions (CICCTE and CICC) have strengthened coordination across departments; digitalisation initiatives have improved data availability and management; and the development of grouped SECAPs has enabled smaller municipalities to access technical support and actively engage in climate planning.

In addition to the expected results, the project has generated a number of **valuable policy effects**. These include the recognition of citizen science initiatives at national level, the integration of climate data into European platforms, and increasing international interest in the regional climate governance. Overall, LIFE NAdapta has played a key role in transforming climate change from a sector-specific concern into a **central element of public policy**, embedded across governance, planning and decision-making processes.

4.5. Capacity building, sustainability and other comments on impacts, barriers, challenges and lessons learned

LIFE NAdapta project has made a substantial contribution to strengthening institutional, technical and social capacities in Navarre. A wide range of stakeholders has been involved throughout the project, resulting in a significant improvement in knowledge, skills and awareness related to climate change. More than **20,000 people** have participated in training, awareness-raising and dissemination activities. In addition, **1,200 professionals** have received specialised training, over **3,000 workers** have been trained in occupational health and climate change, and **700 farmers** have taken part in capacity-building activities. Citizen science initiatives have also engaged the education sector, with more than **100 schoolchildren** actively participating in climate-related monitoring activities. Altogether, the project has mobilised a broad community of stakeholders, including more than **4,900 trained professionals**, contributing to the consolidation of long-term institutional and societal capacities.

Institutional capacity has also been notably strengthened. The project has led to the creation or reinforcement of **five permanent climate governance bodies**, facilitated more than **50 interdepartmental technical meetings**. This progress reflects a clear shift towards more coordinated, knowledge-based and integrated public action.

The project has not only strengthened capacities during its implementation, but has also established a solid foundation for the **long-term implementation of climate adaptation policies in Navarra**, ensuring continuity beyond the end of the project and alignment with subsequent planning cycles. This is ensured through the integration of its results into legal frameworks, strategic plans and permanent governance structures, most notably through the **implementation of the Navarre Climate Change Roadmap (KLINa) and from 2027 with the new ENERKLINa2050 roadmap for Navarra** that covers both energy and climate strategies (the plan has been approved the 25th of February 2026).

Through this process, **adaptation has been embedded across multiple sectoral policies**, including water management, forestry, agriculture, public health, territorial planning and energy. This integration represents the main guarantee of continuity, as adaptation is no longer a project-based activity but a structural component of regional policy.

In operational terms, several **core actions initiated under the project will need to be maintained, scaled up or further developed**. These include, in particular, the continued deployment of C1.2 actions

related to local climate governance and the Covenant of Mayors, the operation and expansion of C2 water monitoring systems and early warning tools, the long-term implementation of C3 adaptive forest management practices, the consolidation of C4 agricultural adaptation measures, the maintenance of C5 climate-related health surveillance systems, and the continuation of C6 actions on energy efficiency, building renovation and climate-resilient spatial planning. All these actions constitute key pillars of the regional adaptation system and will remain active beyond the LIFE project. More details, figures and qualitative information are displayed in the After LIFE deliverable DF3_4.

Their continuation will be ensured primarily by **Government of Navarre departments and public agencies**, including OREKAN, NILSA, INTIA, NASUVINSA and the Public Health Institute (ISPLN) as well as other public organizations competent on digitalisation, transport and mobility, energy or entrepreneurship, operating within their regular mandates and planning instruments.

From a resource perspective, the continuation of these actions is considered feasible and realistic. It is estimated that maintaining the core functions of the system will require approximately **10 to 15 full-time equivalent (FTE) positions** (among which seven FTE are people from LIFE NAdapta – see LPI 13 in deliverable DF2_4) and an **annual budget of around €1 million** see LPI 14.3 in deliverable DF2_4), which is compatible with the current level of institutional capacity and climate ambition in Navarra. The project has also created a strong base of **human and technical capacities** that are expected to be largely maintained. As stated in the form paragraph, significant proportion of the staff involved in LIFE NAdapta (7 FTEs) belong to permanent structures within public administration and partner organisations. In fact, the **technical infrastructure developed during the project will remain fully operational** and integrated into public systems. This includes monitoring equipment such as water sensors and environmental measurement systems, digital platforms and decision-support tools, energy certification databases, municipal inventories, GIS tools and vulnerability models.

All the beneficiaries of LIFE NAdapta also ensure the continuity of **dissemination, communication and stakeholder engagement activities**, which are essential for maintaining momentum and supporting behavioural change. Moreover, networking activities remain active and continue targeting local authorities, sectoral stakeholders, technical professionals and the general public since the organizations' expertise and knowledge somehow depend on synergies with other professional and policy makers. The experience gained has shown that sustained and structured engagement processes are far more effective than one-off initiatives, and this approach will be maintained over the next years.

Finally, the project provides important **lessons learned and identifies key challenges for future implementation**. At the governance level, it has demonstrated the importance of strong multi-level coordination and continued technical support for municipalities, particularly smaller ones. From a technical perspective, it highlights the need for **robust and interoperable data systems**, continuous digitalisation and the long-term maintenance of climate services. It also underlines that ecosystem-based adaptation measures require time to deliver their full benefits but offer highly effective and multifunctional solutions. Furthermore, a critical condition is to maintain a quite high level of funding mobilisation. Political changes (elections each 4 years) may have impact on climate strategies and resources. In such a context, as stated before, the institutionalisation of climate challenges is an advantage to keep working toward the achievement of the strategic objectives and to foster climate actions based on the work of projects such as LIFE NAdapta.

5. Implementation of the complementary actions

5.1. Coordination mechanism(s) established with other funds

LIFE NAdapta action C7.2 "Coordination with (EU) and other funding mechanisms" is the main action to fulfil with the KLINa measure TR5 on Coordination with (EU) and other funding mechanisms is implemented. This consists in the identification of funding opportunities at EU level, as well as national and regional levels, based on the attendance to info days, EU funding forums, training sessions and workshops. In order to draft new projects, the project partners take into consideration different programs such as FEADER, FEDER, LIFE H2020, Horizon Europe or EU Mission for Adaptation. EU Next Generation funds also represented a strong financial source. Additionally, the LIFE NAdapta beneficiaries also raised funds from national mechanisms (Fundación Biodiversidad, PIMA…) and from regional subsidies

The identification of the different funds mobilized has been an important issue during the project thanks to a quite efficient climate governance in Navarre. The KLINa commissions, the LIFE NAdapta follow-up of the funding opportunities maps and the direct contact with the DG for Foreign Affairs, as well as the structures derived from the implementation of the LFCCTE allow a good exchange of information and project opportunities

The management of C.7.2 actions take also into account that most of the LIFE NAdapta project partners have previous experience with funding mechanisms. For the beneficiaries with less experience (NILSA and ISPLN), the Project Management Office (PMO) provides support to identify funding options that can match with their needs. Each partner entities also conducts internal analysis for their CC strategy, especially with regard to the european framework programme 2021-2027. Other options are also taken in consideration such as new financial opportunities and plans related to the EU Next Generation funds, European Green Deal, and EU Missions (in particular the EU Mission for Adaptation).

LIFE NAdapta represents the region of Navarre in the Adaptation Working Group of the National Ministry of Ecological Transition, and the coordination team participates to the meetings on the adaptation plan, measures and funding opportunities. The working group also promotes the commitment of the Spanish regions to the EU Mission for Adaptation (since phase 3), and Navarre was one of the first Spanish regions to sign its interest in this Mission. Trainings Sessions in 2024 and 2025 with the consultancy named Riccardo, and evaluation of project options such as – in the case of Navarre – adaptation measures and actions against forest fires.

At a strategical level, Government of Navarre started preparing in 2025 a new integrated strategy on energy and climate change. In the last decade, Navarre had on the one hand a Regional Energy Plan, and, on the other hand, the Climate change Roadmap named KLINa. From now on, aligned with European framework policies, plans and strategies, two Departments (Energy Transition and Environment – Clima) cooperate in the implementation of a regional energy and climate change strategy (approved the 25th of February 2026). Along with this new step, Government of Navarre applied to the last LIFE SIP CLIMA call (5th of March 2026) with a new IP project named "LIFE ENERKLINA" that aims to mobilise new funds for the period 2027-2034.

5.2. Summary status of the complementary actions

LIFE NAdapta presents in the table below the results of the complementary actions following the structure defined in the Grant Agreement and using the pillar/theme approach agreed with CINEA and the external monitoring team.

Table of complementary actions, reports, dates, financing (Full version of the table in Annexe 3)

(See next page)

(Integrated Projects funded under the LIFE 2014 – LIFE 2020 Calls must use this format)

Source of funding	Amount foreseen in the application (€)	Amount committed by the Final Report (€)	Amount spent by the Final Report (€)	Highlight how the IP facilitated the implementation of the complementary action or fund.
EAFRD funds	165.236.103	165.187.995	105.932.607	Joint project, LIFE NAdapta partners INTIA - GN Department of Rural Development and the Environment.
ERDF funds	25.422.010	19.310.373	5.213.345	Joint project, LIFE NAdapta partners NILSA, INTIA, GAN-NIK / OREKAN, NASUVINSA - GN. Departments of Rural Development and the Environment; Territorial Cohesion; Industry And Ecological And Digital Business Transition; Housing, Youth and Migration Policy.
H2020	16.857.599	16.318.959	4.021.329	Joint project, LIFE NAdapta partners INTIA, NASUVINSA - GN. Departments of Rural Development and the Environment; Industry And Ecological And Digital Business Transition; Housing, Youth and Migration Policy.
HORIZON	2.083.277	2.083.277	353.636	Joint project, LIFE NAdapta partners INTIA - GN Department of Rural Development and the Environment.
LIFE	63.847.971	6.202.984	1.649.005	Joint project, LIFE NAdapta partners INTIA, GAN-NIK / OREKAN, NASUVINSA - GN. Departments of Rural Development and the Environment; Industry And Ecological And Digital Business Transition.
DG Env	80.000	80.000	77.453	Joint project, LIFE NAdapta partners GN. Department of Rural Development and the Environment.
Next Generation EU (NGEU)	62.973.099	62.973.099	42.772.309	Joint project, LIFE NAdapta partners NASUVINSA – G, OREKAN, NILSA. Departments of Territorial Cohesion; Housing, Youth and Migration Policy.
Other European Funds / AECT / ERANET	1.237.890	1.237.796	76.079	Joint project, LIFE NAdapta partners INTIA-GN. Departments of Rural Development and the Environment; Industry And Ecological And Digital Business Transition.

National Public funds	64.043.710	58.030.762	28.915.335	Joint project, LIFE NAdapta partners NILSA, INTIA, GAN-NIK / OREKAN, NASUVINSA - GN. Departments of Rural Development and the Environment; Territorial Cohesion; Industry And Ecological And Digital Business Transition; Housing, Youth and Migration Policy
Regional Public funds	198.882.229	190.154.635	142.711.190	Joint project, LIFE NAdapta partners NILSA, INTIA, GAN-NIK / OREKAN, NASUVINSA - GN. Departments of Rural Development and the Environment; Territorial Cohesion; Industry And Ecological And Digital Business Transition; Housing, Youth and Migration Policy.
TOTAL	**600.663.888**	**521.579.880**	**331.722.288**	

5.3. Discussion on the contribution of complementary actions to the implementation of the targeted Plan

One of the main objectives of the project is to contribute to the full implementation of the Climate Change Roadmap of Navarre (KLINa), that includes both mitigation and adaptation measures. LIFE NAdapta contributes to KLINa as the main tool to implement the adaptation measures and to mobilize funds from different sources to develop CC complementary measures in line with KLINa objectives.

KLINa has established a biannually monitoring system to assess the degree of implementation and budget execution of its measures, based on the KLINa working plan. DRyMA published in 2023 the third monitoring report, covering 2021-2022 period. The report is available online on the Government of Navarre website. Cross-cutting and adaptation measures have been developed mainly through the specific actions of LIFE NAdapta. The mitigation measures show a high degree of execution due to the great effort made in Navarre in energy efficiency and promotion of renewable energies thanks to the EU Next Generation funds. In order to get updated information on the implementation of KLINa strategy, PMO made an additional effort to get information on the implementation and mobilization of funds by project partners and other entities in Navarre.

During the four phases of the project, 171.5M€ have been spent from national and regional funds, mainly through PIMA funds from the MITECO and GN. The Government of Navarre also approved subsidies to develop several measures that contribute to improve the resilience of Navarre and mitigate GG emissions. Issues addressed include Local Agenda 2023, Local Investment Plan on measures that promote energy efficiency (refurbishment, street lighting, waste management), municipal plans against floods, or that improve the adaptation of water management to climate variables (monitoring of water resources, reduction of the water demand, digitalization of the water cycle).

The contribution of GAN-NIK / OREKAN (new name since 2024) and Government of Navarre to water CC adaptation with complementary actions is quite extensive. It is based on improving the resilience of the population to the consequences of extreme climate events, restoring riverbanks, identifying and defining temporary floodwater storage areas so that they can be used during temporary flood events, and monitoring the most important parameters that relate CC to the natural environment. The LIFE Ebro Resilience and the LIFE Kantauribai projects are two important pillars for an efficient water strategy facing CC challenges. In the water management cycle and WWTP sector, NILSA also drafted new R&D projects to be implemented in phase 4 and beyond.

Several complementary actions on forestry area are aligned with KLINa's adaptation objectives, with new POCTEFA and Interreg Europe projects drafted in phase 3, and to be implemented in the same period of phase 4 and beyond.

Complementary measures related to agriculture and livestock (INTIA & GN) are numerous and contribute to promote sustainable agricultural practices, minimise erosion, preserve soil organic matter, improve the treatment of livestock waste and its application, improve agricultural practices, and promote energy efficiency. The funds mobilized are mainly linked to EARFD, ERDF, H2020 and regional funds. Those initiatives are closely linked to the implementation of the Rural Development Plan (PDR) of Navarre, which contributes to reach KLINa’s objectives with €165,187,995 committed, and €105,932,607 during the project period.

Complementary measures on Health contribute to a better fulfilment of KLINa's objectives, and the relevance of LIFE NAdapta C5 actions is becoming more important. This includes also a strong

dissemination activity such as the participation to events of social and scientific importance, the publication of scientific articles, and the participation to international health symposiums.

In the field of infrastructures and territorial planning, many of the project actions stimulate complementary projects such as ELENA-PRIMAVERA, LC Districts, H2020 Stardust or Interreg Europe POTEnT, among others.

In the area of mitigation, national and regional funding through EU Next Generation and post-pandemic recovery funds enable a large mobilisation to achieve a high number of KLINa's objectives, many of them included in regional initiatives such as *Plan Reactivar Navarre / Nafarroa Suspertu 2020-2023*.

As a global overview, the complementary measures spent during the eight year of LIFE NAdapta project have reached a **total amount spent at the end of the project of €327,126,320.60**. Below, the two tables show the amount committed and spent by the end of the project (year 2025) on complementary measures related to each area of LIFE NAdapta.

Thematic area	Amount commited by the Final report (€)	Amount spent by the Final report (€)
C1.1	1,356,000.00	9,400.00
C1.2	4,259,418.00	3,133,928.00
C2	39,442,798.00	20,727,643.00
C3	12,240,386.00	7,414,702.68
C4	196,201,022.00	131,483,459.71
C5	5,092,597.00	1,318,346.00
C6	77,178,135.00	49,647,368.00
Cross-cutting actions LIFE NAdapta	185,809,525.00	113,391,473.21
TOTAL		**327,126,320.60**

Area	Source of funding	Amount commited by the Final report (€)	Amount spent by Final report (€)
C1.1		1,356,000	9,400
C1.1	Regional Public funds (GN)	1,356,000	9,400
C1.2		4,259,418.00	3,133,928.00
C1.2	LIFE programme	661,000	-
C1.2	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	1,000,000	982,593
C1.2	National Public funds	301,021	301,021
C1.2	Regional Public funds (GN)	2,297,397	1,850,314
C2		39,442,798	20,727,643
C2	ERDF funds (Cofunded POCTEFA 65%)	1,720,460	671,341
C2	LIFE	4,427,632	1,218,481

Area	Source of funding	Amount commited by the Final report (€)	Amount spent by Final report (€)
C2	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	12,303,852	5,059,562
C2	National Public funds (Co-funded-MITECO PIMA Adapta Ecosistemas 2017)	14,049,876	7,622,238
C2	Regional Public funds	6,940,978	6,156,021
C3		12,240,386	7,414,703
C3	ERDF funds	6,561,320	3,443,083
C3	LIFE	835,804	151,975.68
C3	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	676,251	-
	Other European Funds	24,800	24,800
C3	Regional Public funds (GN)	4,142,211	3,794,844
C4		196,201,022	131,483,460
C4	DG Env (cofunded DG Environment, 70%)	80,000	77,453
C4	EAFRD funds (RDP Navarre)	165,196,202	105,940,814
C4	ERDF funds	1,548,541	689,877
C4	H2020	1,023,391	771,045
C4	HORIZON EUROPE	2,083,277	353,636
C4	LIFE	278,548	278,548
C4	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	96,772	90,563
C4	Other European funds (AECT Euroregion Aquitania-Euskadi-Navarra)	57,996	51,279
C4	National Public funds	11,185,122	10,705,877
C4	Regional Public funds (GN)	14,651,173	12,524,368
C5		5,092,597	1,318,346
C5	Regional Public funds (GN)	5,092,597	1,318,346

Area	Source of funding	Amount commited by the Final report (€)	Amount spent by Final report (€)
C6		77,178,135	49,647,368
C6	ERDF funds	6,468,129	352,447
C6	H2020	7,830,115	2,946,663
C6	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	23,546,224	11,289,591
C6	National Public funds	4,173,312	48,312
C6	Regional Public funds (GN)	35,160,355	35,010,355
Transversales LIFE NAdapta		185,809,525	113,391,473
	ERDF funds	3,003,716	48,389
	H2020	7,465,453	303,621
	Recovery, Transformation and Resilience Plan, funded by the European Union – Next Generation EU	25,350,000	25,350,000
	Other European funds (AECT Euroregion Aquitania-Euskadi-Navarra)	1,155,000	-
	National Public funds	28,353,862	10,270,318
	Regional Public funds (GN)	120,481,494	77,419,145

6. Evaluation of Project Implementation

6.1. Methodology applied

The analysis of the approach and methodologies applied in LIFE NAdapta can be structured according to the means (technical staff of the beneficiaries, external assistance…), and to the relation with stakeholders (networking, transfer and replication). The efficiency of the general methodology also depends on the project coordination (validation of results, synergies between partners…) and the interaction with KLINa staff.

Actions undertaken with technical staff of the beneficiaries

In each area of the project, the technical staff of the beneficiaries assumes the high majority of works to be undertaken. In fact, this relies on internal expertise to reach the expected results. When some actions need a very specific study, data collection, model or software, project partners count with external assistance.

In C.1.1, the methodology of climate change monitoring is based on webpage maintenance, indicators update, and technical meetings with data owners. All the work is made with NASUVINSA internal staff. In C.1.2 (local action), the methodology counts with working groups to cover Navarre territory, and the organisation of workshops to support municipalities interested in signing the Covenant of Mayors (CoM) and develop a SECAP. This is a very good example of a **strong multilevel governance** that gather project partner, key territorial actors, and Government of Navarre departments.

In area C.2 (water), actions are distributed among three (3) beneficiaries: NILSA, OREKAN (formerly GAN-NIK), and Government of Navarre. NILSA works directly with its own technical and R&D staff to manage actions C.2.1, C.2.2, and C.2.3. It consists mainly in the installation of tools, material and software to control floods impact on wastewater treatment infrastructure. In some cases, NILSA teams receive specific technical training for use and maintenance of the new material installed. Regarding OREKAN, internal staff was in charge to design the flood emergency plans (C.2.5) with an external assistance (TESICNOR). This activity covered as well the organisation of training sessions with the municipalities, as well as the promotion of the plans to local population and media. The development of warning system application (C.2.4) depended on an external assistance since it requires high-level design and computing competencies. The partner also counts with external assistance for the evaluation of hydric resources (C.2.7) since it relies on special modelling systems. Government of Navarre, in charge of river space recovery (C.2.6) managed the action thanks to its own technical staff to draft preliminary projects as a strategy of conservation and reduction of the flooding impact.

In area C.3 (forestry), all the activity undertaken during the project relies entirely on personal resource of Government of Navarre. Technical staff manages software, database and geographic information tasks, as well as the elaboration of the new management plans. The review of the Local Plans and the inclusion of climate change-related aspects are also made with technical staff, in collaboration with OREKAN. The forestry unit also develops and applies models of forestry growth under different climate change scenarios to evaluate the productivity changes in the forestry stands (C.3.5) for each biogeographic area in Navarre.

In area C.4 (agriculture and livestock), UPNA academic staff has been in charge of the sampling of the soil network of plots, the analysis of data and the draft of a Soil Management Plan (C.4.1). INTIA is in charge of the rest of C4 area, mainly with its own technical staff. Still, some works are combined with

external assistance for specific tasks out of their competency such as software and database management, data services, and mobile apps. From C.4.2 to C.4.6 actions, technical staff of the entity manages methodology, experimental tests and plots, selection of material and varieties, workshops, visits and dissemination. INTIA is strongly coordinated with the Agriculture and Environment Department of Government of Navarre, as well as with stakeholders (networks, other European projects, national platforms…).

In area C.5 (human health), ISPLN counts with a high dedication of their own staff in each action (surveillance systems, impacts of CC on public health and on workers, impact of CC and pollen, emerging diseases surveillance…). The methodology has consisted in improving the surveillance systems related to air pollution, heat waves and risks for the population and workers, pollen peaks, and emerging disease vectors. This also depends on contacts with regional stakeholders such as public health local centres, as well as municipalities to share warning messages during a period of risk (heat, pollen, air pollution…). ISPLN also needed external assistance to manage pollen surveillance.

In area C.6, NASUVINSA worked on the eleven actions with their own technical staff. The beneficiary combines staff dedication with external assistance in several actions when specific competencies and modelling are necessary. We can mention external assistance for instance in C6.1 for landscape evolution scenarios, C6.2 for climate scenarios, C6.4 for buildings regeneration, C6.6 for infrastructure studies, C6.7 for legal and regulatory guide for local energy communities (LEC), C6.8 to C6.10 for technical support on LEC and C6.11 to evaluate cost-benefit of energy and climate measures of the C6 area. A special mention has to be done with respect to C.6.7 and C.6.10. As explained in the phase 2 interim report, LIFE NAdapta proposed to focus on LEC since it fits with the climate change pilots planned in area C.6. In fact, the measure is included in the C.6.5 climate change roadmap for infrastructures, and improves social innovation as a condition for adaptation to climate change.

With respect to crosscutting actions such as C.7 (capacity building), D. (project indicators and impact) and E (dissemination), the methodology is based on a strong coordination work led by the Project Management Office (PMO). The project coordination staff gave a special importance in creating project news based on the partners' activities and actions' results. A special emphasis was put also on the project events and trainings. The latter has boosted in fact relations with stakeholders such as the Distance University (UNED), the weather agency (AEMET), municipalities of Navarra, or for instance the Sustainable Network of Schools of Navarra.

The F1 (project management) methodology is based on a regular follow up of the project activities with internal meetings each week (more than 230 during the project (90+81+66=237)), coordination meetings with the partnership (15 over eight years) and internal technical meetings (nearly 100 (21+33+43=97)). The project coordination also counts with external assistance for administrative and financial management (Zabala innovation until 2022 and Eurovértice since 2023), and for digital dissemination (since November 2021).

Actions and tasks undertaken with external assistance

As mentioned before, the correct execution of actions or sub-actions of LIFE NAdapta also depends on targeted external assistance (EA). This is necessary for specific tasks out of competencies of the project beneficiaries, and with the aim to count on high expertise levels to reach the best results as possible. In several cases, external assistance is needed with regard to software development, database analysis, engineering, models and predictions, technical training, or communication services. It is always combined with partners technical staff. Hereafter, we can list the most relevant EA during the project implementation:

C.1.2 - SECAP: consultancy to draft the SECAP.

C.2.3 - SUDS: engineering company for the draft of the SUDS guide.

C.2.4 - Development of the flood risk warning and automatic alert generating software platform.

C.2.5 - Development of the flood emergency plans (just for one more municipality in 2023).

C.2.7 - Retrieval and updating of hydrometeorological data series, and evaluation of water resources.

C.4.2 - Data management service of agrometeorological stations.

C.4.3 - Local seeds diagnostic, and computer tool for plant material selection.

C.4.4 - Technical support and maintenance of the phytosanitary management platform.

C.4.4 - Technical assistance for the mobile app on resilient vegetal material.

C.5.6 - Pollen surveillance.

C.6.1 – Landscape evolution under climate scenarios

C.6.2 – Climate scenarios in Navarra

C.6.6 - Study of the CC impact on transport infrastructure in Navarre.

C.6.7 - Feasibility study and business model of pilot projects of energy communities (Garralda)

C.6.11 – Cost-benefit study of the energy and climate measures for infrastructure adaptation

E. (area) - Digital communication and dissemination through the project webpage and social networks.

F.1. - External assistance for administrative and financial management.

Relation with stakeholders

The development of the project actions also takes profit of synergies with stakeholders. Especially, at technical level, LIFE NAdapta beneficiaries exchange information that result necessary for the progress of the project. In several cases, they receive information from other European projects, and from other organizations, networks or platforms specialized on climate change issues.

The most significant examples are synergies of NASUVINSA and Covenant of Mayors, NILSA with AEAS (national technical group on water management), OREKAN, Government of Navarre, and local entities with respect to flood emergency plans, INTIA and networks such as GENVCE for resilient varieties. In terms of trainings and dissemination, special relations were build with the Distance University (UNED), the weather agency (AEMET), and the Sustainable Network of Schools of Navarra.

Project coordination and synergy between partners

The overall project management methodology is based on regular coordination, collaboration and follow up between LIFE NAdapta beneficiaries. As shown in part 3 of the FINAL REPORT, the management of the project counts with different teams and boards to organise a constant follow up of the progress of the actions as well as an efficient planning of the works in each phase.

The management system relies on the share of the progress and results of each area thanks to coordination project meetings (at least two per year) and monitoring visits (NEEMO until year 2022, ELMEN-EEIG from 2023 until the end of the project). These meetings and visits are extremely important and efficient to share results, but also to identify needs and difficulties encountered.

As part of the project coordination methodology, the communication board cares for the compliance of the corresponding objectives, and evaluate the progress and results of the dissemination activities. It is particularly useful to focus on dissemination tasks since most of it are common to the LIFE NAdapta partnership: digital news, events organisation, social networks…

PMO has also observed a significant need to manage crosscutting synergies between some areas of the project. Therefore, since phase 2 PMO put in place an internal forum system to share information with the partners involved in actions that are linked between them, and be better coordinated. It has been designed this way be more focused, and get into technical and practical details, out of the general coordination meetings that bring together all the partnership. Since then, PMO and PMB have organised several crosscutting technical meetings on water management (C.2) and agriculture (C.4), SECAP (C.1.2) and water (C.2), and emerging diseases due to invasive vectors for animals (C.4.5) and for humans (C.5.5).

Technical follow up and validation of results

Thanks to the coordination methodology described above, an additional attention is paid on the validation of results, especially when part of it have - o can have - impact on other plans, programmes, strategies or projects, in Navarre. Some examples can be mentioned such as SECAP (C.1.2), or the regional Forestry Agenda (C.3). In both case, the expected results of the actions are directly related to, respectively, local administration management and planning, and forestry management of Government of Navarre. Therefore, PMO and PMB have to share the project progress and draft results with the official units, so that they can evaluate the content and validate it before making it public.

Coordination with KLINa and other Government's Departments.

PMO also assumed a constante coordination and collaboration with KLINa's team since both are part of the same Directorate General of Environment (Government of Navarre). During the project, regular meetings and contacts were held with the KLINa staff to maintain and reinforce the existing synergies on mitigation and adaptation strategies, to monitor complementary actions, as well as to draft the KLINa's reports each two years.

Cooperation with other departments, services and entities of the Government of Navarre is also necessary for LIFE NAdapta and the management of complementary actions. Synergies between the different teams are managed through e-mails, telephone contacts and virtual meetings, especially during the drafting the LFCCTE. Some significant synergies with different Departments and Units of Government of Navarre are shown hereafter:

- with the Energy Transition Service (mainly related to C.1.2 and C.6)
- with the Strategical Projects Service (synergies on CC strategy, and new European projects)
- with the DG for Foreign Affairs (on funding opportunities and capacity building in C.7.2)
- with the Spatial Planning Department (on territorial actions in C.6)
- with Local organisation and administration Department (related to SECAP).

6.2. Dissemination

Communication and dissemination activities are essential for the execution of the project in order to promote results and tools obtained thanks to the implementation of the actions. Moreover, it contributes to involve stakeholders, to enhance networking, and to create opportunities of transfer and replication of results as well as climate change strategies.

The Communication and Dissemination Board (CDB, represented by all the project partners) coordinates the activities following the Communication and Dissemination Plan defined in phase 1, and the second Plan updated in phase 2 with an external assistance. There is a direct interaction among the LIFE NAdapta beneficiaries, with communication guidelines designed and share through the CDB. Since phase 2, the dissemination activities were shared between the partnership and two external assistances (one from 2022 to 2024, and another one in 2025).

The dissemination activity is based on different communication levels and means, different target audience, different objectives and different topics. It depends on events, networking with stakeholders and other European projects, and digital communication (website and social networks). Dissemination material (leaflets, posters, exposition panels) is also a key part of the activity to increase visibility of the project. The CDB and project partners use communication material produced in the previous phases and new material produced in phase 3 and 4.

The global impact in the media is quite high and several indicators are higher than the target established at the beginning of the project (press release, articles in media, website visits, stakeholder platform, networking contacts, attendees to project events…).

EVENTS

As a first level of analysis, the dissemination of the project depends on events and trainings organised by LIFE NAdapta, and organised by other agents with the participation or attendance of the project. **During the eight years of the project, LIFE NAdapta has organised, participated or attended more than 535 events and trainings**: 165 in Fase 2, 200 in Fase 3 and 170 in Fase 4 (the accounting in Fase 1 is not precise due to the start of the project and the covid19 pandemic conditions).

All the project partners share information, contents, results and knowledge (methodologies, recommendations, technical assessment…) in events related to their technical activity such as seminars, workshop, technical groups and forum, technical visits, or technical networks. In addition, they exchange information through networking meetings and events with other projects, mainly European ones. As shown in table 6.2.1, **in Fase 4** project partners participated in **170 technical and networking events** to increase their knowledge in their areas of work, and share experience and results of the project with stakeholders. Thus, they foster networking synergies and contribute to the dissemination of the project.

Table 6.2.1 - Dissemination in technical and networking events.

Thematic area	2024	2025
C1	6	3
C2	11	17
C3	6	4
C4	15	27
C5	19	3
C6	7	1
C7.2	9	5
E3	6	8
E4	2	21

As shown in action D.2 (see deliverable DD2_4), it is relevant to see that LIFE NAdapta organised events for different type of target audience. In some cases, an event covers several public categories at the same time (for instance, an event might be counted twice if it covers two different audience):

- Organisation of Events for Direct stakeholders (8 years): 361.
- Organisation of Events for General Public (8 years): 96.
- Organisation of Events for Replicating / Policy makers (8 years): 104.

	Valor inicial 2017	Valor acumulado 2018	Valor acumulado 2019	Valor acumulado 2020	Valor acumulado 2021	Valor acumulado 2022	Valor acumulado 2023	Valor acumulado 2024	Valor acumulado 2025
Organización eventos para agentes directos	0	9	40	82	141	221	286	323	361
Organización eventos para público general	0	2	9	19	48	57	68	73	96
Organización eventos para replicación/legisladores	0	1	1	10	26	44	74	93	104

In area C1.1 on Monitoring, the communication events were scheduled to promote the monitoring hub (web portal), as well as the options for downloading information. In area C1.2 on Local Environment, local bodies have been targeted to boost their adherence to the Covenant of Mayors for Climate and Energy, and increase CC awareness among local authorities during the draft of SECAP.

In area C2 on Water, work has also been carried out with local authorities and population to raise awareness and involve them in the emergency plans against the risk of flooding. This will be maintained after the projects since there a constant need to inform the population and municipalities' mayors on flood risks.

In area C3 on Forestry, most of the event during the project were organized at technical level. Some specific events were celebrated in Phase 4 with private stakeholders (forest owners) in action C3.3.

In the C4 area of Agriculture and Livestock, communication activity was organised for professionals to share good practices, tools and results of the project. Participation in congresses and external conferences has also been quite relevant to exchange information and boost technical networking and knowledge transfer.

In the C5 Health area, the actions carried out in the project include the development of communication tools for the general population, most of them linked to health awareness campains and warning systems in case of heat waves, or high concentration of pollen. The presentation of results on the impact of high temperature, the surveillance of pollen and the increase of the tiger mosquito in Navarre stands out in phase 3 and 4.

Finally, in area C6, participatory sessions have been organised to raise awareness and involve local entities on local energy communities (LEC) and high level Congress in Navarra. Moreover, the project has been presented in several technical forums on climate scenarios and sectorial adaptation such as landscape planning, buildings and social housing, and transport infrastructures.

The impact in terms of audience (indicator D.3) along the eight years of the project raises almost **7.200 persons attending communication events organised** by the LIFE NAdapta project, covering the six specific areas plus the horizontal actions.

Table 6.2.2 - Number of attendees at events organised by LIFE NAdapta, per thematic area.

DEFINICIN INDICADOR	área	Fase 1	Fase 2	Fase 3	Fase 4	Fase 4 acumulativo
nº asistentes a los eventos de comunicación y difusión (E4) organizados por NAdapta	TOTAL	1390	2880	1785	1137	7192
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area del monitoreo al CC	C1	174	281	235	79	769
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area del agua	C2	650	982	342	179	2153
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area de bosques	C3	154	0	187	83	424
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area de agricultura	C4	39	632	916	187	1774
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area de salud	C5	63	10	33	50	156
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en el area de infraestructuras	C6	100	42	35	0	177
nº asistentes a los eventos de comunicación y difusión (E4) organizados por Nadapta en áreas transversales de CC	Transversales	210	513	221	281	1225

NETWORKING WITH EUROPEAN PROJECTS

During the four phases of the project, LIFE NAdapta staff had contacts and exchanged information with **161 European** projects of interest with various levels of collaboration, both at strategic and technical levels (thematic areas). Table 6.2.3 shows the number of projects with networking activities. Although the trend is decreasing, this is quite normal since LIFE NAdapta made many contacts at the beginning to promote the project and start exchanging information. Afterwards, knowledge transfer still goes on with several projects over the phases and with **new** European projects with whom LIFE NAdapta starts networking. More details on the synergies with European projects are available in the corresponding deliverables (DE3_1; DE3_2; DE3_3; DE3_4).

Table 6.2.3 - Networking with European projects in the period 2018-2025.

Phase 1	Phase 2	Phase 3	Phase 4
81	**28**	**28**	**24**

The share of project information takes place through direct networking meetings, or attending dissemination events and networking events. Table 6.2.4 shows the different types of activities undertaken with the main projects with most significant networking and information exchange.

Table 6.2.4 – **Main projects** with Networking activity in the period 2018-2025.

Project	Activity
H2020 EJP Soil SERENA	Events
LIFE Adaptate	Contact + UNED training course
LIFE Agromitiga	Networking meeting + UNED training course
LIFE CITYAdaP3	Contact + UNED training course
LIFE Ebro Resilience	Events
LIFE Good Local Adapt	Contact + UNED training course
LIFE IP Urban Klima 2050	Networking meeting + events + UNED training course
LIFE IP ARTISAN	LIFE IP Helsinki event + LIFE stand Pollutec Paris
LIFE IP C2C CC	LIFE IP Helsinki event
LIFE IP COALA	LIFE IP Helsinki event
LIFE IP NASCCELERATE	LIFE IP Helsinki event
LIFE IP-RBMP DUERO	Networking meeting
LIFE Live Adapt	Contact + UNED training course

Project	Activity
LIFE MIDMACC	Event and field visit
LIFE SIP eCOadapt50	Contact (+ networking meeting to be scheduled)
LIFE Soria Forest Adapt	Event (in UPNA) + UNED training course
LIFE Adapt ALEPPO	Event (in UPNA) + UNED training course
LIFE Vía Plata Salamanca	Contact + UNED training course
POCTEFA ACCLIMAFOR	Events + networking contacts (OPCC)
POCTEFA Pirineos La Nuit	Contact + UNED training course
POCTEFA NaturClima	Final conference
Interreg EU - LC4Regions	Final conference
Interreg EU - WEEEWaste	Events + networking contacts
LIFE PLAN4CET	Networking meetings on technical topics
Horizon Europe - BEATLES	Workshop
H2020 BECOOP	Events + networking contacts
LIFE FUMIGREEN	Webinar EU Regions Week 2023
LIFE SIP PYRENEES4CLIMATE	Networking meetings & Events
LIFE FiReno	LIFE stand Pollutec Paris
CoolLIFE	LIFE stand Pollutec Paris
LIFE BungEES	LIFE stand Pollutec Paris
LIFE Waste2built	LIFE stand Pollutec Paris
LIFE Abaa	LIFE stand Pollutec Paris
LIFE Own Your Secap	LIFE stand Pollutec Paris
LIFE AgriAdapt	Reunión bilateral + Intercambio
HORIZON Climate Europe 2	Varias reuniones + entrevsitas
POCTEFA Solpyr	Participación taller evento 15-sept-2025
JRC - PolyTROPOS	Participación taller evento 17-oct-2025

During the four phases of the project, LIFE NAdapta also promoted the regional climate change strategy (KLINa) and the project progress and results through official networks mainly at international and European level, as shown in table 6.2.5.

Table 6.2.5 - Participation of LIFE NAdapta in official networks in the period 2018-2025.

Network	Issues / topics
Climate Group - Under2	Strategic
> Climate Group	Future Fund
Regions4	Strategic
> RegionsAdapt	Community of Practice
StepUpNow	Strategic
Iniciativa4por1000	Soils / Expertise / Surveillance
ERIAFF	Agriculture, Food, Forestry
Euromontana	Expertise / Projects
ACR+	Opportunities / Expertise / E.Circular
ERRIN	R+d Projects
ICLEI	Local Governments for Sustainability

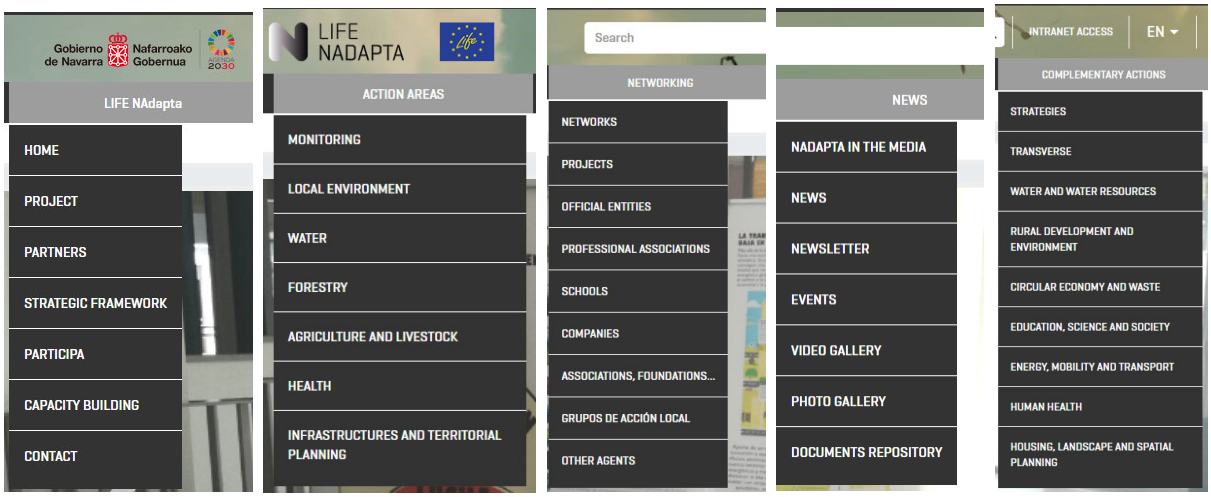
DIGITAL COMMUNICATION

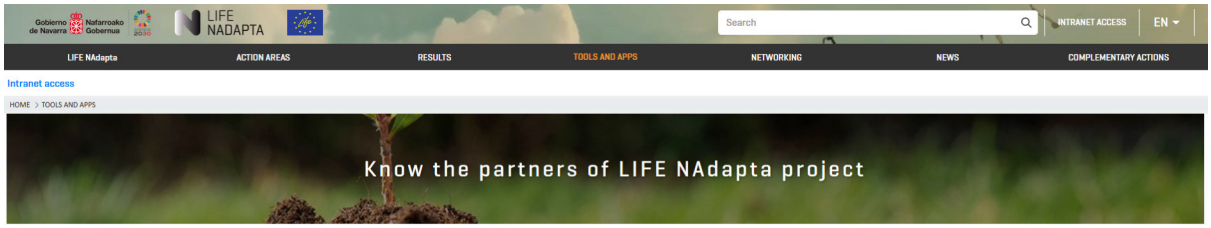
The dissemination also depends on a **digital communication plan**, with different pillars: project website, project news and newsletter, project communication on social networks, and creation of digital contents (information, reports, digital applications and tools, links, videos…).

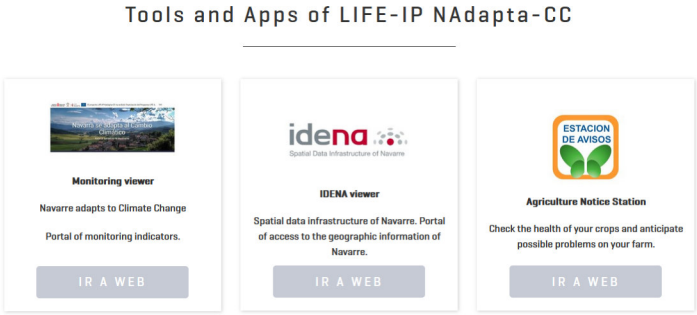
- PROJECT WEBSITE

At the end of the project, the **project website** has reached **50.232 visits** (number of unique visits, calculated with unique visitors on the basis of Google Analytics). It is the main tool to reach any type of audience in order to share information on each project action (with description and deliverables published) and the last updates on events, documents and newsletters. The sections more visited are the homepage, the news section, the project description and the project results. The project website shows several improvements, especial in the navigation menu and the split and contents of the sub-menus proposed (see print screens bellows):

- LIFE NAdapta initial menu
- Actions areas menu
- Networking menu
- News menu
- SOIL Platform meeting page
- Complementary actions menu
- Tools and app menu







- NEWS and INFORMATION

The communication team published **1.810 news** on the project homepage during 8 years, with a special effort from phase 2 to 4. This represents a ratio of 18 news per month. The news cover all the thematic areas of the project: local climate action / SECAPs, water, forestry, agriculture, health, infrastructures, training and events, as well as complementary measures.

In addition, Government of Navarre shared information of the project and news on adaptation to CC thanks to the **KLINa Berri newsletter**, with 17 publications (12 in 2022 + 5 in 2023). Since June 2023, LIFE NAdapta also publishes its own **project newsletter** (with 400 subscribers) on a monthly basis except on summer with one newsletter covering July and August.

- SOCIAL NETWORKS

By the end of the project (31/12/2025), LIFE NAdapta consolidated a sustained and coherent presence across its main social media channels, building on the strong growth achieved in earlier phases and reinforcing its role as a reference project on climate change adaptation.

On **X (formerly Twitter)**, the project reached **899 followers**, four times the initial community recorded at the end of phase 2. This increase reflects the long-term consolidation of the channel as a key space for institutional visibility, technical dissemination and interaction with project partners and affiliated entities. Over the course of the project, a high volume of content was published, **exceeding 1,800 tweets**.

On **Facebook**, LIFE NAdapta closed the project with **132 followers**, continuing the significant growth observed after phase 2. While the size of the community remained modest, the channel proved particularly effective during the final phase to amplify major milestones and events, achieving high levels of visualisation through targeted campaigns and a more regular publication rhythm.

In parallel, **Instagram** played a complementary role through the Navarra / Nafarroa Green account, under the authority of DRyMA and with **659 followers**. Across phases 3 and 4, and especially in the final year of the project, 29 references to LIFE NAdapta were disseminated on concrete actions in areas such as local climate action, forestry, agriculture and renewable energy communities. In 2025, special emphasis was placed on short videos and visual content, reinforcing the project's capacity to reach a non-technical audience and to translate complex results into accessible digital narratives.

Table 6.2.6 - LIFE NAdapta's social media activity – period 2018-2025.

Social media	Community size	Content activity	Reach / visibility	Strategic role highlighted
X (Twitter)	899 followers	> 1,800 posts published	Peak 9,291 impressions (Oct 2025)	Institutional and technical dissemination
Facebook	132 followers	Up to 20 posts/month (final phase)	> 58,500 accounts reached (campaigns)	Amplification of major milestones and events
Instagram (Navarra Green)	659 followers	~30 project-related posts	Best performance on visual / video posts	Outreach to non-technical audiences

- PRESS MEDIA and ARTICLES

The dissemination of LIFE NAdapta information through press media has reached a good level during the project. References to LIFE NAdapta appeared in **170 press releases** launched by the Government of Navarre. As calculated for D.2 Indicators (see deliverable DD2_3), other interesting figures can be

outlined in table 6.2.7 such as 13 press conferences to promote for instance local climate action initiatives, water adaptation, climate change trainings or complementary measures.

Table 6.2.7 – Press releases, press conference, and technical articles.

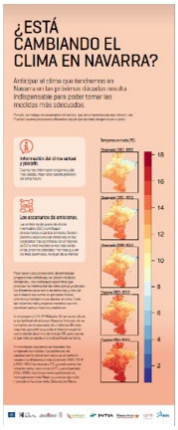
Indicator	2017	Cumulative value 2018	Cumulative value 2019	Cumulative value 2020	Cumulative value 2021	Cumulative value 2022	Cumulative value 2023	Cumulative value 2024	Cumulative value 2025
Press releases	0	26	47	57	90	118	134	154	**170**
Press conferences	0	2	3	3	5	6	9	9	**13**
Technical articles	0	2	4	8	18	22	34	46	**54**

COMMUNICATION MATERIAL

All the project beneficiaries use communication material created since the beginning of LIFE NAdapta: posters at the entrance of each organisation buildings and offices, on-site posters, stickers on equipment, videos, brochures, and templates (project deliverables, documents, power point presentations, and any kind of visual support). Still, **new material is created**, and in some cases reissued, to promote actions and events managed during phase 3:

- **LIFE NAdapta exposition renewed in year 2024 and launched in March 2025**. More details on the roll-ups content and places that showed it are available in deliverables DE2_4 and DE4_4.













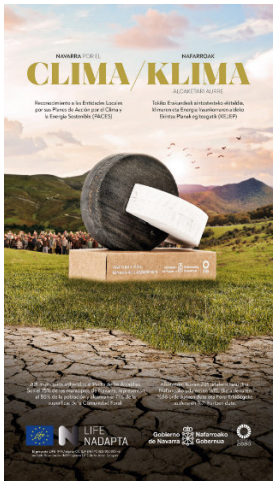








- New roll-up for C1.2 local action awards in phase 3



- Project brochure: updated project brochure with the main results after phase 1 and phase 2.

- Leaflet for area C.5: information leaflet on the tiger mosquito

- Information panels:
    - Two information panels in front of each SUDS spots in Tudela (UPNA) in phase 3.
    - Six information panels in the C.4 OPEN DAYS (Orkoien) in phase 3.
    - Two updated panels on heat waves in Navarra (ISPLN) in phase 3 and 4.

- Specific posters for events (seminars, workshops, visits…) in each thematic area of the project, as well as digital versions for website and/or social networks. For instance in C.1.2 SECAP regional event (NASUVINSA), water events and seminars (NILSA and GAN-NIK).

- OPEN DAYs posters to announce and promote the events over phase 3 and 4.

- Videos: 12 videos during the project
    - Videos on technical areas
    - General video to promote the project
    - Videos to promote specific events (especially in 2025)

6.3. Technical implementation

NOTE: Since this section refers only to phase 4, the actions already finished in the previous phases are not described. The major impacts of it are explained in section 4 from an overall point of view with a holistic perspective. For more details and figures, please refer either to the actions deliverables and annexes submitted in the former phases or to the former interim report. Similarly, for specific details regarding the continuity of the technical actions after LIFE NADapta, please refer to the After LIFE deliverable DF3_4.

Action C1.1. Monitoring of territorial indicators of climate change in Navarra

Foreseen start date: 01/01/2024	Actual start date: 01/01/2024
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

The definition of indicators (activity 2), the generation of models for the integration of source data (activity 4), the calculation of indicators (activity 5), the configuration of maps (activity 6), and the configuration of the web platform (activity 7) have been carried out, as in previous phases. These activities have been carried out through telephone or email consultations with those responsible for each sector, in order to update existing indicators, add new indicators, and discard those that were not relevant.

New indicators have been defined and a new impact chain relating to the road network has been incorporated, accessible at https://monitoring-en.lifenadapta.eu/pages/roads. Of the 216 proposed climate change adaptation indicators, 123 have been calculated and published. All indicators have been published in LIFE NAdapta monitoring portal (ES / EN), Oficina de Cambio Climático de Navarra (ES), Nafarroako Klima Aldaketaren Bulegoa (EUS). Updates to changes in the indicators are recorded in summary tables on the same portal https://monitoring.lifenadapta.eu/ and on the institutional website of: https://cambioclimatico.navarra.es/es/resumen

In 2024, external assistance was provided to change the website design with a view to improving its usability. The header, footer, header images, typography and other design aspects were modified to enable users to interact with the site in a simple, intuitive, pleasant and secure manner. Beyond the design aspect, the structure of the portal was also modified to facilitate access to information, so that the portal now has 7 main sections. As for activity 7 (web platform configuration), the NAdapta tracking portal interface has been updated in both Spanish and English, and a user manual has been added in both languages, which is available on the website's home page. (AC1.1.1_4).

Following activity 8 (preparation of a framework document to maximize the impact of adaptation policies), we have developed a management application for internal use to monitor compliance with LFCCTE. This tool allows us to track the progress of the law's provisions, validate changes if necessary, and visualize the degree of implementation. (AC1.1.2_4).

Finally, in order to promote the monitoring platform, it was presented at the PLAN4CET Mentoring Navarra conference, held on October 8, 2025, in Navarra, and at the MIP4Adapt event on “Monitoring progress and impact: Advancing adaptation through monitoring, evaluation, and learning,” held on November 6, 2025. In addition, news items on the progress made in terms of indicators have been published periodically on social media and on the websites of Nasuvinsa and the LIFE-IP Nadapta-CC

project. Finally, Behalur's periodical publications (https://behalur.nasuvinsa.es/) have addressed specific aspects of monitoring over the last two years.

Several climate change indicators have been incorporated into GN's web of the Climate Change Office, GN's Navarra Spatial Data Infrastructure (IDENA) and GN's Navarre Geoportal to achieve greater impact and visibility (AC1.1.3_4). These web platforms allow users to view, consult, and download detailed geographic, cartographic, and territorial information about the Autonomous Community of Navarre. They are the main access point for data from the Navarre Territorial Information System (SITNA).

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C1.1	Objectives: Show the situation and evolution regarding the climate change as well as it will permit the identification of the effect of the adaptive solutions and transformations implemented in the Integrated Life. Expected results: A follow-up system that will permit to better understand the existing reality in Navarra, both internally and regarding its regional context within the European framework, which will foster the adoption of adaptation and mitigation measures.	New LIFE NAdapta monitoring portal, in Spanish and English. Updating of 123 climate change adaptation indicators. 15 strategic mitigate on indicators. Annex AC1.1.1_4. Manual has been produced to guide users through the monitoring portal. Annex AC1.1.2_4. user manual for the LFCCTE tracking application. Annex AC1.1.3_4. Indicators in IDENA.	The greatest success factor has been the ability to work in a network, supporting the tasks in the knowledge of those responsible in each area.

The LIFE-IP NAdapta-CC monitoring portal has been available to the public since January 2021, and all changes made to the indicators have been published on it.

There have been no significant budgetary changes in this action (only the budget originally allocated to external assistance to staff has been transferred).

In 2026, Government of Navarre (GN) continue to review and update the indicators and use the tool that allows the GN to monitor compliance with the Regional Law on Climate Change and Energy Transition, and to monitor the new ENERKLINa2050 roadmap. On a long term basis, the climate change office of Navarra will seek new funding to finance the continuity of the CC Monitoring website.

C1.2. Adaptive management of the local environment, through Covenant of Mayors for Climate and Energy Transition

Foreseen start date: 02/10/2017 Actual start date: 02/10/2017
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

The main objective of this action is to support all Local authorities in Navarre to develop local energy and climate policies following the CoM initiative. All the information has been submitted to CoMO, and the European Commission's JRC has approved the Methodology for SECAPs elaboration in Navarre. The European Commission's Joint Research Centre (JRC) is the main developer of methodologies, technical guidelines and assessment tools for Sustainable Energy and Climate Action Plans (SECAPs). An update on the progress of the initiative can be found on the project's website: https://lifenadapta.navarra.es/es/medio-local, https://monitoring.lifenadapta.eu/pages/pacto-alcaldias, https://pactoalcaldias.navarra.es/es/

As of 6 November 2025, 226 local entities have adhered to the CoM. At the end of 4th phase, 9 more municipalities have completed their Sustainable Energy and Climate Action Plans (SECAPs). Overall, these plans are structured into 17 grouped SECAPs and one individual SECAP, jointly addressing a total of 210 municipalities.

During Phase 4, several dissemination and communication activities were held. The 2nd and 3rd Regional Meetings of the Covenant of Mayors in Navarra were held in Tafalla and Zizur Mayor, respectively. Each event including technical and political representatives from municipalities, associations of municipalities, local action groups, and public companies. At these events, the protagonists of 13 good practices videos shared their impressions live, which helped to spread awareness of local climate action and its potential replication. In addition, representatives from NASUVINSA participated as speakers at the National Meeting of the CoM, held in Tarragona from April 2 to 4, 2025.

A participatory workshop on sustainable gardening and urban greening was organized by Nasuvinsa in Pamplona, bringing together nearly forty participants from different municipalities interested in undertaking actions to adapt to climate change.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C1.2	**Objectives**: **A1**. Definition of the work team with local administration and the Government of Navarre (MC1.2.1). Revision and definition of local sustainability indicators (MC1.2.2).	- 3 coordination meetings held in 4th phase with the C1.2 interdepartamental commission (created in Phase 1 of the project) - 3 coordination meetings with Sustainability Forum formed by Local Action Groups and Pamplona's county technicians.	Due to high amount of municipalities committed to CoM and supra municipal agents included in SECAP process, municipalities' district groups have been created. GN coordinates LIFE-IP NAdapta-CC, Nasuvinsa coordinates the work with Local Action Groups and municipalities, and
	A2. Identify actors that take part supporting local entities (MC1.2.1).	- 226 local entities have adhered to the CoM, together with 3 valley councils.	

	Promotion of CoM in Navarra. 20 local commitments	- 8 meetings with Local Actions Groups for the monitoring of SECAP implementation.	Red NELS is supporter of the CoM. This multi-level governance model facilitates the day to day work, the exchange of experience and knowledge between all the agents involved: mainly from local to local level, but also from regional to local level. Expected results foreseen in the GA were achieved (even if the action will continue until the end of the project duration). It was expected to reach 20 local commitments, and at the end of the project, there are **226 signatories and 210 municipalities with Grouped SECAPs**.
	A3. Elaboration of local climate and energy analysis of municipalities adhered to the CoM. Sustainable Energy and Climate Action Plan (SECAP). Methodology for elaboration of SECAP in Navarra.	- 17 Grouped SECAP (following option 1 of CoM methodology) and 1 individual (Estella-Lizarra municipality) addressing 210 municipalities. DC.1.2_4. - For details of each SECAP: Annexes A.C.1.2.1_4 – A.C.1.2.50_4 - Methodology for elaboration of SECAP in Navarra approved by the JRC.	
	A4. Dissemination of the CoM initiative in Navarra.	- 2nd and 3rd Regional Conference of the CoM: Tafalla [November 21, 2024] and Zizur Mayor [October 22, 2025] respectively - Attendance at the National Meeting of the CoM. Canary Islands (January 30–31, 2024) and participation in the National Meeting of the CoM: Tarragona [April 2–4, 2025] -Final Event of LIFE-IP NAdapta-CC [October 24, 2025]	
	A5. Small pilot actions coordinated with local entities	- 13 videos about SECAP Best Practices recorded. - Workshop on sustainable gardening and urban greening	

Action C1.2 of the LIFE NAdapta project has achieved outstanding results. In 2023 some budget changes were approved in this action due to the high amount of municipalities that signed climate commitments. In this regard, personnel cost was increased.

Although the initial goal was to develop 20 new Sustainable Energy and Climate Action Plans (SECAPs), and they could have served 20 entities, thanks to the SECAPs modalities, it has been possible to serve 210 local entities in Navarre. In addition, 3 other associations of municipalities (Aezkoa, Salazar, and Roncal) have joined the CoM, with complementary funds, bringing the total number of entities with SECAPs to 226. This represents 82% of the population of Navarre and far exceeds the initial objectives.

ACTION C2.1: Development of an early warning system facing possible environmental emergencies produced in waste water treatment plants

Foreseen start date: 01/2018 Actual start date: 01/2018
Foreseen end date: 12/2025 Actual (or anticipated) end date: 12/2025

The objective of this action is to implement warning system that allows the early detection of effluents that could negatively affect (hydraulic and/or pollutant overload) the proper functioning of the current sanitation system in order to prevent the impact of discharges (due to an inadequate quality level) on water bodies in Navarre. The scope of action is those bodies of water that receive discharges from the sanitation installations managed by NILSA (collectors and treatment plants, onwards WWTP). Since the beginning of the project, about 60 probes and sensors have been purchased and installed for the control of different parameters (pH, turbidity, SS, O2, NO3-, NH4+, PO3-) in 32 WWTPs in Navarra. The locations where the equipments are installed are: Aoiz, Artajona, Bajo Arga, Bajo Ebro, Valtierra-Arguedas, Cadreita, Cáseda, Castejón, CAT Tudela, Cintruénigo, Corella, Cortes, Estella, Etxalar, Fitero, Goizueta, Irurtzun, Isaba, Larraga, Lesaka, Miranda de Arga, Monteagudo, Montes de Cierzo, Olazagutia, San Adrián (Bajo Ega), Sangüesa, Santesteban, Tafalla-Olite, Tudela, Ultzama, Villafranca, Zubieta and Zugarramurdi.

All the sensors and probes have been connected to NILSA's Telecontrol, allowing us to continuously monitor these 32 WWTPs. This provides information on the degree of purification, both to optimize the purification process and to detect non-standard discharges that may affect the WWTP itself and the receiving watercourse.

In Phase 4, data collection from probes and sensors installed in previous phases has continued. In addition, maintenance of all the equipment has been tendered to ensure proper operation. During this phase, the purchase, installation and commissioning of equipment for the implementation of early warning systems at Navarra's WWTP have also continued:

- TAFALLA - OLITE WWTP: Ammonium Analyzer (2), Phosphate Analyzer (2), Suspended Solids Probe (1), Redox Probe (1) and Nitrate Probe (1), which allow the biological process and determine if the purification process is working correctly.
- FITERO WWTP: 2 probes (1 for sludge measurement and 1 for suspended solids measurement) in order to optimize sludge extraction and reduce the volume of sludge to be managed. In addition, 1 nitrate probe has been tendered to monitor the nitrification/denitrification process and 2 oxygen probes to control the aeration of the organic ponds and optimize energy spending.
- BAJO EBRO and VALTIERRA-ARGUEDAS WWTPs: 4 dissolved organic matter probes were installed at the inlet and outlet that were financed in Phase 3. This year we have tendered the telecommunications system to collect the signals emitted by these probes and integrate them into NILSA's remote control system.
- ARAZURI WWTP: Simulation study of potential new scenarios to analyse alternative operational configurations based on treatment performance and operating cost indicators (effluent quality, aeration, sludge production, etc.) (ANNEX AC2.1.1_4, ANNEX AC2.1.2_4)
- ULTZAMA WWTP: 1 Orthophosphate Analyzer and 1 ferric chloride dosing device in order to know the P level at the WWTP outlet and, if necessary, to precipitate it to prevent eutrophication in the ULTZAMA river. Ferric chloride dosing will be activated when there is at risk of not meeting its quality objectives (ANNEX AC2.1.3_4).

- TUDELA WWTP: Performance assessment of the percolating filters at the through mathematical modelling and simulation tools, using data obtaind from continuous monitoring equipment.(ANNEX AC2.1.4_4)

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C2.1:	Objectives and Expected results (ER): Significantly improve the pollutant load of discharges in waste disposal events. Significantly improve the status of the waste receiving water body in the second planning cycle of the water plan. The geographical coverage is increased to cover all the territory under NILSA management, to include all WWTP that can cause impacts on the receiving rivers according to NILSA´s technical criteria.	In Phase 4, purchase, installation and commissioning of control equipment for the WWTPs of Tafalla, Fitero, Bajo Ebro, Valtierra-Arguedas and Ultzama. Specific studies for the WWTPs: Arazuri, Ultzama and Tudela AC2.1.1_4, AC2.1.2_4, AC2.1.3_4, AC2.1.4_4 60 real-time sensors connected to NILSA´s Telecontrol. 32 WWTP continuously monitored since the beginning of the project. Several dissemination events (AC.2.1.4_5.) (DE.4_4).	Investment in monitoring probes enabled real-time characterisation of influent discharges, allowing rapid alerts and reducing environmental risks. Early warning systems revealed non-compliant industrial practices connected to the WWTP, improving discharge detection and self-monitoring procedures. WWTP modelling optimised management and contributed to pollutant load reduction and better water quality in receiving waters

The results obtained since the beginning of the action have enabled a progressive improvement in the daily management of the WWTPs and the consolidation of monitoring systems, ensuring the continuous generation and updating of databases and long-term historical series.

In the post-LIFE phase, these systems will remain operational and will be further integrated into routine management processes, supporting evidence-based decision-making. This continuity is aligned with the Government of Navarre's Integral Water Cycle Plan and strengthens the capacity to address the increasing vulnerability of rivers to climate change, ensuring a more adaptive and resilient water management approach.

ACTION C2.2: Development of a monitoring network for Combined Sewer Overflows (CSO) and diagnosis of its environmental impact

Foreseen start date: 01/2018 Actual start date: 01/2018
Foreseen end date: 12/2025 Actual (or anticipated) end date: 12/2025

This action aims to control sewer overflows and minimize the negative effects of torrential rain (a consequence of the CC) which provoke overflows on the sanitation systems and their associated environmental risks (contamination of aquatic environments).

Activity 1 CSO sensors installation. To create the Network for Monitoring Storm Overflows in Sewerage Systems (DSS or CSO), an inventory of overflow points has been carried out, where **497 overflow points** have been identified. During Phase 1-3, the most priority points have been selected and about **50 control** equipments have been installed and integrated into NILSA's remote control. When an overflow occurred, an alert is send (sms or emails) allowing us to monitor the relief points in real time (frequency and volume overflowed). In addition to monitoring and controlling overflows, this network allows us to detect problems in the sewage networks, locate parasitic water and critical points of entry of rainwater into the network, apply preventive/corrective measures to minimize the impact and reduce the volume as much as possible, and to comply with current legislation RD 665/2023 of the DPH and New TARU Directive.

During **Phase 4**, the maintenance of the installed equipment has continued: daily control of spillages, cleaning tasks, renewal of components and batteries (AC2.2.1_4). In addition, we have continued with the installation of new overflow detection equipment, as well as rain gauges, which have been connected to NILSA's remote control and are emitting continuous signals. In **2024**, **10 new DSS points** were equipped with control equipment: Bajo Ebro-Cabanillas, Olzagutia, Alsasua, Lakunza, Etxarri-Aranatz, Uharte-Arakil (2), Baquedano, Gollano-Artaza, Lerate (AC2.2.2_4) and 3 new rain gauges have been installed: Cintruénigo, Puente la Reina, Burgui (AC2.2.3_4). In **2024**, an evaluation of 96 overflow points of the Sewage Network of Navarre has been conducted for the installation of measuring and control equipment (AC2.2.4_4). From this study, **57 new equipment** have been selected and installed, all of them financed with external funds to LIFE NAdapta. As a complement to the installation of equipment, storm tanks are progressively being installed to store water from specific floods in Tudela and Olite WWPT, with external funds to LIFE NAdapta. As a complementary action to the overflow monitoring network, the modeling of TUDELA's sewerage network has been carried out to know the behavior of the network in rainfall episodes and to know where to act to minimize overflows (AC2.2.5_4). The modeling allows us to explore scenarios and predict how the sewage network behaves in different weather conditions.

Activity 2 Implement preventive/corrective measures. Volume measurement campaigns are carried out it different periods (with external funds to LIFE NAdapta). The installation of measuring equipment in LIFE-IP NAdapta-CC have served us to provide an early warning of non-standard discharges, detect problems in the networks or floods related to higher intensity climate phenomena derived from climate change, thus meeting the objectives proposed at the beginning of the project. The progressive installation of data-loggers is allowing us to increase our knowledge and make improvements on the networks, preparing investment plans (renovations, extensions, incorporation of hydraulic elements that reduce the volume of relief to reduce the number of episodes and their duration) and action plans on the network (monitoring, cleaning at specific points).

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned

C2.2: CSO Relief monitoring network	Characterise the sewerage system, the point of discharge of the overflow, the regulating infrastructure and the drained area associated with the overflow: Inventory/census of "relief points", register of reliefs at each point, characterisation studies of sewerage networks and relief points. Proposal for preventive and corrective actions to minimise discharges and prevent their impact on the environment.	Remote equipment of the highest priority overflow points to characterise a large part of the sewerage network and preventing pollution from discharges into receiving watercourses Monitoring and quantification of overflow episodes: daily, quarterly, and annual report (AC2.2.1_4) 10 new DSS point installed in Phase 4. (AC2.2.2_4). 3 new rain gauges installed: Cintruénigo, Puente la Reina, Burgui (AC2.2.3_4). Evaluation of 96 new DSS point from the sewerage network to be equipped (AC2.2.4_4) Modelling of sanitation networks in Tudela (AC2.2.5_4). Up-to-date maintenance of the DSS/CSO census in Navarre.	The implementation of this Network for Monitoring Storm Overflows in Sewerage Systems (DSS or CSO) provides with useful and necessary information. It allows to daily report relief events at each point (compiling with of RD 665/2023 requirements), to diagnose the frequency and impact of each relief to the natural environment and helps to make decisions that minimize this impact with specific actions. This Network also improved our knowledge on the sanitation networks state.

NILSA continues to be part of the V commission of DAQUAS (Spanish Association of Water Supply and Sanitation) that actively participates in the implementation of a state regulation, **RD 665/2023,** which imposes obligations and deadlines for DSS monitoring. After project ends, NILSA will continue with the monitoring and maintenance of the Combined Sewer Overflows (CSO) Network.

During Phase 4, NILSA presented C2.2 action's results in several dissemination events (see deliverable DE.4_4).

<u>ACTION C2.3</u>: Adaptation of the urban sewerage networks through the implementation of sustainable drainage systems in urban areas

Foreseen start date: 01/2018 Actual start date: 01/2018
Foreseen end date: 12/2025 Actual (or anticipated) end date: 12/2025

During phases 1 and 2, NILSA completed the construction of a SUDS prototype located in the parking lot of the UPNA campus in Tudela, and converted part of the final retention stage of SUDS B into a green filter. During phase 3, rain samples were collected and analyzed to characterize the chemical composition of the inflow and outflow of runoff in the SUDS. Heavy metals (mercury, lead, cadmium, chromium, zinc, and copper), hydrocarbons, and physical and chemical parameters were analyzed, as well as chemical oxygen demand (COD) and suspended solids (SS). In addition, soil samples were monitored and several tests were carried out in order to better understand the retention processes that take place in the soil over time.

During phase 4, no significant actions have been carried out in this area. The instruments installed in previous phases continue to operate automatically and record data. A scholarship holder (UPNA-NILSA chair) is carrying out the complete modeling of the system AC2.3.1_4). This work has been financed with external funds from LIFE NAdapta. Deliverable DC2.3_2 (Maintenance and gardening cost study) is also attached, which compiles the information necessary for SUDS maintenance and associated costs.

During Phase 4, NILSA presented the results of action C2.3 at the LIFE NAdapta final event and at several other dissemination events (see deliverable DE4_3).

Action	**Foreseen in the Grant Agreement**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C2.3: Adaptation of the urban sewerage networks through the implementation of sustainable drainage systems in urban areas	1. Show Authorities and technical personnel from public and private institutions the advantages of using SUDS/BMPs to manage quality and quantity of urban runoff. 2. Site visits, workshops and seminars are amongst the actions planned. 3. Increase general public awareness about Water Sensitive Urban Design (SUDS) and their influence in the water cycle. 4. Increase awareness about the SUDS philosophy, emphasising on design concepts rather products, paying special attention to	SUDS maintenance (DC2.3_2) SUDS modeling (ANNEX 1). Presentation of SUD guide and results in several dissemination events.	The SUDS guide (Phase 3) is replicable to other locations and will help local authorities to implement SUDS.

	prevention and runoff control at source. 5. Increase public awareness about the need to manage water sustainably and the implications of the EU Directive 2000/60/EC, the Water Framework Directive 6. Increase awareness among stakeholders about the risks of soil erosion and modifications to water bodies and how SUDS can contribute to restore, reduce and / or improve environmental problems originated by human activity. 7. Show public authority and public institution designers the viability and simplicity to construct and manage SUDS		

Once NAdapta ends, NILSA will continue disseminating SUDS guide in different networks and replicating SUDS prototypes in different municipalities throughout Navarra.

2.4- Flood risk warning and automatic alert generating software platform.

Foreseen start date: 01/01/2018 Actual start date: 01/01/2018
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

In phase 4, work continued on the ongoing maintenance and support of the IT platform for managing early flood warnings in Navarre. Progress has been made in integrating weather forecasts from the European Centre for Medium-Range Weather Forecasts (ECMWF); designing interfaces for editing hydrological model parameters; incorporating filters into received alerts; and configuring advanced user profiles. Improvements were also made to optimize the reception of hydrometeorological information, the transfer of relevant information generated on the platform to the Civil Protection Major Emergencies System, the editing of the layer of vulnerable elements, and the development of a user manual.

All necessary development work has been completed to provide a fully functional platform. The Early Warning System (EWS or SAT) that has been developed is an innovative tool that operationally integrates all processes involved in emergency management: from hydrological risk assessment—using features that enable rapid analysis of observed and forecast hydrometeorological data—through the configuration, management, and issuance of warnings—via its specific alert and dissemination module—to the assessment of flood impacts. This has required a significant effort by the internal staff of GAN-NIK (now Orekan) and GN, with external assistance for IT-related matters.

Activities have been carried out to transfer and disseminate the IT platform (DE2_4, DE3_4, DE4_4)

Action	**Foreseen in the Grant Agreement**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C2.4_Act-1. Picking up signals from meteorological radars	**Objectives**: Obtaining hydro-meteorological data in real time **Expected results:** Establishment of agreements with different organizations for data exchange purposes.	The contacts established at the start of the project with various agencies responsible for real-time hydrometeorological information have been successfully completed, enabling the continuous, real-time receipt of all relevant information for Navarre.	These agreements have enabled real-time access to all the hydrometeorological information needed to detect and monitor flood events.
C2.4_Act-2. Embedding meteorological and hydrologic data.	**Objectives:** Embedding hydrological and meteorological data. **Expected results:**	Integrating real-time data from GN (Meteonavarra, SAIH, and the Public Works Network), SAIH Ebro (Ebro River Basin Authority), the Provincial Council of Gipuzkoa (DFG), and the Provincial Council of Álava (DFA). In addition, data is received from AEMET, including both observational	The standardization and integration of data from various sources have significantly improved the analysis and real-time monitoring of flood

	Meteorological and hydrological data already available.	data (sensors and radar) and forecast data (Harmonie with a 48-hour range and the IFS model with a 10-day time horizon).	events, as well as precipitation and flow estimates.
C2.4_Act-3. Construction of the IT platform for river flooding management including hydrologic predictions.	**Objectives**: Implementation of the computer-platform for flood risk management, which will include hydrological predictions **Expected results**: Platform fully operational.	The warning platform enables: A-Real-time acquisition of hydrometeorological data B-Processing of information to generate relevant outputs: rainfall fields, time-series graphs of hydrometeorological variables, intensity-duration-frequency (IDF) curves for precipitation, etc. C-Hydrological modeling for flow estimation D-Visualization of flood-prone areas and vulnerable elements based on water level or flow magnitude E-Configuration and visualization of real-time alerts F-Alert notifications to mobile devices (Telegram) G-Hydrometeorological database for consulting historical events stored on the platform since its launch.	A retrospective analysis of significant rainfall events with the potential to cause flooding has confirmed that the tool represents a significant advance and a major improvement in the ability to monitor, track, and respond to flood risks in the Autonomous Community of Navarre. Greater difficulty has been observed in forecasting small-scale convective phenomena or those with a highly localized distribution, which limits the platform's predictive capability in these cases.

The positive experience gained with the alert platform has demonstrated its usefulness as a strategic tool for managing flood emergencies. Consequently, the GN will continue to develop and improve the platform, incorporating new information sources and advanced features designed to reduce response times and enhance operational effectiveness in the face of extreme hydrometeorological events.

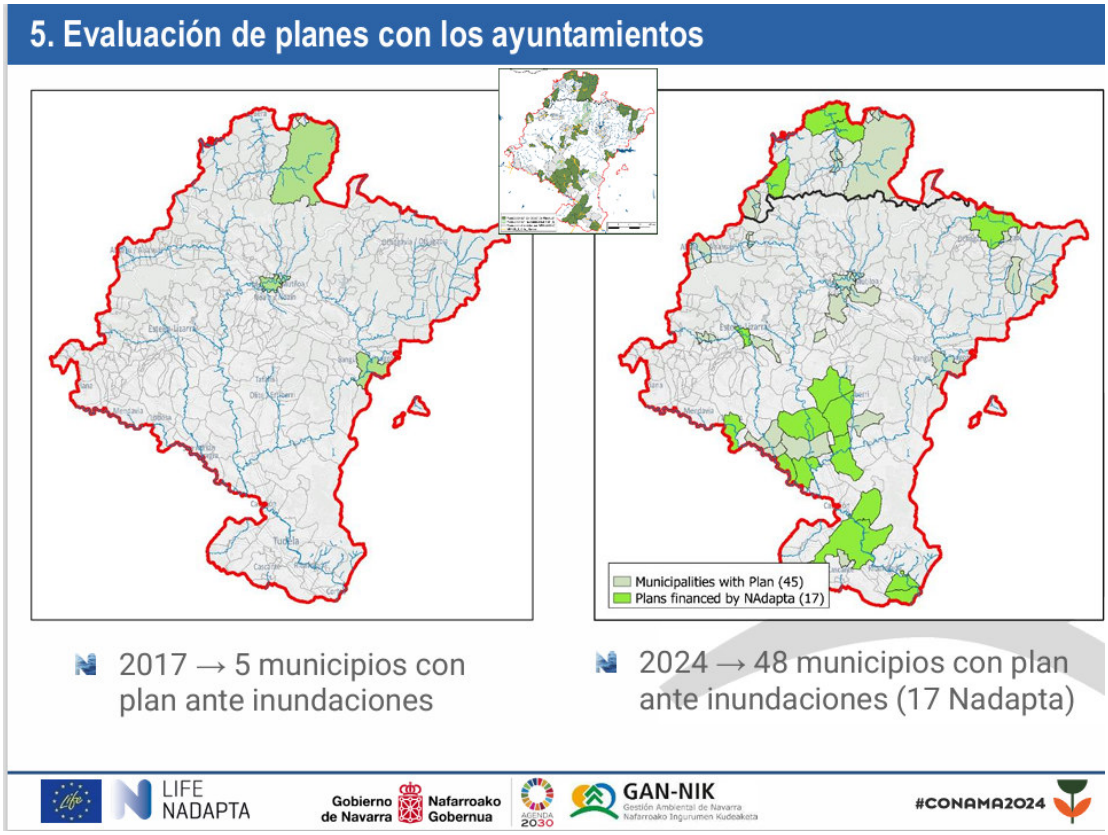
ACTION 2.5- Promotion of self- protection plans facing local entities flooding

Foreseen start date: 01/10/2017 Actual start date: 01/01/2018
Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2023

The action was completed during Phase III of the project. However, this specific report is being presented because the action was a success and its results have had a significant impact. We have taken part in various dissemination activities, such as the following:

- 31 May 2024, ONLINE PRESENTATION given by Javier Loizu at Green Week 2024 "Towards a water-resilient Europe" with the following title: "Local management of flood risk in Navarre" https://www.delegacionuenavarra.es/imagenes/eventos/docs/eu-green-week-2024-actos-asociados-a-la-semana-verde-de-la-ue-exchange-of-good-regional-practices-on-water-resilience-1822.pdf (AC2.5.1_4 PresentaciónNadaptaGreenWeek)

- 12 April 2024, ORAL PRESENTATION given by Luis Sanz at the National Environment Congress (CONAMA) held at the IFEMA North Convention Centre in Madrid: "Climate change adaptation action in Navarre: 'Promotion of flood self-protection plans in local authorities'" as part of the LIFE NADAPTA project. This presentation highlighted how the project has served as a basis for the transfer and replication of a model plan for other municipal plans in Navarre. (AC2.5.2_4 PresentaciónNadaptaCONAMA)https://www.conama.org/conama/download/files/conama2024/STs%202024/10012842_ppt_LSanz.pdf



- ORAL PRESENTATION given by Luis Sanz at the 13th Iberian Congress on Water Management and Planning held in Salamanca: "Promoting flood self-protection plans in local authorities as a means of adapting to climate change through the LIFE NADAPTA project".

A key achievement worth noting is the recognition of the LIFE-IP NAdapta-CC project as an example of good practice in flood resilience, following the publication on the Climate-ADAPT (EEA) platform of the case study “Strengthening flood resilience by integrating flood risk management into local governance frameworks” in the ‘Mission: Solutions’ section. (AC2.5.3_4 PresentaciónNadaptaEUMissions)

https://climate-adapt.eea.europa.eu/en/mission/solutions/mission-stories-inactive/strengthening-flood-resilience-navarra-story43

<u>ACTION C2.6</u> Drafting of river space recovery projects/ preliminary projects as a strategy of conservation and reduction of the flooding impact

Foreseen start date: 01/01/2018 Actual start date: April/2018
Foreseen end date: 31/12/2023 Actual (or anticipated) end date: 31/12/2025

The characteristics and scope of the actions for the recovery of the natural dynamics, reduction of flood damage and recovery of the areas from the environmental point of view, require a good analysis and studies, prior to the drafting of any detailed project. The development of this action has been oriented to the drafting of studies of alternatives or preliminary projects, carrying out a previous analysis that defines the different possibilities that exist in the area and assesses their cost. These studies will serve to define the best possible alternative, to be executed in the future, will be used for the search for financing and, when the time comes, will be the basis for the drafting of a detailed project, a project that will be necessary for the execution of the works.

The approval of the projects requires participatory processes at the level of administrations (municipalities and CHE) and other affected agents, explaining what each study consists of. Several of the initially proposed projects have not been finally approved by municipal decision before or after the citizen participation process, others have been readapted to another area of action due to technical criteria or requests from the municipalities. The situation with respect to the start of the project is as follows :

- "El Aislado"(Castejón) : Project and study drawn up in Phase 2.
- "Soto de Arguedas" (Arguedas): The project in the area was discarded due to social opposition to the project, as transmitted again in 2022 by the Arguedas City Council.
- "La Lobera/El Sotillo" (Caparroso): the scope of the project has been extended to the entire stretch of the Aragón river as it passes through the municipality of Caparroso. In Phase 3 the study of alternatives "*Project for the recovery of the river space of the Aragón River as it passes through the municipal territory (MT) of Caparroso, as a conservation strategy and reduction of the impact of floods*", prepared by SPESA INGENIERIA S.A. (2022) includes two (2) documents. In November 2023, the project was presented to the Caparroso municipal corporation, as a conservation strategy and reduction of the impact of floods. In May 2024, both documents were presented to the public at the Caparroso Cultural Center. (AC2.6.1_4, AC2.6.2_4, AC2.6.3_4).
- "Soto Arévalo" (Milagro and Villafranca): In Phase 4, work has been completed on the drafting of the "Project for the recovery of the river basin of the river Aragón from its confluence with the river Arga to its mouth in the river Ebro, MT of Villafranca and Milagro, as a strategy for the conservation and reduction of the effects of floods". (awarded to the companies INGENIERIA Y GESTIÓN ARAGÓN S.L. and GRAELLSIA INGENIERIA Y MEDIO AMBIENTE S.L.). The project includes two (2) documents. In October 2025, the project was jointly presented to the municipal corporations of Milagro and Villafranca, as a conservation strategy and reduction of the impact of floods as well as to the citizens in workshops held in both Milagro and Villafranca. (AC2.6.4_4 and AC2.6.5_4)
- "Soto Gil/Ramal Hondo"(Funes): In Phase 3, the project for the "Soto Gil and Ramal Hondo" area in Peralta/Funes is the responsibility of the Ebro Hydrographic Confederation (CHE), the drafting of which has been awarded to the office of SPESA INGENIERÍA S.A.. Once the project

has been drafted, the CHE will proceed to its execution in the IV Phase of restoration of the Arga river in Funes, within the PIMA - Adapta Plan and the Flood Risk Management Plan of the Ebro basin.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C2.6: Drafting of river space recovery projects / preliminary projects as a strategy of conservation and reduction of the flooding impact.	Objectives: Expected results (ER): - Activity 2: Drafting of projects for the extension of the river area, recovering flood plains and promoting the restoration of natural ecosystems for their conservation. The drafting includes a participatory process (activity 3). - Activity 3: Carrying out a participatory process so that the population and local councils understand the need for a change in river management models, compatible with the objectives of production, protection and conservation.	Out of the **five** selected areas, projects have been developed in four of it (one by the CHE). In two of the areas (Caparroso and Milagro), the study includes the writing of two documents (study and project), expanding the initial forecast.	The success of the projects is determined by whether their execution is viable in the future, which depends on the availability of land and a sufficient budget (the execution of this type of project costs several million euros). The complexity of the river environment is great, both because there are economic interests opposed to recovering space from the river (mainly agricultural activity), and legal interests relating to the inclusion of the zones or not in the Public Hydraulic Domain. All selected areas are part of the Natura 2000 Network. The actions proposed in the projects are carried out in accordance with the Management Plans of the respective ZEC or protected space.

Some budget changes have been made in this action. As communicated to NEEMO monitors in 2022, part of the C2.6 action budget remained available in 2023 (€311,000). The main part of it has been reallocated into the project Consortium to foster other actions and results.

In August 2023, within the LIFE EBRO RESILIENCE project (promoted by the CHE and with the collaboration of the governments of Aragón, La Rioja and Navarre), a meeting was held in the town of Castejón with representatives of several town councils. At this meeting, the upcoming restoration of the “El Señorío” Soto, located in Castejón-Valtierra, was discussed, highlighting the importance of the complementary funds for the execution of this LIFE NAdapta action.

In 2026, GN plans to implement one of the documents drafted in LIFE NAdapta in the town of Caparroso (project in Soto el Puente).

<u>Action C2.7</u>- Evaluation of hydric resources, derived from climate change scenarios and from demand exploitation

Foreseen start date: 01/01/2018 Actual start date: 01/02/2018
Foreseen end date: 31/12/2021 Actual (or anticipated) end date: 31/12/2025

The studies included in Action C2.7, aimed at assessing the impact of climate change on available water resources in Navarre, were completed during Phase III of the LIFE NAdapta Project, as reflected in the Interim Report for that phase.

Please note that the action, in technical terms, finished in 2023 (end of phase 3). Still, the study has shown a strong interest from professionals and policy makers in the water sector. Therefore, it is necessary to explain below the additional work done in phase 4.

Given that the main objective of this action was to integrate the effects of climate change into the planning of the sectors with the highest water consumption, in April 2024, the results obtained were forwarded to the departments responsible for the Regional Irrigation Plan and the Master Plan for the Integrated Urban Water Cycle of Navarre.

To this end, specific presentations were prepared for each sector, summarizing the study's main results and conclusions regarding the various possible scenarios for water resource depletion between 2010 and 2100 and their impact on water supply guarantees for the different irrigation systems, as well as three possible development plans with their associated water demands and infrastructure requirements.

It was also noted that the detailed reports were available on the LIFE NAdapta website, and active collaboration was offered to facilitate the integration of these results into sectoral plans.

Action	**Foreseen in the revised proposal**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C2.7 Evaluation of water resources derived from Climate Change scenarios and the demand exploitation model. Demand management plan (supply, irrigation, etc.).	Objectives: Sectorial-plans review. Expected results: Report on the plans review.	A diagnostic study that has made it possible to: A- Assess changes in natural water resources resulting from climate change (CC) in Navarre. B- Quantify the impact that a potential decrease in water resources may have on the reliability of water supply for various future development plans in Navarre. The study has been presented and submitted to the Navarre government agencies responsible for the	The study has identified the land-use systems and development alternatives most vulnerable to climate change in Navarre, thereby improving water management planning in sectors with the highest water consumption. The study required the design and calibration of a management model that enables the balancing of water resources against water demand. During this process, gaps in existing demand data were identified, which required additional effort on the part

		Regional Irrigation Plan and the Master Plan for the Integrated Urban Water Cycle of Navarre.	of GAN-NIK (now Orekan) to estimate these figures. It is also worth noting the difficulty involved in communicating the study's results, which stems from the large number of simulated climate change scenarios, the inherent uncertainty in those scenarios, and the lack of a well-established methodology for this type of analysis.

It is worth taking into account the difficulty in communicating and disseminating results, which is due to the large number of simulated climate change scenarios, the inherent uncertainty in those scenarios, and the lack of an established methodology for this type of analysis.

Still, the results of action C2.7 provide a solid scientific and technical basis for understanding the evolution of water resources in Navarre under future climate scenarios, highlighting a general decreasing trend in water availability.

In the post-LIFE phase, these results will be used to support strategic planning and decision-making processes, particularly in the framework of the Integral Water Cycle Plan. The knowledge generated will inform the balance between water resources and demands, reinforcing adaptive management approaches. Overall, C2.7 contributes to enhancing the resilience of water systems by embedding climate change considerations into long-term water management policies.

<u>Action C3.3</u> Analyse management comprehensive models in Mediterranean agroforestry systems to increase its ecologic value minimizing risks

Foreseen start date: 1/1/2018 Actual start date: 1/01/2018
Foreseen end date: 31/12/2019 Actual (or anticipated) end date: 18/12/2025

Activities were carried out by GN and OREKAN (previously "GAN-NIK"). Please take into account that in technical terms, the action was over on phase 1. Nevertheless, due to the pandemic, some specific tasks were remaining such as key networking activities and a special event to make official the agreement between Government of Navarre and public owners for the implementation of adaptive measures. This has been managed over phase 3 and phase 4. Please find below more details.

The main tasks of the action were already finished by the end of 2019, with some delay due to administrative issues which resulted in a delay on the signal of the agreements and collaboration protocols with forest owners (achieved in October 2021).

Besides, although individual informative sessions had been held and the management guidelines for Mediterranean agroforestry systems (C3.3.1 activity) published, the planned public event of the signal had to be cancelled due to the Covid-19 and political issues preventing public events from being held between election periods. Since 2021, agreements have continued to be signed, but in 2024, the importance of this type of agreement was highlighted with the signing of new agreements, at a public event.

Communication and awareness campaigns on the effects of climate change on forest ecosystems and the role of adaptive forest management have been addressed through various tasks aimed at different audiences, especially during the final phase of the project.

Thus, as part of activity C3.3.4, the conference "Integrated management of Mediterranean forests to adapt them to climate change" was held at the Monastery of Sierra de Leire (Navarra) as part of the project's OPEN DAYS. In addition to disseminating the management guidelines for Mediterranean agroforestry systems (activity C3.3.1) and visiting a case study in the field, new agreements and collaboration protocols were signed with forest owners. Furthermore, an informative brochure entitled "Integrated management of Mediterranean forests to adapt them to climate change" was published and distributed during the event, and uploaded in digital format to the project website. (AC3.3.1_4, AC3.3.2_4, AC3.3.3_4).

In 2025, although not planned, the contents of the management guidelines for Mediterranean agroforestry systems (C3.3.1 activity) are updated. In the area of Yesa, near the Monastery of Leire, a pilot project has been carried out using funding from sources outside the project, incorporating climate change adaptation measures and lessons learnt from the LIFE project. (AC3.3.4_4)

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C3.3	Objectives and expected results: -Communication and awareness campaign	Signal of new agreements and collaboration protocols with forest owners. Celebration of the Conference "Comprehensive management of Mediterranean forests to	Unexpected circumstances such the COVID-19 may completely modify the calendar and/or characteristics of some activities like dissemination events.

		adapt them to climate change' in Monastery of Sierra de Leire (Navarra) on 18th October as part of the OPEN DAYS of the Project. AC3.3.1_4 Open days Summary. AC3.3.2_4 Leaflet 'Comprehensive management of Mediterranean forests to adapt them to climate change'. AC3.3.3_4 Open Days Video. The contents of the management guidelines for Mediterranean agroforestry systems (C3.3.1 activity) are updated. Pilot project in Yesa (AC3.3.4_4)	On the other hand, this situation has made us to be more familiar to new or improved digital technologies and to change our way of working (e.g. telecommuting, virtual meetings and conferences).

The guidelines for managing Mediterranean agroforestry systems establish the scope of adaptive forest management to counteract the effects of climate change on these systems, which are present in much of the region. Thanks to the project, they can be replicated and incorporated into the revision of local plans in the future (C3.4.3). In addition, these plans serve as a basis for the development of forest management plans on a larger geographical scale, so replication is also possible on this other scale.

Action C3.4 Analysis of planning tools to incorporate adaptive management measures for the different types of stands

Foreseen start date: 1/1/2018 Actual start date: 1/01/2018
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

Activities were carried out by GN and Orekan - Gestión Ambiental de Navarra

All forests in Navarre must have a forestry planning document, approved by the Government of Navarre, which sets out long-term objectives and plans short- or medium-term improvements to meet those objectives. The documents are incorporated into the 'Forest Management' application, which is a geographical database that allows the monitoring of forestry planning in Navarre.

Activity C3.4.1 Creation of a common geodatabase (GDB) to compile the data from the current forest management tools. The GDB includes the information of 366 current management plans (282,903 ha), ca. 80% of the total area with forest management tool. The validation and uploading to the database has been partially framed with LIFE-IP NAdapta-CC project. The related web viewer can be accessed through https://administracionelectronica.navarra.es/VisorOrdenacionForestal/default.aspx .

Activity C3.4.2 Elaboration of new forest management plans (FMP). Four FMP on private area (68 ha) and 21 on public land (21,945 ha) were approved in 2024 while, during 2025, six FMP on private property (590 ha) and 11 on public land (9,564 ha) were approved. Based on the activity development, we can confirm that the Project objectives are being satisfied.

Activity C3.4.3 Review of the local plans according to biogeographical areas. The Map Viewer of the Spatial Data Infrastructure of Navarre (IDENA, idena.navarra.es) provides access to the set of public geographic information layers of the Territorial Information System of Navarre (SITNA) of the GN. It allows users to search, browse, incorporate maps, share data and download geographic information on a wide range of topics. During the last phase, relevant cartographical information for forest evaluation and management has been generated and published in IDENA: areas with non-human intervention, forest experimental sites and real and potential soil erosion. Besides, a pilot project to evaluate the use of new methodologies for mapping forest tracks has been developed.

The Regional Forestry Plans set out the guidelines that must be followed by all forest management plans approved in Navarre. The three documents (one per biogeographical area) can be reached through the GN webpage (https://www.navarra.es/es/medio-ambiente/gestion-forestal/planes-de-ordenacion-forestal). One has been dreafted in C3.4 Action (Mediterranean systems).-

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C3.4	Objectives: Analysis of the existing forestry planning tools to incorporate forestry management tools considering climate change-related issues. A review of the management plans executed will be completed, aiming at including actions in new management plans as well as in local plans.	Achieved though: -data gathering in a common geodatabase and web viewer. Analysis of more than 10.000 ha/year -contract for the elaboration of new forest management tools -review of the Local Plans -gradual modification of the bidding documents for the elaboration of forest management plans	The activity is progressing as planned, although it depends largely on other project results and knowledge about the effects of climate change and adaptation. Flexibility is one of the main factors of success as, for instance, the GDB design and implementation has been developed based on different casuistic found in

	Expected results: - a review of the local plans of Navarra (3) - an analysis of 10,000 ha/year and surface planned. - actions starting from the exploitation and improvement plans in 70 local entities/year	Annex AC3.4.2_4. Regional Forestry Plans. Summary of Actions Annex AC3.4.3_4. Methodology for Mapping Forest Roads Annex AC3.4.4_4. 2025 Phenology Monitoring Report and 2017–2025 Series	the forest management tools. The strategy for the review of the local plans of Navarra has been designed based on the results obtained so far in the Project. Local plans must be flexible in order to contain the knowledge and experiences related to CC effects on forests and adaptation practices.

The results from the C3.4.1 activity are already visible using the web viewer (https://medioambiente.admon-cfnavarra.es/VisorOrdenacionForestal). New forest management tools are accessible in the web viewer as they are approved, while the bidding documents for their elaboration might be downloaded from the tender announce. Cartographic results coming from the reviewing of the Local Plans are accessible as they are published on IDENA.

Forest Management tools undergo continuous modifications and adaptations, as new issues or difficulties arise, or industry and technology evolve. Due to the complexity of the forest ecosystems and their response to CC, as well as to the uncertainty of the different CC scenarios, the modification of the management tools must be gradual, dynamic and flexible. Thus, they will be continuously reviewed and modified when considered.

Gradually, CC-related issues are being included in the Technical Specifications for the elaboration of FMP in Navarre.

<u>Action C3.5</u> Develop and apply models of forestry growth under different CC scenarios to be able to evaluate the productivity changes in the forestry stands

Foreseen start date: 1/1/2018 Actual start date: 1/01/2018
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

Activities were carried out by GN and OREKAN - Gestión Ambiental de Navarra.

<u>Activity C3.5.1 Review of sylvicultural guidelines.</u> During the last phase the management guidelines for the main forest systems present in Navarre were published. (AC3.5.4_4, AC3.5.5_4)

<u>Activity C3.5.3 Studies related to alternative species in the Atlantic area.</u> The different research lines regarding the assessment of chestnut as an alternative tree species to those with health issues have satisfactorily processed. During the fourth phase, maintenance tasks on the experimental plots installed during the Project were carried out. Moreover, different dissemination events have beeen celebrated (see DE4_4.deliverable).

Furthermore, during these last two years, several duties have been carried out in order to recover a coastal redwood (*Sequoia sempervirens*) provenances experimental site installed in 1996 in Asustun (Facería Bidasoa-Berroaran Mendiak). Trees showed high growth rates and good health status, which suggests that the coastal redwood may be a candidate as an alternative tree species in the Atlantic area. Tasks included forest inventory, selection and genotype of the best provenances.

<u>Activity C3.5.4 Sylvicultural duties in plots owned by the Government of Navarre in the Mediterranean areas (Sabaiza).</u>

Several measures and practices are being carried out to enhance forest adaptation in the Sabaiza Forest Property, owned by the Government of Navarre. During the 4rd phase, the reforestation of the area affected by the *Diplodia pini* fungus continued while different thinning and regeneration cuttings were carried out according to the Revision of the Forest Management Plan. Furthermore, several actions to reduce forest fire risk (e.g. firewall and strategic management points creation, prescribed burning) has been developed.

A course on forests and climate change was held for the Environment Department staff of the Government of Navarre at this estate in Sabaiza, where the actions involved in this initiative were demonstrated. Additionally, a research to evaluate the differences in tree growth and vulnerability to drought due to thinning in Austrian pine stands has been carried out.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C3.5	Objectives: The general goal is to develop and apply different models of growth and sylvicultural guidelines to evaluate the productivity changes of the forestry areas. For that reason, the following specific objectives are going to be undertaken.	Adaptive forest management guidelines for the main forest systems in Navarre. (AC3.5.4_4, AC3.5.5_4) Studies related to alternative species in the Atlantic area of Navarra continues successfully.	Flexibility is one of the main characteristics of an adaptive forest management and, in this context, capacity reaction is essential.

	-Set out sylvicultural guidelines for specific forestry ecosystems/Mediterranean -Complete studies related to alternative species in the Atlantic area of Navarra. Expected results: - a review of the sylvicultural guidelines. -the execution of sylvicultural actions in a property in Sabaiza. - a study over the chestnut in the North-West area of Navarra.	Continue with the application of different adaptive forest practices in the Sabaiza forest. (AC3.5.3_4) Evaluation of the effects of thinning on tree growth and vulnerability to drought in Austrian pine stands (AC3.5.1_4)	

The project results will be visible at the medium term, although they are continuously spread on informative sessions.

Perspectives for continuing the action after the end of the project. Forest guidelines are continuously reviewed as new issues, difficulties or technological advances arise. Due to the longevity of forest trees and to the rhythm of the ecosystems processes, treatments must be monitored at the long term. Thus, adaptive measures in Sabaiza and test of chestnut evolution will continue at medium-long term.

<u>ACTION C4.1:</u> Optimization of the adaptability of agrosystems to climate change through organic matter, crops and soil managements strategies.

Foreseen start date: 01/01/2024 Actual start date: 01/01/2024
Foreseen end date: 30/09/2025 Actual (or anticipated) end date: 31/10/2025

UPNA staff conducted mostly all sub-actions, with the support of INTIA. In action C.4.1.2, INTIA holds the responsibility of the demonstration plots, and UPNA on the assessment of LIFE NAdapta soil indicators. Detailed results of good practice demonstrations are provided as annexes to the Deliverable DC 4.1_4 (4 annexes AC4.1.2_3, updated for a v3).

The deliverable has been up-dated for a v4 (DC4.1_4) including the results of sub-action C4.1.5 in 2023 and 2024, and the comparison between 2020, 2023 and 2024. It is noteworthy that in some cases, a decrease of some indicators has been detected in the adaptive plots from 2020 to 2023 and/or 2024 In other cases, constant values have been observed in the adaptive plots, vs. a decline in the conventionally managed. The deliverable contains this information, as it is advisable to avoid making conclusions from the results of a single year and to observe the long-term evolution, in particular in the framework of the new C farming and Soil Health regulation.

It is important to note that unexpected and changing climate conditions can hinder the on time development of the sampling strategy.

Action	Foreseen in the Grant Agreement	Achieved un phase 4	Main factors of success and lessons learned
C4.1_1	**Objectives:** Agricultural soil's diagnosis and resilience indicators. **Expected results:** Zoning and soil`s map. Resilience indicators list. Network of monitored plots.	Zoning and soil's diagnosis map of Navarra 1:50,000, list of vulnerability resilience indicators, network of plots, finalized.	The zoning and soil`s diagnosis map is a very good tool to develop adaptation strategies tailored to each area. The drawback is that collecting information on soil types and indicators, as well as from farmers, is time-consuming and requires more time than previously estimated.
C4.1_2	**Objectives:** Good practice demonstration in order to improve soil resilience. **Expected results:** Demonstrations and soil`s monitoring. Organic materials evaluation as fertilizers.	Plots identification (218). Soil sampling. Good practice demonstrations (5). Interpretation of these results incorporated into Deliverable DC4.1_4 and in Annexes AC4.1.2_4	The development of demonstrations allows obtaining quantitative data useful to develop the resilient management plan. On the other hand, field demonstrations sometimes gives variable results.

C4.1_3	**Objectives:** Characterization of chosen exploitations. **Expected results:** Plots identification, soil sampling and analysis. Chart of indicators with threshold and optimal values.	Plots selected (148). Soils sampling and analysing finalized. Interpretation of these results incorporated into Deliverable DC4.1_4.	Measurement of soil resilience indicators allows comparing adaptation strategies with quantitative data (protocol in Annex AC4.1.3_4) However, obtaining data from farmers can be very dependent on personal and economical aspects.
C4.1_4	**Objectives:** Resilient management plan. **Expected results:** Creation of a working group. Identify technical and economic barriers. Practical Resilient Management Plan.	Final assessment of the results and observations, and lessons learnt in the project. Final version of the Plan including two annexes to the deliverable DC4.1._4: - Annex AC4.1.4a_4: Resilient Management Plan (summary of results and limitations) - Annex AC4.1.4b_4: Resilient Management Plan as a **Guide** version.	A final version of the plan has been developed, in the form of a guide to assess resilience of soils under different threats, as done in NADAPTA, with examples and results of the project. It is available at the website of the project at this link.
C4.1_5	**Objectives:** Implementation at level of non-experimental plots. **Expected results:** Collection of data and soil indicators.	11 plots identified, sampled and indicators analysed, on an area basis, and on a time basis (compared in 2023 and 2024 with the first assessment in 2020).	Sampling farmers' plots is always more complex than demonstration plots, in particular because granting stable management conditions in time is not always easy. Getting access to economic data from farmers can be challenging and a limiting factor for the Plan.

Two new Annexes have been added in relation to action C4.1_4 (Resilient management plan):

- a new version of Annex AC4.1.4 (Annex AC4.1.4a_4) with the updated summary of the results obtained plus the limitations discussed with practitioners and farmers,

- and the final version of the Soil Resilient Management Monitoring **Guide** (Annex AC4.1.4b_4), already available at the project's web site at https://lifenadapta.navarra.es/es/repositorio-documental/-/document_library/A0PbQJ8w0mQF/view_file/55048090

ACTION C4.2: Adaptation in water management in the agricultural sector

Foreseen start date: 1/01/2024 Actual start date: 1/01/2024
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

As a reminder, in phase 3, four workshops were organised by LIFE Nadapta, with 112 attendees. The experimental actions in all sub-actions were completed, and in **phase 4** INTIA focused on disseminating good irrigation practices among farmers, based on all the experimental information obtained, together with the guide on the use of low-pressure sprinklers, and on disseminating good practices in the application of deficit irrigation strategies.

During the last two years of the project (2024-2025), monitoring of pistachio and hazelnut crops using moisture probes continued. The use of probes has validated this technology as a decision-making support tool in irrigation management. Moisture probes are an additional source of information for validating and correcting water dosage and evaluating the irrigation strategy provided.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C4.2_1	**Objectives:** Adaptation and improvement of irrigation infrastructures. **Expected results:** Development of strategies to improve the efficiency in water use.	The installation and organisation of the irrigation system has been completed efficiently at the Cadreita demonstration farm.	The facilities enable improved experimentation data and have made it possible to disseminate good irrigation practices among farmers through workshops and demonstrations.
C4.2_3	**Objectives:** Consultation Platform for Water and Agro climatic needs **Expected results:** Optimization of resources to define an irrigation strategy adjusted to the areas characterized by EA. Better decision-making resolution based on agroclimatic data.	Optimisation of the Irrigation Recommendation Service and improvement of the Irrigation Recommendation Tool and the Agroclimatic Data Viewer. Both platforms are publicly accessible and open from the INTIA website. **Full information is provided in Annex AC4.2.3_4**.	SAR optimisation for 64 representative crops in Navarre. Agroclimatic data viewer offering agronomic calculations adapted to the seasonality of the campaign, on the agroclimatic areas most at risk of adaptation to climate change.
C4.2_4	**Objectives:** Test demonstration of Regulated Deficit Irrigation (RDI). **Expected results:**	Monitoring soil moisture content in hazelnut (Cadreita) and pistachio (Sartaguda) crops	The probe measurements enabled the irrigation strategies defined for the campaign to be validated and corrected.

	Development of strategies to improve the efficiency in water use.	**Full information is provided in deliverable DC4.2_4.**	**A guide to the efficient use of irrigation water was included in the deliverable.**
C4.2_5	**Objectives:** Pilots of Collective sensorization network for climate, soils and crops and incorporation into the AGROasesor platform. **Expected results:** Development of strategies to improve the efficiency in water use.	Action completed in the former phases.	
C4.2_6	**Objectives:** Pilots of Collective sensorization network for climate, soils and crops and incorporation into the AGROasesor platform. **Expected results:** Development of strategies to improve the efficiency in water use.	Action completed in the former phases.	
C4.2_7	**Objectives:** Evaluation of traceability and sensor systems for agricultural operations. **Expected results:** Analysis of agricultural machinery consoles and evaluation of commercial solutions.	Action completed in the former phases.	

ACTION C4.3: Environmental adaptation to climate change of vegetative material.

Foreseen start date: 1/01/2024 Actual start date: 1/01/2024
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

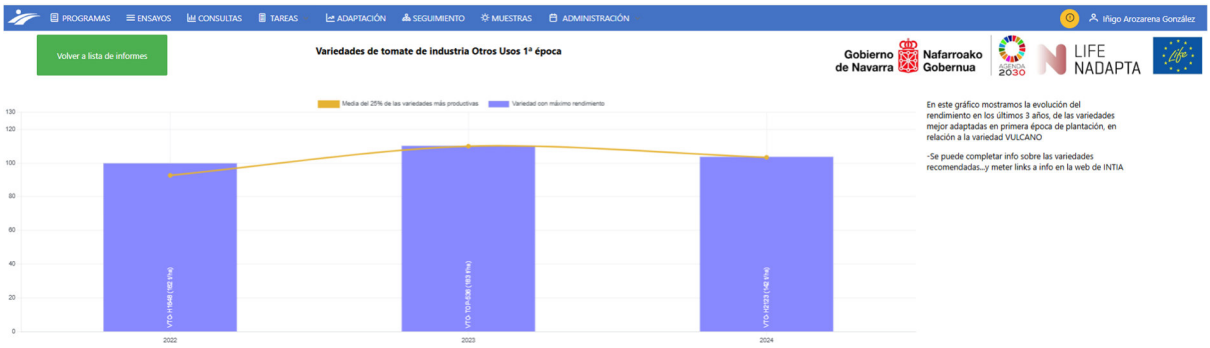
In 2024 winter varieties trials 2023-24 and summer varieties 2024 were finished: 26 trials were developed, testing 265 horticultural crop varieties. Throughout the year 2024, INTIA organized **field visits** to INTIA's Experimental Site of Sartaguda (on the 14th of May). Technical staff work on organic production, and at INTIA's Experimental Site of Cadreita (on the 26th of August) in conventional production. At these field visits INTIA invited field technicians of frozen vegetable companies and other processing industries, growers, cooperative managers, seed companies, students and technicians from other research institutes. INTIA showed the trials on agronomic response of crop varieties in tomato for processing, cucumber, butternut, pepper (red and yellow), chard, lettuce, celery, etc., as well as the trials on growing techniques.

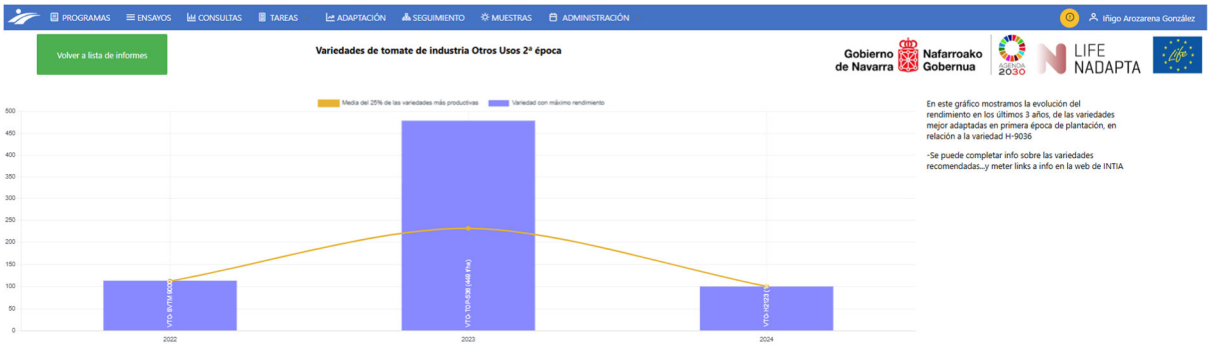
The results of broccoli trials for the period 2023-24 were presented at the 53rd edition of the national congress of technicians and specialists on horticulture called "*Seminario de Técnicos y Especialistas en Horticultura*" that took place in Chipiona (Spain). The list of winter and summer varieties trials is presented at the **Annex AC.4.3_4**.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
4.3.1	**Objectives:** Demonstration trials of environmental adaptation to the climate change of different crop species and varieties. **Expected results:** Identification of varieties sensitivity to different stresses related to climate change.	During phase 4, 26 trials were done, testing 265 horticultural crop varieties.	Both the 2024 and 2025 agricultural seasons faced extreme agroclimatic conditions, enabling the analysis of late-cycle varieties under high temperatures and water restrictions in rainfed extensive crops. Unusually high temperatures, exceeding historical averages by 3°C to 4.5°C, affected horticultural crop responses. For details, see **Annex AC.4.3_4**.
4.3.2	**Objectives:** Development of a tool for vegetative material resilience information management. **Expected results:** User-friendly software for tolerant and efficient varieties consultation.	The tool is operational since Phase 3 of the project. Since then, INTIA has integrated historical information on varieties.	Historical data has been loaded to visualize and transfer information generated by the plant material adaptation tool. Information has been adapted and standardized for input into the created data structure, specifically for wheat and barley variety trials from 2013 to 2025.
C4.3_3	**Objectives:** Conservation of local seeds biodiversity, with high natural value. **Expected results:**	In phase 4, INTIA worked on 13 varieties in order to increase the seed quantity for the germplasm bank.	The 13 varieties multiplied in the experimental farms of Sartaguda, Cadreita, and Doneztebe/Santesteban, include Green beans (6), Additional green

	Location, identification, collection and conservation of local genetic material.		beans from another farm (1), Corn (2), Onions (1), and Local tomatoes (3). All varieties will be sent to the CITA germplasm bank for its preservation.

In 2025, INTIA developed the **adaptation tool** for horticultural crops, uploading data from trials of tomato from the past three seasons. With this tool, INTIA is able to detect yield trends and replacement of new varieties. The two following illustrations show the evolution of the varieties in early transplants ("1ª época") and late transplants ("2ª época").





INTIA also organized the **54th *Seminario de Técnicos y Especialistas en Horticultura*** in Navarre, where a group of around 50 people have participated. The first day was a **LIFE NAdapta Open Days,** with around 70 technicians from different Spanish regions attended, with the aim to show the importance of long-term projects to evaluate the impact of climate change on crops and crop varieties.

On the other hand, INTIA presented the results of Piquillo pepper variety trials in the RetPim project event in June. The programme included field visits in the experimental sites of Sartaguda (25th of June) and Cadreita (3rd of September). The focus was done on trials on summer varieties, soil management practices, fertilization, green manure or cover crops, and pest management.

In order to test the effect of the use of the Roller Crimper to finish winter cover crops and then transplant summer crops, INTIA have acquired 8 humidity and temperature probes/sensors. These sensors give the information of every 20-minute change on soil temperature and humidity at different depths (10, 20, 30, and 40 cm) of the two soil management techniques: traditional biodegradable mulch and cover crops managed with Roller Crimper (without tillage). The details of the use of the probes are presented on **Annex AC.4.3_4,** as well as the list of winter and summer varieties trials with the number of varieties tested in each one.

ACTION C4.4: Plague and emerging diseases Warning System Terminal

Foreseen start date: 1/01/2022 Actual start date: 1/01/2022
Foreseen end date: 30/05/25 Actual (or anticipated) end date: 10/05/25

Throughout **phase 4**, work on the Alert Station (EA) centered on testing new automatic pest-monitoring systems, which enabled the detection of a previously unrecorded corn pest and led to an expansion of monitoring points, while also strengthening collaboration with farmers through automatic trap installation and maintenance. EA data allowed analysis of pest dynamics, showing shifts in Lobesia botrana populations between northern (increasing) and southern (decreasing) vineyard areas, while Bactrocera oleae studies revealed no clear predictive patterns aside from a 2–3 week lag between flight and damage. Alternative pest-control trials in beans, cucumbers, cherries, olives, and pears produced mixed but sometimes promising results, though still insufficient to replace plant-protection products, while maize-related work on mite control and Fusarium susceptibility supported varietal recommendations. A survey of auxiliary fauna on the Sartaguda estate confirmed abundant beneficial insect populations, and the findings were shared in a well-attended conference showcasing expertise on wild flora, beneficial fauna, and biological pest control.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C.4.4_1	**Objectives:** Collaborative Warning Station (WS) fulfilling all the new requirements of emerging plagues, vectors of farming diseases, automatic monitoring and updated warnings of new integrated management solutions. **Expected results:** New computer developments included in the WS.	The warning station has remained fully operational throughout 2024 and 2025. The connection to the meteorological data provided has caused some problems on the part of the EA, but these have been resolved.	In phase 4, work continued on historical data on catches of Lobesia botrana and the olive fly – Bactrocera oleae. The presence of Diabrotica virgifera in maize was detected, highlighting the importance of the tool.
C.4.4_2	**Objectives:** Incorporation of new plague risk and emerging diseases prediction models in the WS. **Expected results:** 4 New models of risk about emerging or adaptive plagues/diseases (1 new model per project phase).	Maintenance of the four disease risk prediction models that were programmed in phase 3.	All models can be consulted on a daily basis at the level of weather stations, or at the level of risk area zoning incorporated into the EA. More information in **deliverable DC4.4_4.**
C.4.4_3	**Objectives:** Pests montoring improvement. **Expected results:** 8 Monitored plagues with automatic traps during the Project.	Four new automatic trap models have been evaluated: Cap2020, Trapview, XFarm, and Scoutlabs.	Overall satisfactory results. See **deliverable DC4.4_4** and **annex AC4.4_4**.

C4.4_4	**Objectives:** Development of new IPM systems for emerging pests and diseases and adaptive changes related to climate change. **Expected results:** 16 demonstrative trials of new IPM system during the project.	In total, 31 GIP trials were conducted and 309 theses were evaluated during the four phases of the project. In phase 4, 12 trials were conducted and 69 theses were evaluated. The GIP alert app was fully operational in phase 4.	Mycotoxin monitoring in corn has intensified through Fusarium sensitivity tests, underscoring the importance of varietal choice and seasonal climate, while alternative pest-control methods in cherry and olive trees have shown mixed and still insufficient effectiveness. Greenhouse trials with horticultural crops continue, and sampling on the Sartaguda farm confirms that flowering strips clearly help increase beneficial insect populations. All information can be consulted in **deliverable DC4.4_4** and **annex AC4.4_4**.

The dissemination of the EA and the warning app has continued in order to promote its use among the sector in Navarra and to raise awareness of it in educational circles through the project's dissemination and communication activities. In total, 229 dissemination events related to the warning station were carried out in phase 4, of which it is worth highlighting the 7 training courses, presence at 10 conferences and the continuity of the information offered by the Warning Station in the INTIA weekly bulletins.





Conference on the study of auxiliary fauna held in Sartaguda on 28 October 2025.

Since 2024, the warning app has been the tool used to issue warnings, replacing the SMS warnings that were maintained for two pests. By mid-October 2025, there had been 473 downloads of the warning app, 68% of which were by users outside INTIA.

Fase / Año	**Nº de Information Sheets**
Phase 1	152
Phase 2	202
Phase 3 – 2022	104
Phase 3 – 2023 (until mid-October)	103
Phase 4 – 2024	111
Phase 4 – 2025 (until mid-October)	110

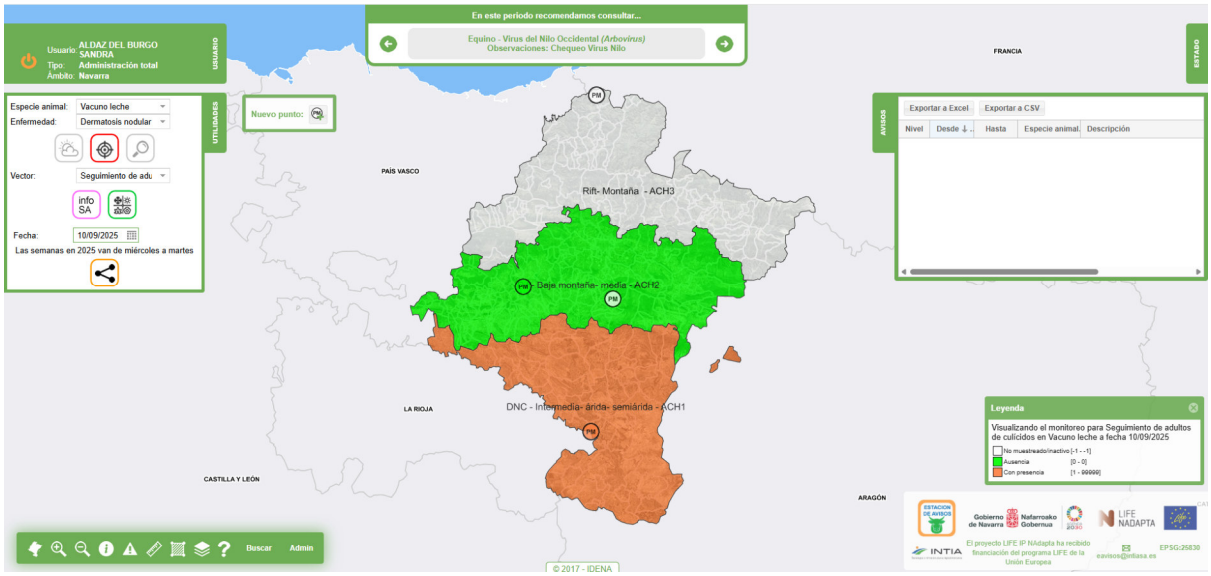
<u>ACTION C4.5:</u> Adaptation to the animal emerging disease due to the climate change.

Foreseen start date: 1/01/2024 Actual start date: 1/01/2024
Foreseen end date: 03/12/2025 Actual (or anticipated) end date: 31/12/2025

The following images show different features of the animal health portal.



More specific display of a warning. The orange dot indicates the corresponding warning level, with three levels available (green, orange, and red, with red being the most dangerous) (above).



Display of points on the viewer. The point is categorised according to risk, and the entire area is categorised according to the highest risk level in a specific zone. In this case, the map is divided into three separate zones (above).

INTIA estimates that a total of 31 veterinarians have received information on protocols for integrated management of emerging animal diseases. Due to the outbreak of bluetongue disease, 271 farms (40% of farms in Navarra) have been vaccinated. All vaccinated farms have been sheep farms, with a total of 117,513 sheep.

Furthermore, INTIA veterinary staff receive notifications and alerts from the station and disseminate them among the different livestock farms in Navarre; 98 dairy cattle, 215 beef cattle, 24 fighting cattle, 376 horses, 375 sheep, 924 pigs and 9 rabbits.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lesson learned
C4.5_1	**Objectives:** Livestock disease vector plagues monitoring. **Expected results:** Identification and monitoring of emerging diseases and incorporation to INTIA's Collaborative Warning Station (WS).	Following completion of the four phases of the project, we have six protocols in place to monitor four vectors covering 13 diseases within the emerging disease surveillance plan for animal health. The monitoring results for all phases of the project have been uploaded. The information is available on the EA website.	The Animal Alerts station serves as a reference point for information on emerging disease transmission vectors in animal health. It also provides alerts on vector surveillance, preventive measures on farms, deworming, etc.
C4.5_2	**Objectives:** Development of new IPM measures to control farming disease vectors. **Expected results:** Identification of GIP systems for the identified emerging diseases.	During this phase, one coordination meeting of the cross-cutting technical committee on vectors was held, with the incorporation of different individuals from livestock farming, forest rangers, biodiversity, OREKAN, SNS hospitals, and ISPLN into the cross-cutting technical committee on vectors.	Interest in the round table being a launch pad in Navarre for the ONE HEALTH approach.

ACTION C4.6: Pastures, livestock and silvopastoralism management to fight against fires.

Foreseen start date: 1/01/2022 Actual start date: 1/01/2022
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

INTIA published in 2025 a new guide on Silvopastoralism. It provides basic guidelines for implementing silvopastoral practices in the Mediterranean area of Navarre, with the aim of reducing the territory's vulnerability to wildfires, whose risk has increased due to climate change. It compiles the knowledge generated under Action C4.6, including pilot experiences, measurements of fuel-load reduction, and environmental assessments carried out at the Sabaiza pilot site.

The document explains what silvopastoralism is and how it contributes to wildfire prevention, outlines the impacts of climate change, and describes key practices such as fuel-management techniques, livestock management, new technologies, livestock mobility, and water-resource management. It also provides guidance for implementing silvopastoral projects in strategic areas, including monitoring procedures, criteria for preventive-grazing compensation, and the involvement of all participating stakeholders.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C 4.6_1	**Objectives:** Creation of a plot to silvopastoral management. **Expected results:** Plot of around 50 ha selected.	Selection of the pilot plot to silvopastoral management in Sabaiza farm.	Activity finished in previous phases.
C 4.6_2	**Objectives:** Creation of a Mosaic plot (pasture-bushes-pines). **Expected results:** Establishment of a pasture surface of around 17 ha in the pilot plot.	Forest cleaning, tillage and grass sowing to pasture establishment.	Activity finished in previous phases.
C 4.6_4	**Objectives:** Pilot plot characterization (soils and flora). **Expected results:** Pilot plot characterization and selection of monitored areas.	Soil sampling, analysis and data treatment. Botanical characterization. 45 Soil samples and 36 transects to floristic inventories analyzed.	Activity finished in previous phases.
C 4.6_5	**Objectives:**	Creation of 4 monitored areas. In	The measurement of herbaceous and shrub

	To study the evolution of C capture from soil and biomass fuels in monitored areas (exclusion vs grazing). **Expected results:** Creation and characterization of monitored areas.	each of them livestock exclusion and grazing area of 100 m2 each, were defined.	biomass has been carried out.
C 4.6_6	**Objectives:** Plot farming use follow-up. **Expected results:** Adjust cattle management to silvopastoral resources.	Follow-up started. Livestock was temporarily moved away to enable adequate growth of sown pasture.	Livestock began to be introduced in 2020, and stocking rates are maintained to ensure intensive grazing.

<u>ACTION C5.1</u> Development of a new surveillance and information systems, analysing the consequences of climate change on human health.

Foreseen start date: January 2018	Actual start date: April 2018.
Foreseen end date: December 2024	Actual (or anticipated) end date: December 2024

<u>Activity 5.1.2 Develop an information and recording system about infectious and non-infectious diseases related to the climate change to know the effects of the climate on the health</u>: Work was developed on the improvement of the "*Prevention plan about health effects of excess temperatures in Navarre*" [Hereafter, the Plan], including recommendations and establishing actions to reduce the effects associated with excessive temperatures. Different activities were implemented:

- Data recording tools (mortality, emergencies and temperatures) were revised and updated.
- In 2024, the Ministry of Health has recalculated the threshold temperatures by isoclimatic zones of the autonomous communities, so the plan has had to be adapted as well as the preventive materials available.
- Improving communication channels, reinforcing collaboration with Navarrese Federation of Municipalities and Councils. In 2024, a specific document for local entities has been prepared to facilitate their work and participation in the Plan.
- An updated document of the Plan was elaborated, introducing the new threshold temperatures aforementioned.
    - As a continuation of the awareness-raising work carried out in the project and as a complementary action outside the project, in 2025, a communication campaign has been developed to raise awareness and educate citizens about the risk of extreme heat. All information and materials are available at the following link:
    - https://portalsalud.navarra.es/es/temperaturas-extremas-y-salud



Figure 1 Images of the communication campaign in 2025

<u>Activity 5.1.3 Develop analysis and evaluation analysis of the consequences of the climate change on the health:</u> Implementation of the Plan. In order to reduce morbidity and mortality caused by the increase in environmental temperature, from May 15th to September 30th, the Plan is jointly developed with the Ministry of Health. The plan monitors the daily temperature forecast, the number of hospital emergencies, emergencies due to heat-related diseases and the number of daily deaths. At the start of the campaign, a meeting was held with all the stakeholders involved to explain the main developments and share the preventive measures adopted in each area of intervention.



Figure 2 Presentation of the 2024 Plan

After the end of the summer, the evaluation on the Plan was carried out, assessing the number of heat alerts, as well as the associated morbidity and mortality, and the relationship with temperatures. In addition, the prevention and action measures taken, or activities was evaluated in the face of possible special situations that may have occurred in the summer (events in hot weather days, crisis cabinet, agreements, etc.). The evaluation reports for the years 2023 and 2024 are presented as a Deliverable DC5.1_4.

Action	**Foreseen in the revised proposal**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C.5.1	Objectives:		
	Develop an information and recording system about infectious and non-infectious diseases related to climate change.	- Information and recording system about high temperatures Data recording tools (mortality, emergencies and temperatures) updated - Updated the threshold temperature - The Plan updated.	- New plan document - Specific document for local entities - New preventive materials
	Analysis and evaluation	Implementation of the Plan: Evaluation of the plan (Deliverable DC5.1_4)	Experience and better prepared to develop The Plan and others plans, such as, *National Plan of Preventive Actions for Low Temperatures*
	Expected results:		
	New surveillance system	Surveillance system about infectious diseases related to climate change and about high temperatures.	A developed a surveillance system which is going to continue
	Adaptation actions efficiency and efficacy evaluation	Evaluation of the Plan	

<u>ACTION C5.2</u> Surveillance of working conditions and climate change consequences; extreme temperatures on workers' health.

Foreseen start date: January 2018 Actual start date: Abril 2018
Foreseen end date: December 2021 Actual (or anticipated) end date: December 2021

This action ended in 2021, but some of the proposed activities continue with ISPLN's own resources.

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C.5.2	Objectives:		
	Develop information and recording system	-Improved surveillance of workers' health -Report of damages	The importance of networking with the different actors involved in monitoring the health of the working population: Mutuals, risk prevention services, labour unions, etc.
	Include within the occupational health plan some specific actions	- Participation in the Plan - Technical conference - Guide	The companies visits campaign has been a success and its dissemination is very important
	Expected results:		
	Evaluation of the consequences of the climate change on worker's health	Report: Evolution of workers' health in relation to Climate Change (Deliverable DC.5.2_3)	
	Promote preventive and adaptive actions	Continuity of the High temperature Plan	Due to the visits campaign, there are now more demands from companies related to the issue of high temperatures

<u>Activity 5.2.2 Health workers record, review and evolution along the project duration</u>:

Information related to the worsening of existing and emerging risks was recorded and analyzed, especially in outdoor occupations groups of workers.

<u>Activity 5.2.3 Include within the Occupational Health Action Plan of Navarre 2017-2020 some preventive actions related to climate change effects on the workers' health</u>:

Strategies were defined to improve the adaptation of the working population to climate change focusing on vulnerable groups, facilitating the participation of workers and trade unions.

During the summer months, a participation in the Plan was done informing the working population of the risk of heat thermal stress, as well as the necessary preventive measures to eliminate or reduce this risk. This dissemination was carried out by Occupational Health Service, through the activation of a banner on the website and by communicating email alerts directly to business and labour union organizations, as well as to prevention services.

<u>ACTION C5.3</u> Improvement of the air quality surveillance and evaluation tools about the effects on health.

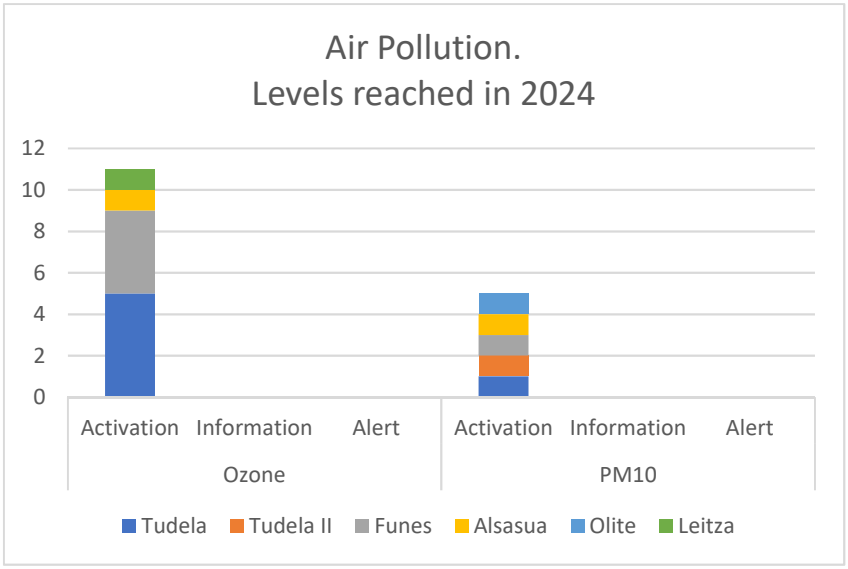
Foreseen start date: January 2018 | Actual start date: April 2019
Foreseen end date: December 2024 | Actual (or anticipated) end date: December 2024

<u>Activity 5.3.2 Register and analysis of the heath condition and its evolution along the project progress</u>:

During 2024, the efforts have been focused on implementing the short-term health protocol for action in air pollution episodes, which the aim of reducing exposure to atmospheric pollution and protecting Navarrese health population.

The protocol has been presented as a Deliverable DC.5.3_4. This protocol is been developed in collaboration with DRyMA Department of the GN, which is the competent section on air quality in Navarre.

As a result of the Protocol, during the summer of 2024, the ozone trigger threshold was reached four times at the Tudela and Funes stations, and once at Alsasua and Leitza. For PM10, it was reached once at the Tudela, Tudela II, Funes, Alsasua, and Olite stations. Unfavorable levels were reached on occasion, but not for long periods, so the information and alert level criteria were not met.



Air pollution Levels reached in 2024

<u>Activity 5.3.3 Develop and diffuse the information required to ease the population adaptation to the air quality condition and its evolution regarding the climate change</u>:

Since summer 2023, ISPLN receives from DRyMA the forecasts of exceedances of the established thresholds of the different pollutants as well as the actual exceedances observed. Monitoring of the data received has been carried out to evaluate the actions provided for in the protocol. Preventive material has been developed with information on how air quality affects health, the most sensitive population groups, and health recommendations.

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C.5.3	Objectives:		
	Develop information and record system	Monitoring the forecasts of exceedances of the established thresholds of the different pollutants	Short-term health protocol for action in the event of air pollution episodes
	Diffusion of information to the population	Preventive material elaborated Alerts in the case of events of air pollution episodes	The short-term protocol is a tool to transfer the information to the general population when necessary.
	Expected results:		
	Follow up the evolution of air quality regarding its consequences on health	Surveillance of the different pollutants levels. Surveillance of the health variables related with air quality	Surveillance helps us see the evolution and possible association between pollution and health.
	Improve the adaptation to atmospheric pollution	Short-term health protocol for action in the event of air pollution episodes Preventive material	The importance of coordination with all areas involved and the importance to diffuse the information to the population.

ACTION C5.4 Improve the surveillance of emerging risks as result of the climate change.

Foreseen start date: January 2018 Actual start date: March 2019
Foreseen end date: December 2024 Actual (or anticipated) end date: December 2024

Activity 5.4.1 Acquisition of equipment devoted to molecular techniques at laboratory level and start-up of these techniques:

Knowledge of the situation of emerging factors continues to be improved by monitoring the emerging risks established as more related to climate change and developing the necessary analytical techniques. The result of the surveillance of the different emerging risks from 2023 and 2024 were presented as a Deliverable DC.5.4_4.

Activity 5.4.2 Development of guides and procedures related to emerging risks and climate change:

New legislations applied: Royal Decree 3/2023, of January 10, establishing the technical and health criteria for the quality of drinking water, its control and supply. This new legislation takes into account the risks arising from climate change, with the aim of identifying the most appropriate adaptation measures to address them.

The current state of scientific and technical knowledge and the experience accumulated in the application of regulations have made it necessary to update Royal Decree 140/2003, of February 7, through the approval of a new regulation. The purpose of this regulation is to establish the technical and health criteria for drinking water and its supply and distribution, from water bodies to the user's tap, as well as to control its quality, guaranteeing and improving its access, availability, healthiness, and cleanliness, with the aim of protecting human health from the adverse effects of any type of pollution.

Activity 5.4.3. Diffusion of information to ease the adaptation of the population to the emerging risks: The work consists of improving the information related to surveillance and providing tools to professionals that help and facilitate decision-making. This information allow us to notify the population in advance in the event of an outbreak or alert due to any of the studied emerging risks. For the moment, it has not been seen the need to disseminate information to the general population.

The results of the surveillance are presented in different forums:

- Hope Project.
- Summer course at the Public University of Navarre.
- Climate Change and Global Health Forum.

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C.5.4	Objectives:		
	Raise the surveillance and intervention regarding emerging risks	-Implementation and accreditation by PCR technique - Surveillance monitoring	

	Develop regulations and technical guides	- Standardized operating procedures	New legislations applied
	Expected results:		
	Increase the knowledge of emerging risks	-Implementation of the techniques -Surveillance monitoring	The increasing knowledge allowing us to carry out better control over these emerging risks. It allows carrying out the necessary interventions to prevent their effect on the health of the population.
	Regulations and technical guides	New legislations applied	

The explanation of these dissemination events are more developed in the deliverable C.5.4_4.

ACTION C5.5 Development of surveillance to detect invasive vectors of human diseases.

Foreseen start date: January 2018	Actual start date: April 2018
Foreseen end date: December 2024	Actual (or anticipated) end date: December 2024

Activity C.5.5.2 Design and development of a vector entomologic surveillance plan in collaboration with the department of rural development and city councils.

Efforts have been focused on planning and preparation of the 2024 campaign, in the Plan basis including the collection of traps, the Laboratory identification of vectors and the evaluation of results in presence of tiger mosquito (*Aedes albopictus*), risk assessment and control measures. The results summary of the Tiger Mosquito Surveillance Plan 2023 and 2024 in Navarre has been presented as Deliverable DC5.5_4.

ISPLN has also participated in several meetings of the crosscutting technical working group (CTWG) on vectors, in cooperation with INTIA, OREKAN, Blood Bank and other units of the GN within DRyMA. One of the main objectives is to share the work on vector monitoring carried out in Navarre and to identify synergies and collaborations.

Nevertheless, as epidemiological surveillance of vector-borne diseases such as malaria, dengue, Zika virus, Lyme disease or Mediterranean spotted fever is mandatory, it is also carried out by the ISPLN.

Activity C.5.5.3 Determine the risk levels according to the information obtained from the epidemiologic and vector-driven information:

Similar to other previous campaigns in 2024, 68 ovitraps and 2 adult traps were set up, and 1,736 samples were collected. The results shows the presence of eggs in 29 of the 68 ovitraps and the detection of 783 adults relative to adult traps and ovitraps with adhesive tape, affecting 18 municipalities in different scenarios. According to the risk scenarios of the new *National Plan prevention, surveillance and control of the diseases transmitted by vectors*, the Bera area comply with scenario 2a, where the mosquito is considered established. The areas of Pamplona, Tudela, Sangüesa, Olite, Leitza and Alsasua (new areas detected in 2024) comply with scenario 1 due to recent and specific detection of *Aedes Albopictus*, but not established. It is very relevant that epidemiological surveillance data for diseases in Navarre confirm the absence of autochthonous cases of diseases transmitted by the tiger mosquito in 2024.

Activity C.5.5.4 Develop and diffuse the information needed to ease the population adaptation to the presence of invasive disease-transmitting vectors:

The ISPLN technical staff organized several working days and awareness sessions in order to share essential information on the tiger mosquito, including the health risk and environmental issues associated with its presence:

- April 24, 2024: Conference "Local entities as key agents in the adaptation, protection and promotion of health in the face of climate change"
- May 21, 2024: Climate Change and Global Health Forum.
- June 13, 2024: Training session at the official college of pharmacists directed exclusively to pharmaceutical professionals under the title "Impact of climate change on health: Tiger mosquito surveillance plan in Navarre."
- June 17, 2024: Environmental Authorities Network Conference.
- June 20, 2024: OPEN DAYS HEALTH: Surveillance of the tiger mosquito in Navarre.

- October 2024, One Health Congress: Presentation of two posters on CTWG on Vectors and the citizen science activity on the surveillance and monitoring of the tiger mosquito (*Aedes albopictus*) with Navarrese educational centers through the Sustainable Schools Network of Navarre of the Department of Education.
- Citizen science project: Throughout the 2023-2024 school year, five schools participated in a citizen science project on the surveillance and monitoring of the tiger mosquito.

Moreover, 2.500 new copies of a brochure on the tiger mosquito characteristics have been printed in bilingual format. These copies are being distributed at events organized by the LIFE-IP NAdapta-CC project. In addition, in August 2025, an article on the evolution of the tiger mosquito in Navarre was published in the international journal "*Insects*" (A Q1 Journal). This publication is a new opportunity relative to the LIFE-IP NAdapta-CC project's commitment in translating the results obtained into the scientific and technical field. And, in October 2025, another article on best practices regarding the CTWG on Vectors was featured on the Climate-Adapt platform:

- https://lifenadapta.navarra.es/documents/2696321/25440339/Insects_16_00852_2025.pdf
- https://climate-adapt.eea.europa.eu/en/mission/solutions/mission-stories/building-resilience-to-emerging-disease-transmitting-species-and-improving-surveillance-in-spain-story81

Action	**Foreseen in the revised proposal**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C.5.5	Objectives:		
	Develop surveillance systems	*Aedes albopictus* Environmental Surveillance Plan	A surveillance network distributed in the most vulnerable areas according to the vulnerability study carried out.
	Establish the risk levels	- Surveillance results	Annually it can establish the level of risk thanks to the surveillance of the mosquito and the epidemiological surveillance of diseases related to the vector.
	Design vector control plans	Working in tick control Plan	
	Diffuse the information to the population	Conference, preventive session, informative brochure, and media appearance	Importance of keeping the affected population informed to give them tools to prevent the problem.
	Expected results:		
	Set out the risk levels	Risk level: - Bera zone = 2a - Rest of Navarre = 1 (According to National Plan)	The risk level was determined.
	Design plans to control the vectors	Working in tick control Plan	

ACTION C5.6 Improve the surveillance of pollen composition and variation of pollination periods regarding the climate change

Foreseen start date: January 2018 Actual start date: April 2018
Foreseen end date: December 2024 Actual (or anticipated) end date: December 2024

Activity 5.6.3 Pollen control:

The work of monitoring atmospheric pollen content in the three climatic zones of Navarre has been maintained by the BEQ-AMBIUN of the University of Navarre.

The work has been carried out in close collaboration with the personnel of the Navarrese Health Service (SNS), which has been in charge of the punctual collection and shipment of the samples from the collectors located in the Reina Sofía Hospital in Tudela and in the Health Center of Santesteban.

An updated pollen calendar, with data from 2019 to 2024, which shows what types of pollens there are at each time of the year, in what quantity, and when each one of them appears, is available. Continuous year-round data are also available for a large number of pollen types. Hence, the possibility of being used as a climate change monitoring element has been increased. In addition, the project is making it possible to provide the biological information being monitored with much greater precision.

Activity 5.6.4 Develop and diffuse the information needed to facilitate the adaptation of the population to the evolution of the pollen composition, quantity and seasonal distribution observing the climate change:

Within the work of disseminating information and preventive measures, work has been done with different entities and the information has been distributed by different means:

- Pamplona (010 phone number), Tudela and Santesteban City Council.
- ISPLN website.
- Navarrese government citizen service (012 Call Center Service).
- Allergology Service of the SNS.
- Spanish Network of Aerobiology (REA) and the Spanish Society of Allergology and Clinical Immunology (SEAIC).

As part of this work, bulletins have been prepared with weekly predictions of the different types of pollens, differentiating among Pamplona, Ribera and North of Navarre areas. The ISPLN website also shows the daily and monthly data for the different pollens in those three zones.

In 2025 but within the framework of the project, a bilingual preventive material has been published with information on the most allergenic pollens present in Navarre, the surveillance system and the forecast information service, and recommendations for allergy sufferers. They have been published in triptych and poster formats. 10,000 triptychs and 80 posters have been printed.

These materials have been distributed to pharmacies, the allergy department at the University Hospital of Navarre (HUN), and primary care centers.

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C.5.6	Objectives:		
	Know the annual pollen calendar and follow-up its evolution	Updated 2024 annual calendar	Pollen control throughout the year allows us to update the complete pollen calendar annually.
	Execute pollen control in three climatic zones	The annual memory 2023 y 2004 is presented as a Deliverable DC.5.6_4	Correctly control throughout the year
	Ease the population adaptation through the improvement of the pollen information diffusion	- Pollen counts - Weekly forecast - REA and SEIAC	Having pollen levels in three different areas of Navarre is a highly valued resource for allergic patients since they can have more real data from their place of residence.
	Expected results:		
	Pollen-related information publication and annual pollen calendars	2023 and 2024 report (Deliverable DC5.6_4)	A large number of pollen types data as an element of climate change control can be used.
	Develop an information system of the weekly forecast	Weekly forecast dissemination through different channels	It is a service in which the number of people registered to receive weekly pollen forecasts increases annually.
	Inform the general population of recommended measures to improve adaptation	Pollen information diffusion Preventive materials	

Action C6.1. Landscape adaptative management

Foreseen start date:	02/10/2017	Actual start date:	02/10/2017
Foreseen end date:	31/12/2021	Actual (or anticipated) end date:	31/12/2025

C6.1 Act 1: Elaboration of the Landscape and Climate Change thematic Guide. The thematic guide 'Landscape and Climate Change' (DC6.1.1) was previously published, but a new version more accessible and informative for the public has been produced.

This new version has been edited in phase 4 and it is available as annex **AC6.1.5_4**.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C6.1	**OBJECTIVES:** Knowing the climate variability in Navarra landscape. Obtain criteria to incorporate the climate change adaptation's variable in Landscape documents. Follow-up of the CC effects in landscape. Elaboration of the thematic landscape and climate change guide. **EXPECTED RESULTS:** Guidelines for landscape adaptative management Incorporation of the climate change variable in a landscape document. Guide the updating of the other landscape documents. Obtain indicators on the impact of climate change on landscape dynamics.	All the activities have been successfully achieved in the previous phases. The point of this part is to show that, due to the interest of the topic and the need to foster divulgation, Government of Navarre and NASUVINSA decided to design and edit a new version of the Landscape and Climate Change thematic Guide. Therefore a shorter guide with an attractive design has been produced, using simpler language. AC6.1.5_4	

NOTE: Please keep in mind that actions C6.2 to C6.9 were finished in the previous phases.

Action C6.10: Pilot project of energetic regeneration of vulnerable economic activity areas

Foreseen start date: 01/2022	Actual start date: 11/2022
Foreseen end date: 12/2023	Actual (or anticipated) end date: 10/2025

The objective of this action is to adapt an area of vulnerable economic activity with the purpose of intervening in buildings, equipment and common areas, adapting it to climate change. The sectors were selected in 2022: Sakana and Aranguren.

C6.10_Act 2. Constitution of a multidisciplinary working group. Two such groups have been created, one for each initiative, composed by Nasuvinsa, the GN, the corresponding local authority and the technical assistances. Meetings of this working group have been held to organize the activity 5.

C6.10_Act 4. Update of the catalogue of measures for Action C6.3, focusing the measures on areas of economic activity. Action C6.3 established a catalogue of adaptation and mitigation measures focused on public buildings. This catalogue has been updated, focusing the measures on industrial estates based on the information obtained from the comparative analysis in benchmarking activity 3. Circular economy measures have been included, such as waste management, electric mobility, sustainable drainage, etc. Catalogue published as annex **AC6.10.2_4.**

C6.10_Act 5. Participatory process, feasibility study and pilot business model. The energy communities chosen as pilot projects were at different stages of development:

-Sakana: The Sakana Energy Community (EBK Sakana) held its assembly in September 2024 to establish the energy community as a cooperative. After these procedures, and due to the requirements of the cooperative registry, it was observed that the statutes needed to be amended to better suit an energy community with specific circumstances at the valley level. To this end, during 2025, technical assistance was provided to work in both the amended statutes and the Internal Regulations. (AC6.10.3.2_4). Although it is not public, upon request, it can be sent.

In parallel, works have been done with a technical assistance for the preparation of a feasibility study for the EBK Sakana (AC6.10.3.4_4). This feasibility study consists of several parts:

- A feasibility study for each of the first four photovoltaic projects planned for Sakana.
- A comprehensive feasibility study for the Energy Community.

The support provided to the EBK Sakana has also enabled the creation of several legal documents to assist other future energy communities, such as, templates for meeting minutes, membership registers, notices of governing board meetings, etc. (AC6.10.3.3_4).

-Aranguren: The energy community (CEPIM, Spanish initials) was already established. During this period, the working group held multiple meetings to study the first project to be implemented by the community.

On the one hand, the group worked on drafting a rooftop rental agreement so that the installation could be located on a private rooftop. A template for a rooftop rental agreement has been published, which can be used by any energy community. (AC6.10.3.1_4)

In parallel, the group worked with a technical assistance to carry out the feasibility study of the photovoltaic projects and the energy community in general. (AC6.10.3.5_4). Afterwards, work was done with the energy community to apply for grants in the call for proposals for energy communities in Navarre.

Finally, the CEPIM energy community was not awarded these grants. Contact with the Government have been held to explain that Industrial Energy communities are much more complex than regular ones. For this reason, the GN has decided to create a specific line of grants only for energy communities in industrial parks. CEPIM will apply for these aids in 2026.

C6.10_Act 6. Launch of the pilot energy community. A support video has been created for the Sakana energy community to showcase and promote their project. A public presentation of the energy community will take place on November 27th 2025. (AC6.10.3.6_4)

Action	**Foreseen in the Grant Agreement**	**Achieved in phase 4**	**Main factors of success and lessons learned**
C6.10	**Objectives:** Make industrial areas more resilient to climate change. Improve knowledge in EC in industrial parks. Viable pilot projects to be replicated within the region. **Expected results:** To boost energy communities in industrial parks.	Catalogue of measures. AC6.10.2_4 Feasibility study EBK Sakana. AC6.10.3.4_4 Legal model for renting a rooftop. AC6.10.3.1_4 2 energy communities with SME were created. AC6.10.3.2_4 Legal documents - new energy community. AC6.10.3.3_4. AC6.10.3.5_4 Video EBK Sakana AC6.10.3.6_4	Collaboration between public and private bodies is key for the success of the project. It enables the development of public policies assuring the participation and future responsibility of citizenship. Industrial Energy Communities are much more complex than residential ones. SMEs and citizens do not work at the same rhythms. More effort and support is needed.

C6.11: Review of scenarios in built environments

Foreseen start date: 01/2024 Actual start date: 01/2024
Foreseen end date: 12/2025 Actual (or anticipated) end date: 12/2025

This action has been developed by NASUVINSA during Phase 4. The goal is to evaluate the activities, tasks and projects carried out in C6 with the aim of determining their transferability, their effectiveness as adaptive land management measures and their ability to contribute to reducing overall GHG emissions.

It was proposed to evaluate the outcome and scope of actions C6, based on the three criteria mentioned above, in terms of the costs and benefits of each action compared to the cost of inaction, for each of the risks existing in the reference scenario used (RCP8.5).

C6.11. Act. 1. Evaluation of actions and activities carried out and future planning and programming. The aim of this activity is analyzing and evaluating the impact of C6. Two main steps have been carried out:

1. Evaluating the outcome and scope of actions C6, based on the three criteria above mentioned.
2. Analyzing the results obtained, extracting of valuable lessons for the future, and proposing improvements.

C6.11. Act. 2. Deliverables and post-project tools. The aim of this activity is generated material that could be used after LIFE project. In this regard, four main documents have been elaborated:

- Cost-benefit study and recommendations (AC6.11.1_4)
- Lesson learned guide (AC6.11.2_4)
- Climate characterization model (AC6.11.3_4)
- Dissemination guide (AC6.11.4_4)

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C6.11	**OBJECTIVES:** The goal is to evaluate the activities, tasks and projects carried out in C6 with the aim of determining their transferability, their effectiveness as adaptive land management measures and their ability to contribute to reducing overall GHG emissions. **EXPECTED RESULTS:**	5 activities analysed in deep, due to the fact they have direct impact in energy consumption: C6.3, C6.4, C6.7, C6.8 and C6.9 4 main documents have been elaborated: - Cost-benefit study and recommendations (AC6.11.1_4) - Lesson learned guide (AC6.11.2_4)	Cost-benefit analysis with real cases which can be extrapolated to the whole region. Despite in some cases the Net Present Value (NPV) is positive, in other ones it is not. However, social benefits, which cannot be measured are always positive. One of the main lesson learned is that regional

	Cost-benefit analysis of main activities carried out in area C6.	- Climate characterization model (AC6.11.3_4) - Dissemination guide (AC6.11.4_4)	government has a crucial role in the fight against climate change, acting as spearhead.

One of the main problems encountered during the execution was the lack of objective economic data. It cannot be forgotten that some activities of this area were focused in general conception about climate change in certain thematic scope, for instance, climate change in landscape. Therefore, their main deliverables were public guides or roadmap.

Moreover, despite of not obtaining enough positive results, this study will provide to political makers information on how to design efficient measures and what should be avoided with respect to energy renovation.

ACTION C7.1: Building of strategic capacities.

Foreseen start date: January 2018 Actual start date: October 2017
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

Following the training trends of the three former phases, LIFE NAdapta has developed new training offers focused on the project results and **knowledge transfer to a wide public**. The activity is focused on building and reinforcing strategic capacities on climate change concepts and technical aspects, to respond to a clear need to train technical teams of the public entities, as well as territorial stakeholders and citizens (general public). PMO designed capacity-building actions around two pillars:

- **General training**: targeted at increasing knowledge of a wide public on climate change and climate adaptation.
- **Specific training**: related to technical approaches and methods in the different areas of the project, and sharing technical knowledge with and from other EU projects on climate change.

Action	Foreseen in the revised proposal	Achieved in phase 4	Main factors of success and lessons learned
C7.1	**Objectives:** Improve capacities among beneficiaries to successfully implement HCCN and contribute to its future sustainability. Contribute to a wider public capacity building. **Expected results:** Training roadmap MC7.1 (phase 1)	5 OPEN DAYS as trainings for professional and general public. 18 technical training sessions organized by LIFE NAdapta Project staff attended 35 sessions on technical topics related to the area of work. The new version of the NAdapta exposition has been showed in 37 places during 322 days in total in 2025 (nearly all year long). LIFE NAdapta teams have attended 30 training sessions on funding opportunities (linked to C.7.2). **More details on programme and attendees in annex AC7.1_4.**	The NAdapta OPEN DAYS serve as a key forum for sharing more technical knowledge with professionals and vocational training students. In many cases, they also engage the local community, depending on the topic being addressed. Furthermore, the training sessions organized with INAP have generated significant interest, as they address a demand from the public sector for climate change training.

ACTION C7.2: Coordination with other Funding Mechanisms

Foreseen start date: January 2018 | Actual start date: October 2017
Foreseen end date: 31/12/2025 | Actual (or anticipated) end date: 31/12/2025

During phase 4, the activity regarding other funding mechanism focused on gathering information related to the new European framework programme 2021-2027. In addition, PC, PMO and PMB dedicated efforts to identify funding options at national level.

The project beneficiaries attended 30 informative and training sessions on European funding programmes, European strategies, and projects opportunities. Among these sessions, Government of Navarre has organized several forums to improve networking between project managers, local stakeholders, and foster knowledge on funding mechanisms.

LIFE NAdapta also receives assessment regarding funding opportunities. Both departments, DRyMA and DG Foreign Affairs, have continuous contacts and meetings to be updated on new project opportunities. Moreover, the project beneficiaries do a surveillance of EU funding programmes and calls that allows implementing complementary measures through new projects.

In phase 4, Government of Navarre applied to LIFE SIP CLIMA call in March 2025 with a new strategic project called "ENERKLINA" (under evaluation process).

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
C7.2	**Objectives:** Contribute to the full implementation of the HCCN (KLINa) **Expected results:** Mobilization of 500,000 €/year Brokerage events participation Deliverable DC7.2_3	Participation to 39 informative sessions on funding opportunities and European strategies (16 in 2024, and 14 in 2025). Among the 30 sessions, Government of Navarre organized 7 sessions on new funding calls and programme, and European strategies. **Detailed information and data available in deliverable DC7.2_3.** EU programmes and calls surveillance by each project beneficiary. 40 European projects on climate change under execution among the project beneficiaries.	The activity on funding mechanism, identifying new financial opportunities, and boosting new projects follows the same trend than the previous phases. The project beneficiaries apply to funding mechanisms, achieving several projects and funding on – or related to- climate change topics. The funds mobilized during the 2024–2025 period (Phase 4) by the LIFE NAdapta partners through the 40 climate change projects reach a total of 2,557,587.55 euros. They cover nearly all the areas of the project (unless C5-Health).

ACTION D1 Monitoring of the project´s contribution to the implementation of the SCCN 2010-2020

Foreseen start date: January 2019 Actual start date: October 2017
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

D1.1 Contribution to the implementation of the SCCN 2010-2020

Since the approval of the Navarre Climate Change Roadmap (HCCN-KLINa or KLINa) in 2018, a period of management, monitoring and implementation of the defined measures has started and has continued in phase 4. KLINa includes work areas (with their corresponding measures) of mitigation, adaptation and crosscutting measures. The monitoring of the KLINa measures during phase 4 has been carried out through its governance system, in which LIFE NAdapta participates, and which is being updated after the approval of the LFCCTE in 2022. The collaboration with LIFE NAdapta is reflected in the following documents, in which the project is mentioned, and available to the public.

https://gobiernoabierto.navarra.es/es/gobernanza/planes-y-programas-accion-gobierno/hoja-ruta-del-cambio-climatico and https://klina.navarra.es/

- Work Programme KLINa 2024-2026 (2025), which includes the actions to achieve KLINa's objectives in the period 2024-2026.
- Report KLINa 2023 (2025) and-2024 (2025), which contains the monitoring of KLINa's targets and measures, focusing on data for 2023-2024.
- Monitoring of the evolution of key parameters: development of the KLINa and LIFE NAdapta indicator dashboard (mitigation and adaptation) and web portal in the framework of LIFE-IP NAdapta-CC, and are also displayed on the homepage of the GN Climate Change Office : https://cambioclimatico.navarra.es/es/

KLINa incorporates LIFE NAdapta actions and explicit references to it, and in turn, LIFE NAdapta contributes to the implementation of adaptation and cross-sectoral measures of KLINa and to the dissemination of the implementation status of many of its measures (mitigation, adaptation and cross-cutting actions). Many of KLINa's adaptation objectives are implemented thanks to the actions of LIFE NAdapta and especially with the cross-cutting actions (TR) (see deliverable DD1_4).

The cross-cutting area of KLINa, to which LIFE NAdapta contributes to a large extent, is the general framework to give coherence and complement the set of KLINa measures. Achieving a CC resilient territory implies acting on a set of principles to make them concrete: promoting sustainability, mainstreaming policies through monitoring and coordination of strategic GN plans, organising a network of collaboration between the actors involved, and extending adaptation and resilience both in the territory and in the planning and tools available.

Navarra has updated its climate and energy strategy through the new integrated **ENERKLINA2050 roadmap** (approved in February 2026), bringing together the PEN 2030, KLINa and Regional Law 4/2022. This new tool, aligned with the EU and the Spanish Government, aims to achieve decarbonisation by 2050 through mitigation and adaptation measures, setting out the Government's guidelines.

D1.2 Contribution to strategic capacity building

LIFE-IP NAdapta-CC has contributed to strategic capacity building in Navarre during this phase 4 with KLINa and the GN Climate Change Office. The project coordination staff are attached to this organisational unit within GN, the GN Climate Change Office, with the project coordinator and the head of department being the same person. Several training sessions and workshops have been

organised for project beneficiaries and stakeholders, as reported in deliverable DD1_4 and annex AC7.1_4 Capacity building and training. As in other phases, the project consortium also attended training and information sessions to improve their technical knowledge and to identify funding opportunities organised by the GN (see action C7.2).

D1.3 Mobilisation of other funds for SCCN actions

The funds mobilised up to phase 4 include different sources of funding to achieve KLINa's objectives: European projects and funds (AECT, H2020, HORIZON EUROPE, ELENA – BEI, LIFE PROGRAMME, ERDF (INTERREG), EAFRD), national projects (PIMA Adapta, PIMA Residuos, PIMA Frío, PIMA CC, CLIMA projects, Fundación Biodiversidad), funds from the GN (sectoral plans, subsidies) and funds derived from Next Generation EU (NGEU).

Action	Foreseen in the Grant Agreement	Achieved	Main factors of success and lessons learned
D1	**Objectives:** Increase the implementation rate of the Climate Change Strategy **Expected results:** Update the SCCN Contribute to implement 100% of the SCCN actions Increase strategic capacities Mobilization of additional resources to fully implement the SCCN	Main achievements: **deliverable DD1_4**. LIFE NAdapta actions are integrated within KLINa and directly contributes to the implementation of KLINa´s adaptation and crosscutting measures. Development of KLINa governance system with the participation of LIFE NAdapta. Navarra has updated its climate and energy strategy through the integrated ENERKLINA 2050 Roadmap, approved the 25th of February 2026. KLINa and LIFE NAdapta have worked jointly in the monitoring of KLINa actions execution: Work Programme KLINa 2024-2026 (2025) and Report KLINa 2023 (2025) and 2024 (2025). Attendance to training sessions on sectorial plans, programmes and EU funds. See **deliverable DC7.2_4.** Total funds mobilized over eight years (2017-2025) for complementary measures: - €521,579,880 committed - **€327,126,320.60 spent**.	Good implementation of KLINa measures by 2025. The collection of KLINa and complementary measures implementation data is a challenge given the large number of data sources involved. The KLINa and LIFE NAdapta teams will continue to work together in a coordinated way on the monitoring and implementation of the **new Energy and Climate strategy** approved in Navarra on the 25th of February 2026, named ENERKLINA2050.

<u>ACTION D2</u> Monitoring of the project´s impact on climate objectives (increased climate resilience and/or reduction of greenhouse gas emissions)

Foreseen start date: October 2017	Actual start date: March 2018
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

As a global overview, action D2 shows a very positive performance. Most indicators have continued improving during Phase 4 and a significant number of them already exceed the targets established for 2025, with several also on track to reach or surpass the 2030 objectives.

<u>C1 – Governance and mitigation</u>

The adaptation of local entities through the Covenant of Mayors continues to be one of the strongest achievements of the project. By 2025, the number of commitments has reached 226 agreements, clearly exceeding both the 2025 (100) and 2030 (200) targets. In parallel, 91.7% of the population and 73.3% of the territory of Navarre are now covered by Covenant of Mayors commitments, well above the foreseen objectives. The committed reduction of greenhouse gas emissions has reached 1,008 ktCO2e, meeting the 2025 target and progressing steadily towards the 2030 goal.

<u>C2 – Water</u>

In the water sector, 50 municipalities have approved self-protection plans against floods, exceeding the target of 40. Flood alert systems are fully operational, with alert numbers far above initial expectations, confirming the effectiveness of risk-prevention measures. Wastewater treatment plant adaptation indicators show very solid results, with 82 online analysers and sensors implemented in WWTPs (versus a target of 45). A total of 37 combined sewer overflows are equipped with monitoring devices. Due to methodological limitations, the previously used indicator based on surface area for river floodplain recovery has been replaced by the number of projects drafted for river space recovery, reaching three projects and fulfilling both the 2025 and 2030 objectives.

<u>C3 – Forestry</u>

Most forestry indicators have continued to improve during Phase 4, while others remain stable due to the completion of the associated actions. Notable progress can be observed in forest fire prevention, adaptive forest management and biodiversity conservation. Indicators such as forest surface under management plans, surface under preventive clearing actions, inclusion of climate-vulnerable species in service contracts and agroforestry agreements with landowners largely exceed the 2025 targets, with several also meeting 2030 objectives.

<u>C4 – Agriculture and Livestock</u>

Agriculture and livestock indicators show an overall upward trend, although the evolution is uneven across indicators. Outstanding results include biomass reduction through silvopastoralism, which reached 68.5%, exceeding the 2025 and 2030 targets. Other indicators related to water efficiency, soil conservation and alternative phytosanitary practices continue progressing, although at a slower pace in some cases, reflecting structural constraints of the sector and methodological adjustments.

<u>C5 – Health</u>

All health-related indicators that had already met their targets in previous phases remain above the required values. The population covered by surveillance systems for high temperatures, pollen and air quality encompasses the entire population of Navarre (678,338 inhabitants). Monitoring of Aedes albopictus has been consolidated, with 67 monitoring points, exceeding the project objectives.

C6 – Infrastructure and spatial planning

Indicators related to building energy performance and territorial planning show consistent improvement. By 2024, 49.7% of private dwellings have an energy rating, and 6.8% reach A–B ratings, exceeding the 2025 targets and approaching 2030 values. Landscape-related indicators also present very strong progress, with 192 landscape units incorporating climate change adaptation measures and 32 singular landscape studies completed, fully meeting the project objectives.

Communication, dissemination and replication

Communication and dissemination indicators demonstrate outstanding results. Almost all indicators largely exceed their 2025 and 2030 targets, including notice boards, roll-ups, brochures, videos, press releases, media impacts and website visits. The project website has reached 79,852 visits (*sessions*), largely exceeding the initial target (*). Replication activities, transfer of the regional approach and communication to EU regions have also progressed well beyond expectations.

(*) Please be aware that the unit differs from LPI that measures *unique visits*.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
D2	**Objectives:** Provide tangible and measurable impact on climate objectives. **Expected results:** Definition of indicators, methodology and tools. Performance indicators monitoring. Evaluation of project findings and outcomes.	Most of the indicators show positive progress, and several values have reached the goals set for the end of the project in 2025, and beyond five years (2030). More details about data collection and indicators' evolution in phase 4 are available in **deliverable DD2.2_4**.	The overall pace of project implementation has been very solid, allowing most indicators to meet or clearly approach the targets set for 2025, with several already exceeding expectations and progressing towards the 2030 objectives. While a limited number of indicators were defined with a particularly ambitious scope and may prove challenging to fully achieve, their evolution remains positive and consistent with the project's long-term objectives.

ACTION D3 Monitoring of the project´s socio-economic impact.

Foreseen start date: April 2018	Actual start date: April 2018
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

Action D3 confirms that the LIFE-IP NAdapta-CC project has generated a clear and measurable socio-economic impact across all strategic areas. During Phase 4, most indicators have continued to evolve positively, allowing a consistent comparison with the targets defined for 2025. The overall trends confirm a strong contribution to regional development, employment, investment mobilisation and benefits for the population of Navarre.

C1 – Governance, monitoring and local environment

The socio-economic impact related to governance and local climate action continues to strengthen. Population coverage under the Covenant of Mayors now exceeds 90% of Navarre's population, confirming the wide territorial uptake of local climate commitments. Local investment in adaptation and mitigation measures has increased significantly, particularly since 2023. The evolution of the implementation of measures can be followed online on the regional SECAP portal. Energy poverty indicators show an improvement compared to previous phases, highlighting the positive social dimension of climate action at local level.

C2 – Water

In the water sector, socio-economic indicators show solid progress. All objectives related to the number of municipalities connected to flood alert platforms, population covered by self-protection plans and municipalities with approved flood-risk plans have been achieved. Investments in early warning systems, monitoring equipment and wastewater treatment plants have generated clear benefits for the population, with 345,560 inhabitants benefiting from improved water management and risk prevention systems by Phase 4.

C3 – Forestry

Forestry-related socio-economic indicators present very strong results. Investment in forest fire prevention, clearing and conservation measures has largely exceeded the 2025 targets. The economic value of timber extracted from certified forests has tripled the original objective, exceeding €63 million, while investments linked to job creation for natural resource management have also surpassed expected values. With respect to forest fire risk, the number of municipalities and population benefiting from prevention measures has increased well beyond initial projections reaching over 31,000 people across 169 municipalities, far exceeding the targets set for 2025.

C4 – Agriculture and livestock

Socio-economic impacts in agriculture and livestock are particularly significant. Several indicators reach their maximum relevance at the end of the project due to their methodological nature; nevertheless, current values already demonstrate substantial progress. The economic value of new climate-adapted crop varieties has increased significantly, exceeding €1 million, while conservation agriculture practices generate substantial savings, including over €11 million linked to reduced mineral nitrogen use. On the other hand, decision-support tools continue to expand their reach with increasing stakeholders and professionals benefiting from advisory services and trainings. Additionally, biomass reduction through silvopastoral management has reached nearly 70% (68.55%), confirming both environmental effectiveness and cost-efficiency.

C5 – Health

Health-related socio-economic indicators show consolidated achievements. Surveillance systems for heat stress, air quality and pollen now cover almost the entire population of Navarre (661,537 inhabitants). The number of analysed samples for emerging risks and the implementation of vector control plans confirm the strengthening of prevention capacity and public health resilience, with most targets reached or exceeded.

C6 – Infrastructure and territorial planning

Socio-economic indicators linked to infrastructures and territorial planning demonstrate a substantial mobilisation of public and private investment. By Phase 4, investments in landscape and climate adaptation measures amount to almost 700,000 euros, while more than 26 million euros in grants for urban rehabilitation and energy efficiency have been awarded. As a result, over 5,500 dwellings have been rehabilitated, delivering long-term social and economic benefits to citizens.

Communication, participation and fund mobilization

Participation in dissemination, training and outreach activities has continued to increase, reaching more than 7,000 attendees across all areas by Phase 4. Water and agriculture-related actions show the highest attendance figures. In parallel, fund mobilization has continued to rise throughout the project with €327 million spent, which confirms the strong leverage effect of LIFE NAdapta.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
D3	**Objectives:** Assessing the socio-economic impact of the project actions on the local economy and population. **Expected results:** Initial situation in socio-economic terms of the region of Navarre regarding climate change Strategy to maximise the socio-economic impacts of the project in the region Quantification of the specific socio-economic impacts previously identified	Most of the D3 indicators have reached the target values set for 2025. In some cases, although some indicators might stay below the estimated final value, the impacts remain positive for Navarra society, institutions and stakeholders. More details are available in **deliverable DD3_4.**	A number of indicators have been defined without explicit target values, mostly due to their exploratory nature. In these cases, performance is evaluated through the analysis of trends and the evolution of the data over time, which overall shows a clear and consistent positive progression.

<u>ACTION D4</u> Monitoring of the impact in cross-sectorial policies.

Foreseen start date: January 2019	Actual start date: October 2017
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

KLINa, Navarre's Climate Change Roadmap is a comprehensive tool based on the coordination of the GN's sectoral policies and the cooperation of territorial actors and the development of Navarre's society, with the aim to tackle climate change. After its approval in 2018, of the regional government is in charge of monitoring and implementing the actions defined. Among the expected advances is the drafting of a LFCCTE. In Phase 4, work was carried out on the KLINa 2023 and 2024 Activity Report and the KLINa Triennial Work Programme 2024-26, which is the tool for its development. Since the approval of the LFCCTE, and the new Government structure (after elections in May 2023), changes have taken place in different areas, such as governance and coordination of the measures against the effects of climate change in Navarre, and therefore also in KLINa and LIFE-IP NAdapta-CC:

a. Government bodies: the department or departments responsible for CC and Energy (since 2023 Rural Development and Environment and Industry and Ecological Transition and Digital Enterprise); after the establishment to the Interdepartmental Commision in 2023, Social Council on Climate Change Policy and Energy Transition was created in 2025, expert advisory group.
b. Navarre Energy Transition Agency (ATENA): to support the achievement of objectives in the field of energy transition and to develop a sustainable energy model based on renewable energy sources, distributed generation, and self-consumption (established in 2025).

During Phase 4, the following initiatives and plans related to climate change have continued or have been initiated:

- Programmatic Agreement for the GN 2023-2027 includes CC in the framework principles.
- Update of the Energy Plan of Navarra (PEN) 2030. Update with the aim of aligning with new state and European objectives, and meeting energy demand while guaranteeing the security and quality of supply in a sustainable manner.
- Financial policy and taxation: Green, Social or Sustainable Bonds, linking financial policy with sustainable strategy. Taxation rules related to CC (waste, renewable energies, electric vehicles, forest management, fuels, etc.). (Deliverable DD4_4)
- Article 17 of LFCCTE establishes the obligation to incorporate the climate perspective into the General Budget of Navarre, including the allocation of found for CC adaptation, mitigation and Energy transition. The identification and quantification of these allocations are addressed in the climate perspective reports included in the 2024 and 2025 general budgets.

In May 2025, the GN proposed an amendment to the LFCCTE in order to improve several aspects, including the introduction of new sources of revenue for the Climate Found and the incorporation of renewable energy in new urban developments for self-supply. Among other measures.

Other plans and strategies take into account the climate change perspective and contribute to meeting KLINA's objectives. The list of plans and strategies is very extensive; please refer to the deliverable for more detailed information (please see **deliverable DD4_4**).

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
D4	**Objectives:** Analysis of governmental plans and programmes within the CICC. **Expected results:** Support a coherent and integrated fight against CC in the different policy areas	Comprehensive management of CC stakes thanks to the governance system of KLINa. KLINa activity report 2023 (2024) and 2024-26 work program (2024). Initiatives and plans approved that include climate change and climate perspective reports. (Deliverable DD4_4) LFCCTE (2022). Contributions from LIFE NAdapta in the field of Adaptation. Changes in CC governance, and tools for the planning, implementation and evaluation of the Law itself.	During this Phase 4, changes have been made related with LFCCTE approved are continuing. The integration of the CC variable in sectoral policies is a challenge and policy makers sometimes find it difficult to relate their activity to CC. The new governance bodies and tools for the planning, implementation and evaluation (LFCCTE) can help to improve this.

It is necessary to ensure the integration of CC in sectoral policies, in the approval and implementation of plans and strategies, and in the systematisation of the identification, monitoring and data management of sectoral policies related to CC.

<u>ACTION E2:</u> Communication and Dissemination Tools.

Foreseen start date: October 2017	Actual start date: January 2018
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

During phase 4 the **communication strategy** has maintained the continuity established since the beginning of the project, while placing a stronger emphasis on disseminating final results, lessons learned and flagship actions. Existing materials produced in previous phases have continued to be widely used, complemented by new communication products directly linked to the outcomes achieved in the final stage of implementation.

A particularly noteworthy action during this phase has been the deployment of the **new itinerant exhibition on climate change and adaptation** (new design and content in 2024, and launch in 2025), as well as the continued and expanded use of information posters linked to public health, especially those related to heat waves and air quality. In parallel, the consolidation of a standardised visual identity for events—through dedicated posters or images accompanied by website news and social media posts—has become common practice. This integrated approach has reinforced the multisectoral dimension of the project and facilitated the involvement of a wide range of stakeholders, fostering synergies, participation in conferences, and networking activities.

The **project website** has consolidated its role as a reference platform, not only for monitoring project progress but also as a comprehensive information hub on climate change and adaptation in Navarre. During Phase 4, 610 news items were published on the website, covering project actions, complementary regional initiatives and relevant national and international developments. This sustained updating of content, together with the continuous expansion of the multimedia and documentary repository, has contributed to a steady increase in web traffic, reaching 29,367 visits during the fourth phase and a cumulative total of 79,852 visits since the start of the project. The website has also increasingly been recognised by external entities as a point of reference for disseminating climate-related events and information.

With regard to **media** presence, LIFE-IP NAdapta-CC has continued to receive significant coverage in institutional press releases and partner communications during Phase 4, generating several hundred impacts in regional, national and international media, as well as on digital platforms and social networks. The project has also maintained a strong presence in radio and television, including interviews and press conferences linked to key milestones. Scientific and technical dissemination has remained an important component of the communication strategy, with several new publications released during this phase, including high-level peer-reviewed articles. In addition, the monthly LIFE-IP NAdapta-CC newsletter—issued except during the summer period—has been fully consolidated as a regular dissemination tool, helping to amplify news published on the website and increase overall visibility.

Audiovisual communication has also been reinforced through the publication of new videos related to different thematic areas of the project, such as local adaptation actions, forestry and health, primarily through the official Navarra Green YouTube channel and the channels of project partners. Social media activity has continued to rely on the project's official accounts and partner networks, with the hashtag #LIFE_IP_NAdapta_CC remaining the main reference for identifying project-related content. As a highlight of the dissemination effort, the communication experience of LIFE-IP NAdapta-

CC was showcased in international and national forums, contributing to the project's positioning as a reference initiative in climate change adaptation.

Until year 2024 (phase 4), the communication company Gabineteseis (Seikaz Comunicación S.L.) has continued to provide comprehensive support to the project, covering events and actions, contributing to the production of website news and social media content, managing the project website and networks, and offering strategic communication advice. From year 2025 until the end of the project, Government of Navarre selected a new external assistance to reinforce and boost the final communication challenges during the last year of the project (public campaigns, more videos, project final video, LIFE NAdapta final event, Layman's report and increase impacts on social network). More details and impacts of the dissemination activities and events in DE4_4 chapter and DE4_4 deliverable and annexes.

Action	Foreseen in the Grant Agreement	Achieved	Main factors of success and lessons learned
E2	**Objectives:** - Development of communication and dissemination of results. - Replication and transfer strategy. **Expected results:** - Creation of the visual image of the project: project logo. - Project website in Spanish, Basque and English: 20,000 visits per year. - Social media channels. - Quaterly newsletter. - Mailings. - Roll-ups (1 at the beginning of the project). - 1 project video/phase. - Journalistic articles, technical articles and publications. - Press conferences and releases: 4 press releases per year. - 1,000 brochures and 1,000 leaflets per phase. - Contact with regions that signed "Letters of Interest" for exchanges and replication.	Communication materials and tools developed in the previous phases keep being used until the end of the project Website www.lifenadapta.eu is available in Spanish, Basque, English and French. A large part of the documentation generated is available online. In addition, periodic news are published and events and training courses are notified on the website as well. The social networks X (Twitter) and Facebook have been consolidated. YouTube channel of DRyMA continues to be the reference video repository where new contents have been uploaded. The project has collaborated with the DRyMA Instagram account, especially for public campaigns in 2025 (with the support of Navarra Capital external assistance). The publication of several scientific and technical articles in different areas of the project is also noteworthy. **Deliverable DE2.2_4** gathers all the information for this phase 4.	The outstanding job carried out in communication relays on to achieve a high visibility and impacts in the media and in society in general. One specific lesson to learn is that it is particularly important and necessary to count on high level professionals. This is possible thanks to external assistance specialized on communication and dissemination, even on social networks. In LIFE NAdapta, the external support has played a key role in ensuring coherence, professionalism and impact across all communication channels during the final phase of the project.

<u>ACTION E3:</u> Networking with other projects.

Foreseen start date: October 2017	Actual start date: October 2017
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

As defined at the beginning of the project, the networking activity focuses mainly on European projects, and official networks and platforms. Still, the consortium has enlarged the identification of stakeholders in order to promote LIFE NAdapta at each level, local, national, and European. In phase 4, the networking activity is based on sharing results and experiences, with a potential of transfer and replication.

All the partners made contacts with stakeholders, and they have capitalized existing synergies achieved in the previous phases of the project. Networking with other projects and stakeholders contributes to increase the visibility of LIFE NAdapta and the LIFE programme, as well as to generate interest and create opportunities for transfer and replication of the project results.

In this phase, LIFE NAdapta has maintained **active collaboration with 24 European projects**, participating in bilateral meetings, technical workshops, platform meetings and joint events. A major milestone was the co-organisation of the **LIFE Platform Meeting on Soils** (Pamplona–Euskadi, April 2024), which brought together more than 100 participants and 50 LIFE projects, reinforcing technical exchange and cooperation on soil resilience and climate adaptation. Another milestone of significance was the invitation from CINEA to participate in the **LIFE Programme stand at the POLLUTEC** international environmental fair in Paris (December 2024). Networking efforts were also intensified with projects focusing on agriculture, forestry, water management, territorial planning, health and climate monitoring, generating relevant synergies for the strategic and technical areas of the project.

At the **local and regional scale**, the project strengthened collaboration with entities such as municipalities adhering to the Covenant of Mayors, the City Council of Pamplona, the Commonwealth of the Pamplona Region (*Mancomunidad de la Comarca de Pamplona – MCP*) and the Network of Sustainable Schools of Navarra. These interactions contributed to technical capacity-building, awareness-raising and the implementation of adaptation measures, including the organisation of regional PACES events and thematic meetings with local stakeholders.

Institutional networking has also been key to built synergies. LIFE NAdapta has participated in several sessions with the Spanish Office for Climate Change (OECC), the Working Community of the Pyrenees (CTP) and the EU Mission on Adaptation to Climate Change, providing methodologies, technical tools and governance approaches developed within the project. These exchanges have strengthened cross-border cooperation, supported the development of the Pyrenean Climate Change Strategy (EPiCC) and facilitated access to complementary funding opportunities.

In total, during phase 4 the project has participated in 170 events, of which 60 were specifically dedicated to networking and another 110 focused on technical dissemination, generating new contacts and reinforcing cooperation opportunities. These interactions have enabled the transfer of LIFE NAdapta's regional approach and technical results across multiple sectors, as well as the replication of concrete actions such as the implementation of SUDS, the development of PACES in additional municipalities, the expansion of Local Energy Communities and the creation of new indicator platforms both within and beyond Navarra.

The networking activity carried out in this phase continues to boost the project's long-term impact, supporting the dissemination and uptake of its methodologies, tools and strategic vision for climate change adaptation in Navarra and across Europe.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
E3	**Objectives:** Promote networking with other projects **Expected results:** Identification of related projects, establish networking with projects to share experience, knowledge and best practices, participation in international workshops and meetings.	Networking activity detailed in deliverable DE3_4. Networking with 24 new projects in phase 4 (to be added to 81 identified in phase 1, 28 in phase 2 and 28 in phase 3). Attendance to 60 events with networking opportunities. Attendance to another 110 dissemination events with opportunities to make new contacts and share information. These cases also lead to networking synergies.	PMO has an important responsibility to accompany the project partners to promote networking activity thanks to the share of events information and contact opportunity, especially with respect to European projects. The participation to meetings and events leads to networking synergies since it is a clear opportunity to share knowledge, results and tools of the project. Making contacts and identifying stakeholders are key steps for networking activities.

ACTION E4: Climate change information point and communications events.

Foreseen start date: October 2017	Actual start date: March 2018
Foreseen end date: 31/12/2025	Actual (or anticipated) end date: 31/12/2025

Project dissemination during phase 4 (2024–2025) has been carried out through a wide range of communication and dissemination activities, in line with the objectives and actions established in the Communication Plan developed under Action E2. Coordination of these activities continued to be ensured by the Communication and Dissemination Committee, which has remained active throughout the final phase of the project.

During this phase, **dissemination activities** were predominantly organized in a face-to-face format, while online or hybrid modalities were used in a complementary manner when appropriate, particularly for meetings, training activities and national or European networking events. In total, during Phase 4, 30 dissemination events were organized directly by LIFE-IP NAdapta-CC, and the project participated in more than 80 additional events organized by third parties, resulting in over 110 dissemination activities. In parallel, the project also took part in around 60 networking-specific events, reinforcing knowledge transfer and exchange with other initiatives.

The dissemination actions implemented during Phase 4 focused mainly on **presenting results and impacts** achieved throughout the project, as well as on demonstrating the transferability and replication potential of the measures developed. All activities organized and attended during this phase are described in Deliverable DE4_4. Among the most prominent milestones are the organization of the third **OPEN DAYS** in 2024 (monothematic events) and the fourth and final OPEN DAYS in 2025, which coincided with the Final Event of LIFE-IP NAdapta-CC. From a thematic perspective, dissemination activities covered all technical areas of the project:

- In C1.1 Monitoring, communication activities focused on presenting the monitoring tools and indicators developed, including their practical use and the interpretation of climate data.
- In C1.2 Local environment, dissemination and engagement activities with local and regional authorities continued to be a priority, particularly in relation to the Covenant of Mayors for Climate and Energy (SECAPs). Regional events such as the Navarre Climate and Energy Meetings held in 2024 and 2025 helped consolidate local climate action and promote the exchange of good practices.
- In the C2 Water area, dissemination focused on tools and measures for water management and flood risk prevention, including digitalisation of the urban water cycle and the presentation of the Flood Early Warning System (SAT), through dedicated technical and networking events.
- In C3 Forestry, results were disseminated through OPEN DAYS, thematic events and participation in external conferences, with particular emphasis on adaptive forest management and the conservation and recovery of species such as the chestnut.
- In C4 Agriculture and livestock, communication activities continued to be primarily oriented towards professionals and technical staff. This area concentrated a high number of dissemination actions, including field demonstration days, technical seminars, participation in national and European events, and contributions to specialised conferences.
- In C5 Health, several dissemination actions targeted both specialised audiences and the general public, focusing on climate-related health risks such as extreme temperatures and vectors (e.g. tiger mosquito). These included technical events, awareness-raising activities and the development of updated prevention materials.

- Finally, in C6 Infrastructure and territorial planning, project results were presented in a variety of technical forums and public events, contributing to broader discussions on spatial planning, vulnerability assessment and adaptation measures.

The Climate Change Information Point, created in 2018, has remained operational throughout the project and has continued to serve as a reference channel for citizens and stakeholders. During Phase 4, this function has been fully integrated into the Climate Change Office of Navarre. through the General Electronic Registry (at cambioclimatico@navarra.es), ensuring traceability and transparency. During phase 4, a total of 41 formal interactions were registered through this system (15 in 2024 and 26 in 2025), mainly related to requests for information.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
E4	**Objectives:** Dissemination of the project through a climate change information point, communication events organised by the project, and attendance of beneficiaries to national and international workshops, seminars and conferences. **Expected results:** Start of an info point, organisation of communication events to increase knowledge and awareness about climate change and involve stakeholders. **Objectives for the whole project duration:** - 48 events for stakeholders. - 8 events for general public. - 3 events for replicating stakeholders and decision makers.	Navarre virtual infopoint has kept working. DRyMA received 22 requests in 2022 and 25 in 2023 through the General Electronic Registry of Navarra regarding information on climate issues. During Phase 3, the project staff organized 97 events, including four session under the OPEN DAYS 2023 framework. In addition, the project beneficiaries attended 82 events in total. Dissemination has been also carried out through other ways such as training activities and courses, university classes, through participation to final projects for university degrees, and institutional events of the Government of Navarre. Communication activities are detailed in **deliverable DE4_4**.	The OPEN DAYS organised in phase 4, including the Final Event, achieved an outstanding reception, confirming the high level of interest generated by the project results among both specialised stakeholders and the general public. The organisation of thematic, territorially focused events in Navarre to showcase project results has proven to be particularly effective, given that climate change impacts are strongly perceived at the local and regional level. During this phase, dissemination activities were mainly conducted in person, while online and hybrid formats were used in a complementary. Participation in stakeholder-led events at regional, national and European level has continued to provide LIFE-IP NAdapta-CC with strong visibility beyond Navarre. The project has frequently been invited to present its results as a reference experience, in areas such as local climate governance, flood risk management and early warning systems, and other adaptation-related measures.

<u>ACTION E5:</u> LIFE-IP NAdapta-CC Layman's report.

Foreseen start date: October 2017 Actual start date: March 2018
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

The LIFE-IP NAdapta-CC **Layman's Report** presents, in a clear, accessible and non-technical way, the main results, impacts and benefits of the project. Its objective is to translate the scientific, technical and policy-oriented work developed throughout the project into understandable messages for citizens, local stakeholders and non-specialised audiences, raising awareness about climate change impacts and, above all, about practical adaptation solutions implemented in Navarre. The report seeks to show that climate change adaptation is not an abstract concept, but a concrete, achievable and necessary response to protect people's health, ecosystems, economic activities and quality of life.

In line with this objective, the Layman's Report explains **why adaptation matters**, what climate change already means for Navarre, and how anticipatory action can reduce risks and vulnerability. It also highlights the added value of an integrated and cross-sectoral approach, showing how adaptation measures have been implemented coherently across water management, forests, agriculture and livestock, health, infrastructure, urban planning and local governance. Special attention is given to the role of municipalities, public services and citizens, underlining that adaptation is a shared responsibility.

The final Layman's Report takes the form of a visually oriented, **narrative-driven document of 28 pages**, available in Spanish, English and Basque. The three languages versions are produced in digital format (pdf). It is accessible through the LIFE-IP NAdapta-CC website and can be easily shared electronically. In addition, a limited number of printed copies (200) has been produced to ensure accessibility for target audiences with limited access to digital tools and to support dissemination activities among key stakeholders.

Structurally, the report describes the six main areas of action, combining concise explanations with concrete examples, figures, and highlighted pilot experiences that demonstrate tangible results on the ground. The document also emphasises the project's legacy, summarising the tools, methodologies, plans and capacities that will remain available beyond 2025, and pointing to future steps to maintain and scale up adaptation efforts.

The Layman's Report is a key communication product of the project, bridging the gap between technical results and public understanding. It contributes to strengthening social awareness, fostering ownership of climate adaptation measures, and supporting the transferability and replication of LIFE-IP NAdapta-CC outcomes both within Navarre and in other European regions.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
E5	**Objectives:** To present the results and benefits of the project to the general public, professionals and local policy makers.	- 3 language versions (Spanish, English, basque) - Printed versions only in Spanish (200) - Distribution in the final event (24th of October 2025).	A key issue to gather information on time much before the end of the project (about 6 months before) and to work with an external assistance for a nice design and creativity.

	Expected results: - 3 language versions (Spanish, English, basque) - Printed versions	- Distribution in other events, after the project and beyond 5 years (e.g.: in the LIFE Platform meeting on Integrated and Strategic projects in Bilbao 21-23 april 2026) - Layman's report available on the project website (link)	The product in itself has generated very nice opinions and positive reactions both for the content and the design.

F. MANAGEMENT AND MONITORING OF PROJECT PROGRESS

ACTION F1: Project Management.

Foreseen start date: October 2017 — Actual start date: October 2017
Foreseen end date: 31/12/2025 — Actual (or anticipated) end date: 31/12/2025

During phase 4, the different management boards (PMO, PMB, PTB > see Chapter 3 of the Final Report) held its respective meetings necessary for the good project implementation, such as the consortium meetings, the technical meetings, the communication meeting, or crosscutting meetings.

- **Project coordination meetings**: the project management office (PMO) organized six consortium meetings (3 in 2024 and 3 in 2025).
- **Project monitoring visits** with ELMEN-EEIG and CINEA project officer (Bernd DECKER): 2 meetings organized the 06-07 of February 2024, and the 26-27 of November 2025. Both monitoring meetings included filed visits. The first one in Arantxa (north of Navarra) and the second one in the municipality of Funes (south of Navarra) and in the city of Villava (next to Pamplona).
- **Technical meetings**: the project coordination team has organized a total amount of 43 technical meetings for the follow up and coordination of the thematic areas of the project.
- **Crosscutting technical meetings**: The project technical board (PTB) organized in this last phase 2 crosscutting technical working groups on emerging diseases vectors. As a reminder, since the second phase, the project consortium has identified crosscutting synergies between some areas of the project such as water management and agriculture, SECAP and water / forestry / agriculture, emerging risks and diseases due to invasive vectors for animals and for humans, or soil and landscape management.
- **Project coordination team**: the coordination team has organized 66 internal meetings on a weekly basis, for the day-to-day follow up of the coordination activity.
- **Communication meeting**: the communication and dissemination board (CDB) has organized 5 communication meetings to manage the dissemination events of phase 4, especially the last year (2025) with general public events and campaigns such as Paseo Sarasate (Pamplona), Tudela, Navarre Parliament public session, the first regional Climate Week and the project Final Event.

PMO kept working with the same coordination scheme based on consortium meetings and technical meetings. The coordination team gave a special importance to the day-to-day follow up of the project activities since the consortium had to prepare its respective parts for the final report, the Layman's report and the AFTER-LIFE plan.

At the same time, CDB had a key role to increase the communication and networking activities before the closing of the project, in order to increase impacts on the general audience and to boost transfer and replication opportunities.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
F1	**Objectives**: Management of the project to ensure achievement of project results.	- 6 Consortium meetings - 2 Monitoring visits with ELMEN-EEIG and CINEA (Bernd DECKER).	In general, the project management has been quite intensive. The different kind of coordination meetings

	Expected results: Coordination of the project according to the management structure: Project Management Office (PMO), Project Management Board (PMB), Project Technical Board (PTB), Communication and Dissemination Board (CDB). Monitoring of project development, both technically and financially. At least 2 coordination meetings / year, and 2 monitoring visits (ELMEN-EEIG). Technical assistance for the administrative and financial management.	- 43 Technical meetings in thematic areas - 2 Meetings of crosscutting technical working groups. - 66 Weekly internal coordination meetings - 5 CDB meetings - Technical assistance for the administrative and financial management, with the company named **Eurovértice**.	were useful to achieve good results and indicators. As mentioned in Chapter 3 of the FINAL REPORT, the coordination team has faced significant changes with respect to the project coordinator in DRyMA. Nevertheless, the good results obtained show that stable coordination team is an asset to reach an efficient management.

<u>ACTION F2:</u> Compilation of information for indicator tables.

Foreseen start date: October 2017 Actual start date: October 2017
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

In the past years, CINEA modified the nomenclature to change "KPI" into "LPI". Then, hereafter we refer only to LIFE Project Indicators (LPI).

During phase 4, PMO has been coordinated directly with ELMEN-EEIG monitors to review deeply the LPI definitions, methodologies and calculation of the values. It has been a quite consistent work to check again the meaning of each indicator, the correct data to be used, and the need to update it both in the deliverables and on the LPI online platform.

In this context, PMO would like to raise a special issue: in the case of several LPI (more o less half of them), the meaning of the indicator, the interpretation that can be made and the obligation to change methodologies are particularly difficult to understand for the project staff, for several reasons:

- Changing the methodology at the end of an 8 years project is quite hard to understand since this breaks the trends already analysed before. We lose then the logic right from the start.
- Therefore, the interpretation of the LPI modified makes no sense if we compare with the previous phases. We have of course to change the 8 years data set, which makes difficult in some cases to get back to the right databases.
- And last but no least, the former LPI (previously named "KPI") were all reviewed, evaluated, updated at the middle of the project, and approved in the former phases by NEEMO, ELMEN and CINEA. It looks like to work done in the previous years has no value.

Still, PMO understands that an improvement always holds special value. That's the reason why PMO has worked in that sense in order to close LPIs issue as good as possible in phase 4. But, just to give it some thought, probably it would have made sense to update the set in the mid-term review (at the middle of the project), when project climax is kind of better than at the end of the project when the overall pressure is quite high.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
F2	**Objectives:** contribution of LIFE NAdapta to the overall objectives of the LIFE Programme **Expected results:** Table of indicators by the end of Phase 4 (DF2)	Strong corrections of LPIs at the end phase 4, with the very useful recommendations of ELMEN-EEIG monitors. Table of LPI indicators updated online, and submitted for validation.	Former KPIs have been deeply modified under the coordination of ELMEN-EEIG monitors. Thanks to the support of ELMEN-EEIG monitors, it has been possible to update the full set of LPIs. The LPI review process has allowed clarifying several data sources and enhancing the information flows between Government services.

ACTION F3: After LIFE Plan.

Foreseen start date: 01/01/2025 Actual start date: May 2025
Foreseen end date: 31/12/2025 Actual (or anticipated) end date: 31/12/2025

The **After-LIFE Plan** of LIFE-IP NAdapta-CC aims to ensure the continuity, valorization, and long-term dissemination of the project's results beyond its formal closure. As defined in the original proposal and reinforced in the latest coordination meeting, the plan outlines how tools, methodologies, and outcomes will continue to be used, promoted, and transferred after 2025. It shows a structured communication and dissemination strategy-covering general and sector-specific climate events, technical seminars, training activities, and networking with thematic and institutional platforms.

Government of Navarre, as project leader, assumed the central role in coordinating this work. The **elaboration** started in may 2025 with the participation of each project partner. They all provided inputs on the continuity of their technical actions, and dissemination of results, data and tools. Given the strong interest of Government of Navarre in fostering stakeholder awareness, knowledge transfer, and replication at national and European levels, the After-LIFE Plan details concrete post-project dissemination actions, including participation in relevant events, transfer of results to other regions, climate policy communication, and specialized or general training sessions.

Action	Foreseen in the Grant Agreement	Achieved in phase 4	Main factors of success and lessons learned
F3	**Objectives:** To ensure the continuity and valorization of the results once this is ended as well as communication and dissemination. **Expected results:** After-LIFE Plan as a separate report of the final report	Collection of information among the project partnership. Analysis of the information received. Drafting the After-LIFE Plan. Publication of the After-LIFE Plan and delivery along with the FINAL REPORT.	The success of Action F.3 relies strongly on the leadership of Gobierno de Navarra, whose institutional commitment ensures continuity, visibility, and long-term integration of project results into regional strategies. The active participation of all project beneficiaries—contributing their dissemination tools, networks, and technical capacities—further strengthens the Plan's implementation. Additionally, the development of a diversified set of post-project actions—such as participation in sectoral events, publication of results, training sessions, and replication efforts—creates a solid foundation for sustained impact. Building on existing transferability strategies and established alliances

			enhances knowledge transfer, fosters replicability, and supports the long-term capitalization of NAdapta's results. .

7. Key Project-level Indicators

The LPI indicators (selected in phase 1) aim at measuring the impact of the project LIFE-IP NAdapta-CC (hereafter "LIFE NAdapta") and the complementary measures (KLINa) on the LIFE Programme objectives. **The selected overarching context is the whole territory of Navarre**, which is the scope of the project and the KLINa Climate Change Roadmap. Specific contexts have been created for each project area, indicating when the indicator is related to LIFE and/or to complementary funding. The list of LPI for LIFE NAdapta is:

1.5 *Project area/length*: surface of the region of Navarre.

1.6 *Humans (to be) influenced by the project*: whole population of Navarre

2. *Water*

2.1 *Terrestrial extent affected by the pressure or risk addressed*: this indicator measures the km2 of ARPSIS municipalities of Navarre currently affected by T=500 years floods that address flood risk through the elaboration of municipal self-protection and emergency plans.

3.1 *Waste management*: two indicators

3.1-LIFE project: contribution of the project to mass reduction of WWTP sludge through the composting pilot in C.4.1

3.1-Complementary funding (Waste Plan of Navarre): mass reduction in disposed urban organic waste through recycling (composting, digestion…).

4. Resource efficiency

4.1.1 *Consumption*: total final energy consumption in Navarre. Linked to complementary funding (KLINa).

4.1.3 *Renewable production*: total renewable energy production in Navarre. Linked to complementary funding (KLINa).

4.2.1 *Sustainable Forest Management*: forestry surface in Navarre under management plans elaborated or drafted from 2015 onwards, considering both LIFE and complementary actions.

4.3 *Resources efficiency-soil*: decrease in the cropland surface using no organic (chemical) fertilization, considering both LIFE and complementary actions.

8. Climate change mitigation

8.1.1 *CO_2 emissions*: CO_2 emissions in the energy production sector (electricity generation) in total annual values and per MWh. Linked to complementary measures (KLINa).

8.1.2 *Other GG emissions*: N_2O and CH_4 emissions in the energy production sector (electricity generation) in total annual values and per MWh. Linked to complementary measures (KLINa).

9. Climate change adaptation

9.1 *Adaptation area*: surface of municipalities that have endorsed the Covenant of Mayors and have approved a SECAP (action plans).

9.3 *Infrastructures targeted for climate resilience*: dwellings in Navarre with high energy efficiency certification (A/B/C and D), including new and refurbished buildings as a result of both LIFE and complementary actions.

10. Governance

10.2 *Involvement of non-governamental organisation (NGOs) and other stakeholders in project activities*: refers to the agents that are part of the AGORA KLINa platform, and other stakeholders related to the project actions.

11. Information and awareness raising in the general public

11.1 *Website*: number of unique visits to the LIFE NAdapta website.

12. Capacity building

12.1 *Networking*: members of interest groups based on AGORA KLINa platform, and other stakeholders associated to the project actions.

13. *Jobs*: number of jobs created in the framework of LIFE NAdapta.

14. Contribution to economic growth

14.1 *Running cost/operating costs during the project and expected in case of continuation/replication/transfer after the project period*: the value refers to LIFE NAdapta total project costs at the end of the phase (the sum of the project costs declared and audited since the beginning of the project).

14.3 *Future funding*: refers to funds to be mobilized between 2025 and 2030 (5 years beyond the end of the project).

It is worth remembering that **in phase 3**, PMO revised and updated several indicators and its respective values. As stated in LIFE programme rules and guidelines, the mid-term review includes the possibility to update the target values in 2025 and 2030. Additionally, PMO delivered a better explanation of methodologies and calculation. All these updates are available both on the LPI online platform and in deliverable DF2_3. The updates referred at that time to the following indicators:

- 2.1 Terrestrial extent affected by the pressure or risk addressed
- 3.1 Waste management
- 4.1.3 Renewable production
- 4.2.1 Sustainable Forest Management
- 9.1 Adaptation area
- 9.3 Infrastructures targeted for climate resilience
- 10.2 Involvement of non-governamental organisation and other stakeholders
- 11.1 Webiste
- 12.1 Networking
- 14.1 Running cost/operating costs during the project
- 14.3 Future funding

In phase 4, for the closing of the project, PMO received recommendations from ELMEN-EEIG with respect to LPI methods and guidelines. Thanks to this support, many data have been corrected due to

methodological adjustments. In these cases, the calculation method has been revised and more information has been provided through stronger references. LPI definitions, data sources and methodologies are detailed:

- **deliverable DF2_4**
- **annex AF2_4** LPI 3.1 NILSA phase 4
- **annex AF2_4** LPI 11 LIFE NAdapta webpage
- **annex AF2_4** LPI Surface not using organic fertilization

The final updated values are shown in the following table:

Indicator Code	Start value (2017)	PHASE 4 (2025)	Beyond 5 years (2030)	Unit
1.5	0	10.391	10.391	km2
1.6	0	349.916	700.000	Number of residents in the project area
2.1	328,00	201,18	168,72	km2
3.1 LIFE	25.128	19.647,02	0,00	tn/year
3.1 Compl. funds	67.634	44.405	7.286	tn/year
4.1.1	23.175.153	21.758.765	18.503.729	MWh/year
4.1.3	3.605.209.000	4.671.933.820	5.551.118.700	kwh/year
4.2.1	67.186	224.082	225.000	ha
4.3	222.789	199.347	180.459	ha
8.1.1 CO2	325.236,70	87.316,74	5.509,26	Tons of CO2 /year
8.1.1 CO2	0,06708	0,01802	0,00126	Tons of CO2/MWh
8.1.2 N2O	26,99	6,89	0,60150	Tons of N2O /year
8.1.2 N2O	0,0000055669	0,0000014223	0,000000137	Tons of N2O/MWh
8.1.2 CH4	21,74	5,27	0,31317	Tons of CH4 /year
8.1.2 CH4	0,0000045	0,0000011	0,000000071	Tons of CH4/MWh
9.1	25	6.971	10.391	km2

9.3	19.632	62.973	65.684	Number of facilities
10.2 Public bodies	0	277	300	Number of stakeholders involved due to the project
10.2 Private	0	270	300	Number of stakeholders involved due to the project
11.1 Nº unique visits	0	50.232	53.000	Number of unique visits (estimado con datos de usuarios únicos)
12.1	0	16	20	No. of individuals
13	0	8,24	34	No. of FTE
14.1	0,00	15.219.304,06	20.000.000,00	€ (euro)
14.3	0,00	0,00	4.780.695,94	€ (euro)

8. Next phase: changes/adjustments

There have been no major deviations at the consortium level by the end of the project. However, there have been some deviations in the partners' budgets, as well as small budget changes and agreements between partners, which are explained in the next section.

9. Comments on the financial report

Prior to introduce and develop this section, it is important to remark that an amendment for merging the phases was signed in April 2022. For phase 3 and forward, there is a single (merged) budget that is no more split into phases.

9.1. Summary of Costs Incurred

The overall project budget has not been fully spent finally, with a small portion remaining unspent. The final budget execution percentage is close to 98%. Therefore, it is clear that there has been a good alignment between the final project expenses and the executed budget.

Cost category	**Approved budget. Eligible costs (€)***	**Consolidated cost statement for all four phases. Eligible costs (€)**	**Percentage of costs incurred (from Phase 1-4) per whole budget (%)**
Personnel	7.901.140,59 €	7.879.061,49 €	99,72%
Travel	359.209,10 €	129.447,99 €	36,04%
External Assistance	3.923.503,29 €	3.864.925,91 €	98,51%
Infrastructure	86.383,00 €	86.212,85 €	99,80%
Equipment	1.186.407,65 €	1.309.595,28 €	110,38%
Prototype	525.958,84 €	463.264,15 €	88,08%
Land Purchase			
Consumables	494.479,35 €	375.364,44 €	75,91%
Other Costs	69.731,54 €	115.776,55 €	166,03%
Overheads	1.018.277,00 €	995.655,40 €	97,78%
TOTAL ELIGIBLE COSTS	**15.565.090,36 €**	**15.219.304,06 €**	**97,78%**

The main deviations from the general project budget have been the excess in the "Other Costs" expenditure item, which is generally explained by having a very small original budget that did not account for certain expenses such as conference fees or travel-related expenses, including costs not limited to staff from the beneficiaries. The existence of a low budget allocation leads to a high percentage of excess, even though the absolute amount of the excess is not significant.

Regarding the underspending in the travel budget, one of the main reasons for the travel budget item being well below the allocated budget is that travel was reduced vastly due to the COVID-19 pandemic, which prevented participation in international conferences and reduced mobility for fieldwork during 2020 and 2021.

Despite underspending and overspending of some costs categories, budget shifts clearly remain under the 20% threshold allowed by the LIFE Programme. The variations on the contractual budget and final declared budget are commented below. It is also important to highlight that the 2% rule regarding personnel expenses and budget flexibility rules have been successfully adhered to.

The total costs shown in the above table come from the individual budgets executed by each project beneficiary. The expenses per partner are detailed in the tables below.

01. GOVERNMENT OF NAVARRE

01. GN	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 2.405.818,73	€ 2.052.614,71	85,32%
2. Travel and subsistence	€ 63.967,41	€ 42.858,29	67,00%
3. External assistance	€ 1.487.488,52	€ 1.376.045,91	92,51%
4. Durable goods	€ 92.000,00	€ 85.792,03	93,25%
Infrastructure	€ 0,00	€ 0,00	
Equipment	€ 92.000,00	€ 85.792,03	93,25%
Prototype	€ 0,00	€ 0,00	
5. Land purchase / lease	€ 0,00	€ 0,00	
6. Consumables	€ 96.260,10	€ 74.806,52	77,71%
7. Other costs	€ 49.600,00	€ 86.479,14	174,35%
8. Overheads	€ 293.659,43	€ 260.301,76	88,64%
TOTAL	€ 4.488.794,19	€ 3.978.898,36	**88,64%**

The major deviations of GOVERNMENT OF NAVARRE budget (this covers both ISPLN and DRyMA costs) are observed for OTHER COSTS, CONSUMABLES AND TRAVEL.

The underspending In the CONSUMABLES is partially due to works and costs that could not be managed in phase 1 + 2 because of the pandemic. Some of the costs budgeted in this category are mostly related to dissemination materials (brochures, leaflets, papers, press releases, videos…).

The overspending in the OTHER COSTS category is directly linked to the underspending in the TRAVEL budget category, since many travel-related expenses, including costs not limited to staff from the Government of Navarre, were charged to the Other Costs budget line. This significantly increased that budget heading at the expense of a reduction in the travel budget line.

It is important to remark that DRyMA has transferred part of its budget to GAN-OREKAN and NASUVINSA, mostly within PERSONNEL cost category through internal agreements. Bearing in mind these internal arrangements, the percentage of budget execution of GN is close to 100%.

02. INTIA

02. INTIA	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 1,051,894.00	€ 1,056,614.80	100.45%
2. Travel and subsistence	€ 195,888.00	€ 49,356.06	25.20%
3. External assistance	€ 687,785.00	€ 564,445.45	82.07%
4. Durable goods	€ 136,583.00	€ 117,658.38	86.14%
Infrastructure	€ 86,383.00	€ 86,212.85	99.80%
Equipment	€ 50,200.00	€ 31,445.53	62.64%
Prototype	€ 0.00	€ 0.00	
5. Land purchase / lease			
6. Consumables	€ 304,560.00	€ 236,227.13	77.56%
7. Other costs	€ 2,679.00	€ 4,462.28	166.57%
8. Overheads	€ 166,557.23	€ 142,013.48	85.26%
TOTAL	€ 2,545,946.23	€ 2,170,777.58	**85.26%**

The major deviations of INTIA budget are related to OTHER COST and TRAVEL categories. In the case of OTHER COST, it is not significant in absolute terms, as the deviation is only an additional 1,783.28€ corresponding to conferences and courses registration fees. On the other hand, there is an underspending in TRAVEL, as most of the trips are national level, and due to the fact travel was reduced vastly due to the COVID-19 pandemic during 2020 and 2021.

The deviation in the INTIA budget concerning the CONSUMABLES category is mainly due to several factors. Firstly, the COVID-19 crisis created significant challenges in sourcing components and spare parts. Furthermore, the floods in Cadreita at the end of 2021 resulting in the cancelation of the winter horticultural variety trials and the expenses related to the trials. Lastly, the delay in introducing livestock into the Sabaiza pilot until 2020 resulted in lower-than-expected expenditure on feed and consumables.

In the category of EQUIPMENT, there was some budget initially wrongly allocated in this budget line.

INTIA is the only partner with INFRASTRUCTURE cost in the budget, which refers to covered building for livestock management Pilot Sabaiza.

In the category of PERSONNEL, INTIA declared abnormal daily rates for ARMESTO ANDRÉS, ANA PILAR in 2025 (€452.45 compared to €268.77 in 2024). This was due to a long-term sick leave from 16/07/25 to 31/12/25. She did not work for almost 6 months, but the company continued to incur costs. In this case, it also applies article 21 of the collective labour agreement, “In cases of temporary disability resulting from a common illness, regardless of the cause, or from a non-work-related accident, the

Company will supplement Social Security benefits starting on the first day and for a maximum period of nine months, with an amount equal to that necessary to reach the standard wage set forth in the collective labor agreement. In the event of temporary disability leave resulting from a work-related accident or occupational disease, the benefit will be supplemented by an amount equal to the amount needed to reach the net pay the employee was receiving at the time of their leave, for a maximum period of twelve months".

Therefore, the total number of hours worked by this person in 2025 was less than half of the hours worked in 2024, being this number of hours drastically reduced due to the sick leave. At the same time, this worker's costs were not reduced in the same proportion.

It is also important to note that annual working hours in INTIA are 1592 h, according to their internal work regulations (attached)

Payslips and timesheets for Ana Pilar ARMESTO ANDRÉS in 2025 are attached, as well as the collective labour agreement.

A certificate of durable goods has been provided by INTIA and is attached to the final report.

03. GAN-OREKAN

03. GAN-NIK	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 966,709.58	€ 1,376,875.88	142.43%
2. Travel and subsistence	€ 38,558.00	€ 23,707.11	61.48%
3. External assistance	€ 142,890.00	€ 157,958.44	110.55%
4. Durable goods	€ 0.00	€ 0.00	
Infrastructure	€ 0.00	€ 0.00	
Equipment	€ 0.00	€ 0.00	
Prototype	€ 0.00	€ 0.00	
5. Land purchase / lease	€ 0.00	€ 0.00	
6. Consumables	€ 1,800.00	€ 1,547.87	85.99%
7. Other costs	€ 600.00	€ 7,717.65	1286.28%
8. Overheads	€ 80,539.03	€ 109,746.49	136.26%
TOTAL	€ 1,231,096.61	€ 1,677,553.44	**136.26%**

GAN-OREKAN has received a total of four hundred and fifty thousand euros (€450,000) from the Government of Navarre. Two hundred and forty thousand euros (€240,000) are committed to complement the work carried out in the C3 forestry actions, ninety thousand euros (€90,000) to complete the work carried out in the C2 water actions and two hundred and sixty thousand (€260,000) euros to support in the technical coordination tasks of the Government of Navarre. The Government of Navarre decided to reduce GAN's participation in action 2.6 to recover river space by one hundred and forty thousand euros (€140,000).

Once these internal arrangements have been taken into consideration, there is no trace of overspending in OREKAN's budget, resulting the final percentage of budget execution in 99%

Those budget transfers are not considered as a major deviation and comply with budget reflexibility at project level.

It is important to highlight that this new scope of work, implied the involvement of additional staff with necessary qualification to carry out the new tasks assigned, explaining the overspend in PERSONNEL.

Similar to other partners, there is an underspending in TRAVEL and overspending in OTHER COST. The last one is not significant in absolute terms. The original budget is €600 compared to a final cost of €7,717.65. The reported cost in this budget heading corresponds to a wide variety of costs such as conferences registration fees and translation of technical reports.

04. NASUVINSA

04. NASUVINSA	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 2,184,979.84	€ 2,191,065.03	100.28%
2. Travel and subsistence	€ 29,936.08	€ 6,175.09	20.63%
3. External assistance	€ 1,132,661.51	€ 1,144,595.36	101.05%
4. Durable goods	€ 0.00	€ 0.00	
Infrastructure	€ 0.00	€ 0.00	
Equipment	€ 0.00	€ 0.00	
Prototype	€ 0.00	€ 0.00	
5. Land purchase / lease	€ 0.00	€ 0.00	
6. Consumables	€ 3,270.82	€ 1,979.68	60.53%
7. Other costs	€ 2,787.74	€ 4,615.30	165.56%
8. Overheads	€ 234,754.52	€ 234,390.13	99.84%
TOTAL	€ 3,588,390.52	€ 3,582,820.59	**99.84%**

Regarding the budget execution of NASUVINSA, there has been a very accurate alignment between the budget and the final expenses incurred. The main deviations are similar to other partners; there is an underspending in TRAVEL (20%) and overspending in OTHER COST (165.56%). The latter is not significant in absolute terms. The original budget is €2,787.74 compared to a final cost of €4,615.30.

In the category of PERSONNEL, NASUVINSA declared abnormal daily rates for SAN MARTIN ZARAGÜETA, BEATRIZ in 2025 (€514.45 compared to €289.95 in 2024). This was due to long-term leave during 2024 and 2025, as Beatriz San Martín Zaragüeta was absent for several reasons:

From 10/10/2024 to 28/11/2024 was absent due to a sick leave.

From 29/11/2024 to 20/3/2025 was absent due to maternity leave.

From 21/03/2025 to 10/4/2025 was absent due to breastfeeding leave.

She started working again on 11th April 2025 but was on holiday until 19/5/2025.

From 20/5/2025 to 01/10/2025 was absent due to leave of absence to care for minor children.

As a result, her total number of hours worked in 2025 was significantly reduced.

Furthermore, under article 21 of the collective labour agreement, “In cases of temporary disability resulting from a common illness, regardless of the cause, or from a non-work-related accident, the Company will supplement Social Security benefits starting on the first day and for a maximum period of nine months, with an amount equal to that necessary to reach the standard wage set forth in the

collective labour agreement. In the event of temporary disability leave resulting from a work-related accident or occupational disease, the benefit will be supplemented by an amount equal to the amount needed to reach the net pay the employee was receiving at the time of their leave, for a maximum period of twelve months".

Also note that Beatriz San Martin was absent due to leave of absence to care for minor children, under article 23 leave of absence of the collective labour agreement, "The regulation set forth in Organic Law 3/2007 on equality will be strictly adhered to. Likewise, the regulations governing leave for the care of minor children are being improved by extending the job retention period to a maximum of 18 months from the start of the leave. An employee with at least one year of service at the company is entitled to the option of taking voluntary leave for a period of no less than four months and no more than five years. This leave may not be requested until four years have elapsed since the end of another leave granted for the same reason".

Given that she worked fewer hours but was paid almost the same amount, her hourly cost for 2025 is considerably higher than 2024.

Payslips and timesheets for Beatriz San Martín Zaragüeta in 2025 are attached, as well as the collective labour agreement.

The underspending in TRAVEL is explained due to the fact that most of the trips are national level, and that travel was reduced vastly due to the COVID-19 pandemic during 2020 and 2021.

In general, the rest of the costs from NASUVINSA are in line with the project budget. The main expenditure comes from staff and external expertise. in the TRAVEL (20%) and OTHER COSTS (165.56%) categories are not significant in absolute terms

05. NILSA

05. NILSA	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 990,882.02	€ 871,270.28	87.93%
2. Travel and subsistence	€ 15,380.00	€ 541.82	3.52%
3. External assistance	€ 457,593.26	€ 620,704.49	135.65%
4. Durable goods	€ 1,570,166.49	€ 1,644,361.87	104.73%
Infrastructure	€ 0.00	€ 0.00	
Equipment	€ 1,044,207.65	€ 1,181,097.72	113.11%
Prototype	€ 525,958.84	€ 463,264.15	88.08%
5. Land purchase / lease			
6. Consumables	€ 64,088.43	€ 48,814.16	76.17%
7. Other costs	€ 13,864.80	€ 11,650.45	84.03%
8. Overheads	€ 217,838.25	€ 223,814.02	102.74%
TOTAL	€ 3,329,813.25	€ 3,421,157.08	**102.74%**

Overall, there has been a minor overspending in NILSA's budget. EXTERNAL ASSITANCE and EQUIPMENT accounts for the majority of the overspending.

In the EXTERNAL ASSISTANCE category, an overspending is due to the fact that external assistance has been contracted to provide support in the installation and maintenance of measurement equipment because of the lack of time and personnel to install the material.

Regarding the overspending in EQUIPMENT, some of the reasons that explained this increase are related to the fact that additional equipment to avoid environmental impact in the action C2.2 was acquired. Likewise, the difficulties in getting the equipment contracting specifications approved for actions C2.1 and C2.2, it resulted in more expensive purchase contracts.

A certificate of durable goods has been provided by NILSA and is attached to the final report.

06. UPNA

06. UPNA	Approved budget. Eligible costs (€)*	Consolidated cost statement for all four phases. Eligible costs (€)	Percentage of costs incurred (from Phase 1-4) per whole budget (%)
1. Personnel	€ 300,856.00	€ 330,620.78	109.89%
2. Travel and subsistence	€ 15,480.00	€ 6,809.62	43.99%
3. External assistance	€ 15,085.00	€ 1,176.27	7.80%
4. Durable goods	€ 0.00	€ 11,260.00	
Infrastructure	€ 0.00	€ 0.00	
Equipment	€ 0.00	€ 11,260.00	
Prototype	€ 0.00	€ 0.00	
5. Land purchase / lease	€ 0.00	€ 0.00	
6. Consumables	€ 24,500.00	€ 11,989.08	48.94%
7. Other costs	€ 200.00	€ 851.73	425.87%
8. Overheads	€ 24,928.47	€ 25,389.53	101.85%
TOTAL	€ 381,049.47	€ 388,097.01	**101.85%**

Overall, there has been a minor overspending in UPNA's budget. PERSONNEL accounts for the majority of the overspending. The reason behind the overspending in PERSONNEL is that the majority of the planned EXTERNAL ASSISTANCE was not needed, as tasks were effectively undertaken by UPNA's own staff. The internal team, as well as the persons hired in the project, possessed greater expertise than initially anticipated, enabling project objectives to be met without additional external support. Also, new internal members joined the project along its execution period. Likewise, the personnel rate for all team members increased because actual salaries rose considerably compared to the budget. This was due to general salary updates and the promotion of some staff members.

TRAVEL expenditures were lower than expected mostly due to the COVID-19 pandemic, which prevented participation in international conferences and reduced mobility for fieldwork during 2020 and 2021.

The underspending in CONSUMABLES is due to the fact that project activities were completed with fewer purchases than initially planned. The team extended the lifespan of materials and optimized laboratory workflows.

It is relevant to mention that an unforeseen piece of equipment was purchased (air compressor for heavy works - €11,260), which was not initially budgeted because UPNA had its own equipment available. However, this equipment has been rendered unusable by the use for LIFE NADAPTA project till June 2024, making a new purchase necessary to maintain project activities. This equipment was necessary to develop tasks for task C4.1 mainly to determine one of the indicators of adaptability of agrosystems (the capacity of agricultural soils to store water available for plants), as affected by the

different adaptive strategies considered (conservation agriculture, organic fertilization, crop rotations, improved grasslands management and Irrigation).

Finally, other categories such as OTHER COSTS looks like a major deviation, but in fact, it is because original planned cost was really low (€200).

A certificate of durable goods has been provided by UPNA and is attached to the final report.

Budget deviations per action

ACTION C1.2: NASUVINSA increase of budget for the PERSONNEL cost and external assistance that will elaborate the SECAP, as the number of municipalities involved in the project related to the SECAP has strongly increased.

ACTIONS C2: Budget transferred from GN to GAN-OREKAN to complement the work carried out under water actions.

ACTION C2.4: The development, implementation and adjustment of F2A2023, F2A2024 and F2A2025 of the platform require a lot of work by internal GAN-OREKAN and GN personnel. This is necessary to work on the information on impacts, alerts and calibration of the models, etc., which will feed the platform.

ACTION C2.6: Different budget changes are made in this action. As communicated and proposed in 2022, in view of the development of the action, part of the amount assigned to it has been released in 2023 (€311,000 euros), including the reduction in the participation of GAN, GN and External Assistance.

ACTIONS C3: Budget transferred from GN to GAN-OREKAN to complement the work carried out under forestry actions.

ACTION C3.4: Delay in the tender planned for 2022, which was finally carried out in 2023. This increases the person days executed due to modifications and updates required for the API SITNA.

ACTION C3.5: Budget increase of staff cost. The amount was initially planned only for GN, but work carried out by GN and GAN-OREKAN. It is worth to mention that Navarre suffered in summer 2022 the biggest forest fires ever, occurred with 15.000 ha of forest burnt and this affected the areas where the action was carried out.

ACTION C4.1: This action requires more staff effort than planned for INTIA, however, less for UPNA and NILSA, the total executed compared to GA is less than 90%. UPNA required unforeseen piece of equipment (Air compressor for heavy works).

ACTION C4.4 and C4.5: In the case of action C4.5, INTIA has exceeded planned person-days, since the effort dedicated to the programming of the collaborative Warning Station in order to make it functional has been more than expected. On the other hand, action C4.4 is also affected as the Warning Station has to be prepared to work for the livestock.

ACTION C5.5 and C.5.2: ISPLN presents a deviation on personnel cost declared in this action. ISPLN contracted additional staff to carry out the necessary works for C5, mainly focusing in C5.5 and C5.2. It is important to highlight that as part of those actions, in addition to monitoring, preventive measures and dissemination and collaboration activities are developed.

ACTION C6.6: The works were initially planned by NASUVINSA to be finished by this point but due to delays in the agreements with the Government of Navarre, it had to be delayed, and, therefore, its execution has been lengthened.

ACTION C6.7 and C6.9: The works from NASUVINSA (Infrastructures and territorial planning and Pilot project of rural areas) were planned to finish in a certain period, but they have been extended. C6.7 started later than planned because it depended on C6.3 which was delayed, as indicated in the previous report. Regarding C6.9, the approval of global intervention projects by the GN took more time than planned, adding to other factors such as the war in Ukraine. At this point, the action is completed and 5 projects have been approved.

ACTION C6.10. 0nly half of the person-days planned have been executed, there have been a delay to start since the personnel were involved in the action C6.7, this action is expected to be fully developed during phase 4.

ACTION C7.2: In principle, budget allocated for external assistance is no longer necessary. The development of the action is carried out on personal cost as project teams' counts on the relevant experience.

ACTION D4: The actual costs of this activity are lower than the planned budget, as this activity is developed in coordination with the KLINa team and the corresponding staff costs are not charged to the project. Activity implemented by the GN in collaboration with all project partners.

ACTION F1: As already explained in the previous phase, due to the burden on coordination tasks required by the integrated project, the medical leave and change of staff in the coordination team of DG Environment, it was decided to include a technical coordinator in the PMO. Therefore, the staff budget is transferred to GAN-OREKAN (€249,321) from GN, for the exclusive hiring of one person to support this role. The follow up to the day-to-day of the project activities requires additional allocation of time. In addition, special importance to the synergy and follow up of the technical and crosscutting activities is given. PMO maintains the working system based on consortium meetings and technical meetings.

9.2. Accounting system

Accounting system

All LIFE NAdapta beneficiaries have assigned a code in their accounting systems to clearly identify the project costs. These are the codes of each beneficiary:

- GN: The ERP used by GN is SAP, the PEP code designated for the project is PEP: E-17/000167.
- INTIA: Uses and ERP for managing and accounting called JUMP, the code assigned to the project is 2020127.
- GAN (OREKAN): Accounting system used is SIGRID, the code assigned to the project is HID18/90003.
- NASUVINSA: Accounting system used is KELIO, internal code assigned to the project is es LIFE-IP NADAPTA-CC IN/0014.
- NILSA: Accounting system used is JUMP. Life expenses are distributed in several cost accounts but those including Life cost arelabelled as "LIFE" (e.g. ESTDG 22 - ASISTENCIA EXTERNA - LIFE).
- UPNA: Accounting system used is Universitas XXI, organic unit (UFG) for the project is 3030007757.

Procedure for approving costs

In general, this procedure is similar for all LIFE NAdapta beneficiaries: any cost must be agreed upon with the technician who requires the acquisition and the project supervisor before requesting the supply/service from the purchasing department. The provider should be included in the database so that the purchasing department can negotiate better deals with providers. Once the provider is validated, the technician can place an order through this system. When the technician checks that the order is right, the purchasing department proceeds to make the payment.

Award procedures must be compliant with the Foral Law 2/2018 of Public Sector Contracts. Regarding travel costs (accommodation, km, allowance), the reimbursement to the employee is requested as a secondment and has to be approved by a responsible. Employees should present a sheet collecting allowance and travel costs (km) incurred together with original tickets and evidence of the purpose of the travel.

Procurement and selection procedure for subcontractor and suppliers' selection

All LIFE NAdapta beneficiaries are public bodies and, thus, they follow the regional (Navarre) public laws related to public procurement procedures (Ley foral 2/2018, 13 abril de contratos públicos). This Law states:

- For supplies or services with a cost lower than €15,000 and for work contracts lower than €40,000, the direct award is allowed.
- For supplies or services with a cost lower €60,000 and for work contracts lower than €200,000,the request of offers to several providers is mandatory.

Timesheets: time recording systems used and presentation of the registration, submission and approval procedure

All beneficiaries have agreed to complete the timesheets following the LIFE template. Additionally, some of them have as a support the internal electronic registration program. All hours registeredon the electronic version are in total accordance with the manually registered timesheets

The beneficiaries that complete the timesheets manually are GN (DRyMA and ISPLN), NILSA and UPNA, while OREKAN, INTIA and NASUVINSA have internal programs (JUMP in INTIA and OREKAN, and NASUVINSA) where the employees register their daily dedication to projects or other activities (training, visits, travels…). These programs generate the timesheet according to the LIFE requirements.

Invoices references to LIFE

The reference of the project (LIFE-IP NAdapta-CC (LIFE16 IPC/ES/000001) is sent to suppliers with the details for the invoice in order to include the project reference in any invoice including costs declared by the project. In some cases that including the reference has not been possible, a stamp has been included (i.e. because there are costs of other projects included), but always as the last option. In all cases, the expenses have been included in the cost centre assigned to the project in each partner's accounting system. The following figure show the stamp used by the project partners:

9.3. Partnership arrangements (if relevant)

Procedures related to financial reporting are agreed with partners, and included in the DLV Management Plan. In addition to the official reports, the coordination team has established internal project monitoring milestones for which it will be necessary to prepare a technical-economic justification report. To this end, the LIFE-IP NAdapta-CC coordination team will periodically request justification reports from the partner entities, which will include both technical and financial information.

Regarding economic information, the contracted company for technical assistance to support in the financial and administrative management (Zabala Consulting until July 2023 and EuroVértice Consultores from July 2023 until the end of the project) is in charge of requesting from the partners the documentation required at each milestone. For the management of economic documentation, EuroVértice has provided each beneficiary entity with access to a shared folder on the Google Drive platform through the account financial.lifeipnadaptacc@gmail.com. The different partner entities will have personalized permissions to access individual folders with confidential documentation. The partner entities will be responsible for uploading and updating the documentation regarding their participation in the project. Regarding the economic justification, for all milestones the IFS shall be completed in detail while the supporting documentation to be submitted will depend on the milestone (triannual or annual). The executed costs by each associated beneficiary are provided in the individual financial statements(LIFE excel templates) with the supporting documents to the project coordinator who review them toguarantee that fulfil the LIFE programme requirements. Once the individual cost statements are validated, GN-DRyMA is responsible of compiling all the data in the Consolidated Cost Statement.

Concerning financial transactions, the first pre-financing was received on 27th December 2017 and it was transferred to the project beneficiaries on 9th January 2018 according to the following figures:

PARTNER	1st pre-financing (Jan.18)
TOTAL	**€1,867,811**
GN-DRyMA	€433,472
GN-ISPLN	€105,185
INTIA	€305,514
GAN	€147,729
NASUVINSA	€430,607
NILSA	€399,578
UPNA	€45,726

The amount distributed regarding the first phase was received firstly on the 28th of December

2020 (€1,493,065.59) and secondly, on the 2nd of February 2021 (€1,381,007.22), and it was transferred to the project beneficiaries on the 20th of January 2021 and on 9th of February 2021 according to the following figures:

PARTNER	TOTAL FINANCING PHASE1 (Jan+Feb.21)
TOTAL	**€ 2,874,072.81**
GN	€ 610,513.54
INTIA	€ 522,572.17
GAN	€ 172,043.20
NASUVINSA	€ 800.792,43
NILSA	€ 697,159.18
UPNA	€ 70,992.07

Upon the third phase, the amount corresponding to the second interim payment was transferred to the project beneficiaries on the 17th of November 2022, according to the following scheme:

PARTNER	TOTAL FINANCING PHASE 2 (Nov.22)
TOTAL	**€ 2,268,545.21**
GN	€ 667,607.90
INTIA	€ 252,741.27
GAN	€ 381,634.44
NASUVINSA	€ 456,595.01
NILSA	€ 443,773.41
UPNA	€ 66,193.18

The payment received by the coordinator after the third report was €338,307.65. However, the coordinator decided to distribute the amount of €461,074.50 among the partners. This payment was carried out on July 18, 2024.

PARTNER	TOTAL FINANCING PHASE 3 (Jul.24)
TOTAL	**€ 461,074.50**
GN	€ 59,341.32
INTIA	€ 17,175.22
GAN	€ 233,325.95
NASUVINSA	€ 93,383.80
NILSA	€ 57,848.21
UPNA	€ 0

9.4. Certificate on the financial statement

The certificates of the financial statements for phase 4 are attached to the final report the designated auditors, **ELIZALDE AUDITORES, S.L.P.**, have certificated the costs justified by all the project beneficiaries with the exception of UPNA that, according to the Article II.23.2.d of the General Conditions, is exempt of this requirement.

Regarding NASUVINSA, the certificate of the financial statement issued by the auditor for phase IV also includes the financial changes made to its IFS, as required by the financial officer in the letter sent to the consortium by the project advisor (Bernd DECKER) on February 5, 2026.

ANNEX 1: DELIVERABLE AND MILESTONES SCHEDULE

IPs with budget split into Phases: fill in below for main deliverables and milestones completed in the reporting period.

IPs with merged budget: in addition to the above, list any relevant deviations in expected completion dates for deliverables and milestones in the next period.

MAIN DELIVERABLE PRODUCTS OF THE PROJECT (PHASE 4)

Name of the Deliverable	Code of the associated action	Deadline	Actual date of completion
Local Climate and Energy analysis	DC1.2_4	31/12/2025	18/12/2025
Maintenance and gardening cost study (SUDS)	DC2.3_2	31/12/2025	30/12/2025
Diagnosis of Agriculture Soil	DC4.1_4	31/12/2025	10/10/2025
Guide of Water for irrigation	DC4.2_4	31/12/2025	15/10/2025
Software tool for identification of best adapted plant material	DC4.3_4	31/12/2025	15/10/2025
Warning Station and IPM trials	DC4.4_4	31/12/2025	18/11/2025
"Transmitting vectors of new diseases affecting the			
animals and protocols of actions"	DC4.5_4	31/12/2025	15/10/2025
Guía Silvopastoralismo	DC4.6_4	31/12/2025	31/12/2025

Report plan of preventive actions on the effects of excess temperature on health in Navarre (2023-2024)	DC5.1_4	31/12/2024	31/12/2024
Prevention plan for health effects of air pollution in Navarre	DC5.3_4	31/12/2024	31/12/2024
Report about the surveillance plans results concerning the presence of invasive vectors related to disease transmission (2023-2024)	DC5.5_4	31/12/2024	31/12/2024
Pollen content in the atmosphere in Navarre (2023-2024)	DC5.6_4	31/12/2024	31/12/2024
Opportunities for funding report	DC7.2_4	31/12/2025	24/03/2026
IP Contribution report	DD1_4	31/12/2025	30/04/2026
Socio-economic impacts report	DD3_4	31/12/2025	20/04/2026
Integration of political initiatives report	DD4_4	31/12/2025	30/04/2026
Comunication materials report	DE2.2_4	31/12/2025	31/12/2025
Networking activities report	DE3_4	31/12/2025	23/03/2026
Comunication activities and impacts report	DE4_4	31/12/2025	05/05/2026
Layman's report	DE5	31/12/2025	15/10/2025
LPI Indicators report	DF2_4	31/12/2025	27/04/2026

MAIN MILESTONES OF THE PROJECT (PHASE 4)

Name of the Milestone	Code of the associated action	Deadline	Actual date of completion
Annual Results Report – Year 6	MC4.3.1_6	31/03/2024	31/03/2025
New collaborative warning station in operation + Report on IPM measures for emerging and adaptable pests – Year 6	MC4.4.1_6	31/03/2024	15/10/2025
New collaborative warning station in operation + Report on IPM measures for emerging and adaptable pests – Year 7	MC4.4.1_7	31/03/2025	31/03/2025
Integration of new pest risk models – Phase 4	MC4.4.2_4	30/06/2025	30/06/2025
Data collected after each implementation phase – Phase 4	MD1.2_4	31/12/2025	31/12/2025
Layman Report	ME5	31/12/2025	24/10/2025
Positive project progress. Final Technical and Financial Report	MF1.2_4	31/03/2026	31/05/2026
LPI Indicators table	MF2	31/03/2026	27/04/2026
Definition of the After-LIFE plan	MF3	30/09/2025	31/05/2026

MAIN ANNEXES OF THE PROJECT (PHASE 4)

Name of the Annex	Code of the associated action	Actual date of completion
User manual por the Climate Change Monitoring Portal in Navarre	C1.1.1_4	09/12/2025
Tool for monitoring Law 04/2022 on Climate Change and Energy Transition	C1.1.2_4	09/12/2025
List and links to the layers integrated into IDENA	C1.1.3_4	09/12/2025
PACES_ARANGUREN	AC1.2.1_4	29/08/2025
PACES_ARANGUREN_Inv2005_Barañain (.xlsx)	AC1.2.2_4	29/08/2025
PACES_ARANGUREN_M2 Inventario municipal GEI (2023) Barañain (.xlsx)	AC1.2.3_4	29/08/2025
PACES_ARANGUREN_Anexo IV Adaptación_Aranguren	AC1.2.4_4	29/08/2025
PACES_ARANGUREN_Anexo V Medidas_Propuestas_Aranguren	AC1.2.5_4	29/08/2025
PACES_ARANGUREN_Anexo VI Tendenciales_Aranguren	AC1.2.6_4	29/08/2025
PACES_BIDASOA	AC1.2.7_4	29/08/2025
PACES_BIDASOA_Inv2005_Sunbilla (.xlsx)	AC1.2.8_4	29/08/2025
PACES_BIDASOA_M2 Inventario municipal GEI (2023) Sunbilla (.xlsx)	AC1.2.9_4	29/08/2025

PACES_BIDASOA_Anexo IV Adaptación_Bidasoa	AC1.2.10_4	29/08/2025
PACES_BIDASOA_Anexo V Medidas_Propuestas_Bidasoa	AC1.2.11_4	29/08/2025
PACES_BIDASOA_Anexo VI Tendenciales_Bidasoa	AC1.2.12_4	29/08/2025
PACES_BURLADA	AC1.2.13_4	29/08/2025
PACES_BURLADA_Inv2005_Huarte (.xlsx)	AC1.2.14_4	29/08/2025
PACES_BURLADA_M2 Inventario municipal GEI (2023) Huarte (.xlsx)	AC1.2.15_4	29/08/2025
PACES_BURLADA_Anexo IV Adaptación_Burlada	AC1.2.16_4	29/08/2025
PACES_BURLADA_Anexo V Medidas_Propuestas_Burlada	AC1.2.17_4	29/08/2025
PACES_BURLADA_Anexo VI Tendenciales_Burlada	AC1.2.18_4	29/08/2025
PACES_CPAMPLONAVALLES	AC1.2.19_4	29/08/2025
PACES_CPAMPLONAVALLES_Inv2005_Goñi (.xlsx)	AC1.2.20_4	29/08/2025
PACES_CPAMPLONAVALLES_M2 Inventario municipal GEI (2023) Goñi (.xlsx)	AC1.2.21_4	29/08/2025
PACES_CPAMPLONAVALLES_Anexo IV Adaptación_CPAMPLONAVALLES	AC1.2.22_4	29/08/2025
PACES_CPAMPLONAVALLES_Anexo V Medidas_Propuestas_CPAMPLONAVALLES	AC1.2.23_4	29/08/2025

PACES_CPAMPLONAVALLES_Anexo VI Tendenciales_CPAMPLONAVALLES	AC1.2.24_4	29/08/2025
PACES_ESTERIBAR	AC1.2.25_4	29/08/2025
PACES_ESTERIBAR_Inv2005_Odieta (.xlsx)	AC1.2.26_4	29/08/2025
PACES_ESTERIBAR_M2 Inventario municipal GEI (2023) Odieta (.xlsx)	AC1.2.26_4	29/08/2025
PACES_ESTERIBAR_Anexo IV Adaptación_Esteribar	AC1.2.27_4	29/08/2025
PACES_ESTERIBAR_Anexo V Medidas_Propuestas_Esteribar	AC1.2.28_4	29/08/2025
PACES_ESTERIBAR_Anexo VI Tendenciales_Esteribar	AC1.2.29_4	29/08/2025
PACES_RIBERA	AC1.2.30_4	29/08/2025
PACES_RIBERA_Inv2005_Monteagudo (.xlsx)	AC1.2.31_4	29/08/2025
PACES_RIBERA_M2 Inventario municipal GEI (2023) Monteagudo (.xlsx)	AC1.2.32_4	29/08/2025
PACES_RIBERA_Anexo IV Adaptación_Ribera	AC1.2.33_4	29/08/2025
PACES_RIBERA_Anexo V Medidas_Propuestas_Ribera	AC1.2.34_4	29/08/2025
PACES_RIBERA_Anexo VI Tendenciales_Ribera	AC1.2.35_4	29/08/2025
PACES_RIBERA_ALTA	AC1.2.36_4	29/08/2025
PACES_RIBERA_ALTA_Inv2005_Funes (.xlsx)	AC1.2.37_4	29/08/2025

PACES_RIBERA_ALTA_M2 Inventario municipal GEI (2023) Funes (.xlsx)	AC1.2.38_4	29/08/2025
PACES_RIBERA_ALTA_Anexo IV Adaptación_Ribera Alta	AC1.2.39_4	29/08/2025
PACES_RIBERA_ALTA_Anexo V Medidas_Propuestas_Ribera Alta	AC1.2.40_4	29/08/2025
PACES_RIBERA_ALTA_Anexo VI Tendenciales_Ribera Alta	AC1.2.41_4	29/08/2025
PACES_RIBERA_ESTELLESA	AC1.2.42_4	29/08/2025
PACES_RIBERA_ESTELLESA_Inv2005_El Busto (.xlsx)	AC1.2.43_4	29/08/2025
PACES_RIBERA_ESTELLESA_Inv2005_Piedramillera (.xlsx)	AC1.2.44_4	29/08/2025
PACES_RIBERA_ESTELLESA_M2 Inventario municipal GEI (2023) El Busto (.xlsx)	AC1.2.45_4	29/08/2025
PACES_RIBERA_ESTELLESA_M2 Inventario municipal GEI (2023) Piedramillera (.xlsx)	AC1.2.46_4	29/08/2025
PACES_RIBERA_ESTELLESA_Anexo IV Adaptación_Ribera Estellesa	AC1.2.47_4	29/08/2025
PACES_RIBERA_ESTELLESA_Anexo V Medidas_Propuestas_Ribera Estellesa	AC1.2.48_4	29/08/2025
PACES_RIBERA_ESTELLESA_Anexo VI Tendenciales_Ribera Estellesa	AC1.2.49_4	29/08/2025

Resultados encuesta ampliación PACES (.xlsx)	AC1.2.50_4	17/12/2025
Local climate and energy analysis_web	AC1.2.51_4	17/12/2025
Arzuri WWTP Modelling 2024	AC2.1.1_4	01/03/2024
Arzuri WWTP Modelling 2025	AC2.1.2_4	01/01/2026
ULTZAMA WWTP report	AC2.1.3_4	30/12/2025
Trickling filters Modelling	AC2.1.4_4	27/12/2024
Trickling filters Poster WRRmod2024	AC2.1.5_4	27/12/2024
Annual Report DSS	AC2.2.1_4	03/02/2025
Puntos DSS instalados	AC2.2.2_4	11/02/2025
Pluviómetros instalados	AC2.2.3_4	11/02/2025
Diagnóstico DSS	AC2.2.4_4	14/11/2025
Tudela sanitation Modelling	AC2.2.5_4	27/12/2024
SUDS Modelling	AC2.3.1_4	30/12/2025
Presentación Nadapta GreenWeek	AC2.5.1_4	14/04/2026
Presentación Nadapta CONAMA	AC2.5.2_4	14/04/2026
Presentación Nadapta EU Missions	AC2.5.3_4	14/04/2026
Presentación Nadapta Caparroso	AC2.6.1_4	08/05/2024
Jornada PGRI Caparroso.pdf	AC2.6.2_4	08/05/2024
Estudio Alternativas Caparroso.pdf	AC2.6.3_4	08/05/2024

Proyecto Villafranca - Milagro.pdf	AC2.6.4_4	09/04/2025
Estudio Alternativas Villafranca - Milagro	AC2.6.5_4	09/04/2025
Resumen Jornada Leire Mediterraneo	AC3.3.1_4	01/04/2026
Leaflet Mediterranean forests	AC3.3.2_4	20/08/2024
Video Jornada Leire (.MOV)	AC3.3.3_4	14/11/2024
Anexo piloto actuaciones Yesa	AC3.3.4_4	30/06/2025
Planes Forestales Comarcales	AC3.4.2_4	15/10/2025
Metodología cartografía pistas forestales	AC3.4.3_4	20/10/2025
Informe seguimiento fenología	AC3.4.4_4	20/10/2025
Evaluación claras pino laricio	AC3.5.1_4	15/11/2025
Actuaciones Sabaiza	AC3.5.3_4	15/11/2025
Guía Gestión Adaptativa Cantábrica	AC3.5.4_4	15/09/2025
Guía Gestión Adaptativa Pirenaica	AC3.5.5_4	15/09/2025
Demonstrative plots. Enériz.	AC4.1.2a_4	15/10/2025
Valoración agronómica de productos orgánicos	AC4.1.2b_4	03/10/2025
Conservation Agriculture Good Practice Demonstrations	AC4.1.2c_4	15/10/2025
Demostración Rotaciones de Cultivo, Fase 4	AC4.1.2d_4	15/10/2025

Desarrollo del protocolo monitoreo indicadores vulnerabilidad red de parcelas	AC4.1.3_4	15/10/2025
Resilient Management Plan (Summary of results and limitations)	AC4.1.4a_4	28/10/2025
Resilient Management Plan	AC4.1.4b_4	10/10/2025
Soil Resilient Management Monitoring Guide	AC4.1.5	28/11/2025
Uso de sondas de riego en frutales	AC4.2_4	15/10/2025
"Ensayos de adaptación de cultivos extensivos,		
hortícolas y cereales antiguos. Campañas 2024 y 2025"	AC4.3_4	15/10/2025
Ensayos de nuevos sistemas GIP para plagas y enfermedades emergentes campañas 2024 y 2025	AC4.4_4	15/10/2025
Informe sobre la vigilancia de la fiebre del Nilo Occidental en Navarra en 2024-25	AC4.5_4	15/10/2025
Caracterización inicial de los suelos de la finca piloto	AC4.6.1a_4	06/02/2020
Parcela ARTETA – SABAIZA Caracterización final de los suelos de la finca piloto	AC4.6.1b_4	15/08/2025
INVENTARIO Y CARACTERIZACIÓN DE LA VEGETACIÓN DE LA FINCA PILOTO DE GESTIÓN SILVOPASTORAL DE SABAIZA	AC4.6.2_4	30/12/2019
Reducción de biomasa en la finca piloto	AC4.6.3_4	21/10/2025
Resumen del III Foro salud global y cambio climático	AC5.5_4	31/12/2024

Guia Paisaje Divulgativa	AC6.1.5_4	22/10/2025
Catalogue of Energy Efficiency and Adaptation to Climate Change Measures to carry out in Industrial Areas	AC6.10.2_4	27/03/2026
Modelo de arrendamiento para cubierta industrial (CEL)	AC6.10.3.1_4	27/03/2026
Estatutos_RRI_ANEXOS (.zip)	AC6.10.3.2_4	27/03/2026
Templates of legal documents for an Energy Community in a vulnerable economic activity area	AC6.10.3.3_4	27/03/2026
Templates of legal documents_ANEXOS (.zip)	AC6.10.3.3_4	27/03/2026
EstudioViabilidad_Sakana	AC6.10.3.4_4	27/03/2026
EstudioViabilidad_Sakana_ANEXOS	AC6.10.3.4_4	30/03/2026
EstudioViabilidad_CEPIM	AC6.10.3.5_4	30/03/2026
EstudioViabilidad_CEPIM_ANEXOS	AC6.10.3.5_4	30/03/2026
ENERGÍA SAKANA vídeo HD (.mp4)	AC6.10.3.6_4	17/11/2025
Evaluation of the LIFE-IP NAdapta-CC Project by Means of a Cost-Benefit Analysis Methodology	AC6.11.1_4	01/10/2024
Guide of Lessons Learned and Measures for the Future	AC6.11.2_4	01/12/2025
Caracterizar la acción climática futura	AC6.11.3_4	01/11/2025
GUÍA DE DIFUSIÓN Y COMUNICACIÓN DE RESULTADOS (DE LA VIABILIDAD ECONÓMICA)	AC6.11.4_4	01/12/2025

Capacity building and training activities - phase 4	AC7.1_4	27/02/2026
Final Report Part2	AC_Final Report Part2_4	05/05/2026
Anexo 1 Informe Exposición_2025	AE4_4	10/02/2026
Anexo 2 Cartelería_Hojas de firmas	AE4_4	10/02/2026

ANNEX 2: TIMETABLE

This Annex only applies to projects with a single budget for the whole project duration, not in phases (see Chapter 8).

It should only be provided if deviations from the (amended if applicable) Grant Agreement are expected.

Highlight in a different colour the deviations. List all actions ordered by number and using their numbers or names. Tick as appropriate.

Action	**2019**	**2020**				**2021**				**etc.**			
Number/name	**IV**	**I**	**II**	**III**	**IV**	**I**	**II**	**III**	**IV**	**I**	**II**	**III**	**IV**
A. Preparatory actions, elaboration of management plans and/or action plans:													
C. Concrete (conservation/implementation) actions:													

D. Monitoring of the impact of the project actions:													
E. Public awareness and dissemination of results:													
F. Project management and monitoring of project progress:													
