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lifeSMART
Support small Municipalities towARds energy Transition

Co-funded by the European Union

# D3.2 Country Reports

## Task 3.2 – Plans Alignment and Updating

Date: 31/07/2025

Lead beneficiary: Cras srl

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## Abstract

This deliverable reports about the plans alignment activities and other updating from the 5 target areas. M13 (October 2024) and M21 (June 2025).

The first part contains the guidelines prepared by the task leader (CRAS) at the start of the activities (M13 - October 2024) to specify the minimum criteria and targets of the inter-municipal vision in each target area in order to identify a range of potential joint actions, grounding on the knowledge acquired during T3.1 and feeds into T3.3 e T3.4.

The second part includes a paragraph per country, drafted by the corresponding beneficiaries at the task end (originally M21 - June 2025, then shifted to M22 – July 2025), and contains mainly a description of the country report of each target area, realized in collaboration with both internal and external IMTS members, which combine the analysis of background and the framing of target area within the current policy context, and the operational meetings with local technical offices and policymakers to gradually achieve a shared vision and in order to identify a range of potential energy transition actions for further development in subsequent tasks.

The third part compares the activities carried out by the beneficiaries in each target area, and tries to point out common elements and lessons learnt. It was drafted by the task leader once having collected in the PART II the contributions by the beneficiaries.

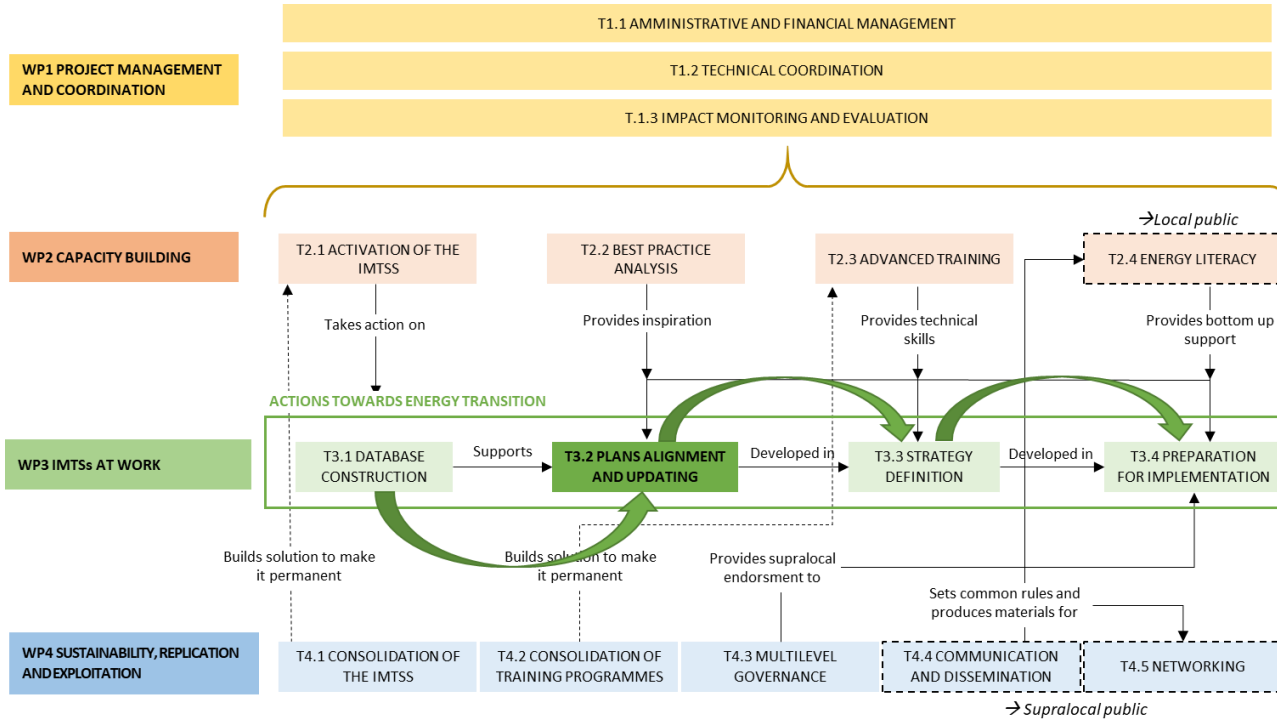
# Introduction

The task 3.2 "Plans alignment and updating" represents the second task of the WP3 "IMTSs at work", namely the group of activities through which the IMTSs - the experts involved together with the staff of the municipalities in the target area – after receiving a training in WP2, will lay down and start implementing the local energy transition strategy.

The task aims to develop in each target area an inter-municipal vision and to identify a range of potential joint actions. It should ground on the knowledge acquired during T3.1 and feeds into T3.3 e T3.4, during which the vision and actions agreed will be further developed and put in practice.

As for other tasks under WP2 and WP3**, this task will be carried on autonomously and in parallel by project beneficiaries in the corresponding target areas** according to the local regulatory framework and administrative praxis**,** in line with the agreement between the beneficiary and the municipalities, as well as with the contracts signed by the IMTS external experts.

*Figure 1 – Task 3.2 within the whole project work plan as described in the GA*




***T.3.2 Plans alignment and updating*** *(COO 1-Anatoliki + APs, BEN 2-AREANATEJO+APs, BEN 3-CCI_NCA +APs, BEN 4- CMRC+APs, BEN 5-FAMP + APs, BEN 6-US, BEN 7-Cras)*

*This task aims to develop in each target area an inter-municipal vision and to focus on a range of potential joint actions. In the case of municipalities lacking any local energy plan, it implies to start its definition (as for 1 over 2 in the Greek target area, 3 over 4 in the French target area, 5 over 5 in the Italian target area, 2 over 9 in the Spanish target area). In the case of municipalities already provided with, it means to update the existing plans especially if based on obsolete targets (such as all the 6 in the Portuguese target area, 1 over 2 in the Greek target area, 1 over 4 in the French target area, 7 over 9 in the Spanish target area). In all the cases, it means working to align reciprocally the local visions on energy transition. Experts engaged in IMTSs, supported by project partners, will prepare a sort of position paper designed to frame the target areas with respect to supra-local planning and programming tools, and will accompany the involved municipalities up to the definition of a common vision and shared priorities about local energy transition. This will take the form of a memorandum of understanding – or similar document - to be approved by the mayors and will include a list of concrete short-term actions on energy efficiency and renewables, suitable to joint or coordinated implementation. Provided the very challenging 2030 and 2050 goals set by the CoM for mitigation and adaptation,*

*project resources do not allow to ensure the approval of full SECAPs for all the municipalities involved - of course the current signatories remain committed (12 over 22 municipalities involved) - nevertheless CoM guidelines and other reference documents will be used as inspiration and guidance*

# PART 1 - GUIDELINES FOR TASK IMPLEMENTATION

# 1 Expected activities, outputs and impacts

The task was scheduled between M13 (October 2024) and M21 (June 2025). According to the project budget, expected expenditures under this task regards personnel costs, besides a share of the subcontracting cost attributed to the involvement of the IMTS external experts, which should play a significant role in this task, especially enabling the cooperation between the municipalities in the target area and providing technical support to the local staff.

Given its goals, the activities to be undertaken under this task by beneficiary staff, in collaboration with both internal and external IMTS members, should combine the analysis of background and the framing of target area within the current policy context, with operational meetings with local technical offices and policymakers to gradually achieve a shared vision and to identify a range of potential energy transition actions for further development in subsequent tasks.

Within the analysis of background any existing local energy plans and measures – i.e. SEAP/SECAP, SUMP and similar, even if referred to 2020 targets – as well as the main energy-relevant supra-local planning and programming tools should be addressed. The purpose is to:

- Update targets: Align existing plans with current goals and timelines.
- Identify measures: Determine which existing measures should be dropped, updated, or maintained.
- Highlight new actions: Explore and integrate new initiatives based on current opportunities and regional/national priorities.

The results of this step should be discussed with policy makers to trigger the process of building a common vision about local energy transition basing on shared priorities.

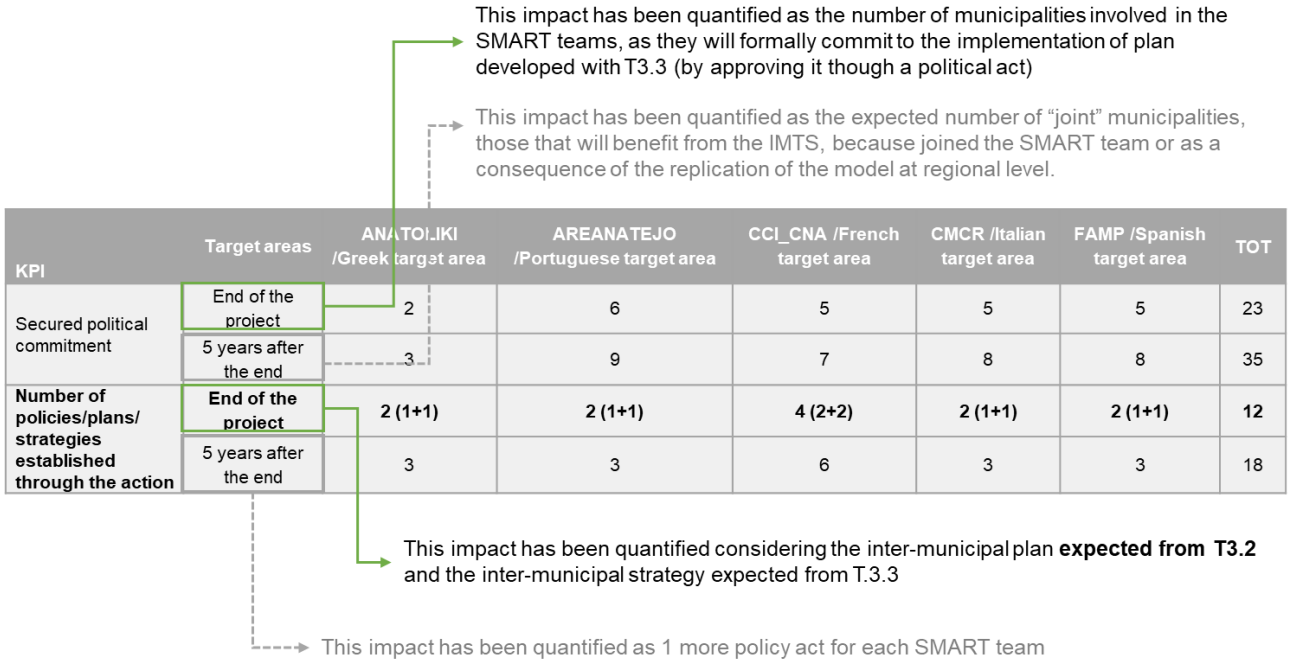
This process may require some meetings during which specific proposals for energy efficiency and renewables could also be collected to initiate the identification of short-term actions suitable to joint or coordinated implementation (to be further developed in task 3.3 and 3.4).

The entire process should lead to drafting a shared policy document that all municipalities commit to. Such document (in the GA defined as a Memorandum of understanding or equivalent) represents the local output of task 3.2 and should be approved/subscribed by an appropriate representative of each municipality involved (e.g. a sector manager or the Mayor) according to local practices.

Please note that the commitment expressed by the policy document mentioned above should be coherent with any existing energy action plans. It builds upon the principles of collaboration promoted by the Covenant of Mayors with 'joint SECAPs', but recognizing the potential difficulties for smaller Municipalities in meeting the requirements of joint subscriptions within the CoM framework - in terms of timelines and targets - this agreement may be more flexible and tailored to the specific needs and capacities of the participating Municipalities. It primarily focuses on establishing a framework for cooperation among Municipalities on short-term energy transition actions.

Nevertheless, the delivery of such shared policy documents represents one of the expected impact of the project and reflects in 2 of the KPIs mentioned in the GA, in particular "Secured political commitment" (it is mentioned in the proposal, but not acknowledged in the KPI platform) and to "Number of policies/plans strategies established through the action" (included in the KPI platform).

*Figure 2 Extract from the KPI table refer to GA annex 1, section "2.1 Ambition of impacts" and "section 2.2 Credibility of impacts" for the related explanations.*




| KPI | Target areas | ANATOLIKI /Greek target area | AREANATEJO /Portuguese target area | CCI_CNA /French target area | CMCR /Italian target area | FAMP /Spanish target area | TOT |
|---|---|---|---|---|---|---|---|
| Secured political commitment | End of the project | 2 | 6 | 5 | 5 | 5 | 23 |
| | 5 years after the end | 3 | 9 | 7 | 8 | 8 | 35 |
| **Number of policies/plans/ strategies established through the action** | **End of the project** | **2 (1+1)** | **2 (1+1)** | **4 (2+2)** | **2 (1+1)** | **2 (1+1)** | **12** |
| | 5 years after the end | 3 | 3 | 6 | 3 | 3 | 18 |

## 2 Reporting Template

The results of the activities implemented under Task 3.2 in each target area will be collected into Part II of the Deliverable 3.2, this section should be developed by the end of May 2025 and will be composed by **5 different paragraphs focused on common vision and priorities identified in each target area** to be drafted by the corresponding beneficiaries:

- Greek target area (by Anatoliki)
- Portuguese target area (by Areanatejo)
- French target area (by CCI-NCA)
- Spanish target area (by FAMP + USpace)
- Italian target area (by CMCR+Cras)

Each paragraph should be approximately **5-10 pages** long, structured as follows and accompanied by all the relevant annexes. Hereafter a short description of the information which beneficiaries are requested to provide as regards the task implementation.

Basing on the information provided by beneficiaries Cras as task leader, will compare local experiences and outline - in part III - some common conclusions, **so it is important that country reports will fulfil the indications and follow the structure below**.

**1. State of the art of local energy plans**(1-2 pages)

Please describe briefly any local energy plans, include date of approval, quantitative and qualitative targets, and explain why /to what extent they can be considered still applicable or outdated. If planning process is ongoing provide information about its progress. If any local energy plan has never been initiated, explain briefly why. If different plans are in force, point out differences and similarities.

***2.*** **Context description and positioning** (1-2 pages)

Please highlight the most relevant internal and external factors that could positively or negatively impact the energy transition of the target area. Refer to elements from the supra-local planning and programming framework to identify particularly relevant policies (e.g. measures and funding schemes) targeted at the local level. If necessary and appropriate, consider completing and attaching a datasheet for the most relevant energy-related plan or program. A suggested datasheet is provided below.

| ***Title:*** | *Plan 1* |
|---|---|
| ***Responsible body*** | *Example: National authority – Ministry of…, xxx Regional authority,* |
| ***Time scope*** | *Date of approval and progress status (currently being drafted, approved, in force, upgrading, under revision, expiring)* |
| ***Brief description*** | *Brief description of the main objective/contents of the plan/programme (including quantitative target if established)* |
| ***Energy transition measures*** | *Explain why the plan/programme is relevant respect to Life SMART project and objectives and which are the most relevant measures or provisions for the target area* |
| ***Associated funding*** | *Indicate funding available for plan/programme implementation if any* |
| ***Link*** | *Link to access the full plan/programme* |

**3. Common vision and priorities** (3-5 pages)

Please briefly describe the process that led to the definition of the policy document included as the main annex in the local language. Highlight the key elements of the common vision shared by the

involved municipalities, the priorities that emerged, the preferred areas of intervention, and possibly list the short-term actions they plan to develop together in the coming months.

**+ Annex in local language:** policy document signed by representatives of the municipalities in the target area (MoU or equivalent act) - **REQUIRED**

**+ Other annexes** (plan datasheets) - **OPTIONAL**

# PART II - COUNTRY REPORTS ON PLANS ALIGNMENT AND UPDATING

# 1 Greek target area (by Anatoliki)

| ABBREVIATIONS - ACRONYMS | |
|---|---|
| ANATOLIKI | Anatoliki S.A. - Organization for local development |
| AUTH | Aristotle University of Thessaloniki |
| BEEP | Buildings' Energy Efficiency Plan |
| CERTH | Centre for Research and Technology Hellas |
| CRES | Center For Renewable Energy Source |
| EIB | European Investment Bank |
| EnCom | Energy Community |
| EPC | Energy Performance Contract |
| EPBD | Energy Performance of Buildings Directive |
| ESCO | Energy Saving Company |
| EV | Electric Vehicle |
| EVCP | Electric Vehicle Charging Plan |
| JTF | Just Transition Fund |
| MERP | Municipal Emissions Reduction Plan |
| MoC | Memorandum of Cooperation |
| NECP | National Energy and Climate Plan |
| NSRF | New National Strategic Reference Framework (2021 – 2027) |
| SEAP | Sustainable Energy Action Plan |
| SECAP | Sustainable Energy and Climate Action Plan |

## 1.1 State of the art of local energy plans

### 1.1.1 Introduction

The area of interest in Greece includes two neighbouring municipalities (Volvi and Aristotelis) with many common characteristics (size, population, economy, spatial planning, etc.) and comparable energy indicators and needs. The general characteristics of the two municipalities are presented in the following table:

*Table 1: General Characteristics of Municipalities Volvi - Aristotelis*

| | Municipality of Volvi | Municipality of Aristotelis |
|---|---|---|
| **Location** | Central Macedonia, Thessaloniki Regional Unit | Central Macedonia, Chalkidiki Regional Unit |
| **Administrative seat** | Stavros | Ierissos |
| **Population** | ~22,000 (permanent), >80,000 (summer) | ~18,300 (permanent) |
| **Area** | 783 sq.km. | 747 sq.km. |
| **Administrative structure** | 6 Municipal Units | 3 Municipal Units |
| **Characteristics** | Coastal, touristic, includes Lake Volvi (Ramsar zone) | Religious and summer tourism, mining activity |

Although initiatives related to their energy transition have been taken, neither municipality has an up-to-date Action Plan for recording and reducing energy consumption. All actions related to energy planning are described in the following paragraphs.

### 1.1.2 Municipality of Volvi

By decision of the Municipal Council in the meeting of August 31, 2015, the Municipality of Volvi joined the voluntary network of European Cities and Regions "Covenant of Mayors". The accession was signed on September 17, 2015. The Sustainable Energy Action Plan (SEAP) included the following:

- Recording of $CO_2$ emissions in the residential, tertiary, and public sectors, and from transport.
- Target setting for 2020, with specific measures for municipal buildings, public lighting, residential, tertiary buildings, and proposals to reduce the carbon footprint ($CO_2$).
- Implementation strategy including: implementation timeline, monitoring structures, SWOT analysis, and progress indicators.

The necessary data on energy consumption within the Municipality's limits were collected from its services, and a Baseline Emissions Inventory and Sustainable Energy Action Plan were prepared with a target year of 2020. $CO_2$ emissions in the Municipality of Volvi were calculated at 115,053.03 $tCO_2$ annually (base year: 2014). The Municipality aimed to reduce $CO_2$ emissions by 32,123.29 $tCO_2$, or about 27.92% by 2020.

In addition, and according to national legislation requirements, the following plans have been developed:

- Buildings' Energy Efficiency Plan (Article 7, Law 4342/2015): requiring the energy upgrade of at least 3% of the total area of municipal buildings per year. The plan was prepared in 2022 and is scheduled for review in 2026. It includes energy evaluation, classification, and upgrade calculations for nine prioritized municipal buildings, candidates for funding programs.
- Electric Vehicle Charging Plan (EVCP) (Article 17, Law 4710/2020): currently under development.

Additionally, the Municipality of Volvi has appointed an Energy Infrastructure Officer and Administrative Officers for each municipal building and energy-intensive facility (Ministerial Decision 68315/502/2022) with main duties:

- Keeping a digital platform of energy data (publicenergysavings.gov.gr) for all municipal buildings and installations.
- Implementing energy-saving measures as outlined in Article 3 of the Ministerial Decision.
- Monitoring the implementation of energy-saving actions and electricity consumption trends to achieve the designated reduction goal via the specialized digital application.

### 1.1.3 Municipality of Aristotelis

The Municipality of Aristotelis does not appear to have presented a Sustainable Energy Action Plan (SEAP) or Sustainable Energy and Climate Action Plan as a Covenant of Mayors member, unlike Volvi. Nevertheless, specific initiatives are being taken toward energy transition:

- Sustainable mobility via the development of an Electric Vehicle Charging Plan (EVCP) and submission of funding proposals for the first 20 charging points. The plan considered traffic, spatial, and urban features of the area.
- Strategic plan to reduce municipal lighting energy consumption by replacing existing lights with LED ones.
- Buildings' Energy Efficiency Plan (BEEP): includes energy analysis and classification of 67 municipal buildings, and techno-economic analysis for energy upgrades of the 12 most significant buildings (in terms of energy footprint) based on a prioritization table. The plan was prepared in 2024 and will be reviewed in 2026.
- Appointment of Energy Infrastructure Officer and Administrative Officers for each building and energy-intensive facility to digitally log consumption and implement energy-saving measures, per Ministerial Decision 68315/502/2022.

Currently, both municipalities are preparing Municipal Emissions Reduction Plans (MERPs), as required by Article 16 of the National Climate Law 4936/2022. Specifically, MERPs:

- Include a detailed inventory (base year: 2019) of energy consumption and emissions for buildings, public service facilities (esp. sports, culture, public street lighting, public spaces), water supply, sewage, irrigation, and municipal vehicles.
- Consider the Buildings' Energy Efficiency Plan of Law 4342/2015.
- Set net emissions reduction targets: minimum **10% by 2025** and **30% by 2030**, compared to 2019, including absorptions.

*Table 2: Comparative Compliance Table - Municipalities of Volvi and Aristotelis*

| Requirement | Municipality of Volvi | Municipality of Aristotelis |
|---|---|---|
| Preparation of MERP | In progress | In progress |
| Submission of data to national mechanism | Not yet | Not yet |
| Participation in Energy Community | In process | Already established |
| Preparation of BEEP | Completed | Completed |
| Preparation of SEAP/SECAP | Completed (2015) | No |
| Preparation of EVCP | Completed | Completed |
| Integration of adaptation measures | Not yet | Not yet |
| Public/Stakeholder consultation | Limited | Limited |
| Energy poverty actions | Planned via Energy Community | Planned via Energy Community |

## 1.2 Context description and positioning

### 1.2.1 Key Internal and External Factors Affecting Energy Transition

**Positive Internal Factors (Strengths)**

- Existing Planning Initiatives: Both municipalities have initiated key energy planning documents: Both have updated BEEP and EVCP plans in place, whereas currently they are estimating their carbon footprint and preparing Municipal $CO_2$ Emissions Reduction Plans. The carbon footprint has to be certified by an independent verification body and the actions plans will be evaluated annular via the certification process.
- Administrative Structures for Energy: Designation of Energy Infrastructure Officers and Administrators in both municipalities ensures responsibility and data tracking.
- Experience with Funding Programs: Both have developed technical documentation (e.g., BEEP, feasibility studies, public procurements etc) for accessing national or EU funding for building renovations.
- Tourism and Public Engagement Potential: Their summer population surges (esp. Volvi) and religious tourism (Aristotelis) offer pilot opportunities for green tourism infrastructure.

**Negative Internal Factors (Weaknesses)**

- Lack of updated SEAPs/SECAPs: Volvi's SEAP is outdated (2015); Aristotelis lacks one entirely, limiting structured energy reduction planning.
- Limited Public Consultation: Both municipalities show limited citizen and stakeholder engagement in planning processes.
- Inadequate Digital/Monitoring Systems: Despite designated officers, there is no evidence of comprehensive implementation or reporting mechanisms for energy performance.
- Dependency on Mining (Aristotelis): The local economy in Aristotelis is partially reliant on extractive industry, which may conflict with decarbonization goals, despite the funding of relative initiatives from the same industry.
- Limited human resources. Both Municipalities are considered small with limited technical and administrative personnel that can support the proper design, funding and implementation of the energy transition initiatives and works.

**Positive External Factors (Opportunities)**

- National Climate Law 4936/2022: Mandates MERPs with emission reduction targets, offering legal and technical frameworks. The certification and monitoring of the carbon footprint on an annual basis is mandatory as the target of reduction 30% until 2023 in relation to the 2019 baseline.
- Law 4342/2015 transposed the Energy Efficiency Directive (2012/27/EC) into national legislation and requires 3% of the total floor area of heated and/or cooled public buildings to be renovated each year to meet the minimum energy performance requirements. It also includes provisions related to the role of public buildings in energy efficiency and the obligation

for public bodies to prepare BEEPs and update them in a four-year basis.

- Energy Communities: Enable collective ownership of RES, reducing costs and improving public acceptance. The legal framework is very strong and relative initiatives have already taken place. Both Municipalities are participating in the Apollon programme, coordinated by the Regional Authority of Central Macedonia, whereas the creation of EnComs in municipal level are under consideration as well.
- Just Transition Mechanism: Supports regions in industrial transition with funding for RES, reskilling, and infrastructure.
- NSRF 2021–2027 & REPowerEU: Provide targeted funding for energy and mobility projects at the municipal level.
- Covenant of Mayors: Volvi's participation aligns with EU goals and facilitates support and cooperation.
- Participation in relative EU programmes and funding schemes.
- Relative high energy costs.

**Negative External Factors (Threats)**

- Complex Funding Access Procedures: Administrative burdens may be too high for under-resourced municipalities.
- Lack of Adaptation Planning: Neither municipality has incorporated climate adaptation, increasing vulnerability.
- Policy Gaps in Local Implementation: EU directives and national legislation are not always effectively implemented at the local level. For instance, the updated requirements of the Energy Performance of Buildings Directive (EPBD-2024/1294/EU) and the Energy Efficiency Directive (EED-2023/1791/EU) call for long-term planning and sustained investment—challenges that are particularly demanding for smaller municipalities with constrained budgets and limited administrative capacity
- Lack of Local Data Infrastructure: The absence of reliable, standardized, and accessible local energy data significantly hampers the ability of municipalities to monitor progress toward climate and energy targets. It also poses a barrier to designing evidence-based policies and effectively demonstrating impact. Furthermore, limited data availability undermines the ability to meet the reporting requirements of national and EU funding mechanisms, reducing the chances of securing financial support for energy transition initiatives.

### 1.2.2 Recommendations Based on Supra-Local Frameworks

- Acceleration of the implementation of Municipal Emissions Reduction Plans (MERPs) in alignment with Climate Law 4936/2022. Ensuring the integration of clear, measurable, and time-bound adaptation and mitigation measures. Establishment of an annual evaluation and certification process for greenhouse gas mitigation plans and carbon footprint estimates, conducted by an independent and accredited verification body.
- Conduction of comprehensive energy inspections of the highest-priority municipal buildings, as identified in the approved Building Energy Efficiency Plan (BEEP). Issuance of updated

Energy Performance Certificates (EPCs) and prepare detailed techno-economic feasibility studies for energy upgrades, including cost estimates, for submission to relevant funding programs.

- Carrying out on-site energy audits for the most energy-intensive municipal facilities and equipment. Development of targeted energy efficiency improvement plans supported by feasibility studies to secure financing through appropriate national or EU programs.
- Conduction of detailed medium-long term local Energy Plans based on the MERPS, the BEEPs, the results of the energy inspections/ audits and the relative energy databases.
- Expansion of the role of Energy Communities by facilitating their access to renewable energy sources (RES) projects, leveraging available financial tools and incentives to promote local ownership and citizen participation in the energy transition.
- Maximization of the use of funding opportunities under the NSRF 2021–2027 and REPowerEU frameworks to support building renovations, deployment of smart mobility solutions, upgrades to energy-efficient infrastructure, and modernization of public lighting systems.
- Update of the Sustainable Energy Action Plan (SEAP) of the Municipality of Volvi to align with current strategic frameworks, including the MERP and BEEP, ensuring coherence with national and EU climate objectives.
- Encouraging the Municipality of Aristotelis to formally join the Covenant of Mayors, enabling access to international best practices, technical support, and collaborative platforms for integrated energy and climate planning.
- Strengthening public engagement and transparency by implementing structured consultation processes and participatory platforms that involve citizens and local stakeholders in the design, implementation, and monitoring of energy and climate policies

## 1.3 Common vision and priorities

### 1.3.1 Process Summary and Shared Vision of the Municipalities of Volvi and Aristotelis

The formulation of the policy document (Memorandum of Cooperation) annexed in both Greek and English language emerged through a collaborative, participatory process involving technical teams, municipal representatives, and external experts from both the Municipality of Volvi and the Municipality of Aristotelis. This process was informed by the National Energy and Climate Plan (NECP - Governmental Council on Economic Policy Decision 3/2024), the National climate (notably Climate Law 4936/2022) and energy legislation, aligned with EU directives on energy efficiency and emissions reduction.

Bilateral meetings, and data-sharing sessions facilitated the joint diagnosis of energy consumption patterns, emissions profiles, and local vulnerabilities. Both municipalities contributed inputs based on their existing planning tools, including SEAPs, BEEPs, and EV charging infrastructure plans.

The two municipalities articulated a common vision centered on:

- A just and inclusive energy transition that supports both environmental sustainability and social equity;
- Decentralized renewable energy development, particularly through energy communities;
- A commitment to local resilience, emphasizing adaptation as well as mitigation;
- Making use of available national and EU funding, while enhancing local technical capacity and inter-municipal cooperation.

### 1.3.2 Emerging Priorities

The process led to the identification of several shared strategic priorities:

- Estimation of the current energy status and identification of each Municipality's energy needs. Implementation of a local energy transition roadmap.
- Promotion of Renewable Energy Source (RES) projects (e.g., photovoltaics, solar thermal, biomass) in municipal infrastructure.
- Improvement of energy efficiency in municipal buildings and pubic lighting networks.
- Promotion of electromobility, both in municipal fleets and among citizens and local businesses. Deployment of public EV charging stations and conversion of municipal fleets.
- Exploration and promotion of Citizen Energy Communities.
- Development of digital platforms for energy management and emissions monitoring.
- Public awareness and sensitization. Strengthening participation of citizens and businesses in energy transition issues.
- Seeking and utilizing National and European funding instruments (e.g., NSRF, Recovery Fund, LIFE, Horizon Europe, etc.). Increasing citizen engagement in energy and climate planning.

### 1.3.3 Preferred Areas of Intervention

Both municipalities expressed a preference for joint or coordinated actions in the following areas:

- Exchange of experiences, policies, and best practices related to the energy transition and the objectives listed in paragraph 3.2.
- Coordination of initiatives and exchange of expertise for policy formation and development of related proposals and projects.
- Exchange visits by expert teams from the participating Municipalities.
- Support and knowledge-sharing in collaboration with other Local Government Organizations and relevant Bodies (Public Agencies and Services, Research Centers and Academic Institutions, Energy Service/Products Companies, private consultants, etc.).
- Participation in policy-making at European, National, Regional, and Local levels to promote principles and priorities for energy transition and climate neutrality.
- Organization of joint actions and implementation of pilot/demonstration projects with high replicability.
- Joint organization of informative events and awareness activities (seminars, conferences, workshops, etc.).

*Table 3: Potential collaborations within the MoC*

| Type | Potential Partners | Benefits |
|---|---|---|
| Energy Community | Citizens, local businesses, NGOs | Legal basis for Net Metering and sharing of energy production |
| Universities – Research Institutes | Anatoliki, AUTH, CRES, CERTH etc | Support for project design and certification |
| Private Technology Providers | Energy providers | Supply of technologies with favourable maintenance terms |
| Development Agencies | Development Agency of Chalkidiki | Administrative support for documentation and application submission |
| Intermunicipal Collaborations | Aristotelis–Volvi–Polygyros–Lagadas–Visaltia–Amfipoli | Joint proposals for intermunicipal RES, EV charging and Energy Communities |
| Energy Performance Contracts (EPCs) in the Public Sector | ESCOs | Public lighting, energy audits, and energy upgrades of facilities |

### 1.3.4 Short-Term Joint Actions

Over the coming months, the Municipalities of Volvi and Aristotelis will implement a coordinated set of actions designed to accelerate their energy transition while strengthening institutional capacity and community engagement. These joint efforts reflect their shared commitment to sustainable development and intermunicipal collaboration.

Planned Initiatives Include:

- Preparation of joint funding proposal under EU or NSRF 2021–2027 programs to finance energy efficiency upgrades in municipal buildings and facilities;
- Deployment of pilot Energy Community projects, focusing on municipal buildings, and social infrastructure;
- Know – how exchange on the design and rollout of digital emissions monitoring platform, enabling real-time tracking and annual reporting of local emissions;
- Public engagement campaigns, including citizen consultations, town hall meetings, and energy-awareness programs in primary and secondary schools;
- Development of coordination frameworks for the alignment and mutual reinforcement of the Municipal Emissions Reduction Plans (MERPs), including common emissions baselines and harmonized targets;
- Energy audits of critical municipal infrastructure, with a focus on water pumping stations, and educational facilities;
- Technical workshops and capacity-building sessions for municipal staff and local stakeholders on topics such as energy performance contracting, climate adaptation, and data reporting;
- Mapping of available rooftops and public land for future renewable energy installations (PV, solar thermal, or wind), using GIS tools;
- Investigation of joint procurement models for energy services, including bundled maintenance, energy supply, and performance guarantees (e.g., through ESCOs).

# 2 Portuguese target area (by Areanatejo)

## 2.1 State of the art of local energy plans

The following table provides a summary of the status of the commitments made by the six participating municipalities prior to the start of the LIFE-SMART project, and their formal update status within the scope of the initiative:

| Municipality | Year of Covenant adhesion | Commitment status before LIFE-SMART | Renewal approved by Municipal Assembly | Remarks |
|---|---|---|---|---|
| Alter do Chão | 2014 | Outdated | ✓ Approved | New commitment adopted (2021 model: -55% by 2030 / climate neutrality by 2050) |
| Avis | 2012 | Outdated | ✗ Pending | Awaiting approval of new commitment (2021 model) |
| Castelo de Vide | 2011 | Outdated | ✓ Approved | New commitment adopted (2021 model: -55% by 2030 / climate neutrality by 2050) |
| Marvão | 2015 | Outdated | ✗ Pending | Awaiting approval of new commitment (2021 model) |
| Monforte | 2021 | Updated | ✓ Already aligned with 2030 and 2050 targets | No need for renewal |
| Sousel | 2022 | Updated | ✓ Already aligned with 2030 and 2050 targets | No need for renewal |

In Portugal, municipalities play a central role in implementing energy transition and climate action at the local level. Over the past decade, several municipalities in the Alto Alentejo region have developed Sustainable Energy Action Plans (SEAP) or Sustainable Energy and Climate Action Plans (SECAP), under the Covenant of Mayors. However, most of these plans are now outdated, with baseline emission inventories from 2005 or 2010 and targets no longer aligned with the current EU ambition for 2030 and 2050.

In this context, the LIFE-SMART project is supporting six municipalities in the region (Avis, Alter do Chão, Castelo de Vide, Marvão, Monforte and Sousel) in the complete revision or replacement of their local plans. These new plans are being developed according to the official Covenant of Mayors methodology (SECAP), integrating mitigation and adaptation strategies, as well as a section dedicated to energy poverty – now mandatory under the European model.

In parallel, the Intermunicipal Community of Alto Alentejo (CIMAA), aligned with the national policy framework, promoted the elaboration of Municipal Climate Action Plans (PMAC) for almost all municipalities in the region. These plans follow national guidelines under the Portuguese Climate Framework Law, including vulnerability assessments and decarbonisation pathways. Where possible, the PMACs are being used as reference documents to ensure coherence and complementarity between national obligations and Covenant of Mayors reporting requirements.

The six municipalities involved in this activity (Avis, Alter do Chão, Castelo de Vide, Marvão, Monforte and Sousel) are Covenant signatories, having committed to emission reductions at different times. At the start of the project, only two municipalities – Monforte and Sousel – had formally adhered to the long-term goals (-55% by 2030 and climate neutrality by 2050), while the remaining four still had older, outdated commitments under the previous 2020 targets.

To regularise this situation and prepare the new SECAPs, a new commitment document was developed according to the most recent version of the Covenant of Mayors – Europe, to be approved by each Municipal Assembly. This renewal process was promoted within the scope of the LIFE-SMART project and has already been successfully completed in Alter do Chão and Castelo de Vide. For Avis and Marvão, approval is scheduled to take place in upcoming Municipal Assemblies.

This process ensures that all municipalities covered by the project will be aligned with the current Covenant requirements, particularly regarding the climate ambition (-55% GHG reduction by 2030) and the inclusion of adaptation and energy poverty in the action plans to be submitted on the MyCovenant platform.

As of June 2025, all six SECAPs are under development within the LIFE-SMART project. Draft versions are under review and are expected to be finalised and formally presented to the municipalities by 23 July 2025.

## 2.2 Context description and positioning

Alto Alentejo region is predominantly composed of small and medium-sized municipalities, characterised by low population density, an ageing demographic and a dispersed territorial occupation. This context poses significant challenges to the implementation of local energy and climate policies, particularly in the areas of sustainable mobility, energy efficiency in public buildings, and access to funding for structural projects.

Despite these constraints, the region has strong potential for renewable energy generation – particularly solar – and a track record of intermunicipal cooperation projects, which have helped overcome technical and organisational limitations at the municipal level.

Relevant strategic instruments include:

- The National Energy and Climate Plan 2030 (PNEC), which defines national targets and strategic guidelines for the energy transition;
- The National Adaptation Strategy and Action Plan for Climate Change Adaptation (P-3AC);
- The PMACs, as mandatory planning instruments under the Portuguese Climate Framework Law;
- Funding opportunities under PO SEUR, PRR and PDR2030, supporting implementation at local level.

The table below provides a summary of the most relevant supra-local plans and programmes:

| Title | Responsible body | Time scope | Brief description | Energy transition measures relevant to LIFE-SMART | Associated funding |
|---|---|---|---|---|---|
| PMAC | CIMAA / APA | 2022–2035 (in force) | Local climate action plans aligned with the Climate Framework Law. | Local decarbonisation pathways, adaptation measures by sector. | PO SEUR, PRR |
| PNEC 2030 | Portuguese Government (DGEG / APA) | 2021–2030 (in force) | National strategy with targets for GHG reduction, energy efficiency and renewables. | -45% GHG emissions by 2030, 47% RES, 35% EE | National and EU Funds (PT2030, PRR, etc.) |
| P-3AC | Portuguese Government / APA | 2019–2030 (under implementation) | National strategy and action plan for adaptation to climate change. | Sectoral adaptation measures, vulnerability mapping. | EEA Grants, PO SEUR |
| PO SEUR / PRR | Government of Portugal / EU Funding Programmes | 2014–2020/ 2021–2026 (active) | Funding instruments supporting climate and energy actions at local level. | Support for energy efficiency, RES, sustainable mobility. | National Recovery and Resilience Plan |

This alignment between local plans and national/regional instruments helps ensure consistency, resource mobilisation and strategic integration.

## 2.3 Common vision and priorities

The process of building a shared vision and defining intermunicipal priorities under Task 3.2 was carried out in close coordination with the six municipalities of the Alto Alentejo region involved in the LIFE-SMART project. AREANATejo led the technical and methodological coordination, ensuring regular follow-up and promoting cooperation between the municipal teams and the contracted experts.

Two experts from the Polytechnic Institute of Portalegre (IPP) were mobilised to support the Intermunicipal Technical Structure (ETIM) and to elaborate the Sustainable Energy and Climate Action Plans (SECAP) for each municipality. The work was participatory, with direct engagement with municipal technical staff and joint sessions that allowed for the collection of contributions, validation of proposals and harmonisation of approaches.

The training sessions under Task 2.3 were particularly valuable, serving as shared spaces for technical exchange and consolidation of a common intermunicipal vision, grounded in shared challenges, available resources and regional opportunities.

Based on this collaborative process, a set of strategic priorities common to the six municipalities was identified, notably:

- Energy rehabilitation of public and residential buildings, focusing on reducing energy bills and addressing energy poverty;

- Promotion of decentralised renewable energy production, especially photovoltaic systems for self-consumption;
- Sustainable mobility, particularly through electrification of municipal fleets and support for shared and intermunicipal transport solutions;
- Valorisation of public space and green infrastructure as adaptive responses to climate change;
- Capacity building of municipal technical teams and strengthening of public energy literacy.

These intermunicipal priorities are reflected directly in the local plans. The most transversal short-term actions include:

- Installation of photovoltaic systems for self-consumption in public buildings and infrastructures, with an expected aggregate capacity exceeding 2 MW;
- Energy rehabilitation of schools, administrative and social buildings, with planned interventions in Sousel, Monforte and Castelo de Vide;
- Progressive electrification of municipal fleets and installation of EV charging stations, with actions already initiated in Avis and Marvão;
- Promotion of active and sustainable mobility, including the development of cycling infrastructure, pedestrian routes and flexible transport solutions;
- Integration of nature-based solutions and efficient water management, with measures highlighted in Marvão and Alter do Chão;
- Development of Renewable Energy Communities (REC), under study or planning in Alter do Chão, Sousel and Monforte;
- Awareness campaigns and educational actions in schools, aligned with the activities of Task 2.4.

While tailored to each municipality's context, these measures demonstrate a joint effort to operationalise the regional strategic vision and enable coordinated implementation of technical and funding solutions under the LIFE-SMART project.

# 3 French target area (by CCI-NCA)

## 3.1 State of the art of local energy plans.

To begin with, we considered it necessary to explain the approach that guided our work. In the Alpes-Maritimes region of France, the four municipalities involved in the project were geographically dispersed and at different stages in the development of their energy transition strategies. They also have different climatic zones so different preoccupations. Given this context, it seemed most effective to focus individually on each municipality by creating a dedicated local energy transition plan. At the same time, we took advantage of collective events to encourage interaction and knowledge-sharing among them.

As previously mentioned, the municipalities were not on equal footing in terms of energy planning. For instance, Saint-Vallier-de-Thiey had already initiated several actions, whereas others were only beginning to address these issues. Resources also varied significantly: some municipalities had technical staff with relevant expertise, while others relied on elected officials with broader but less specialized responsibilities. At the beginning of the project, none of the municipalities had a clearly defined or consolidated energy plan, even if certain actions had already been undertaken.

A common observation across all four municipalities was the lack of a coherent overview of ongoing and planned actions. With support from an external expert, we helped each municipality compile and structure their existing measures while identifying new potential actions. The process began with a full analysis of the current state of energy use, including on-site visits and consultations, followed by the proposal of a comprehensive energy transition plan. This approach was designed to comply with the French national regulatory framework, including the **"Décret Tertiaire" (2019),** the "**Décret BACS" (2020**), and the **LOM law ("Loi d'Orientation des Mobilités", also from 2019).** These laws provide both qualitative and quantitative objectives—such as the obligation to reduce energy consumption in tertiary buildings by 40% by 2030, 50% by 2040, and 60% by 2050—and served as the backbone for the actions proposed in each local plan.

For each municipality, the following methodological framework was applied (see Annexes for detailed methodology):

- **Assessment of current energy consumption**, including allocation by category (buildings, lighting, transport, etc.)
- **Identification of areas for improvement**, based on audits and on-site assessments
- **Proposal of concrete and prioritized actions**
- **Evaluation of actions based on economic, energy efficiency, and environmental impact criteria**

The scope of each study focused on communal buildings, public lighting, and the municipal vehicle fleet. Based on the same methodology, we first assessed current energy consumption and how it was distributed across sectors. We then identified areas of potential improvement and proposed

concrete, tailored actions. Each action was analyzed from economic, energy efficiency, and environmental perspectives.

In **Biot,** for example, 79% of the municipality's energy consumption was attributed to communal buildings. Therefore, the proposed action plan focused on auditing the most energy-consuming facilities as a necessary first step. The plan then recommended launching a collective self-consumption operation, installing photovoltaic panels on rooftops, electrifying the municipal vehicle fleet, and developing public infrastructure for electric vehicles. Indirect actions targeting residents were also included, such as promoting carpooling and soft mobility.

For **Saint-Martin-Vésubie,** a similar approach was taken. The plan emphasized reducing building energy use through audits and renovation, followed by a collective photovoltaic self-consumption project, rooftop solar installations, public charging stations, and citizen engagement actions.

In **Saint-Vallier-de-Thiey,** the situation was more advanced. The municipality had already conducted energy audits and had a clearer understanding of its needs. As such, the action plan proposed more targeted technical interventions, such as insulation improvements, replacing gas boilers with high-performance heat pumps, upgrading exterior joinery, and modernizing building management systems in accordance with the BACS regulation.

**Tende** presented a slightly different profile. Although buildings still represented the largest share of consumption (53%), public lighting was also a significant contributor (43%). Consequently, the plan addressed both sectors, recommending improvements to building energy performance and the optimization of public lighting systems.

The process highlighted the differences between municipalities in terms of readiness, resources, and expertise. This task served to give municipalities a clearer, data-driven understanding of their energy profiles. In some cases, it was the first time such detailed analysis had been carried out. Ultimately, these local plans not only helped clarify existing efforts but also laid a solid foundation for structured and ambitious energy transition strategies moving forward.

## 3.2 Context description and positioning

### Internal positive factors

In the Alpes-Maritimes, a growing number of municipalities are showing strong commitment to sustainability and the energy transition. For instance, **Saint-Vallier-de-Thiey** stands out as an example of a commune actively engaging in decarbonisation through the development of a local energy plan. This growing awareness and ambition at the local level create a fertile ground for implementing concrete actions aligned with regional and national objectives.

Several municipalities in the region have already initiated or completed planning tools such as **PCAET (Plan Climat-Air-Énergie Territorial)** or conducted **energy diagnostics**. These instruments provide a strategic framework for prioritising actions, monitoring progress, and aligning with supra-local policy goals, thereby reinforcing coherence and long-term impact.

Moreover, local support structures, notably **Agence 06**, are instrumental in facilitating the energy transition. Acting as a bridge between municipalities and the broader ecosystem of energy experts, solution providers, and funding bodies, Agence 06 offers tailored technical assistance and capacity-building. Their involvement is key to helping municipalities overcome knowledge gaps and implement effective strategies.

**Challenges and constraints:**

However, despite political goodwill, many small and mid-sized municipalities face serious **capacity constraints**. A lack of in-house expertise in energy, engineering, or project development often prevents them from moving beyond intentions to implementation. Recruitment difficulties and limited staff availability further compound this issue.

Moreover, coordination between different levels of governance—**local, intercommunal, departmental, and regional**—is not always smooth. This fragmentation can lead to overlapping initiatives, missed synergies, and inefficiencies in planning and implementation. Cross-municipal collaboration remains underdeveloped in many areas.

There is also a challenge to access the funding schemes. Municipalities may struggle with complex application procedures, evolving eligibility criteria, and limited time to prepare dossiers. Platforms like *Démarches Simplifiées* or calls for proposals by **ADEME** require administrative knowledge and time that are often lacking at the local level.

**External positive factors:**

The energy transition in the Alpes-Maritimes is shaped by a combination of national regulations, regional policies, and local initiatives. At the national level, several key regulations are driving forward decarbonisation efforts. These include :

- the **"Décret Tertiaire"** (2019), which mandates significant reductions in energy consumption for tertiary buildings over the coming decades;
- the **"Décret BACS"** (2020), which requires automation and control systems in non-residential buildings to optimize energy use;
- and the **"Loi d'Orientation des Mobilités" (LOM)**, also from 2019, which promotes sustainable mobility and a shift away from carbon-intensive transport modes.

At the regional and departmental level, there are several support mechanisms and funding such as:

- **Fonds Chaleur** *(ADEME)*: Financial support for renewable heat production projects (biomass, solar thermal, geothermal, heat networks).
- **CEE** *(Certificats d'Économie d'Énergie)*: Private funding leveraged through obligated energy suppliers.
- **TERRITOIRES ENGAGÉS POUR LA TRANSITION ÉCOLOGIQUE** (TEPOS, TEPCV): Support for communities engaging in long-term low-carbon strategies.

**Negative external factors:**

However, despite the availability of regulations and funding opportunities, the energy transition ecosystem remains complex and fragmented. Many municipalities in the Alpes-Maritimes lack the technical expertise and administrative resources needed to navigate and access these support schemes. This is where local actors like **Agence 06** play a crucial role: they provide technical support, facilitate access to funding, and connect municipalities with relevant stakeholders and solution providers, thereby acting as enablers of local energy action.

Saint-Vallier-de-They, with the help of the external expert, has developed a local energy plan in line with regional and national objectives. It provides a useful case study of how supra-local policies are interpreted and implemented at the local level.

| **Title:** | Local Energy Plan – *Saint-Vallier-de-Thiey* |
|---|---|
| **Responsible body** | Mairie of Saint-Vallier-de-Thiey |
| **Time scope** | Approved |
| **Brief description** | The primary objective of the plan is to provide the municipality with a clear and comprehensive roadmap for its energy transition, focusing particularly on the performance of communal buildings. The plan aims to:<br>● Establish a global vision of actionable measures to reduce energy consumption and greenhouse gas emissions at the local level.<br>● Evaluate the environmental and economic impact of each proposed action, supporting evidence-based decision-making.<br>● Prioritise actions based on their cost-effectiveness, feasibility, and contribution to the municipality's overall energy goals.<br>● Ensure alignment with supra-local and national policies, such as the Décret Tertiaire, Décret BACS, and the PCAET framework, as well as regional climate and energy strategies.<br>A key quantitative target set by the plan is to reduce the energy consumption of communal buildings by 50% by 2024, compared to a defined baseline. This ambitious goal is to be achieved through a combination of energy efficiency measures, building retrofits, user awareness campaigns, and the integration of renewable energy solutions. |
| **Energy transition measures** | The energy plan is highly relevant to the LIFE SMART project as it directly supports municipalities in overcoming one of the core challenges identified by the project: the lack of technical expertise and capacity at the local level. By providing a clear, structured framework for assessing, prioritising, and implementing energy-related actions, the plan strengthens local governance and facilitates the operationalisation of sustainable energy strategies.<br><br>Furthermore, the plan demonstrates strong alignment with supra-local policies and regulatory frameworks, including national obligations such as the *Décret Tertiaire* and *Décret BACS*, as well as regional energy-climate objectives. This coherence ensures that local efforts contribute effectively to broader decarbonisation targets.<br><br>Importantly, the plan adopts a comprehensive and inclusive approach to the energy transition, integrating not only technical upgrades to public buildings but also citizen engagement and behavioural change, as evidenced by some of the proposed awareness-raising actions. This aligns closely with LIFE SMART's emphasis on systemic and participatory approaches to sustainability.<br><br>The measures proposed also reflect a logic of energy sobriety, prioritising consumption reduction before investing in new renewable energy systems. This sequencing is consistent with the LIFE SMART project's guiding principles of cost-efficiency and climate impact.<br><br>Given the local context and energy profile of communal buildings, the most impactful measures proposed in the plan include: |

| | |
|---|---|
| | • Thermal insulation upgrades to improve building envelope performance and reduce heat loss.<br>• Replacement of outdated gas boilers with high-efficiency heat pumps, reducing fossil fuel dependency.<br>• Modernisation of exterior joinery (windows and doors) to improve comfort and reduce energy loss.<br>• Deployment of Building Automation and Control Systems (BACS) in line with the 2020 regulation, to optimise energy use in real time.<br>These actions are detailed in the annexed Energy Plan and provide an example of planning for other municipalities in the Alpes-Maritimes and beyond. |
| **Associated funding** | ADEME, Région Sud, Europe (FEDER), local budget |
| **Link** | https://drive.google.com/file/d/12eHgULt40BtEm3eGqs6n69YhZ0k35EDR/view?usp=drive_link |

## 3.3 Common vision and priorities

To address the geographical and contextual diversity of the beneficiary municipalities, tailored local energy plans were developed for each municipality. This individualized approach was complemented by inter-municipal collaboration through shared events such as:

- The **Salon des Maires (October 2024)**
- A **training session on March 18th, 2025** at the CCI NCA headquarters, covering key topics like:
  - Collective self-consumption,
  - Heating and cooling networks,
  - Energy renovation of historical buildings.

These events fostered knowledge exchange and mutual learning, supported by networking sessions that aligned with the collaborative ethos of IMTS.

Each municipality participated in a dedicated meeting where their Energy Plan was presented. These sessions helped identify and prioritize actions based on economic and environmental impact, forming the basis for short-term implementation under Task 3.4.

The work of the IMTS highlighted different key elements of a common vision. First, it came out a shared commitment to the energy transition through practical, place-based strategies. For most of the municipalities, there is a focus on building municipal capacity and sharing successful approaches across territories. They all agreed on promoting concrete, scalable actions leading to visible impact and peer learning.

It also highlighted emerging priorities and some preferred areas of intervention such as energy efficiency in communal buildings emerged as the most immediate and actionable priority across all municipalities. However, these actions are to be confirmed in the next phases of the project. Collective self-consumption initiatives were also explored and promoted through training and discussions. Another important point is the synergies between municipalities which are seen as vital for long-term resilience and innovation in energy practices.

The work with the municipalities ended on short-term actions planned for the upcoming months, in particular:

- The **implementation of one prioritized action** per municipality, focusing primarily on public buildings.
- The **organization** of a **collective feedback workshop**, featuring:
  - A questionnaire to gather insights on challenges, benefits, and lessons learned.
  - A shared report, summarizing:
    - Each action (steps, deliverables),
    - Prerequisites and data requirements,
    - Feedback from municipalities,
    - Estimated energy savings (in MWh/year),
    - Next steps for continuity.
  - An exchange session for municipalities to reflect, discuss results, and co-design future collaborative actions.

In consultation with the external expert and the municipalities, we decided that it was more relevant to have the collective feedback workshop at the end of the implementation of the priority actions, in order to learn about these first actions and to co-design future collaborative actions.

This integrated approach balances local specificity with inter-municipal cooperation, ensuring that each municipality advances on its own path while contributing to a collective regional vision for energy transition.

**The annexes related to the French target areas are the following:**

- Reading guide for the Local Energy Plan
- Local Energy Plans (Biot, Saint-Martin-Vésubie, Saint-Vallier-de-Thiey, Tende).

# 4 Spanish target area (by FAMP + USpace)

## 4.1 State of the art of local energy plans

In La Loma Occidental, Jaén, eight municipalities are in the process of preparing their Municipal Plans against Climate Change (by its Spanish acronym, PMCC). The municipalities are: Baeza, Begíjar, Canena, Ibros, Lupión, Rus, Torreblascopedro and Villatorres. The initiative to create these documents is part of Regional Law 8/2018, of the Junta de Andalucía, which deals with measures against climate change and the transition to a new form of energy management in the region of Andalusia, establishing the obligation that all Andalusian municipalities have this type of energy and climate planning. The official approval of these plans is foreseen for 2025 and will be crucial to drive a shift towards a more sustainable energy model.

Currently, these plans are being developed under the framework of the Andalusian Climate Action Plan (PAAC) and with the collaboration of the Provincial Council of Jaén, which offers some technical and financial support to the municipalities involved. At the moment, the municipalities of La Loma Occidental are also receiving the leading support of LIFE Smart project for the final definition of PMCCs and their approval. These plans have been subjected to an open process of citizen participation and public consultation, allowing the inhabitants of the region and local actors, such as associations and public entities, the opportunity to directly influence the definition of the actions and priorities that are intended to be implemented. This model of participation is essential to ensure that the plans truly reflect the needs of each municipality, ensuring that the solutions proposed to be adopted are accepted by the community and are truly effective.

Although the plans are not yet formally approved, their objectives are very clear and fully aligned with regional, national and European policies.

With regard to the quantitative objectives of PMCCs, the main one is to significantly reduce greenhouse gas (GHG) emissions and make determined progress towards the use of renewable energy sources. In order to achieve this, each plan includes a detailed inventory of the emissions that occur in each municipality. This inventory focuses mainly on key areas such as energy consumption, transport, waste management and agricultural activity. By obtaining all this type of data, it is possible to set concrete and measurable emission reduction targets in the short, medium and long term. In addition, it is crucial to boost the energy transition by replacing non-renewable sources with other cleaner and more local energies, such as solar energy, wind energy or biomass, the latter being widely deployed throughout the region. Measures underpinning this objective include improving energy efficiency in public buildings, optimising street lighting and promoting sustainable mobility through the promotion and use of electric vehicles and the infrastructure necessary for their recharging.

In terms of qualitative objectives, the plans actively promote adaptation to climate change. This means reducing risks and vulnerabilities in the face of climate threats to these municipalities, such as extreme heatwaves, droughts or floods. Each municipality is expected to identify the most vulnerable areas where to act with more specific adaptation measures to strengthen the resilience

of the territory. This includes, for example, restoring natural ecosystems, improving water resource management and creating urban green spaces to help mitigate the effects of high temperatures.

The energy transition is a challenge that involves the whole of Europe. The municipalities of the region of La Loma Occidental have the opportunity to be leaders in sustainability, efficiency and adaptability to climate change. Therefore, PMCCs are a legal experience but also a strategic instrument that makes possible for municipalities to access European funding and grants. These funds will enable the financing of the actions necessary to achieve emission reductions, adaptation to climate change and the modernisation of infrastructure.

The plans of these municipalities share a common basis, because they are governed by Andalusian regulations and PAAC guidelines, but they have certain differences according to the characteristics of each municipality. For example, in some of them it is more focused on improving energy efficiency in buildings and housing, while in others, with greater agricultural activity, priority may be given to the incorporation of renewable energy in the agricultural sector or to the reduction of emissions associated with agriculture.

All municipalities share the vision of the importance in reducing greenhouse emissions and moving towards a lower carbon economy. All consider it essential to draw up an inventory of emissions and adapt the territory to make it more resistant to the impacts caused by climate change.

The progress in the planning of the PMCC varies in each municipality, but all of them are immersed in their development, collaborating with technicians and Andalusian authorities. The main challenge is to obtain sufficient financial support to be able to carry out the measures included in these plans. The PMCCs include a specific chapter on this, with a strong focus on obtaining European funds. Political commitment and active participation of citizens and local economic sectors is also crucial. In addition, it is important to ensure that plans are reviewed and updated as circumstances progress and new needs or technologies emerge.

## 4.2 Context description and positioning

La Loma Occidental is immersed in a key process of transition towards a more sustainable energy model. The success of this transformation will be conditioned by a number of elements. Some are internal, such as the quality of existing infrastructure and the level of public awareness and participation. Other factors are external, including guidelines and support from regional policies, as well as the availability of funding through European funds. This analysis focuses on the main aspects that will influence the outcome of the energy transition in this region.

**Internal factors:**

1. Economic dependence of the agricultural sector since the implementation of renewable energies in agriculture, such as biomass and the use of solar energy in irrigation and other agricultural processes, can be a driver of positive change. However, resistance to change in more traditional sectors could slow down the implementation of these technologies.

2. Awareness and local participation: Increasing public awareness and active participation in the development of PMCCs is essential. Educational programs and awareness campaigns are key to engaging the local population.
3. Existing energy infrastructure: Some municipalities have very old buildings and infrastructure that do not contribute to reducing energy consumption and therefore emissions. Modernising these infrastructures can be an opportunity to reduce emissions and improve energy efficiency.

**External factors:**

1. Supralocal Policies and Programs:
   - *Andalusia Energy Strategy 2030*: An ambitious regional strategy that seeks to position Andalusia as a leading area in the energy transition, promoting the use of renewable energies and fostering greater efficiency in energy consumption. This translates into a fundamental framework that prioritises concrete actions to meet the decarbonisation and sustainability objectives. Through this strategy, municipalities can access regional and national funds and grants.
   - *Jaén Energy Optimization Plans* (by its Spanish acronym, POE): The Province of Jaén launched the POE a few years ago, with a clear objective: boosting energy efficiency in all municipalities in the province. These plans, in addition to offering technical and financial support, also facilitate the implementation of more sustainable energy solutions at the local level. For these municipalities, participating in these plans meant having a direct opportunity to modernize their energy infrastructure and adopt more responsible practices, laying the foundations for what would be a true energy transition towards cleaner energies, reducing dependence on fossil fuels and moving towards a more autonomous and environmentally friendly model.
   - *Optimize 30 Program*: This program, promoted by the province of Jaén and aimed at small municipalities (less than 20,000 inhabitants), focuses on maximizing the energy efficiency of municipal buildings and modernizing existing infrastructure to achieve the optimization of energy consumption. This is a direct opportunity to modernise their heritage and public services, making them more sustainable. The program serves as a tool to help identify where more energy is spent and how it can be improved. It is a fundamental step for these localities to manage their resources more efficiently. The measures aim to achieve the triple target 40-27-27 by 2030: 40% reduction in CO2, 27% increase in energy efficiency and 27% of EU energy from renewable sources.
   - *New Integrated National Energy and Climate Plan* (by its Spanish acronym, PNIEC): At national level, the PNIEC is the main strategic framework related to the energy transition. It sets more recent and ambitious targets for the reduction of greenhouse gases and sets the course towards a sustainable energy system for all of Spain. PMCCs are fully aligned with these national targets. This ensures that efforts at the municipal level contribute effectively and in a coordinated manner to the country's major climate challenges.

2. Access to finance:

- The municipalities of La Loma Occidental have access to European funds through the ERDF and EAFRD programmes, and other direct management programmes such as LIFE to finance renewable energy, energy efficiency and sustainable mobility projects. These funds are essential for the implementation of the PMCC measures.

3. Climate change and vulnerability:

- Municipalities in La Loma Occidental are vulnerable to the effects of climate change, such as droughts and heat waves. This makes adaptation to climate change as essential as mitigation. The implementation of green infrastructure and efficient water management will be crucial for the resilience of these municipalities.

4. Collaboration with the private sector:

- Public-private partnership schemes can be key to accelerating the start-up of innovative renewable energy projects. An example of this is the local energy communities, which can be promoted by the municipalities themselves.
- In addition, private companies have a key role to play in driving new technologies and modernising our energy infrastructure, enabling a faster and more efficient transition.

The following are the main common objectives of the Local Energy Plans for the municipalities of La Loma Occidental:

- Reduction of CO2 emissions: Establish measures to reduce GHG emissions in sectors such as residential, transport and industry.
- Promotion of renewable energy: In public and private buildings promote the implementation of solar energy systems.
- Improving energy efficiency: Achieve consumption optimization in public buildings, street lighting and use recharging infrastructure for electric vehicles.
- Promoting sustainable mobility: Encourage the use of electric vehicles.
- Adaptation to climate change: Develop measures to reduce the risks and vulnerabilities of the municipality in the face of the impacts of climate change.

Below is a fact sheet highlighting the most relevant Plan related to the energy transition in the area.

| ***Title:*** | *Energy Strategy of Andalusia 2030* |
|---|---|
| ***Responsible body*** | *Andalusian Energy Agency, Junta de Andalucía (Regional Government)* |
| ***Time scope*** | *2020-2030* |
| ***Brief description*** | *Regional plan that promotes the use of renewable energies and the improvement of energy efficiency in the region. It sets decarbonisation targets for 2030.* |
| ***Energy transition*** | *Promotion of renewable energy* |

| | |
|---|---|
| ***measures*** | |
| ***Associated funding*** | *Improving energy efficiency in buildings and facilities* |
| ***Link*** | *Energy Strategy of Andalusia 2030* |

Finally, a table of main objectives in mitigation, energy and adaptation actions of the municipalities of La Loma Occidental is shown.

| MUNICIPALITY | GHG EMISSION MITIGATION OBJECTIVES | ENERGY OBJECTIVES | ADAPTATION OBJECTIVES TO CLIMATE CHANGE |
|---|---|---|---|
| **Baeza** | At least 19% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 3%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 26%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Begíjar** | At least 18% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by at least 2% by 2030.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 33%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Canena** | At least 23% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 4%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 38%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Ibros** | At least 18% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 1%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 44%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Lupion** | At least 19% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by at least 2% by 2030.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 29%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Rus** | At least 14% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 1%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 35%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Torreblascopedro** | At least 27% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 5%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 31%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |
| **Villatorres** | At least 13% reduction in greenhouse gas (GHG) emissions compared to 2005. | Reduce trend primary energy consumption by 2030 by at least 1%.<br>Contribution of renewable energies in the final energy consumption of the municipality in the year 2030, at least 28%. | Reduce the risk of climate change impacts, giving priority to the areas most at risk. |

## 4.3 Common vision and priorities

La Loma Occidental shares a particular landscape that adapts its local policies to the energy transition. Given the legal imperative for all Andalusian municipalities to approve their own PMCC according to Regional Law 8/2018, of the Junta de Andalucía (as mentioned above), FAMP was very clear about the connection between these strategic plans and the project's own roadmap. For this reason, since the beginning of 2025, several meetings have been held with the Andalusian Climate Change Office, a body under the Ministry of Environment of the Regional Government of Andalusia that serves as a reference point for everything related to the PMCCs.

This body has been in charge of drafting general templates for the PMCCs, in response to the recognition of the limited capacities of Andalusia's small municipalities. These drafts were delivered to the municipalities in May, which has delayed the drafting of the protocol linked to this deliverable. The reason is that it could have been counterproductive to move forward on a protocol before knowing the guidelines outlined by the PMCCs, as it would have implied a duplication of efforts for a local administration that suffers from a lack of staff and resources.

In this way and thanks to the interinstitutional dialogue, the meetings with the Andalusian Climate Change Office have been fundamental to keep us informed of the process and to anticipate the work in the framework of the Life SMART project.

Once published, a detailed analysis of all the documents has been carried out by the IMTS experts: each of the templates of the eight PMCCs corresponding to the eight municipalities of the pilot area.

These documents are serving as a basis for identifying commonalities, both in terms of context and needs, in order to develop a Joint Intermunicipal Protocol linked to the activity 3.2. From here, and with IMTS at the core of all actions, a working process or roadmap has been devised using a Design Thinking methodology, so taht the participants in the meetings are real co-creators of the solutions that will be the object of the intermunicipal protocol. In this way, participants start by analysing the problem and identifying barriers and difficulties that prevent a simple solution to the problem. From there, the ideation phase begins, putting on the table all kinds of ideas, feasible or not, that could break through these difficulties and provide an answer to the problem. Finally, the best ideas are turned into solutions.

This collaboration process is serving not only to propose a joint protocol (T 3.2) and a linked joint strategy (T 3.3) for the energy transition, but also for territorial cohesion, shaping a working team, which already has a significant level of training, to address this and other challenges that arise in the territory.

### 4.3.1 Current obstacles in Municipal Energy Management.

Despite the goodwill of the political team, the small municipalities that are part of Life-SMART pilot area in Andalusia find certain structural problems. They do not have expert staff in the field of energy or climate change in their teams and this makes it more difficult to carry out their plans independently. However the Life-SMART project is somehow trying to break this barrier through the capacity building and further training experiences in the framework of the meetings of the IMTS. In addition, another obstacle comes from the limited availability of financial resources, which conditions them when investing in more sustainable infrastructures, as well as the difficulty involved in accessing these funds, as they imply an administrative and technical effort that is not possible for small municipalities with very limited human resources. There are also common social and economic challenges, such as an ageing population or low population density, as usual in Andalusian rural areas.

### 4.3.2 Key opportunities for progress.

But not all are obstacles, there are also great opportunities thanks to the alignment with strategies that go beyond the municipal. The Energy Strategy of Andalusia proposes a model that seeks self-sufficiency, digitalization and a just transition. This allows municipalities to find different ways to collaborate such as the creation of energy communities or more sustainable mobility. In addition, from the programs that are developed at supramunicipal level, improvements in the energy efficiency of buildings and street lighting have been promoted, providing a solid technical and operational basis to continue moving towards the energy transition.

### 4.3.3 Joint work at IMTS meetings

Due to the imminent need to overcome the barriers described above, the municipalities of La Loma Occidental, within the framework of the LIFE Smart project, have found the IMTS to be a useful structure for the exchange of information. This group, composed of technicians and municipal officials, has held so far two face-to-face meetings and two online meetings that have served to begin to articulate a shared vision and define the lines of action within what could be a Joint Intermunicipal Protocol (T 3.2) and Joint Energy Transition Strategy (T 3.3).

The first face-to-face meeting allowed the signing of the IMTS constitution agreement, ratifying the municipal commitment to the joint energy transition strategy. The state of preparation of the PMCCs was also presented and certain common aspects of the municipalities were evaluated, such as: high energy consumption in the residential sector, the need to modernise municipal infrastructure, the difficulties in raising awareness and raising awareness of efficient and responsible energy consumption and the low deployment of renewable energy. During this session, agreement was reached to promote a joint strategy that prioritized the search for external financing and that took advantage of joint collaboration to optimize resources and costs.

The second face-to-face meeting was developed around a collaborative working table, where a methodology was applied to analyze the measures of the PMCCs of each municipality, prioritizing them according to the needs of each of them. Subsequently, an analysis was carried out with a supramunicipal vision, on the measures with the greatest potential for and feasibility of joint implementation.

### 4.3.4 Agreement on common points

Through this participatory process with all the municipalities involved in this project, a consensus was reached on a common vision of energy transition that is summarized in the following key elements:

- Promotion of a model of local energy development that is fair, inclusive and adapted to the rural reality.
- Progress towards energy self-sufficiency through the promotion of self-consumption, with local energy communities and the installation of renewable energies.
- Revaluation of the residential building stock through energy rehabilitation measures.
- Promote sustainable mobility.
- Improve citizen and technical training, through awareness-raising and training actions.

### 4.3.5 Short-term actions agreed at meetings.

The highest scoring actions were identified as candidates to be analyzed jointly in the short-medium term, with the aim of generating tangible results and fostering collaboration between municipalities.

1. Solar PV installations in municipal buildings to reduce energy consumption.
2. Electrification of the municipal fleet with hybrid or electric vehicles and thus promote sustainable mobility.
3. Local production of photovoltaic energy and constitution of a local energy community to share the energy produced between municipalities.
4. Energy audits in municipal buildings to improve energy efficiency.
5. Renewal of the fleet and promotion of vehicles with unconventional or sustainable fuels, as well as the installation of recharging points.
6. Promotion of cycling and pedestrian mobility through the creation of bike lanes and pedestrianized areas suitable for high temperatures and other climatic risks that affect citizens.
7. Tax subsidies for energy rehabilitation.

# 5 Italian target area (by CMCR+Cras)

## 5.1 State of the art of local energy plans

The following table provides a summary of the status of the commitments made by the five participating municipalities, members of the "Unione Comuni della Valle Ustica" (Ustica Valley Union), prior to the start of the LIFE-SMART project, and their formal update status within the scope of the initiative:

| Municipality | Year of Covenant adhesion | Commitment status before LIFE-SMART | Renewal approved by Municipal Assembly | Remarks |
|---|---|---|---|---|
| Vicovaro | 2015 | Outdated | ✓ Approved | New commitment adopted by the "Unione Comuni della Valle Ustica" SECAP 2025 - model: -55% by 2030 / climate neutrality by 2050 |
| Roccagiovine | 2015 | Outdated | ✓ Approved | New commitment adopted by the "Unione Comuni della Valle Ustica" SECAP 2025 - model: -55% by 2030 / climate neutrality by 2050 |
| Licenza | 2015 | Outdated | ✓ Approved | New commitment adopted by the "Unione Comuni della Valle Ustica" SECAP 2025 - model: -55% by 2030 / climate neutrality by 2050 |
| Percile | 2015 | Outdated | ✓ Approved | New commitment adopted by the "Unione Comuni della Valle Ustica" SECAP 2025 - model: -55% by 2030 / climate neutrality by 2050 |
| Mandela | 2015 | Outdated | ✓ Approved | New commitment adopted by the "Unione Comuni della Valle Ustica" SECAP 2025 - model: -55% by 2030 / climate neutrality by 2050 |

In Italy, municipalities are at the forefront of driving energy transition and climate action within their local communities. They serve as crucial hubs for translating national and European environmental goals into tangible, on-the-ground initiatives. This decentralized approach empowers local governments to tailor strategies that directly address the unique energy consumption patterns, environmental challenges, and socio-economic contexts of their specific areas. Over the past decade, numerous municipalities within the **Metropolitan City of Capital Rome** area have actively engaged in climate planning through the development of **Sustainable Energy Action Plans (SEAPs)** or **Sustainable Energy and Climate Action Plans (SECAPs)**. These plans were typically formulated under the umbrella of the **Covenant of Mayors**, a European initiative that brings together thousands of local governments committed to combating climate change. The Covenant encourages signatory cities to set ambitious climate and energy targets, implement policies to achieve them, and report on their progress. While these early plans represented a significant step forward, many are now outdated. Their baseline emission inventories, often from 2005 or 2010, no

longer accurately reflect current emissions profiles. Furthermore, their initial targets frequently fall short of the significantly more ambitious European Union (EU) goals for 2030 and 2050, which aim for deeper emissions cuts and a transition towards climate neutrality. This misalignment highlights the need for a comprehensive update to ensure local efforts contribute effectively to broader climate objectives.

It's within this critical context that the LIFE-SMART project has emerged as a vital catalyst for renewed climate action. This innovative project is providing crucial support to five specific municipalities in the region: Vicovaro, Mandela, Licenza, Percile, and Roccagiovine. These municipalities, all members of the Unione dei Comuni Valle Ustica, are collaboratively undertaking the definition of their joint local climate plan. The LIFE-SMART project ensures that the new activities planned are being developed in synergy to the official Covenant of Mayors methodology for SECAPs. This updated methodology goes beyond traditional energy planning, demanding a more holistic approach that integrates both mitigation and adaptation strategies. Mitigation focuses on reducing greenhouse gas emissions, while adaptation addresses the impacts of climate change that are already inevitable. A significant and now mandatory addition under the European model for SECAPs is a dedicated section on energy poverty. This reflects a growing understanding that the energy transition must be just and equitable, ensuring that vulnerable households are not disproportionately affected by rising energy costs or lack of access to essential energy services. By addressing energy poverty, these new plans aim to create a more inclusive and resilient energy future for all citizens. Ultimately, the LIFE-SMART project is not just about updating documents; it's about empowering these municipalities to become even more effective agents of change, leading their communities towards a sustainable and climate-resilient future in line with the urgent demands of our time.

In parallel, the Metropolitan City of Capital Rome (MCCR), aligned with the national policy framework, promoted the elaboration of Municipal Climate Action Plans (SECAP) for many municipalities in the region. The five municipalities involved in this activity (Vicovaro, Mandela, Licenza, Percile, and Roccagiovine) are Covenant signatories as Union of municipalities named “Unione dei Comuni Valle Ustica” by Council Resolution no. 11 of 22/07/2022, having committed to emission reductions of -55% of 2015 by 2030.

To finalize the joint SECAP, a new commitment document was developed according to the most recent version of the Covenant of Mayors – Europe, to be approved by each Municipal Assembly. This renewal process was promoted within the scope of the LIFE-SMART project and the approval is scheduled to take place in upcoming municipal councils.

This process ensures that all municipalities covered by the project will be aligned with the current Covenant requirements, particularly regarding the climate ambition (-55% GHG reduction by 2030) and the inclusion of adaptation and energy poverty in the action plans to be submitted on the MyCovenant platform.

As of June 2025, the joint SECAP is defined and aligned within the LIFE-SMART project. Draft version is under review and are expected to be finalised and formally approved to the municipalities by December 2025.

## 5.2 Context description and positioning

The Union of Municipalities of the Ustica Valley is formed by the aggregation of five municipalities: Vicovaro, Mandela, Roccagiovine, Licenza and Percile. The Union: pursues self-government and promotes the development of the local communities that constitute it; with regard to its own attributions, it represents the community of those who reside in its territory and contributes to looking after its interests. The Unione dei Comuni della Valle Ustica has demonstrated a constant commitment to energy and climate sustainability. Already in 2015, with Union Council Resolution No. 2 of 14/04/2015, it adhered to the Covenant of Mayors for Energy, then drafting in 2016 the BEI (Baseline Emission Inventory), with base year 2008.

This commitment was reinforced in 2022 with the adhesion to the new Covenant of Mayors for Climate and Energy, which took place through Union Council Resolution No. 11/2022 of 22/07/2022. During the last months, the Union was working on the defining of the PAESC (Action Plan for Sustainable Energy and Climate), availing itself of the technical-scientific support of a temporary grouping of companies appointed by the Metropolitan City of Rome Capital for this service in the municipalities of the territory.

If action at the local level can benefit from the Covenant of Mayors instrument and the direct support of LIFE-SMART Project with capacity building for energy transition planning and implementation, higher-level regional and national planning should also be noted. The Lazio Regional Energy Plan (PEAR Lazio) provides a clear strategic roadmap and targets for decarbonization (e.g., 55% CO2 reduction by 2030, net-zero by 2050), with specific measures for RES and energy efficiency. The European Funds (FESI/ERDF) offer significant financial resources through the Lazio Regional Programme (PR FESR Lazio 2021-2027) for energy efficiency and renewable energy projects. The National Recovery and Resilience Plan (NRRP) / REPowerEU: Massive funding for green transition, including building efficiency, sustainable mobility, and Renewable Energy Communities (RECs), which are highly encouraged.

The process of defining the Life Smart actions and the approval of the European Covenant of Mayors' SECAP itself had begun with great momentum and collaborative spirit at the start of the Project, but subsequently experienced a slowdown, especially when, following municipal elections, one of the involved municipalities, Vicovaro, saw a change in administration and practically less attention given to the Life SMART project. The situation further complicated and slowed down due to a series of appeals with alternating judicial outcomes that concluded only a few days ago with the substantial annulment of the municipal elections held, the appointment of a special commissioner for the municipality, and the prospect of new elections. Vicovaro has recently received the appointment of an extraordinary commissioner from the Prefecture, after which the

municipality will prepare to return to the polls. The community eagerly awaits the concrete effects of this ruling and the future administrative direction of the Municipality. Naturally, all of this has distracted and slowed down the attention and work within the Life Smart project, and now, even if it must be said that the commissariat generally limits itself to purely ordinary management and is ill-suited to previously made political commitments, the hope is that, albeit with a slight delay, with a climate of greater certainty the commitments made can be fulfilled, considering the Life SMART project represents a significant opportunity to act as a catalyst, bolstering the feasibility of the SECAP through support for the development and implementation of some of its foreseen actions.

## 5.3 Common vision and priorities

The process of building a shared vision and defining intermunicipal priorities under Task 3.2 was carried out in close coordination with the five municipalities of the Ustica Valley Union involved in the LIFE-SMART project. CMRC led the technical and methodological coordination, ensuring regular follow-up and promoting cooperation between the municipal teams and the contracted experts of the inter-municipal technical structure IMTS.

In particular, what is outlined below is based on the work of constructing a cognitive heritage conducted over the last few months by the members of IMTS activated thanks to the life SMART project, within which information concerning local energy consumption and needs, production potential from renewable sources, vocations and constraints of the territory were collected and processed. The results of the work are collected in Annex 'Report T3.1 - Data collection report'.

The framework provided here illustrates some possible areas of intervention, the development of which could contribute to promoting the energy transition of the Union's territory. These lines of action were then incorporated as an integral part of the actions of the Ustica Valley Union's SECAP, not yet formally approved but defined and shared in terms of content.

In the first line of action, it is a matter of following up on existing European, national and regional guidelines, which recognise renewable energy communities and self-consumption as excellent opportunities to promote culture and stimulate the increasingly widespread use of renewable energy sources, with consequent environmental, economic and social benefits.

In the second line of action, it is a matter of promoting the energy efficiency of municipal buildings, as the start of a process of environmental and energy redevelopment that starts from the work of institutions and extends to communities, as supported by substantial resources made available to municipalities.

In the third line of action, it is a matter of enhancing certain projects already present in the Union's three-year planning, which can integrate energy transition objectives within development initiatives with other purposes such as the use and development of tourism in the area.

All this will be subject to verification and in-depth analysis in the subsequent phases of the project, to be carried out according to the priorities of the Administrations.

The three areas of intervention illustrated below therefore refer to:

1. **Promotion of Renewable Energy Communities: extension of the Roccagiovine REC to the "Ustica Valley" REC**
2. **Energy efficiency in municipal buildings**
3. **Tourism territorial marketing among the municipalities of the Ustica Valley.**

### 5.3.1 Area of intervention 1: Renewable Energy Community: from the REC of Roccagiovine to the 'REC Valle Ustica'

The first area of intervention identified, already presented to the mayors as part of the life-SMART project, stems from the proposal to involve the other municipalities of the Ustica Valley Union in the REC of Roccagiovine, already established on 16 February 2023, extending the environmental, social and economic benefits of the initiative to the entire territory of the Union. The enlargement of the existing REC, by widening the potential catchment area - at least to the territory pertaining to the primary cabin - allows to multiply the potential in terms of connected RES plants and clean energy produced and consumed within the community. On the other hand, it makes it possible to overcome the criticality of the original configuration, determined by the entry into force of the decrees implemented in February 2024, which established the impossibility of valorising photovoltaic plants financed with public contributions for quotas greater than 40%.

It should be emphasized that the economic benefits associated with the activation of a REC, according to the current regulatory framework, derive both from the so-called Incentive Tariff, i.e. the incentive recognised by the GSE to the REC as a function of the electricity "self-consumed", i.e. produced and consumed at the same time by the electricity users of the REC members, and from the sale of the electricity produced and fed into the national electricity grid, according to the procedure known as "dedicated withdrawal" (RID).

The implementation of this line of action requires a series of steps to formalise the adhesion of new members and update the administrative documentation and management bodies of the REC (the decision to expand the Roccagiovine REC was formalised with the deliberation of the muncipal council of Roccagiovine No. 6 of 16.05.2025), as well as some operational in-depth studies related to the identification of location options, technical solutions and financial resources to build the renewable energy plants needed to activate the REC.

On the financial side, in order for municipalities to become promoters of the construction of new plants, the use of a loan should be considered, taking advantage of channels dedicated to RECs made available by banking institutions, or the public-private partnership, with the involvement of an external party according to project finance mechanisms.

As a possibility of financial support for the operation, capable of significantly influencing its feasibility, one should note the possibility of taking advantage of the NRRP contributions managed by the GSE for the construction of plants serving RECs in municipalities with less than 5000

inhabitants. The measure covers up to 40% of expenses and, following a recent extension (DM 28/02/2025), will expire on 30 November 2025.

### 5.3.2 Area of intervention 2 - Energy requalification of municipal building stock

The second area of intervention of the strategy concerns the energy efficiency of municipal buildings. In fact, it is possible to transform many of the existing buildings into near-zero energy facilities, improving the environmental performance of the buildings to generate, in perspective, significant economic savings.

As a preparatory activity to the implementation of this line of action, information was collected on current annual electricity and heat consumption and on the potential for energy upgrading of municipally owned buildings.

In order to be able to assess the overall costs of a complete redevelopment of the public building stock, an in-depth energy diagnosis and the formulation of some project hypotheses are indispensable. At present, two potentially accessible financing channels have been preliminarily identified to implement this line of action:

Non-repayable contributions for the energy requalification of public and private buildings offered under the **“Conto Termico 3.0” incentive programme** managed by the GSE. The contributions cover quotas ranging from 40% to 65% of the investment and provide particularly favourable conditions for municipalities with under 15,000 inhabitants and in the case of school buildings or healthcare facilities. The Conto Termico financing scheme has been in force for several years. Its third update (Conto Termico 3.0) has recently been announced, and the publication of the relevant implementing decrees is expected by the begin of 2026. In the absence of resources, the involvement of ESCos is allowed, subject to the conclusion of an energy performance contract. The scheme envisages the possibility of reserving subsidies in order to have resources in the budget for interventions to be planned, but also to recover resources for interventions in progress or already implemented and not fully financed under other public incentives and recently concluded.

The call for tenders **C.S.E. 2025 - Municipalities for Sustainability and Energy Efficiency**, which offers contributions to municipalities for the purchase, within the MePA, of goods and services related to the category ‘Renewable Sources and Energy Efficiency’. The call for tenders, open from 5 May to 30 September 2025, has a budget of over EUR 232 million, 80% of which is reserved for municipalities in less developed regions.

### 5.3.3 Area of intervention 3 - Intervention of tourism territorial marketing among the municipalities of the Ustica Valley

The last area of intervention identified concerns the synergic development of two projects already included in the Three-Year Planning of the Ustica Valley Union:

a) ‘Interventions to improve the route of the Saint Benedict Walk’.

b) ‘BiBo Project - Biciturismo dei Borghi’.

The first project, which has already received funding from the Ministry of Tourism in the amount of 1 million euro, may be adopted in its entirety, while the second, while waiting for the funding programme to be submitted, may be re-proposed in a partial form, declining the most innovative aspects of the original proposal, which concerned 28 municipalities, only with reference to the municipalities of the Ustica Valley.

The St. Benedict's Path project, concerns a route of about 300 km that from Umbria crosses all of Lazio to the borders with Campania and envisages:

- The improvement and restoration of the path network, by means of path arrangement, implementation of signposting and the creation of equipped rest areas.
- The promotion of the bicycle touring network, through the creation of a sales point for bikes, hand-bikes and electric bikes.
- The digitalisation of the trail, through the use of signage equipped with QrCodes, from which to download the map and identify the stages and different rest areas.

The BiBo project intends to respond to the phenomenon of depopulation of the area's small hamlets, through the creation of an equipped cycle tourism circuit that, in line with the growing demand in the ‘slow’ tourism sector, also from abroad, could contribute to a sustainable and lasting development in harmony with the socio-environmental characteristics of the territory. In order to increase the attractiveness of the route, the original proposal promoted by the Unione dei Comuni della Valle Ustica covers an area extending as far as Lake Turano. However, in an initial phase, it seems reasonable to restrict the scope of intervention and pursue synergies with the other lines of action by envisaging, for example, the installation of rest/rest points powered by renewable sources and the acquisition of electric vehicles to be made available to visitors.

The 2 activities envisaged by the line of intervention offer a contribution to the energy transition and sustainable development of the territory through the valorization of electric mobility in relation to the use of renewable energy sources. For its implementation, beyond the funding already available, it will be necessary to prepare in-depth projects and identify additional resources through calls for tenders or specific initiatives.

## PART III - Conclusions (by task leader)

In this paragraph a comprehensive analysis of five distinct target areas — Greece (Volvi and Aristotelis), Portugal (Alto Alentejo region), France (Alpes-Maritimes), Spain (La Loma Occidental) and Italy (Unione Comuni della Valle Ustica) — reveals a **shared commitment to local energy transition**, despite diverse starting points and challenges. A common thread across all regions is the recognition that outdated local energy plans (SEAPs) are insufficient to meet current national and EU targets, particularly the ambitious goals of a 55% GHG reduction by 2030 and climate neutrality by 2050.

In the **Greek target area**, the Municipalities of Volvi and Aristotelis are forging a new path through a **Memorandum of Cooperation (MoC)**. This collaboration addresses a key weakness: the limited human and administrative resources of smaller municipalities. By working together, they can more effectively leverage national and EU funding streams like the NSRF 2021-2027 and REPowerEU. Their joint vision prioritizes renewable energy communities, energy efficiency in public infrastructure, and the development of digital platforms for emissions monitoring. This intermunicipal approach is a strategic response to shared challenges, fostering a unified effort to accelerate their energy transition.

The **Portuguese target area**, encompassing six municipalities in the Alto Alentejo region, demonstrates a successful transition from outdated plans to updated **Sustainable Energy and Climate Action Plans (SECAPs)**. This process is systematically supported by the LIFE-SMART project, ensuring alignment with the latest Covenant of Mayors requirements and national legislation. The region's strategy focuses on a series of short-term, high-impact actions, including the installation of photovoltaic systems, energy rehabilitation of public buildings, and the electrification of municipal fleets. These initiatives are designed to address regional challenges such as low population density and an aging demographic while capitalizing on the strong solar potential and a tradition of intermunicipal cooperation.

Similarly, the **French target area** in the Alpes-Maritimes region, though still in the preliminary stages, is guided by a clear need to update local energy plans to align with national and European climate objectives. Like their Greek and Portuguese counterparts, the French municipalities are building their strategy on a **collaborative and participatory approach**, recognizing that coordinated action is essential for success.

The country reports from Spain (La Loma Occidental) and Italy (Unione Comuni della Valle Ustica) highlight a strategic and cohesive approach to energy transition at the local level. Both regions, composed of small municipalities, are leveraging **intermunicipal collaboration** to overcome common obstacles like limited resources and administrative capacity. This model of cooperation, supported by initiatives like the LIFE-SMART project, is proving to be an effective way to translate ambitious European and national climate goals into actionable, local-level plans.

The Spanish municipalities are in the process of finalizing their **Municipal Plans against Climate Change (PMCCs)**, aligning with a legal mandate from the Junta de Andalucía. This process is highly participatory, involving citizens and local stakeholders to ensure plans are tailored to the specific needs of each area, such as focusing on agricultural emissions or building efficiency.

The Italian municipalities, through their "Unione," have defined a joint **Sustainable Energy and Climate Action Plan (SECAP)**, demonstrating a commitment to a unified vision. A key element in both reports is the emphasis on **Renewable Energy Communities (RECs)** and the promotion of renewable energy, particularly solar, which is seen as a way to enhance energy self-sufficiency and reduce costs for citizens and public services.

Furthermore, both reports acknowledge the critical importance of **climate adaptation**. The Spanish PMCCs include measures to address vulnerabilities to droughts and heatwaves, while the Italian SECAP integrates both mitigation and adaptation strategies, along with a mandatory focus on **energy poverty**. This holistic approach ensures that the energy transition is not only environmentally effective but also socially just and resilient to the impacts of a changing climate.

These two case studies demonstrate a robust and coordinated effort to drive a sustainable energy transition from the ground up. By fostering collaboration, securing external funding, and integrating local needs with broader European objectives, these municipalities are creating a replicable model for how rural regions across Europe can become leaders in sustainability and climate resilience. The progress in both regions, despite challenges like political transitions or a lack of specialized staff, underscores a strong commitment and a clear vision for a decarbonized future.

In conclusion, these country reports highlight a pan-European trend where local governments are moving beyond siloed, outdated planning to **intermunicipal cooperation and updated, integrated action plans**. The success of these initiatives hinges on a few critical factors:

- **Strong institutional collaboration**, as seen in the Greek MoC and Portuguese intermunicipal framework.
- **Leveraging EU and national funding mechanisms** to overcome financial and administrative barriers.
- **Adopting a holistic approach** that integrates energy efficiency, renewable energy, sustainable mobility, and social equity (e.g., addressing energy poverty).

Ultimately, these regional efforts collectively contribute to the broader European energy transition by translating high-level EU directives into concrete, locally tailored, and replicable actions. The collaborative frameworks established in these projects serve as models for how municipalities can accelerate their climate action by sharing resources, expertise, and a common vision for a sustainable future.

**Up to the end of July 2025**, the results in terms of policy documents elaborated in the target areas under task 3.2, which can be accounted as the KPI "6. Legislation & policy in Number of (Number of policies/plans/strategies established through the action)", following the "LIFE KPI webtool Guidance for LIFE-CET project coordinators" are:

| Greece | Portugal | France | Spain | Italy | Total |
|---|---|---|---|---|---|
| 1 | 6 | 4 | 0 | 1 | 12 |

For the Greek target area, the document to be considered for the purpose of reporting KPIs is the Memorandum of Cooperation for the Energy Transition of the Municipalities of Volvi and Aristotelis (EL_Annex I)

For the Portuguese target area, the documents to be considered for the purpose of reporting KPIs are the 6 Sustainable Energy and Climate Action Plans of Alter do Chão, Avis, Castelo de Vide, Marvão, Monforte, Sousel (PT_Annex I-VI)

For the French target area the documents to be considered for the purpose of reporting KPIs are the 4 Roadmap summary of Biot, Saint-Martin-Vésubie, Saint-Vallier-de-Thiey, Tende (FR_Annex II-V)

For the Italian target area the document to be considered for the purpose of reporting KPIs is the Shared Vision document, incorporated by the Sustainable Energy and Cliamte Action Plan and approved by the Valle Ustica Union of Municipalities

As regards to the Spanish target area, as fully explained in the paragraph 4, the issue of a policy document to be considered for the purpose of reporting KPIs is expected in the next months.

# LIST OF ANNEXES IN NATIONAL LANGUAGES:

## Annexes related to the Greek target area

**Annex I: Memorandum of Cooperation for the Energy Transition of the Municipalities of Volvi and Aristotelis**

**Annex II: Energy Transition ongoing projects**

**Annex III: Energy Transition Funding Schemes**

## Annexes related to the Portuguese target area

**Annex I: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Alter do Chão**

**Annex II: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Avis**

**Annex III: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Castelo de Vide**

**Annex IV: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Marvão**

**Annex V: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Monforte**

**Annex VI: Plano de Ação para a Energia Sustentável e Clima (PAESC) de Sousel**

**Annex VII: eumayors-commitment-2021-PT_Alter_do_Chao**

**Annex VIII: eumayors-commitment-2021-PT_Castelo_Vide**

## Annexes related to the French target area

**Annex I: AF5134-CCI SMART_Guide de lecture feuille de route**

**Annex II: AF5134-CCI SMART_Synthèse feuille de route_Biot**

**Annex III: AF5134-CCI SMART_Synthèse feuille de route_Saint-Martin-Vésubie**

**Annex IV: AF5134-CCI SMART_Synthèse feuille de route_Saint-Vallier-de-Thiey**

**Annex V: AF5134-CCI SMART_Synthèse feuille de route_Tende**

## Annexes related to the Italian target area

**Annex I: PAESC Valle Ustica**

**Annex II: LifeSMART_Quadro di riferimento visione condivisa_Valle Ustica**

**Annex III: Valle-Ustica-Union_Approval**