

European Public Local Authorities' Network for
driving the Energy Transition



D4.1 - MAIN USER REQUIREMENTS AND NEEDS FOR TRAINING MATERIAL

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Executive Summary

The ePLANET project is a Coordination and Support Action cofounded by the European Commission through Horizon 2020 program. This project aims to deploy a **new clustering governance** for energy transition based on a digital framework to share harmonized information, facilitating the adoption of coordinated energy transition actions by the European public sector.

The development of ePLANET is justified to deploy Energy Transition (ET) in public sector, for which the following challenges are targeted:

- Improving coordination between local authorities and regional governments
- Enhancing decision-making process in deployment of ET projects
- Providing coherence and consistency to the energy transition measures (ETM) to be implemented
- Encouraging the digitalization of measures and plans
- Enabling an interoperable ecosystem of data and tools
- Building capacity of local authorities

All these targeted objectives will give the needed support for the energy transition decision-making process and its practical implementation.

The present report outlines the results of a needs-assessment process conducted from January to May 2022 by ePLANET consortium to identify the main capacity-building needs, knowledge gaps and barriers of the municipalities in the ePLANET pilots in terms of energy planning and measures. Survey and interview results contained in this report provide a picture of barriers, topics of interest and challenges of municipalities in the ePLANET pilot regions. These results will help e-PLANET develop capacity-building activities for different type of actors in the region that are tailored to their needs and empower them to develop and implement their energy transition plans and measures, despite the increasing administrative and financial constraints that they face. Accordingly, it will feed directly into Task 4.2 - Strategies to overcome ET barriers.

The main findings were:

- **Limited financial resources is the greatest barrier perceived by ePLANET municipalities to implement projects and design climate and energy plans.** It was cited as a central issue by more than 88% of municipalities in the three pilots. A lack of technical expertise was the next most prevalent one.
- With regards to sectors and areas, **buildings and solar were highlighted quite unanimously as relevant sectors for municipalities in three pilot regions.**
- **The strong need for specific support on finance is a matter of consensus for a large majority of municipalities in Girona and Crete.** 80.5% of municipalities in these two pilot regions referred to the European Structural Investment Funds as an area where they have strong needs, and 75% to the innovative financing like EPC and crowdfunding. By contrast, only 27% of respondents from Zlín Region indicated having strong capacity building needs in finance.
- **More than 75% of municipalities in the three pilot regions reported having difficulties in specific daily tasks related to energy transition in the past months.** Although difficulties are encountered in a variety of situations, there are specific tasks



identified by at least 25% of municipalities in at least two pilot regions. These include collecting and interpreting local energy data, deciding which measures to save energy at local level and defining monitoring indicators.

- **Around 60% of surveyed municipalities in the three pilot regions attended capacity-building activities in the past 5 years.** Most of them in the form of webinars. In the majority of cases, it was helpful for understanding complex issues but less for implementing actions or projects.
- **The preferred methods for capacity building are webinars, thematic workshops, coaching and study visits.**



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Abbreviations and acronyms

ABBREVIATION OR ACRONYM	DESCRIPTION
CILMA	Council of Local Initiatives for the Environment
CoM	Covenant of Mayors
EAZK	Energy Agency of the Zlín Region
EPC	Energy Performance Contracting
ETM	Energy Transition Measures
EU	European
EUCF	European City Facility
DDGI	Girona Provincial Council
OTE	Energy Transition Offices
RDFC	Regional Development Fund of Crete
SECAP	Sustainable Energy and Climate Action Plan
SEAP	Sustainable Energy Action Plan



1 Introduction

Local and regional authorities are a decisive lever for the EU to achieve its carbon neutrality target by 2050. Policymakers and administrations at all sub-national levels (regions, provinces, cities, towns, urban districts, rural areas, etc.) need to commit to and effectively plan the clean energy transition of their respective territory, energy systems and infrastructures at an unprecedented level of ambition and pace with a long-term time horizon. However, local and regional authorities often lack capacities to plan such plans and strategies, in particular in smaller municipalities that are lagging behind in the energy transition. Research on municipal sustainability efforts has shown that small, often rural municipalities, are frequently cited as lacking the technical resources or knowledge to engage in innovative planning [1-4]. Similarly, small municipalities may adopt fewer sustainability policies because they face political unwillingness and fiscal constraints [5]. According to [Covenant of Mayors initiative](#), there are small municipalities among their signatories that still highly need support to design their Sustainable Energy and Climate Action Plans (SECAPs). Other cities which have already developed such a SECAP, or similar plans still need to align their plans to the new targets and deliver more ambitious actions to reach carbon neutrality. Innovative policy features, such as applying carbon budgets, earmarking and tracking resources for climate actions in the municipal budget, defining energy efficiency and renewable energy targets at district and community levels and social innovations based on transition management, systems thinking or reflexive monitoring, can support the upgrade of the plans.

The [European City Facility](#) (EUCF) on the other hand, highlights the key role that municipalities of all sizes have in pooling smaller projects into larger investment portfolios and in mobilizing the significant financial resources required for the energy transition. Indeed, it identifies two fundamental barriers for sustainable energy investments at the local level:

- Lack of financial and legal capacity to transform local long-term energy and climate strategies (e.g. SEAPs, SECAPs etc.) into appropriate investment concepts.
- Lack of aggregation of fragmented smaller projects (for example in the building sector) and thus lack of attractiveness for the financial sector.

The present report outlines the results of a needs-assessment process conducted from January to May 2022 by ePLANET consortium to identify the main capacity-building needs, knowledge gaps and barriers of the municipalities in the ePLANET pilots in terms of energy planning and measures. Survey and interview results contained in this report provided a picture of barriers, topics of interest and challenges of municipalities in the ePLANET pilot regions.

Specifically, we tried to answer the following questions:

- *Which are the main barriers and problems faced by ePLANET municipalities when developing and implementing energy planning?*
- *What are the areas where ePLANET municipalities need the most support?*
- *What are the specific needs and pain points that staff members have in their day-to-day?*
- *Which type of capacity building activities would work best to conduct training?*

The results of the present analysis will help ePLANET develop capacity-building activities for different type of actors in the region that are tailored to their needs and empower them to



develop and implement their energy transition plans and measures, despite the increasing administrative and financial constraints that they face.

1.1 Organisation of the report

This report is organised as follows. First, the remainder of this introductory section briefly sets out how the work reported on in this deliverable relates to other activities and tasks in the ePLANET project. Next, the methodology section elaborates how we have organised and structured the empirical work, including the description of the sample, the data collection method and analysis. Section 3 is the core of D4.1 and provides an overview of the capacity-building needs-assessment process in each pilot region. For each pilot region, it identifies the main barriers faced by municipalities when implementing energy planning, specific knowledge needs and gaps and preferences of capacity building activities. Subsequently, Section 4 concludes with a discussion of these findings and describes next steps.

1.2 Connection to other activities in the ePLANET project

The project is divided into 7 work packages working on governance, digitalisation, capacity building, replication and networking, communication, and dissemination.

This report is part of WP4, User empowerment. WP4 aims to empower policy makers, public officers, new ePLANET governance figures (e.g. PAET) and key stakeholders with the necessary tools to implement ETM with the enough information and the proper tools.

The following figure depicts an overview of the activities of WP4 until the end of the project:

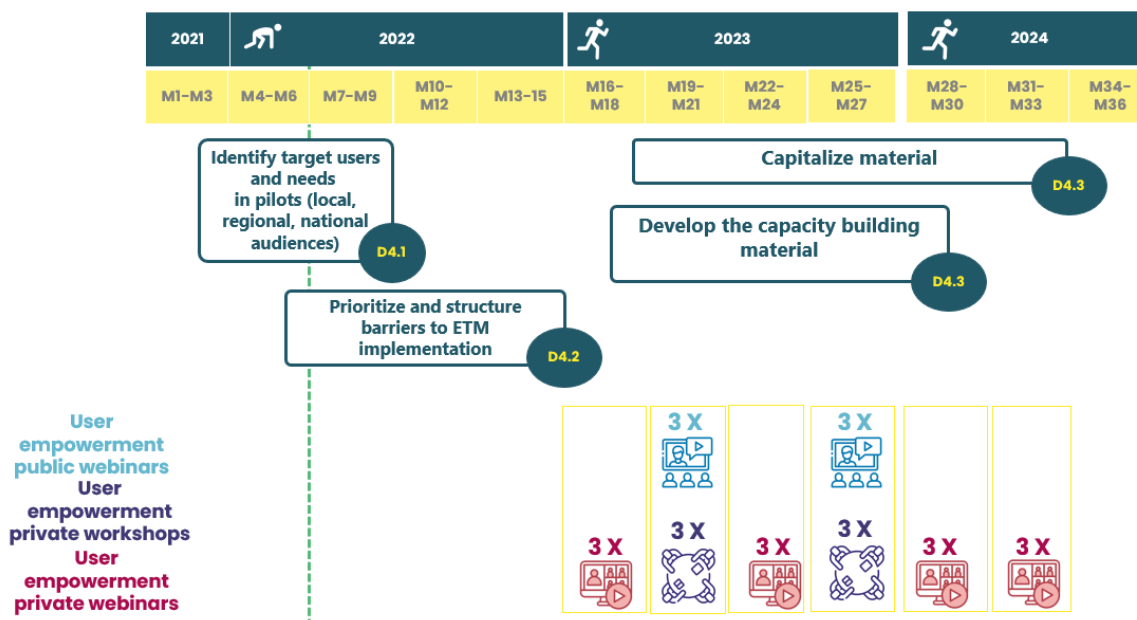


Figure 1-1 Overview of activities of WP4 User empowerment

In this first task, the main obstacles and barriers to ET planning and implementation by the public sector will be identified. The outcomes of the work described in this report, together with the previous ePLANET outputs in WP2 are taken as a point of departure for a package of

work, which will involve the co-development of tailor-made training materials on ETM addressing the main requirements and needs of the different target groups.



2 Methodology

2.1 Research approach, data collection and analysis

A multi-level perspective was used to conduct the needs and knowledge gap assessment of the ePLANET pilot territories. Indeed, this process was based on three methodological approaches: desktop research, a quantitative analysis in the form of an online survey and a qualitative analysis in the form of structured interviews to pilot managers and experts.

Individual interviews were conducted with the following profiles:

- One project manager of the Girona Provincial Council (January 2022).
- One project manager of the Regional Development Fund of Crete (January 2022).
- One project manager at the Energy Agency of the Zlín Region (January 2022).
- One project officer at the European City Facility initiative (June 2022).
- One officer at ICAEN, the Energy and Climate Agency of Catalunya (June 2022).
- One energy expert at the region PACA in France (June 2022).

Online survey:

The respondents participated in an online survey from December 2021 to March 2022. The main purpose of the survey was to identify the main capacity-building needs, knowledge gaps and barriers of the municipalities the ePLANET pilots in terms of energy planning and measures. Also, to capture positive and negatives experiences with training. It was available in the three pilot regions languages (Greek, Catalan and Czech) through the EU survey platform, and was advertised through the pilot partners communication channels (mainly mailing).

Link to survey in English:

<https://ec.europa.eu/eusurvey/runner/ePLANETneedssurvey2022>

Link to survey in Czech:

<https://ec.europa.eu/eusurvey/runner/ePLANETneedssurvey2022CZE>

Link to survey in Greek:

<https://ec.europa.eu/eusurvey/runner/ePLANETneedssurvey2022GR>

Link to survey in Catalan:

<https://ec.europa.eu/eusurvey/runner/ePLANETneedssurvey2022CAT>

The survey was conceived in collaboration with WP2 and based on a literature review on planning for sustainability in small municipalities and existing initiatives like [Covenant of Mayors](#) and particularly [6], [Climate Alliance](#) and [ManagEnergy](#). It included a total of 21 questions. Questions were a mix of multiple choice (with up to 6 choices per question) and included mostly closed and semi-open questions. The questions featured in the survey are available in Appendix 1: Online survey questions.

The last part of the survey focused on identifying the main capacity-building needs of the municipalities and included 5 specific questions divided into three main sections: Section E - Barriers and pain points; Section F - Needs and knowledge gaps; Section G - capacity building activities.



2.2 Sample and respondents' profile

The three pilot of ePLANET project are: Zlín Region (Czech Republic), Crete Island (Greece) and Girona province (Catalonia, Spain). **The overall sample comprised 55 municipalities**, from Zlín region (N = 21), Crete Island (N = 10) and Catalonia (N = 24, being N=12 from Girona and N=12 from the rest of Catalonia Region). The profiles of the municipalities vary in size although the majority of the respondents are small and medium-sized: 22% are municipalities with a population of less than 2,000 inhabitants, 30% between 2,000 and 6,000 inhabitants, 23,6% between 6,000 and 20,000 inhabitants, and 24,4% more than 50,000 inhabitants.



Figure 2-1 Map of the ePLANET pilot site regions (Zlín Region, Crete and Girona)

Table 1 below presents the specificities of the surveyed municipalities in each pilot in terms of population and available resources. On the other hand, Figure 2-2 focuses on the staff working in energy topics, including the number of technicians in each municipality and their average level of expertise.

Table 2-1 Summary of the profile of respondents by pilot region

	Pilot 1. Zlín Region	Pilot 2. Crete Island	Pilot 3. Girona Province
Total population of territory (Number of inhabitants)	580 000	625 000	780 000
Statistics on population of surveyed municipalities	52% (< 2k) 38% (2k - 6k) 10% (6k - 20k)	20% (2k - 6k) 40% (6k - 20k) 20% (20k - 30k) 20% (50k - 110k)	16% (< 2k) 33% (2k - 6) 21% (6k - 22k) 20% (50k - 110k) 10% (> 110k)
Main available resources	41% sun 27% biomass 15% other 10% wind 7% water	37% sun 21% water 21% biomass 16% wind 5% other	37% sun 25% biomass 19% wind 13% other 6% geothermal





Figure 2-2 Energy specialised staff characteristics in surveyed municipalities per pilot region

3 Results / Needs and knowledge gaps assessment

This chapter provides an overview of the capacity building needs-assessment process in each pilot region. In the first part of each case study section, pilot territory characteristics and key stakeholders are described. In the second part, the main barriers and knowledge needs are investigated, and preferences of capacity building activities are discussed.

3.1 Pilot 1. ZLÍN REGION

3.1.1 Pilot territory characteristics and governance

The Zlín Region is a frontier region with both agriculture and industrial tradition and a great density of settlements. There are 307 local authorities, with a population of 580.119 inhabitants (2021).

The ET vertical governance in Zlín Region is solid and well-established. Energy transition strategy in the region is mainly defined by EAZK, and later adopted by the region. Local authorities implement the ET rather through planning particular projects and individual implementation, hardly any of them have a real SEAP.

EAZK also supports both the region and the municipalities to gain financial sources from existing funds to implement EE measures and increase the RES share on energy supply in the Zlín Region. Most of the municipalities are small with insufficient absorption capacity. Many times, they struggle with finding the way in EE financing and with financing at all. Most of the projects initialised and administered by the EAZK have been financed with the support of structural funds. Only in 2019 EAZK processed 35 investment EE and RES projects for the Zlín Region and municipalities of the Zlín Region with the total value 253,7 mio CZK (app. 9,8 mio EUR).

Relevant stakeholders in the ET:

In Czech Republic, the relevant stakeholders financing the energy transition are on national level and they are mainly ministries and their institutions that participate in developing the national legislation in this topic as well as administrative financial support in energy efficiency.

These are mainly:

- **Ministry of Environment** which is responsible for development and managing of the OP Environment, National Programme Environment and New Green Savings Programme.
- **State Environmental Fund of the Czech Republic** which is an intermediating body managing the operational phase of the OP Environment implementation, announces call for proposals, evaluates projects submitted, is supervising project implementation and communicates with applicants on day-to-day basis.
- **Ministry of Trade and Industry** - which is responsible for development and management of the Operational Programme Enterprise and Innovations for Competitiveness and EFEKT Programme.
- **Ministry of Regional Development** - which is responsible for development and management of the Integrated Regional Operational Programme (IROP).



Other key stakeholders implementing energy policy at regional level and supporting municipalities include:

- **Energy Agency of the Zlín Region** - The consortium partner EAZK was established in 2006 as an implementing tool of the Zlín Region energy policy. EAZK operates also as an advisor for the public sector in the Zlín Region in the process of the development of energy plans and identification of suitable opportunities for investment, mainly in the field of RES, energy efficiency and low-energetic construction.
- **Energy auditors** are an important stakeholder group in the region that can't be omitted when implementing EE efficiency policy.
- **Environmental centres** are small advisory bodies who support municipalities locally. Their local experience is beneficial as a feedback to regional and national level.

3.1.2 Barriers faced by municipalities when implementing energy planning

Respondents from municipalities in Zlín Region were asked to select the three main barriers they face when developing and implementing energy planning, among a range of options. **¡Error! No se encuentra el origen de la referencia.** shows the results for the total sample. Note that respondents could select more than one barrier.

76,2% of municipalities in Zlín Region responded that the main barrier when implementing energy planning is limited financial sources. On the top of the list, **“Lack of technical expertise”** was selected but with a big difference (38,1% of respondents). At the bottom of the list, barriers like “lack of support from stakeholders” and “immature or high cost of technologies” can be found. Finally, “incompatibility with national policy orientation” was not perceived as a barrier by any municipality in Zlín Region.

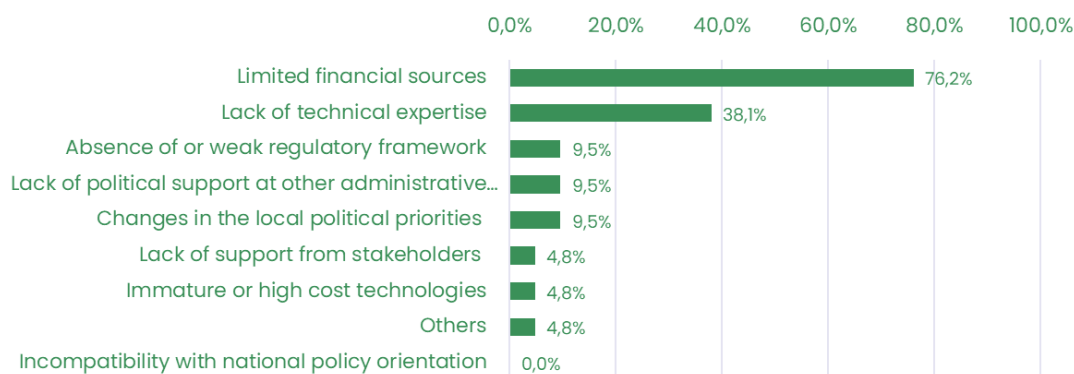


Figure 3-1 Barriers and pain points in Zlín Region

3.1.3 Specific knowledge needs and gaps

Respondents from municipalities in Zlín Region were also asked to indicate whether they had a strong need, limited need or no need for capacity-building in different sectors and specific areas. Sectors ranged from buildings, lighting and transport to energy production and management. Specific areas like energy communities, energy poverty, finance, policies and citizen engagement were also covered in the question.

As may be seen from figure below, there is no specific sector or area with strong need of support that clearly stands out more than others (identified by the majority of respondents). However,

more than two-thirds of municipalities from Zlín Region indicated strong capacity building needs in municipal buildings (60%), solar (57,1%), public lighting (52,6%), policies and regulations (50%).

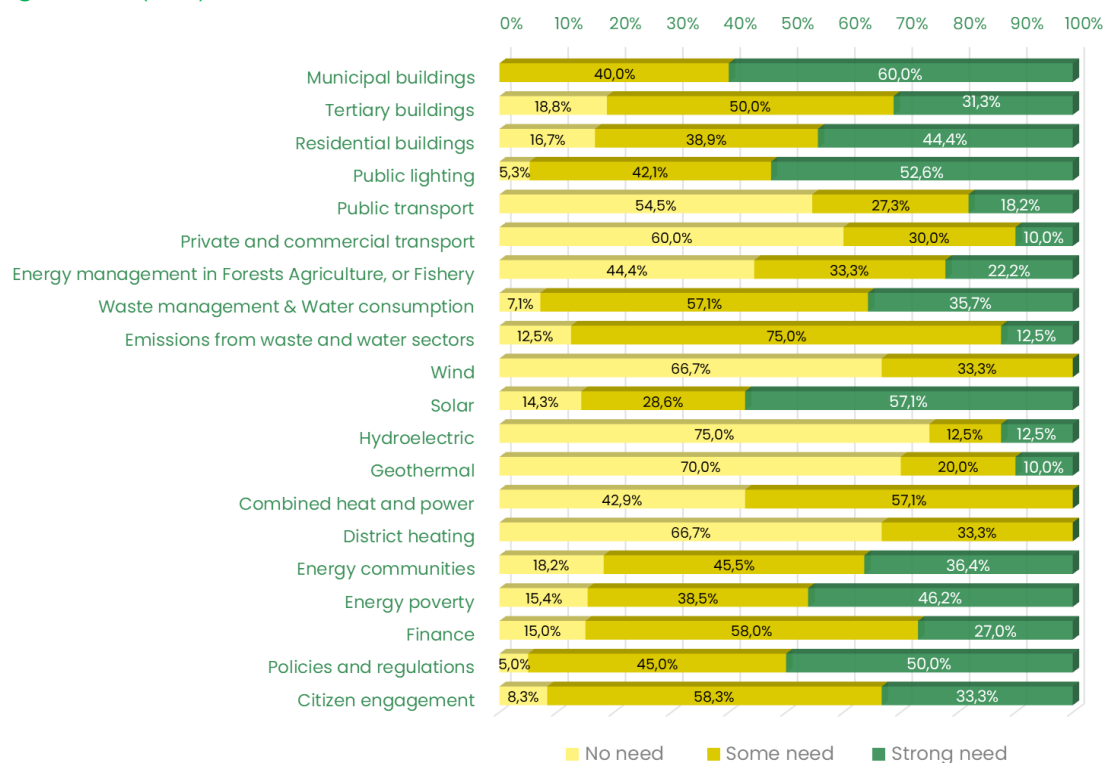


Figure 3-2 Specific knowledge needs in Zlín Region

Focus on specific financing needs: Only 27% of respondents from Zlín Region indicated having strong capacity building needs in finance. If we examine in more detail the specific financial instruments, the survey reveals similar rates, being the ESIF the most highlighted among the three options (30,8% of respondents indicated strong needs and 61,5% some need).

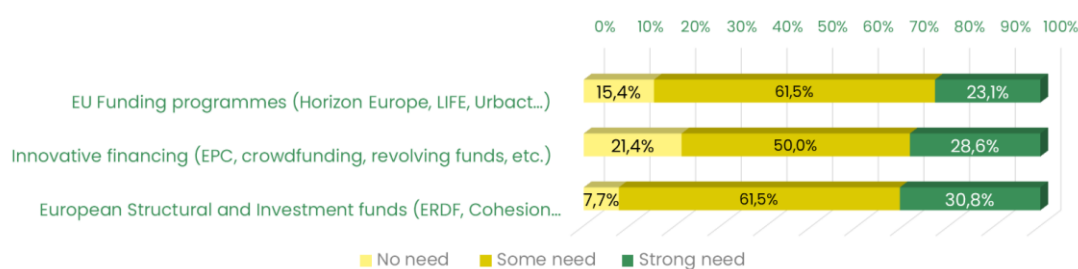


Figure 3-3 Knowledge needs in financing for Zlín Region

Focus on specific pains and difficulties that staff members have in their day to day: Municipalities were asked to indicate if they have difficulties in specific daily tasks related to energy transition and if yes, to identify them. **68% of surveyed municipalities in Zlín Region answered yes.** ¡Error! No se encuentra el origen de la referencia. presents the list of daily tasks that were more cited. Note that respondents could select more than one barrier.

As may be seen from figure below, there are two specific tasks in which staff members from municipalities in Zlín Region face difficulties. These are: **Selecting water and energy suppliers** (identified by 81,2% of respondents) and **defining monitoring indicators** (37,5%). **Collecting and/or interpreting local energy data** was identified as a pain by 9% of municipalities.

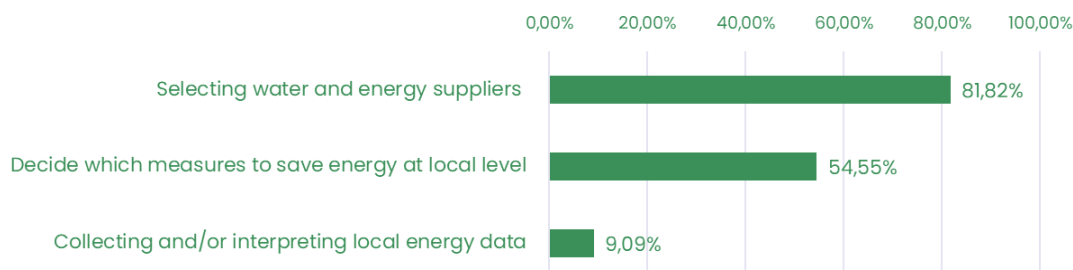


Figure 3-4 Specific tasks where municipalities in Zlín Region needs the most support

3.1.4 Capacity building activities

Background: EAZK regularly organizes workshops, conferences and webinars on various topics related mainly to capacity buildings. The number of yearly organized events ranges from 15 to 30, only in 2021 EAZK organized or actively participated in 29 events aimed at helping the development of the Zlín Region, supporting increasing efficiency and self-sufficiency in energy use and support of employment.

50% of surveyed municipalities in Zlín Region attended capacity building activities in the past 5 years. Most of them in the form of webinars. In the majority of cases, it was helpful for understanding complex issues but less for implementing actions or projects. The main topics addressed in these trainings ranged from selecting energy suppliers, energy efficiency and savings in buildings, central heating systems development to sector specific ones like energy communities and smart grids development.

Preferences regarding capacity-building methods: As a final question, respondents were asked to indicate, how relevant the different type of capacity building activities are to their needs, selecting from “strong relevance”, “limited relevance”, or “not relevant”. As **¡Error! No se encuentra el origen de la referencia.¡Error! No se encuentra el origen de la referencia.** reveals, respondents from Zlín Region found the following three types of activities “strongly relevant”:

- **Webinars (session live)** - 65% of respondents marked this option with “strong relevance”.
- **Coaching** aimed at receiving individual tailored and feedback and advice - 57,1%.
- **Study visits to organisations** to learn more about their practices and share experiences - 42,9%.

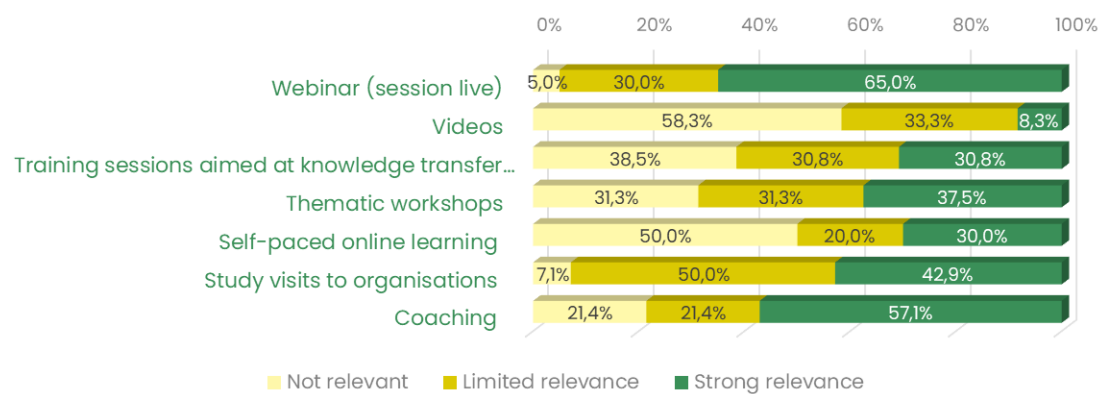


Figure 3-5 Preference of format for capacity building in Zlín Region

3.2 Pilot 1. CRETE ISLAND

3.2.1 Pilot territory characteristics and governance

Crete is the largest and most populous island in Greece, and the fifth most populous Region in Greece. It has an area of 8,336 km² and a coastline of 1,046 km. There are 24 local authorities, with a population of around 625.000 inhabitants (2021). The strongest sector of the Cretan economy remains "Trade and Tourist Services" contributing 6.8% to the country total.

Energy Transition of the public sector in Crete is characterized by a vast adoption of CoM (18 of the 24 local authorities are CoM signatories, 16 of them with submitted Action Plans) and, at the same time, by little monitoring of the implemented actions and relatively few investments in ET. Energy governance is mainly unidirectional, from region to local authorities (ET strategy is defined by RDFC, and later adopted in Action Plans by local authorities), with limited feedback from the local authorities to the regional entity and neither an established information sharing procedure nor intra-local coordination. Finally, Crete is currently updating their Energy Action Plan (2016) into a new Energy Transition Plan.

Relevant stakeholders in the ET:

In Greece, the relevant national stakeholder for all issues related to energy policy and energy transition is the **Ministry of Environment & Energy**.

Other key stakeholders implementing energy policy at regional level and supporting municipalities are:

- **Regional Development Fund of Crete** - The consortium partner RDFC was established in 1998 as a supporting entity of the Crete Region development planning (including energy planning). RDFC also operates the Regional Energy Agency of Crete (REAC) which supports the municipalities and the Region of Crete with energy advice as well as acts as the CoM territorial coordinator in the whole island, a signatory of the Pact of Islands and a member of the ManagEnergy and the Clean Energy for Islands initiative.
- **Energy managers of Municipal buildings:** In line with Greek legislation, the Region of Crete has appointed Energy Managers for its public buildings. They are responsible for collecting and monitoring energy data for the buildings under their responsibility, including energy efficiency measures applied or planned to be applied, and report annually to the Ministry of Environment and Energy using specific monitoring tools provided by the Ministry.

3.2.2 Barriers faced by municipalities when implementing energy planning

Respondents from municipalities in Crete Island were asked to select the three main barriers they face when developing and implementing energy planning, among a range of options. **¡Error! No se encuentra el origen de la referencia.** shows the results for the total sample. Note that respondents could select more than one barrier.

100% of municipalities in Crete responded that the main barrier when implementing energy planning is limited financial sources. Lack of technical expertise was also frequently selected by municipalities (70% of respondents), followed by **"Absence of or weak regulatory frame-**



work” (20%). At the bottom of the list, barriers like “Lack of political support at other administrative level” and “incompatibility with national policy orientation” can be found. Interestingly, “immature or high cost of technologies” was not perceived as a barrier by any municipality.

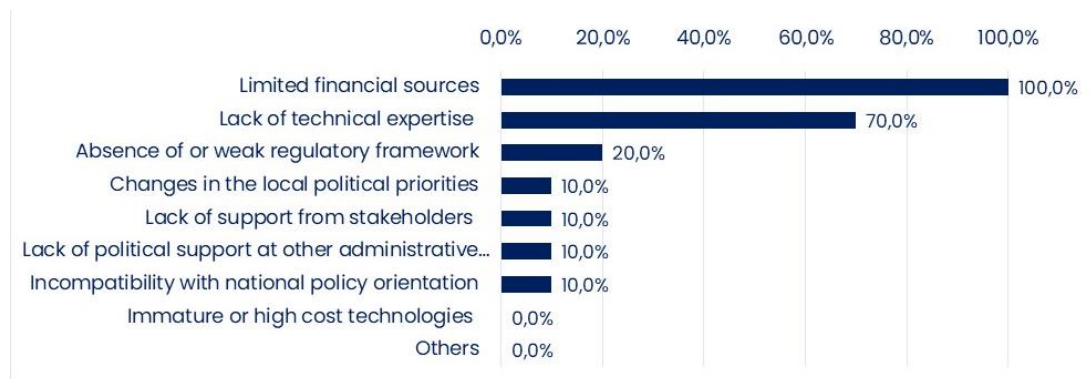


Figure 3-6 Barriers and pain points in Crete Island

3.2.3 Specific knowledge needs and gaps

Respondents from municipalities in Crete were also asked to indicate whether they had a strong need, limited need or no need for capacity-building in different sectors and specific areas. As may be seen from figure below, sectors ranged from buildings, lighting and transport to energy production and management. Specific areas like energy communities, energy poverty, finance, policies and citizen engagement were also covered.

The **sectors** where respondents from municipalities in Crete indicated the need for the most support are **buildings** (in especially municipal ones) and **energy management in forests, agriculture or fishery**. Note that for those sectors, “strong needs” was the most selected option (before “limited needs” and “no needs”). As regards to **local renewable energy production technologies**, capacity building needs are the strongest when it comes to **hydroelectric, solar and wind**. These results are likely to be related to the available natural resources in Crete which were sun, water and wind. Finally, respondents in Crete also indicated strong needs for capacity-building in **finance and energy poverty**.

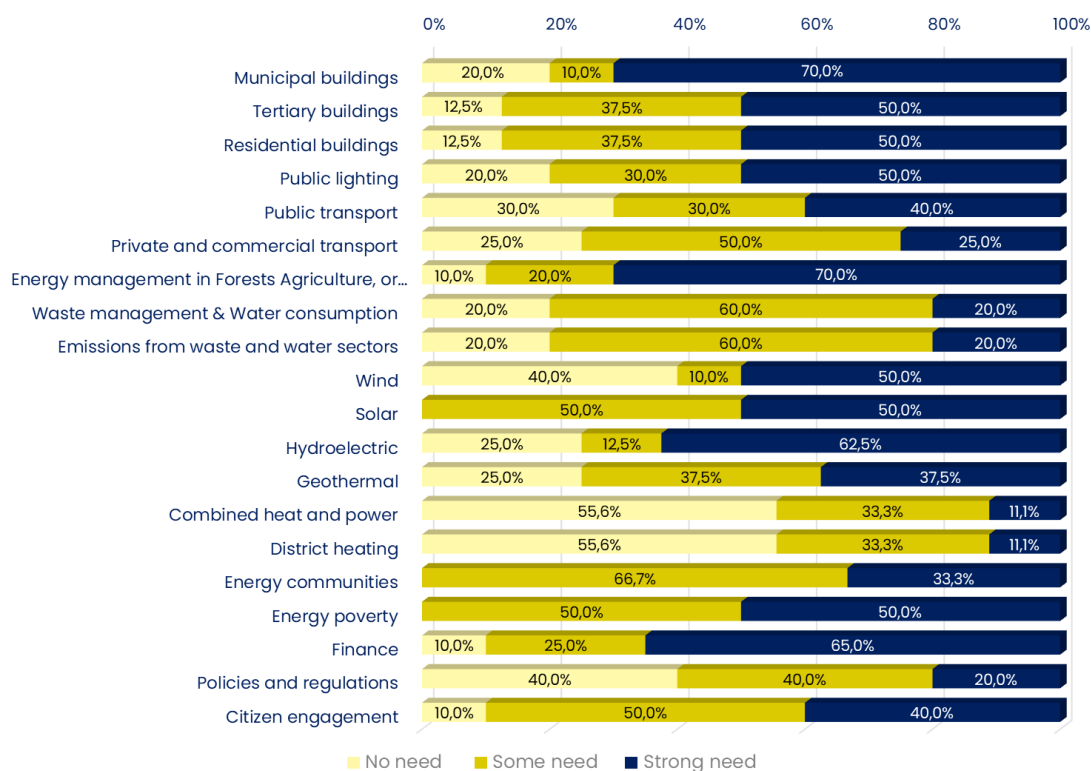


Figure 3-7 Specific areas in which more support is needed in Crete

Focus on specific financing needs: 65% of respondents from Crete indicated having strong capacity building needs (and 25% some needs) regarding finance. As shown in figure below, the strongest needs concern the **European Structural Investment Funds (70%)**, followed by EU Funding programmes (60%) and innovative financing (60%).

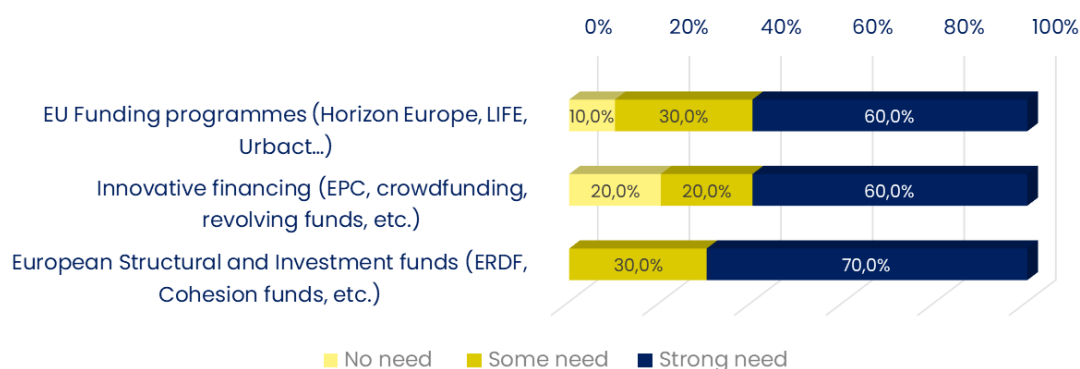


Figure 3-8 Knowledge needs in financing for Crete Island

Focus on specific pains and difficulties that staff members have in their day to day: Municipalities were asked to indicate if they have difficulties in specific daily tasks related to energy transition and if yes, to identify them. **95% of surveyed municipalities in Crete answered yes.** **62,5% of** respondents showed the list of daily tasks that were more cited. Note that respondents could select more than one barrier.

municipalities in Crete answered they had difficulties when collecting and interpreting local energy data. Over 37,5% indicated they had difficulties when defining monitoring indicators. At the bottom of the list, communication with residents and coordination with other levels of governance can also be found.

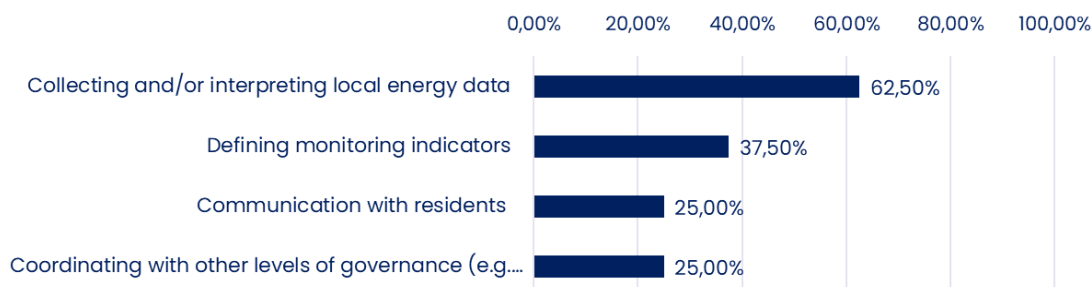


Figure 3-9 Specific tasks where municipalities in Crete need the most support

3.2.4 Capacity building activities

Background: Most capacity building activities organized in Crete are related to European projects and the promotion of their results to local municipalities. **70% of surveyed municipalities in Crete attended capacity building activities in the past 5 years.** Most of them in the form of courses or webinars. In the majority of cases, it was helpful. The main topics addressed in these recent trainings ranged from ELENA financial mechanisms, and energy communities to Climate adaptation and energy efficiency in public infrastructure.

One of the most recent capacity building activities was organized within the framework of the LIFECLIMATE ADAPT project which resulted in the creation of the web platform: www.safecrete.gr. Municipalities had the chance to learn about the Regional Action Plan for Climate Adaptation. Finally, there is also a diploma mainly addressed to public servants in Crete who wish to gain expertise in energy projects, However the interest from local municipalities is relatively low since the involvement required is high and priorities of local authorities are somehow others.

Preferences regarding capacity-building methods: As a final question, respondents were asked to indicate, how relevant the different type of capacity building activities are to their needs, selecting from “strong relevance”, “limited relevance”, or “not relevant”. As **¡Error! No se encuentra el origen de la referencia.** reveals, respondents from Crete found the following **four types of activities** “strongly relevant”:

- **Thematic workshops**, primarily aimed at sharing good practices and tools on a specific topic - 100% of respondents marked this option with “strong relevance”
- **Study visits to organisations** to learn more about their practices and share experiences - 83,3%

- **Training sessions** aimed at knowledge transfer from experts and webinars - 66,7%

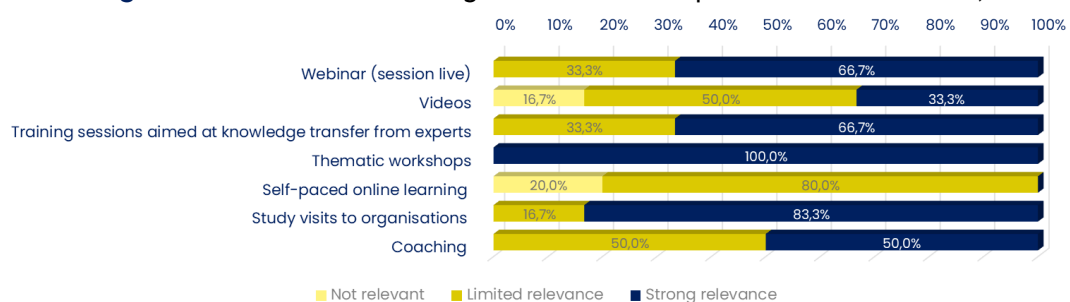


Figure 3-10 Preferences for capacity building activities in Crete

3.3 Pilot 3. GIRONA PROVINCE

3.3.1 Pilot territory characteristics and governance

Girona Province sits in the extreme northeast corner of the Iberian Peninsula. It spans an area of 5,905.45 Km² and has a population density of 126.63 inhabitants/ km². There are 221 local authorities, with a population of 757.497 inhabitants (2019). This region, due to the confluence and convergence of the Mediterranean, Atlantic and Eurosiberian phytogeographic regions, exhibits a markedly diverse landscape and biodiversity.

Girona Provincial Council (DDGI) is the public local authority for the Girona province and provides technical, financial and administrative support to all the 221 municipalities within their operational area. Since 2008, 209 have joined the CoM initiative. 190 of them have approved a SEAP, validated by DGland the climate office of CILMA. Currently there are 50 SEAPs monitoring reports and 3 newly approved SECAPs. DDGI has been providing means to local councils in the Girona area to develop projects under the European Regional Development Fund (ERDF) financial schemes; whereof, among others, aims to support the shift towards a low carbon economy in all sectors from the period 2007-2013 onwards

Relevant stakeholders in the ET:

The relevant national stakeholder for all issues related to energy policy and energy transition is the **Ministry for the ecological transition and demographic challenge**. At the level of the autonomous community of Catalonia the authorized entity is **ICAEN**.

Other key stakeholders implementing energy policy at regional level and supporting municipalities include:

- **Girona Provincial Council** (DDGI) is a CoM Coordinator and one of their main stakeholders in the province of Girona. It supports all municipalities to sign, join and develop their own Sustainable Energy (and Climate) Action Plan. Since 2008, from a total number of 221 local councils, 209 have joined the CoM initiative. 190 of them have approved an Action Plan and 50 of them a monitoring report.
- **Council of Local Initiatives for the Environment (CILMA)** was established in 1999 to foster sustainability in the municipalities of Girona. It also organises activities that are linked to the CoM programme.
- **Energy Transition Offices (OTE)**: Girona Region has 7 county councils and 3 of them have an Energy Transition Office, but in the future, the idea is to implement an OTE to each county council. At least, in each OTE there is an Energy Transition Technician to help municipalities with anything related to energy and the environment.

3.3.2 Barriers faced by municipalities when implementing energy planning

Respondents from municipalities in Girona Region were asked to select the three main barriers they face when developing and implementing energy planning, among a range of options. ¡Error! No se encuentra el origen de la referencia. shows the results for the total sample. Note that respondents could select more than one barrier.

88% of municipalities in Girona responded that the main barrier when implementing energy planning is limited financial sources. On the top of the list, **“Lack of technical expertise”**



was selected but with a big difference (36% of respondents). At the bottom of the list, barriers like “Changes in the political priorities” and “immature or high cost of technologies” can be found. Finally, “incompatibility with national policy orientation” was not perceived as a barrier by any municipality in Girona.



Figure 3-11 Barriers and pain points in Girona Region

3.3.3 Specific knowledge needs and gaps

Respondents from municipalities in Girona were also asked to indicate whether they had a strong need, limited need or no need for capacity-building in different sectors and specific areas. Sectors ranged from buildings, lighting and transport to energy production and management. Specific areas like energy communities, energy poverty, finance, policies and citizen engagement were also covered in the question.

As may be seen from figure below, there are specific areas in which a clear need of support is highlighted. This is the case of **finance** (90% of respondents selected “strong needs” before “limited needs” and “no needs”), **energy communities** (83,3%) and **citizen engagement** (77,3%). Note that for **energy poverty and policies**, “strong needs” was selected by more than half of respondents (66,7% and 60% respectively).

As regards to sectors, **more than two-thirds of municipalities indicated having strong needs of support in solar**. This is coherent with the high interest and need in energy communities. Other sectors where more than half of respondents from Girona indicated strong capacity building needs are **tertiary and residential buildings and transport**.

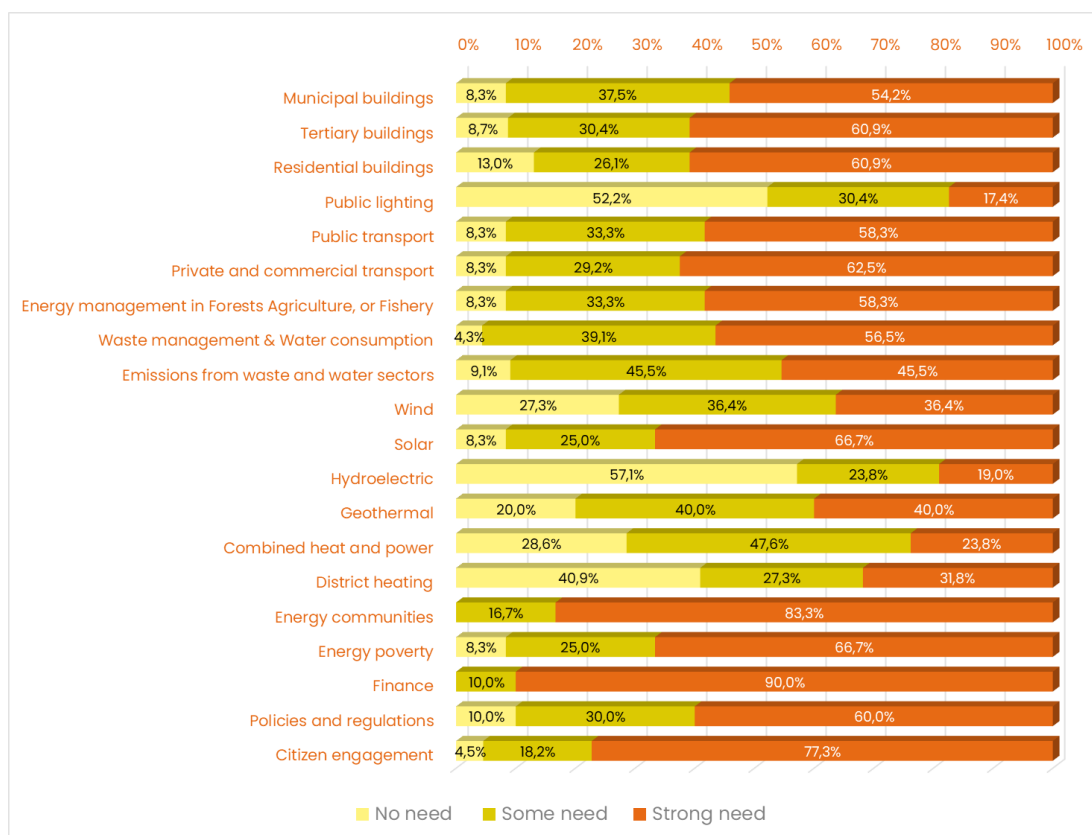


Figure 3-12 Region Specific areas in which more support is needed in Girona

Focus on specific financing needs: 90% of respondents from Girona indicated having strong capacity building needs in finance. As shown in figure below, strong knowledge needs were revealed for the three types of financial instruments. The strongest needs concern the **European Structural Investment Funds (91,3%)**, followed by innovative financing (90,9%).

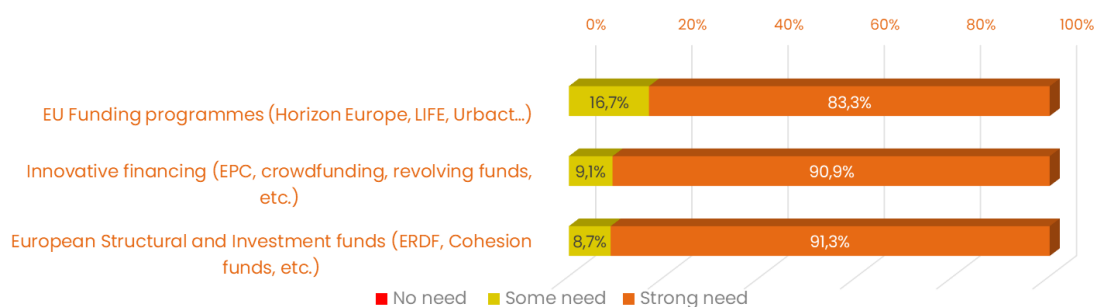


Figure 3-13 Knowledge needs in financing for Girona Region

Focus on specific pains and difficulties that staff members have in their day to day: Municipalities were asked to indicate if they have difficulties in specific daily tasks related to energy transition and if yes, to identify them. **70% of surveyed municipalities in Girona answered yes.** ¡Error! No se encuentra el origen de la referencia. presents the list of daily tasks that were more cited. Note that respondents could select more than one barrier.

From the figure below we can see that **staff members from municipalities in Girona face difficulties in a variety of tasks** and not in a specific one. 38,9% of municipalities in Girona answered they have difficulties when **deciding which measures to save energy at local level** and 33,3% when **trying to coordinate with other levels of governance** (i.e. European, national, regional). On the other hand, tasks like **interpreting local energy data and defining monitoring indicators** were cited by almost two-thirds of the respondents (27,8%). At the bottom of the list but mentioned by 16,7% of the respondents we can find the tasks of selecting water and energy suppliers and communicating with residents. The latter is consistent with the interest in citizen engagement observed in the previous question.

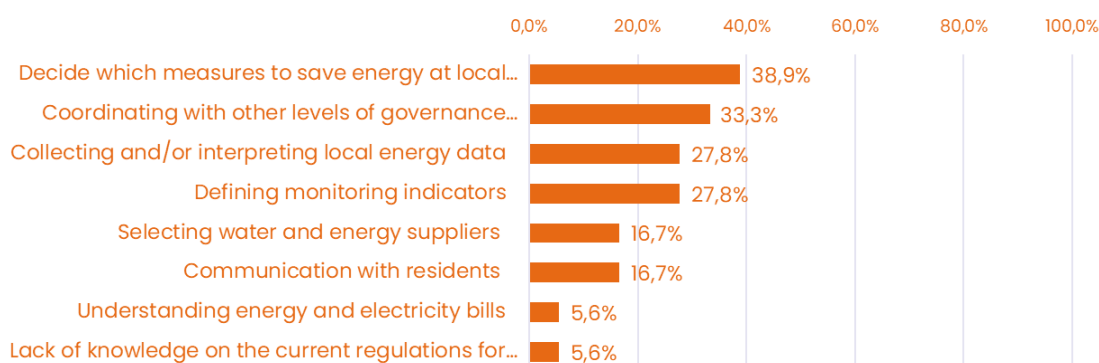


Figure 3-14 *Specific tasks where municipalities in Girona Region need the most support*

3.3.4 Capacity building activities

Background: 60% of surveyed municipalities in Girona province attended capacity building activities in the past 5 years. Most of them in the form of webinars. Indeed, CILMA regularly organizes online training sessions to support municipalities in Girona in drafting SECAPs: [Ponències - Sessions de formació en línia sobre la redacció de Plans d'Acció per l'Energia Sostenible i el Clima \(PAESC\) a les comarques gironines - Cilma | Consell d'Iniciatives Locals per al Medi Ambient](#). Other topics addressed are energy communities, energy poverty, energy efficiency in buildings and waste management at municipal level.

Preferences regarding capacity-building methods: As a final question, respondents were asked to indicate, how relevant the different type of capacity building activities are to their needs, selecting from “strong relevance”, “limited relevance”, or “not relevant”. As **¡Error! No se encuentra el origen de la referencia.** reveals, respondents from Girona found the following four types of activities “strongly relevant”:

- **Training sessions** aimed at **knowledge transfer** from experts and webinars - 90,5% of respondents marked this option with “strong relevance”.
- **Coaching** aimed at receiving **individual tailored and feedback and advice** - 81,8%.
- **Webinars (session live)** - 77,3%.
- **Thematic workshops**, primarily aimed at sharing good practices and tools on a specific topic - 68,2%.

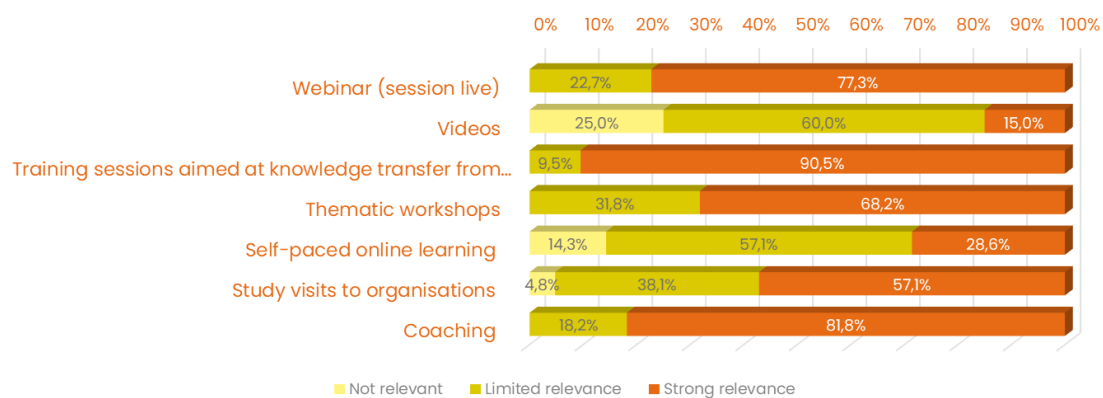


Figure 3-15 *Preference of format for capacity building in Girona Region*

4 Discussion of findings

The previous sections presented the results of a needs-assessment process conducted from January to May 2022 by ePLANET consortium. Also, it helped us identify relevant stakeholders in each pilot region implementing energy policy and supporting directly municipalities.

Through an online survey and interviews, we tried to answer the following questions:

- Which are the main barriers and problems faced by ePLANET municipalities when developing and implementing energy planning?
- What are the areas where ePLANET municipalities need the most support?
- What are the specific needs and pain points that staff members have in their day-to-day?
- Which type of capacity building activities would work best to conduct training?

4.1 Comparative discussion on capacity building needs

Comparing the conclusions for the three pilot regions, the following findings stand out:

Main challenges and barriers faced by ePLANET municipalities:

Limited financial resources is the greatest barrier perceived by ePLANET municipalities to implement projects and design climate and energy plans. It was cited as a central issue by more than 88% of municipalities in the three pilots (being 100% of municipalities in Crete, 88% in Girona and 76,2% in Zlín Region). Indeed, the lack of financial resources makes it difficult for small municipalities to undertake long-term climate and energy actions, even when they do have long-term planning documents. This is consistent with the study conducted by Covenant of Mayors in 2017 and EUCF.

A lack of technical expertise was the next most prevalent one, but with a difference (cited by 70% of municipalities in Crete and around 36% of municipalities in Zlín Region and Girona). Indeed, as CoM points out, this barrier prevents local authorities from undertaking long-term climate and energy action. This is sometimes directly linked to the lack of financial resources, but also relates to human resources management. When local authorities have a budget to work on climate and energy issues, they typically hire in external consultants, whose expertise leaves with them after the project has been completed.

Finally, “lack of support from stakeholders”, “immature or high cost of technologies” and “incompatibility with national policy orientation” were not perceived as a barrier by municipalities in the three pilots.

Message from interview

“Most of the municipalities in Zlín region are very small municipalities with insufficient absorption capacity. Many times, they struggle with finding the way in financing energy projects and with financing at all. They need to operate many buildings like schools, cultural centers, kindergartens etc. and at the same time they face the risk of getting too much into debt. It is not sustainable for them to manage without an external support. Nowadays, national funding programmes like the OP Environment in Czech Republic is prevailing a way of financing EE for them”



Specific capacity building needs and knowledge gaps:

With regards to sectors and areas, **the needs for specific support vary from one pilot region to another**, as discussed in the following:

- **Public lighting** was identified as a sector where support is needed by only municipalities in **Zlín Region**.
- **Energy management in forests, agriculture, or fishery, and hydroelectric and wind** were highlighted by only municipalities in **Crete**.
- **Energy communities, citizen engagement and transport** were selected by municipalities in **Girona**.

However, some common interests were also found:

- **Buildings and solar** were highlighted quite unanimously as relevant sectors for municipalities in **three pilot regions**.
- **The strong need for specific support on finance is a matter of consensus for a large majority of municipalities in Girona and Crete** (90% and 60%, respectively). 80.5% of municipalities in these two pilot regions referred to the European Structural Investment Funds as an area where they have strong needs, and 75% to the innovative financing like EPC and crowdfunding. By contrast, only 27% of respondents from Zlín Region indicated having strong capacity building needs in finance. This could be related to an effective national financial programme, OP Environment, launched in Czech Republic. This divergence will be explored in more detail in Task 4.2.
- **Energy poverty** was as well selected as a relevant area for both **Girona and Crete**.
- Finally, **policies and regulations** were selected as relevant areas by more than half of municipalities in **Zlín Region and Girona**.

Focus on specific pains and difficulties that staff members have in their day to day:

More than 75% of municipalities in the three pilot regions reported having difficulties in specific daily tasks related to energy transition in the past months. Although difficulties are encountered in a variety of situations, there are three specific tasks identified by at least 25% of municipalities in at least two pilot regions. These are:

- **Collecting and interpreting local energy data** (62,5% of respondents in Crete and 27% in Girona)
- **Deciding which measures to save energy at local level** (55% of respondents in Zlín Region and 38,9% in Girona)
- **Defining monitoring indicators** (37,5% of respondents in Crete and 27,8% in Girona)

Other tasks identified by municipalities are: **Selecting energy suppliers** (81,81% of respondents in Zlín Region and 16,7% in Girona), **coordination with other levels of governance** (33,3% of respondents in Girona and 25% in Crete) and **communication with residents** (25% of municipalities in Crete and 16,7% in Girona).

Preferences regarding capacity-building methods

Around 60% of surveyed municipalities in the three pilot regions attended capacity-building activities in the past 5 years. Most of them in the form of webinars. In the majority of cases, it was helpful for understanding complex issues but less for implementing actions or



projects. Again, although its pilot region presents its particularities, the following four types of capacity building methods appeared to be strongly relevant for more than 60% of all surveyed municipalities:

- **Webinars (session live)**
- **Thematic workshops** (including knowledge transfer from experts or aimed at sharing good practices and tools)
- **Coaching** aimed at receiving **individual tailored and feedback and advice**
- **Study visits to organisations** to learn more about their practices and share experiences

Videos and self-paced online learning, on the other hand, appeared to be not relevant.

4.2 Concluding remarks

The present analysis contributes to a foundation for future research and indeed shows the challenges and barriers that small municipalities encounter when implementing energy planning. This kind of analysis is a valuable source of knowledge for tailored policy and coordination efforts. Indeed, with such information regional and national authorities could elaborate capacity building programs considering the profile of municipalities, and thus promote better energy governance.

As is common in surveys, there may be respondent bias from municipalities who are more interested in this subject, and therefore more likely to participate in related research. As such, the sample population of municipalities in these pilot regions is limited. Additional research further investigating these findings with a larger and a more diverse sample (assessing the needs of other key stakeholders in each region) will help clarify how municipalities' needs vary according to their size and region/country where they are located.

This deliverable is intended as a basis to co-design and implement tailor-made training materials on ETM addressing the main requirements and needs of the different target groups. Accordingly, it will feed directly into Task 4.2 - Strategies to overcome ET barriers. Indeed, as the present analysis showed, small municipalities lack of financial capacities to transform local long-term energy and climate strategies into appropriate investment concepts. But not only. They also lack capacities to employ energy referents, internal experts who are able to collect and interpret local energy data, select energy suppliers, define monitoring indicators and define the investment priorities. As a result, smaller municipalities usually invest only in limited, low scale EE projects and thus lack of attractiveness for the financial sector. On the other hand, small municipalities fall under the regulation of the Law on Public Procurement. The preparation, launching and evaluation of a procurement requires knowledge in specific sectors and areas, which as the present study reveals, is not available at all municipalities.

In Task 4.2 these challenges (and other ones addressed in this study) will be prioritized and structured. Indeed, as section 3 and section 4.1 showed, there are needs for specific support that vary from one pilot region to other but there are also common knowledge gaps and barriers. **ePLANET will capitalize on the knowledge acquired in the present task to co-create a modular training strategy programme for each pilot region and target group. Regarding the capacity building methods, the most relevant ones for ePLANET municipalities will be included: webinars, coaching sessions, thematic workshops and study visits.**



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