UNLOCKING THE COMMUNITY BIOENERGY POTENTIAL

D3.1 Mobilisation actions for the development of community bioenergy projects - First

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About

Over the last years, the EU has witnessed some remarkable steps in Renewable Energy (RE) deployment. However, at the same time, we see an increasingly uneven penetration of RE across the different energy sectors, with the heating and cooling sector lagging behind. Community bioenergy schemes can play a catalytic role in the market uptake of bioenergy heating technologies and can strongly support the increase of renewables penetration in the heating and cooling sector, contributing to the EU target for increasing renewable heat within this next decade. However, compared to other RES, bioenergy has a remarkably slower development pace in the decentralised energy production which is a model that is set to play a crucial role in the future of the energy transition in the EU.

The ambition of the EU-funded BECoop project is **to provide the necessary conditions and technical as well as business support tools for unlocking the underlying market potential of community bioenergy.** The project's goal is to make community bioenergy projects more appealing to potential interested actors and to foster new links and partnerships among the international bioenergy community.

The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952930.

Project partners

Table of Contents

List of Tables

Abbreviations

BE	Bioenergy
BEC	Bioenergy Community
DH	District Heating
EU	European Union
RE	Renewable Energy
RESCoop	Renewable Energy Cooperative

Executive Summary

Deliverable 3.1 presents and reflects upon the results of task 3.1, which has the main goal to **mobilise local stakeholders** (energy communities, local authorities, businesses, citizens etc.) around the application of the community energy concept in the fields of bioenergy and RE heating across the EU.

Another essential goal of this task is the **identification** and, eventually, **creation of BECoop bioenergy RESCoops**. By following the task-proposed **engagement plans**, T3.1 is called to **define such community structures** at the Pilot level.

To carry out this task, a set of guidelines were co-elaborated with the partners to help create a relevant cohesion in the outcomes. By building on the experience and knowledge of the BECoop local partners, pilot-based strategies have been designed and will constitute the basis for the project's stakeholder engagement process.

Through a first circle of pilot events in each area, relevant information has already been gathered leading to the identification of i) key stakeholders who are willing to support the BECoop vision; ii) key opportunities and promising community cases that, after future consultation, bear the potential to be supported in the framework of the BECoop project.

Specifically, ***A total of one (1) webinar and six (6) warm up events were carried out*** in the first phase of this task. Different methods were used to give a general overview of the expressed interest and the representation of diverse stakeholders that attended the warm-up events. The results from the events were further analysed and summarized providing insights into the attendees' willingness to engage and act as ambassadors who will mobilize and inform local communities towards the deployment of bioenergy communities in the near future. For example, explaining ideas and benefits that a Renewable Energy Cooperative (RESCoop) could bring in a tangible and accessible way, can lead to better awareness and growth of interest.

Overall, the main points gathered from both webinar and events are as follows:

- The exploitation of local agricultural and forestry biomass, and the deployment of Bioenergy Communities (BECs) in the pilot areas could bring significant both socioeconomic and environmental benefits, such as :
    - Growth and development opportunities
    - Security against energy poverty
    - Better natural resources management
- However, the elimination or at least the minimisation of significant barriers (such as legislation frameworks, lack of funding and public's trust and ignorance, etc.) should be a priority for the successful implementation of such ideas.

Based on the knowledge gathered in the first part of the task, the second part of this task will focus on continuously monitoring and guiding pilot partners towards the wider people's engagement, and/or the selection of new potential community cases.

CBS will continue to carry out task level meetings to discuss with the pilot partners about the event's outcomes, the engagement plan and the communities' identification process to substantiate the deployment of the engagement actions. ***The main goal of these meetings will be the narrowing down of the identified community cases, and the selection of at least one (1) per pilot region to be further supported towards a local common vision for RE heating.***

1 Introduction

1.1 The BECoop Project

1.1.1 Background

While the need for more Renewable Energy (RE) use in the energy sector has been increasing and the EU has made large investments in RE technologies to achieve effective energy transition, the penetration rate of RE across energy sectors appears to be uneven. That raises concerns about the progress in decarbonisation, as the EU cooling and heating sector is slowly "penetrated" by RES. The cooling and heating sector accounts for 51% of the EU´s total energy consumption and 27% of the EU´s total CO_2 emissions and it is expected to account for the largest share of demand in 2050[1]. If efforts towards a transition will not accelerate, it will be very difficult to meet the EU´s ambitious goal for a 1.3%[1] annual increase between 2021 and 2030 in renewable heat. Fossil fuelled heat can be replaced by bioenergy technology, which is the leading one in that sector in the EU, and it holds the highest potential to achieve the replacement.

However, research shows that citizens´ resistance and low acceptance of bioenergy technology can become an obstacle to a smoother RES transition.

On the other hand, public demand for a cleaner environment has been growing over the past few years, and energy communities have started to be present. Renewable energy communities have the potential to disrupt the existing energy production system. Experience has shown that Renewable Energy Cooperatives (RESCoop) are important enablers of the energy transitions to a low-carbon economy.

Recent studies also suggest that half of the EU population could become energy producers meeting 45%[1] of its energy demand. Community energy is considered a key factor for future RE market uptake.

Nevertheless, community bioenergy is still lagging far behind. In RES terms, the vast majority focuses on solar and wind energy resources exploitation, while biomass is on very low levels. At the same time, financing schemes suitable for bottom-up energy structures disregard bioenergy.

It has become evident that if the EU bioenergy sector became more present in the RES scene, it could create important market opportunities and higher penetration of its technologies. At the same time, it could offer significant co-benefits such as[2]:

- Climate change mitigation and emissions reduction
- Energy reliability and supply security
- Flexible energy systems
- Local circular economy effects
- Waste treatment solutions

[1] BECoop Proposal and GA
[2] Ibid

1.1.2 The project's ambition

Activating the community energy market for bioenergy

The bioenergy industry can exploit a significant market opportunity by accessing this untapped marketing channel, as community energy appears to be the key organizational form for promoting future energy transition. Based on this, BECoop's main ambition is "to facilitate a wider deployment of bioenergy heating across Europe by providing all the necessary conditions and support tools for unlocking the community bioenergy potential".

Currently, the development of bioenergy communities is difficult due to conditions that arise from the bioenergy and community element. That happens due to:

- Sceptic/unprepared communities to embrace the concept because:
  - It is expensive and time-consuming
  - It is technically difficult to implement
  - There is limited awareness and they do not see how they will benefit from it
- Bioenergy stakeholders´ lack of promoting awareness of their technology through the community channel
  - Unaware of special requirements the community energy might apply
  - Unaware of how to approach the energy community and market
- Framework conditions that might encompass "vested interests" such as:
  - Competition with fossil fuels and other RES
- Policy factors such as:
  - Local/national regulations that may make community bioenergy difficult to develop.

In order to increase the bioenergy penetration in the community energy schemes, **there is a high necessity for these projects to be more appealing to potential community energy owners.**

This task supports BECoop's strategic plans through supporting:

- People´s effective mobilisation around community bioenergy initiatives
- Knowledge gathering about stakeholders towards boosting local bioenergy demand by creating a better image and social acceptance for it
- Comprehension widening of community bioenergy market value by the EU bioenergy industry stakeholders, as a potential application of their technologies.

1.2 Stakeholder engagement in the energy sector

While renewable energy is considered one of the main solutions to many social and environmental problems (such as climate change, energy poverty, etc.), the transition and integration of a more considerable portion of it into the bigger energy portfolio come with a lot of effort and great sacrifices. For new energy systems to be established is to overcome economic, technical, social, and environmental challenges, related to decisions, options, and outcomes. These decisions, options, and outcomes depend highly on socio-economic and environmental factors that vary significantly even among regions within the same country and on developers' perceived reputations. A renewable energy future and its development appear to affect and be affected by many different stakeholders. Therefore, it is important to have a whole image of who these stakeholders are, and what they will provide in the decision-making process that can improve the reliable and accountable development of

renewable energy projects. Some argue that to successfully implement such kind of projects, strong and constant stakeholder engagement is needed. Stakeholder participation, which is different from broader public participation, can be defined as the process where groups, organizations, and individuals decide to participate actively in decisions that will have an impact on them. It is highly recommended that stakeholder involvement begins in early stages, such as in dialogue on underlying assumptions, values, and agenda-setting. This approach creates credible project organization, and better, socially acceptable, and desirable projects and technologies (Cuppen et al., 2016; Johnson & Jansujwicz, 2015; O'Neill-Carrillo et al., 2010; Schelly et al., 2019; Sufia Azlan et al., 2020).

Additionally, and according to Section 2, Ch. 23, Agenda 21 from Rio Earth Day "One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need for individuals, groups, and organizations to participate in environmental impact assessment procedures, and to know about and participate in decisions, particularly those that potentially affect the communities they live and work in. Individuals, groups, and organizations should have access to information relevant to the environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures" (United Nations Conference on Environment & Development, 1992).

In other words, all stakeholders need to get involved in the initiation, assessment, and implementation of long-term strategies towards a more sustainable future. Collaboration between government, industries, commerce, and citizens is crucial to change present adversarial positions into collaborative relationships of trust and constant commitment to the public good (O'Neill-Carrillo et al., 2010). Studies have also shown that people who are familiar with renewable energy technologies (for example there are wind turbines sited near their region) are more encouraging and supportive of such technologies (Schelly et al., 2019).

The constantly increasing need for renewable energy resources, demands reliable mechanisms of communication and discussion among energy stakeholders (O'Neill-Carrillo et al., 2010). Crucial stakeholder implementation can be succeeded through "better-informed" decisions and "good practice in creating value to stakeholders" (Sufia Azlan et al., 2020).

Providing timely information to all stakeholders transparently and commonly is also needed, before any final policy decision is taken. This is because most "energy decisions are usually made on top-down approaches", and on limited and late public participation in any policy-making action. Some tools that could potentially enhance stakeholder engagement, and consequently the successful implementation of proposed energy projects are:

- Transparent communication systems, where all stakeholders can express their concerns and recommendations
- Education strategies focused on renewable energy, and early and constant community involvement in the design/planning stages.
- Visible and tangible compensation or/and profit-sharing schemes

To have different stakeholders decide about the appropriateness or value of a project, requires that they comprehend fully the project's benefits and consequences. The optimal choice can lead to maximisation of benefits and minimisation of unexpected consequences. However, such requirements can be challenging in energy projects, where benefits and consequences vary for each stakeholder. Another challenge is that the total amount of benefits depends on socioeconomic, technical, and environmental factors. While the acknowledgment and evaluation of social factors (e.g., acceptance,

fear, desirability, etc.) can be difficult, a proper assessment of benefit can provide identification of such factors for each stakeholder group and assess its preferences and opinions.

As mentioned earlier, public education appears to be of paramount importance for renewable energy resources to be properly introduced to new "green" concepts. The role of education is to eliminate rumours and misinformation about renewable energy that often circulate as true. A neutral, well-informed third party (instead of a local authority for example) can facilitate constructive and respectful dialogues among stakeholders, and make sure that all opinions and concerns expressed are represented. That requires participatory structures and analyses that go beyond the cost-benefit one and include social factors in energy policies. Interdisciplinary and constructive approaches are suggested to bring different attitudes, values, perceptions, and knowledge to policy-making. Lastly, the outreach and education of the energy workforce and public must occur in a participatory and holistic way (O'Neill-Carrillo et al., 2010; Schelly et al., 2019).

Benefits that can derive from an active stakeholder decision-making participation can be:

- Trust and acceptability development among stakeholders
- Understanding, accountability, transparency
- Decisions' durability and quality
- Promotion of social learning
- Local priorities and needs more likely to be met
- Non-scientists can provide non-technical information in the decision-making process
- Sustainability and resilience.

The feeling of participation in the planning and decision-making processes reduces the possibilities of public opposition to the process outcome (Johnson & Jansujwicz, 2015; Sufia Azlan et al., 2020). However, public opposition can become a risky and less predictable obstacle for the implementation of big infrastructure projects. It can significantly increase the project's cost by delaying it, lead to developers' reputation damage, or even to the project's cancellation by the government (Cuppen et al., 2016).

Meanwhile, stakeholder participation can be proven quite challenging. The high complexity of stakeholders can be an obstacle in creating mutual stakeholder collaborations, leading to the difficult deployment of renewable energy projects. The participation of diverse and numerous stakeholders into the planning and decision-making processes requires clear identification and characterisation of each stakeholder group. ***Taking stakeholders into account can be a crucial perspective of the problem-solving process*** (Johnson & Jansujwicz, 2015; Sufia Azlan et al., 2020). The more reliably described stakeholders' opinions are, the higher the trust towards a project is built. And in turn, their engagement is improved (Bellantuono et al., 2016). ***Unsuccessful stakeholder engagement can lead to unfulfilled needs and expectations early and efficiently, before they escalate*** (Sufia Azlan et al., 2020).

Concluding, ***stakeholder engagement appears to be a significant factor for the successful development and implementation of renewable energy projects.*** While the diversity of stakeholder groups (in terms of different interests, values, knowledge, etc.) could be a barrier to the deployment of such projects, participation in the early stages of decision making and planning, the providing of transparent and timely information, and the creation of value to them, could lead to high levels of trust and communication. Consequently, to the acceleration and successful implementation of the project.

2 Engagement plan for mobilising local communities

2.1 Engagement actions applied to all pilots

T3.1 is responsible for mobilising local stakeholders around the concept of community bioenergy heating by **defining the specific engagement actions per area and per targeted group** (e.g., targeting existing RESCoop members, other citizens, local authorities, businesses, etc.). This is to be kick-started through warm-up events in the target areas in the project pilots. **A key outcome of these activities is to identify lead users, who can act as ambassadors** to mobilise and inform local communities, promoting the uptake of bioenergy.

The first part of the task focuses on the kick-starting of the warm up events. Based on the knowledge gathered, the second part of the task will focus on **continuously monitoring and guiding pilot partners** towards the wider people's engagement, and/or the identification of new potential community cases. Moreover, task level discussions with the pilot partners about the event's outcomes, the engagement plan and the communities' identification process will be taking place regularly. The main goal of these discussions will be to **eventually narrowing down the preliminary identified community cases, and the selection of at least one (1) in each pilot region to be further supported by BECoop.**

In connection with the task, we held a webinar where project partner SEV presented their experiences in regard to stakeholder engagement. In the event they also answered relevant questions related to the topic.

Furthermore, **the stakeholder engagement and actions from T3.1 build on results from tasks T1.1, T1.2 and T1.3**. The results from these tasks provided insights regarding the motivations and challenges of RESCoops and associations, identification of potentials and market challenges in the BE (bioenergy) expansion, the legislation frameworks across countries, and the perception and acceptance levels of the BE communities. **They also align with events and activities from T3.2, T3.3 and T4.1.** Building on the T3.1's results, the T3.2's main goal is to empower RESCoops, policy makers, and bioenergy heating actors with knowledge and skills that will support them in designing and deploying community bioenergy heating projects.

Furthermore, the identification of (lead) stakeholders, interested in forming BECs, will assist with the awareness raising actions that will improve social consumer acceptance, reshape negative perceptions, and offer a better understanding for community bioenergy heating. Lastly, it will support the translation of needs and challenges of the developed bioenergy communities into a local common vision for RE heating.

The overall engagement and stakeholders' mobilisation actions that are expected to be implemented by the pilot partners focus mostly on the following:

- Organise **warm-up events and information campaigns** to raise public awareness about BEC.
- Organise **community events** to identify the most suitable entities to represent and promote community bioenergy heating projects.
- Organise and promote events to define **steps towards potential development of biomass centres** for better forest/agricultural/animal residues management for energy generation purposes.
- **Info days, training workshops** and **open discussions** to, among else, define modes to remove or eliminate any legislation barriers that prevent the deployment of RECs.

2.2 Engagement strategy per pilot area

CBS, T3.1 leader, has been in constant communication with pilot partners in order to identify the **engagement strategy that best fits the specificities of each region**. The primary role of the project's **mobilisation actions**, as presented below, is to (i) inform and mobilise local stakeholders around the notion of community energy, bioenergy communities as well as to (ii) promote the BECoop's vision and engage them in our project's future actions.

During the engagement strategy brainstorming sessions among CBS and pilot teams, a series of prospective, region-specific ideas was also preliminary suggested. These **indicative ideas** are linked to potential future implementation actions that are not necessarily BECoop-linked, yet they appear to be highly capable of igniting a dialogue between the project's pilot teams and invited stakeholders. They can be potentially brought on table over our mobilisation actions to further attract participant's attention, while highlighting the project's added value and potential support.

Note: at this stage, these indicative ideas are not necessarily linked to the initial **identification of BECoop RESCoops, presented in Chapter 4.**

Pilot-specific strategies are presented below.

2.2.1 Spanish Pilot

A number of mobilisation actions should take place to raise stakeholders' (decision makers, SMEs, producers, general public etc.) awareness around the BECoop project, and consequently the identification and deployment of bioenergy communities. In the case of the Spanish pilot a few indicative actions include:

- **Local warm-up events:** planning and execution of warm-up events in the identified municipalities and cities to further promote the potential deployment of BECs and inform locals about woodchip production and forest maintenance activities that can impact and improve local heating services.
- **In person meetings:** meetings among local people (e.g., producers, local authorities, citizens etc.) to identify synergies and further develop ideas that can impact the RE uptake.
- **Information campaigns:** through social media and platforms (e.g. Facebook, Twitter, Telegram, monthly bulletin, GoiEner website etc.) or visual and promotional material (e.g., videos, leaflets etc.) to present existing RESCoops in the local (identified) communities to promote the BECoop project and disseminate the benefits of biomass-based distribution systems.
- **Promotional events:** similar activities with the above could raise knowledge about better forest maintenance and use of forest biomass resources by local people.
- **Door-to-door communication**: when possible, hold informal communication as a way to spread the word and create further awareness about RE opportunities for the local community.

A list of 5 indicative ideas is further presented below that can be potentially discussed during a mobilising action organised by the Spanish pilot in order to initiate the dialogue with local citizens.

Idea 1. *BECoop community deployment | Lead stakeholders: Local volunteers supported by GOI*

- Local GOI volunteers will promote the idea through campaigns and events
- Define the steps needed in order GOI to participate as biomass handler and retailer of woodchips among local consumers
- Request the local administration technician to support and promote the BECoop project

Idea 2. *Forest biomass centre for local demand | Lead stakeholders: Local GOI volunteers, supported by local authorities*

- Organise further warm-up events to identify potential consumers/ users
- Organise an internal meeting to identify synergies that will be responsible for the woodchips production activities

Idea 3. *Valorisation of animal waste from cow farms | Lead stakeholders: Lacturale (company); Citizens.*

- Explore the Lacturale Biogas valorisation of its own cow excreta using their biogas plant
- Investigate solutions towards potential electricity & heating sharing with locals through the deployment of a community

Idea 4. *Woodchip production and forest maintenance activities service developed in a vocational training centre | Lead stakeholders: Small enterprise in the Murgia vocational school, GOI.*

- Define the steps for GOI to collaborate with the school in the creation of a bioenergy production facility

Idea 5. *Deployment of BEC | Lead stakeholders: Small rural administrative councils in hamlets - GOI can collaborate with minor local administrations and the city hall on which they depend*

- Identify the sources & heating demands
- Define the steps to facilitate how GOI could be involved in the initiation & development of the idea

2.2.2 Greek Pilot

A number of mobilisation actions should take place to raise stakeholders' (decision makers, cooperatives, producers, general public etc.) awareness around the BECoop project, and consequently the identification and deployment of bioenergy communities. In the case of the Greek pilot a few indicative actions include:

- **Local warm-up events:** planning and execution of warm-up events in the identified municipalities and cities to further promote the potential deployment of BECs – exploring how best to exploit residuals
- **In person meetings:** meetings between local biomass producers and existing RESCoops (e.g., ESEK) to identify synergies for better exploitation of agroforestry biomass
- **Field trips:** to local forest and farms for the assessment of untapped biomass residues
- **Training days:** with local farmers, producers and public for proper agroforestry biomass harvesting

- **Information campaigns**: through social media and platforms (e.g., Facebook, Instagram etc.) or visual and other promotional material (e.g., videos, leaflets etc.) to present existing RESCoops to the identified municipalities in order to disseminate the socioeconomic and environmental benefits of BECs
- **Door-to-door communication**: when possible, hold informal communication as a way to spread the word and create further awareness about RE opportunities.

The Greek partners have also identified some **indicative ideas** that can potentially be brought up during the pilot engagement actions, aiming to further attract the audience's attention and ignite discussion:

Idea 1. *Exploitation of forest biomass - logging residuals | Lead stakeholders: Municipal authority; Forest cooperatives; ESEK; Citizens)*

- Define the steps to create a biomass trade centre (biomass yard) for the exploitation of forest, agricultural, and urban (city trees trimmings) biomass
- Define how the biomass will be stored: in the yard and sold either in bales, chip, or shredded form (hog fuel)
- Investigate how to upgrade to refined solid biofuels, e.g., pellet, briquette, torrefied pellet etc.

Idea 2. *Utilisation of local agricultural residues for supplying the newly established district heating unit in the Amyntaio area, and local buildings | Lead stakeholders: Forest & Agriculture Cooperatives.*

- Assess what is harvested & exploited by local cooperatives
- Organise meetings to define efforts to remove any legislation barriers to exploiting forest residues
- Follow up with the Greek Ministry of Environment, who has already been asked to resolve legislation barriers

Idea 3. *Exploitation of coffee residues provided by the local coffee shops for energy production | Lead stakeholders: Coffee shops; Municipality; ESEK; Citizens.*

- Define the steps to set up a service to organise the collection of coffee residues from the local coffee shops
- Investigate how to best transform coffee residue into proper and usable format (e.g., pellets)
- Set up the process to test coffee pellets as fuel for heating application

2.2.3 Polish Pilot

A number of mobilisation actions should take place to raise stakeholders' (administrative councils, farmers and other producers, entrepreneurs, general public etc.) awareness around the BECoop project, and consequently the identification and deployment of bioenergy communities. In the case of the Polish pilot a few indicative actions include:

- **Local warm-up events:** planning and execution of warm-up events in the identified cities for the identification of relevant and willing to commit to the promotion of BECoop project, invite relevant stakeholders, such farmers (pig & cattle) and local representatives to provide the knowledge on breeding and sewage treatment plants and legislation requirements

- **Information campaigns:** through social media and platforms (e.g., Facebook, Instagram etc.) and visual and promotional material (e.g., videos, leaflets etc.) to increase awareness around BEC, targeting particularly potential consumers.
- **Door-to-door communication**: when possible, hold informal communication as a way to spread the word and create further awareness about RE opportunities.
- **Promotional activities: similar to the above** to disseminate BECoop project benefits to the public.

The Polish pilot partners have also identified three indicative ideas that can potentially be discussed during a mobilisation activity (e.g. warm-up events) in order to capture the attention of the participants.

Idea 1. *Potential deployment of BEC | Lead stakeholders: Small Rural administrative councils*

- Define steps to promote the BECoop project - Identify biomass-rich regions (particularly in the countryside)
- Define steps to identify & deploy the RES market monitoring system
- Define steps and campaign to increase BE awareness
- Organise information campaigns

Idea 2. *Agricultural biogas coming from pig and cow breeding and sewage treatment plants | Lead stakeholders: Cow & Pig Farms*

- Identify the most relevant stakeholders (names and roles) to carry out the idea
- Define the steps for an awareness raising campaign targeting potential consumers

Idea 3. *Exploitation of the commune's potential in rich biomass with industry - sawmills, carpentry, furniture factories and from agriculture, forestry | Lead stakeholders: Entrepreneurs, Farmers and Forest Cooperatives*

- Define efforts to change legislation frameworks
- Define steps to create proper scientific & technical basis that will support the implementation of the idea.

2.2.4 Italian Pilot

A number of mobilization actions should take place to raise stakeholders' (local authorities, cooperatives, associations, general public etc.) awareness around the BECoop project, and consequently the identification and deployment of bioenergy communities. In the case of the Italian pilot a few indicative actions include:

- **Local warm-up events:** planning and execution of warm-up events in the identified municipalities and cities to further promote the potential deployment of BECs and deal with legislative hiccups to facilitate the deployment of RECs.
- **In person meetings:** meetings between local people and existing historic electricity cooperatives to identify synergies for the identification of possibilities of revamping and diversification of natural resources.

- **Information campaigns**: through social media and platforms (e.g., Facebook, Instagram, Twitter etc.) or visual and other promotional material (e.g., videos, leaflets etc.) to present existing RESCoops to the identified municipalities in order to disseminate the socioeconomic and environmental benefits of BECs
- **Door-to-door communication**: when possible, hold informal communication as a way to spread the word and create further awareness about RE opportunities.

The Italian partners have also identified 2 indicative ideas that can be mentioned during an engagement action in order to inspire their audience and start a discussion:

Idea 1. *Deployment of RECs - identification of the most suitable legal entity and governance model for the formation of a REC | Lead stakeholders: Local Authorities supported by FIPER & RSE*.

- Set up criteria and tools for the evaluation of benefits and repercussions
- Help to promote a legislative proposal to extend the scope of REC application to the primary electrical substation
- Set up the steps to define the initiation of thermal energy communities, which lacks subsidies
- Set up an agreement towards limiting the increase to 200kW/single producer especially for PV systems

Idea 2. *Potential participation of existing energy producers in RE (non-profit) | Lead stakeholders: The historic electricity cooperative Prato allo Stelvio & ACSM public company (multi-utility).*

- Identification of potential promoters
- Identification of the purpose and the means to implement the idea
- Identification of cooperative model to be used as reference for the initiation

3 Implementation of mobilisation actions until M12

3.1 First round of BECoop warm-up events

The task was initiated by a joint meeting where it was discussed how to best organise the events, considering the Covid19 limitations in the different locations. Based on this initial meeting, CBS prepared a template (Annex I) where all pilots could fill out online aspects related to online technologies, goals, etc. in order to design adequate templates for their warm up events.

The warm-up events were designed to be dynamic and diverse to fit the various pilot settings. Most importantly, the events were to be carried out by one main facilitator, who could engage and promote a well-distributed conversation to help identify the key persons, who might become a close collaborator in the projector, due to their interest and capability to help distribute information and engage others. Due to the pandemic restrictions, the warm-up events were mostly carried out online, however, due to the vaccination rollout, some pilots managed to have face-to face meetings as well.

3.1.1 Internal steps and guidelines

As an initial approach, CBS organized an online session to discuss with the partners about initial requirements and align with them the purposes of the events. Thereafter, CBS prepared an online template in the shared drive using the gDRAW tool (to already introduce an online collaborative tool in the process of gathering information), which was filled by the partners covering aspects related to:

- **Outcomes:** What the partners want to achieve with the event
- **Assets:** What they see as positive and important aspects in holding these events
- **Challenges:** What they acknowledge as issues or problems that need to be considered to avoid jeopardizing the event
- **Tool:** Which online collaborative tools they are acquainted with, and feel comfortable using
- **Communication Tools:** Which software they are most acquainted with in their locations to communicate such sessions.

The partners filled out the online form, which was combined to create the guidelines to the upcoming events, which are listed in the following.

Based on the task description and partners' input, the event's main outcomes focused on achieving:

- ➔ Identification, from within the attendees, of **committed participants** who represent a key stakeholder group, and are willing to engage in supporting BECoop actions (e.g "lead users" or ambassadors)
- ➔ Identification of key opportunities
- ➔ Identification of potential community cases (BECoop RESCoops) that can be further supported by the project.

Through the partners' input, CBS has suggested *how the events were to take* place and *which tools could be used* to achieve the expected goals. Based on the results, a whole set of guidelines were created and shared with the partners to assist them in carrying out and reporting back the events. The guidelines are fully described in Annex I - Warm up event guidelines.

This step was then followed by a webinar, organized by CBS in conjunction with the BECoop partner, SEV. From the webinar, which was held on April 6th 2021, key points were raised regarding community engagement in RES, which helped the partners in their initial discussions prior to holding their events. The key points raised were:

- The creation of district bioenergy heating systems, where consumers are not responsible for its maintenance, could lead to stronger engagement of, especially vulnerable, communities to RESCoops.
- Facts and realistic figures can convince easier people to engage to RESCoops
- Possible lower prices of bioenergy districting heating, could be a significant factor that would persuade consumers to switch to it
- Another significant factor that can lead to people's engagement is to simply explain to them the ideas and benefits that a RESCoop could bring. Also, local leaders could play a significant role in this.

3.2 Warm-up events implementation

The events were carried out from June to September 2021 as indicated on Table 1.

Table 1: Implementation of first round warm-up events

Pilot Partner	Type of Event	Event date (planned)
ESEK	Virtual	8 June 201
FIPER	Physical (Piacenza)|	23 June 2021
	Virtual (together with SEV)	15 July 2021
GOI	Physical, Virtual	10 June 2021
OBS	Physical (Oborniki Śląskie)	23 September 2021

Besides the promotion of BECoop's vision, warm up events are also critical for the identification of lead users that could act as ambassadors of the project's concept and as central points for the development of the BECoop RESCoops.

Over such events, each stakeholder group was separately examined; their potential contribution and level of engagement was assessed, and the optimum channel of communication was defined. Finally, the contact details of participants expressing an interest for the project were noted down – after receiving an informed consent and in total compliance with the GDPR principles – thus, forming the first pool of motivated stakeholders to be invited in future activities.

In the following section, a short description of the warm-up events is being presented.

3.2.1 Spanish Pilot

Two warm- up events were also implemented in the case of Spain, both on the 10th of June 2021.

An online event (Zoom)

Thirty-one (31) people participated in the online event. The attendance at the online warm-up event was significantly higher than at the physical event. That could be due to Covid-19 situation and the fact that people might have still felt insecure and socially awkward or the fact that it was easier for people to attend the online event from the comfort of their places (time and money saving). Without the need for travelling to the event, an audience from a broader geographical region was captured.

A physical event in Kanpezu culture centre (Montaña Alavesa region)

Six (6) participants attended the live meeting in the local region (Montaña Alavesa). These six (6) existing woods chips DH cases, operated by small rural little administrations, showed high interest in the dissemination of the concept in order to exploit the local forest, where all citizens have harvesting rights.

The Spanish events gathered a number of relevant stakeholders, who will be key towards carrying out the next steps of the awareness raising actions.

Stakeholders who were not reached were:

Online event: End user/citizens/vulnerable groups or citizens from densely populated areas: It is difficult to attract this audience due to the prevailing conviction that the added complexity of implementing bioenergy systems in urban areas makes this solution impractical.

Offline event: The call for the event did not reach the expected amount of people interested in the BECoop concept. In fact, some of GOIs volunteers were not aware that this introduction event was taking place, so the following lessons learned were identified:

- Not completely rely on municipality involvement in order to promote the event
- Try not to coincide two events in the same day in order to make the social communications activities separately
- Adapt the material to be shared in the event to the level of knowledge of participants
- Involve local identified existing cases in order to engage people based on real experiences

The number of representatives for each stakeholder group is presented in Table 2. This information can be used by the partners in order to identify which are the most important and useful stakeholders that can critically contribute to project's outcomes and which is the best way to reach them.

Table 2: Spanish pilot - stakeholder engagement overview

Stakeholders' Groups	Potential contribution	Current level of engagement	Desired level of engagement	Channel of communication used to reach them	No of participants
Authorities	high	medium/high	high	email / social media	11
Citizens/general public	high	low	high	social media/e-mail	7
RESCoops	high	high	high	social media/e-mail	5

Stakeholders' Groups	Potential contribution	Current level of engagement	Desired level of engagement	Channel of communication used to reach them	No of participants
Others	N/A	N/A	N/A	social media/e-mail	2
Energy/biomass associations	high	high	medium/high	social media/e-mail	2
ESCO's and installers	medium	high	medium/high	social media/e-mail	4
Equipment manufacturers	medium	high	medium/high	social media/e-mail	2
NGO's	medium	medium	high	social media/e-mail	1
Biomass management companies	high	medium	high	social media/e-mail	1
Biomass owners	high	low	medium/high	social media/email /phone calls	2
Research centres / universities	medium	low	medium	social media/e-mail	2

First pool of motivated stakeholders in the Spanish pilot area:

A couple of participants expressed their interest for the BECoop concept and seemed to be motivated to participate and support future project's actions. These stakeholders will be exploited by Spanish partners in order to start creating the BECoop RESCoop that they will support throughout the project.

3.2.2 Greek Pilot

The Greek warm up event virtually took place on the 8th of June. The agenda covered an introduction of the participants and the scope of the workshop. The event gathered a number of relevant stakeholders, who will be key towards carrying out the next steps of the awareness raising actions. The summary of the event is presented below.

Eighteen (18) people attended (without considering the people from the project's consortium). Initially, thirty (30) people had registered to the event on the online forms. Even though all types of stakeholders were reached out and invited to the event, some NGOs (socially vulnerable groups' representatives), and energy communities of farmers and forest cooperatives/ industries could not attend due to:

- Intense harvesting season
- Unfamiliarity with virtual meeting and platforms
- Unstable internet connection

The stakeholder groups that attended the event, together with major points raised, are described in more detail below:

Academia Institutions: Representatives from the University of Thessaly

- actively participated with knowledge sharing and suggestions in the initial operation steps of the ESEK biomass plant
- High interest in the BECoop project

Energy communities: Energy community of Vlasis, Energy community River, Energy community of Attica, Electra energy community, Energy community Zero one and Minoan Energy community

- Energy communities serve as key factor for future RE market uptake
- Many energy communities do not choose biomass energy because there is not clear distinction of terms biomass, waste, residue, and garbage. There is also lack of technical and legislation framework knowledge

NGOs: DAFNI (Network of sustainable Greek Islands) & InCommon (civil non-profit company)

- Great interest in RES and utilization of residual biomass
- Supply chain set up and high investment cost are considered as obstacles to such initiations

Forest cooperatives: Forest cooperative of Mouzaki

- Potential major and stable source of raw material and particular for forest residual biomass, that is not used for construction purposes, furniture or firewood
- Legislation framework obstacles. They are not allowed to sustainably extract residual biomass, losing a potential income source

Local authorities: the Mayor of Lake Plastira, and the general director of AN.KA (Development agency of Karditsa)

- Crucial contribution of authorities to the utilization of forest, agriculture and plant residues for energy production
- After the warm-up event sent an official request to the Ministry of Environment & Energy for the implementation of a pilot program for forest logging residues management for 7 years

Energy associations: Clube Association

- Great interest in the project. Willing to offer their knowledge and suggestions
- Replication partner: potential establishment of an energy community along with municipal authorities. They could be the bridge that connects energy community products to end users such as co-heating district units

Disadvantaged and vulnerable populations: Community centre in the municipality of Karditsa (The community centre is the first point of contact of the citizen with the social service of the municipality). Important for the project in order to tackle energy poverty and support vulnerable populations.

Details regarding attendants' contribution, potential engagement status and channels of communication are given in Table 3.

Table 3: Greek pilot - stakeholder engagement overview

Stakeholders' Groups	Potential contribution	Current level of engagement	Desired level of engagement	Channel of communication used to reach them	No of participants
Academia	high	high	high	e-mail / offline meeting	2
Energy communities	high	low	medium	social media/e-mail	6
NGOs	medium/high	low	high	e-mail	2
Forest cooperatives	high	low	high	e-mail /offline meeting	1
Local authorities	high	high	high	e-mail / offline meeting	2
Energy associations	high	medium/high	high	e-mail	1
Disadvantaged & vulnerable population	medium/high	low	high	n/a	1
General public	high	low	high	n/a	-

First pool of motivated stakeholders in the Greek pilot area:

All participants expressed their interest in the project's activities, and their support to the market uptake of bioenergy and community bioenergy. A list of the first pool of motivated stakeholders in the Greek pilot area is presented below:

- The municipality of Lake Plastira: participation in a pilot project for harvesting local forest residues for bioenergy production
- Clube (cluster-energy association): participation and support of the development of a biomass centre/yard for the exploitation of agriculture/forest biomass
- Forest cooperatives: participation in the harvesting of local forest residues for bioenergy production
- InCommOn and Kafsimo (NGOs): Know-how sharing / Testing of the coffee-residue pellets from local coffee shops

3.2.3 Polish Pilot

The Polish event took place on the 23rd of September 2021 in Oborniki Śląskie. The event gathered a number of relevant stakeholders, which will be key towards carrying out the next steps of the awareness raising actions. The summary of the event is presented below:

Fourteen (14) participants attended the offline meeting at the community centre hall. The event was attended by people aware of the necessity of actions for air quality improvement, willing to gain knowledge about energy transition. However, the call for the event did not reach the expected amount

of people interested in the BECoop concept. Biomass producers/suppliers, NGO representatives did not join the meeting, despite a prior confirmation of participation in the meeting, due to:

- Evening work in the daily ritual on the farm
- Family obligations
- Problems with getting to the meeting place.

The stakeholder groups that attended the event are described in more detail below:

- Representatives of the local pro-ecology Association "Resin" and social activists
- Representatives of local authorities (Town Council, representatives of residents (including those with a coal boiler, automatic pellet boiler and gas installations heating systems, members of a housing community, living in detached houses) of Oborniki Śląskie and representative of local authorities (Sołtys – village chief)
- Representative of research centre/university

The different stakeholder groups, as well as their potential contribution, their current and desired level of awareness and the best channel of communication is given in Table 4.

Table 4: Polish pilot - stakeholder engagement overview

Stakeholders' Groups	Potential contribution	current level of engagement	Desired level of engagement	Channel of communication used to reach them	No of participants
Authorities	high	high	high	high	2
Citizens/ general public	high	high	high	high	9
RESCoops	low	low	low	low	-
Energy/biomass associations	low	low	low	low	-
ESCO's & installers	low	low	low	low	-
Equipment manufacturers	low	low	low	low	-
NGO's	high	high	high	medium	2
Biomass management companies	low	low	low	low	-
Biomass owners	low	low	low	low	-
Research centres/ universities	low	low	low	low	1

First pool of motivated stakeholders in the Polish pilot area:

All participants showed interest in BECoop concept, RES and particularly in the use of biomass due to increasing electricity demand. They all believed that the education and discussions would have a positive impact on the BECoop project.

3.2.4 Italian Pilot

In the case of the Italian pilot, 2 warm-up events were organized and implemented

A Physical event in Piacenza.

The offline Italian event took place on the 23rd of June in Piacenza (Expofiere). **Eleven (11)** people (without considering the people from the project's consortium) have participated in the physical warm-up event. The event went also live on a social media platform, and in that case the presentation reached more than 470 people (GDPR principles were respected).

A virtual event on the 15th of July.

The agenda of the virtual warm-up event covered an introduction of the participants and the scope of the workshop. The event gathered a number of relevant stakeholders, who will be key towards carrying out the next steps of the awareness raising actions. **Twenty-one (21) people joined** the second (online) event (considering the people from the project's consortium).

The Italian warm-up events aimed at comparing experiences and actively promoting the REC with the authorities, representing various municipal realities. End-users and citizens were represented through the presence of cooperatives members at the online event.

The stakeholder groups that attended the events are described in more detail below, while their level of engagement, their potential contribution and the best communication channel to be used in order to reach them are presented in Table 5.

- **Energy Association**: Lombardy Forestry Consortia Association ; Itabia ; Italia Solare ; Historic electricity cooperatives in the Alps
- **Local authorities/Municipalities**: Mayor of the Municipality of Tirano ; Energy Councillor of the Municipality of Piacenza ; Environment Councillor Magliano ; Mayor of Riccomassimo ; Energy Councilor of the Municipality of Aosta ; Municipality of Prato allo Stelvio (100% RE) ; Municipality of Primiero
- **SMEs**: Massagno Electric Company
- **RESCoop**: Enostra and many other RESCoops
- **General public**: students, representatives of public institutions (mountain communities, small town councillors) followed the event remotely
- **Research institutes**: RSE, Politecnico di Torino
- **Trade associations**: Federcooperative

Table 5: Italian pilot - stakeholder engagement overview

Stakeholders' Groups	Potential contribution	Current level of engagement	Desired level of engagement	Channel of communication used to reach them	No of participants
Energy associations	high	high	high	e-mail / social media	10
Local authorities	high	high	high	e-mail / social media	7
SMEs	high	medium	medium	e-mail / social media	1
RESCoops	high	high	high	social media/e-mail	12
General public	medium	low	medium	N/A	-
Research institutes	high	medium	high	e-mail / social media	1
Trade associations	medium	low	medium	e-mail / social media	2

First pool of motivated stakeholders in the Italian pilot area:

Among the stakeholders that have attended the event, Prato allo Stelvio cooperative & ACSM Primiero expressed high interest in directly getting involved in the BECoop actions. In addition, the young audience, mainly university students, was also motivated by the topic. These highly motivated stakeholders will become project's allies while creating and supporting the new community case in the Italian pilot.

4 Preliminary identification of BECoop RESCoops

This section will constitute a valuable guide to the BECoop Pilot partners in order for them to identify the communities cases that will be supported in the framework of the project. In fact, by M15, pilots are called to narrow down their pool towards selecting the (at least) 1 community they plan to provide support to (connection with T4.1 and all WP4 activities).

Based on the outputs of the first round of warm-up events, and the initial ideas that were identified in each pilot area, the following indicative pools of potential BECoop RESCoops were preliminary defined:

- Six (6) in Spain
- Three (3) in Greece
- Three (3) in Poland
- Two (2) in Italy

For each identified community i) The types of stakeholders that will participate ii) their (bioenergy-related) focal point iii) the needs and iv) the challenges they need to overcome are also presented.

In the next sections the indicative lists of community cases for each pilot area are presented. As mentioned, pilot partners will leverage this list to eventually select the most promising community case that will be supported in the framework of BECoop project.

4.1 Spanish Pilot

Six different community cases are candidates for getting support by the Spanish BECoop pilot partners. The key identified opportunities regarding RE uptake in the Spanish pilot covered mostly aspects of exploiting animal and forestry biomass. The six promising cases are described below:

***Potential Community Case 1*: Potential deployment of bioenergy community case by rural little administrative councils**

Location: Vitoria-Gasteiz city

***Lead stakeholders*:** Small rural administrative councils in hamlets - GOI can get involved

Focal points: Bioenergy district heating system

Drivers/ Needs:

- Extraction and treatment of abundant and freely available local forest biomass
- High energy prices
- Cold continental climate
- Existing community structure
- Strong city council's commitment

***Challenges*:**

- Perceptions and mistrust regarding biomass
- Inconvenience of extraction and processing
    - High investment for DH network
    - Resource potentials evaluation
    - Heat demand identification
    - GOI could get involved in the process of how shared bioenergy heating systems are developed, and heating retailing activities can be performed

***Potential Community Case 2*: Business case study of forest maintenance and woodchips production**

Location: Zuia Gorbeialdea

***Lead stakeholders*:** Small enterprise in the Murgia vocational school, GOI could support with the development of a bioenergy production facility

Focal points: Renewable fuels: Woody biomass extraction and processing into woodchip

Drivers/ Needs:

- Exploitation of the local forest resources
- Support of the rural economy

Drivers/ Needs:

- The set-up of a viable business, and the creation of a minimal customer base
- Gain support from local administration

***Potential Community Case 3*: Bioenergy communities**

Location: Balmaseda, Leitza, Zestoa, Otxandio Municipalities

Lead Stakeholders: Local authorities supported by GOI

Focal points: Heating

Drivers/ Needs:

- Cover of heating demands
- Creation of new jobs in municipalities with higher rates of unemployment

***Challenges*:**

- Public acceptance
- Convenience of existing individual gas heating

***Potential Community Case 4*: Lacturale Biogas plant**

Location: Nafarroa

Lead stakeholders: Dairy farm (member of GOI) in collaboration with local authorities

Focal points: Biogas plant for self-consumption of electricity and heat

Drivers/ Needs:

- Energy self-sufficiency
- Possibility to cover local energy demands through a community

***Challenges*:**

- Financial viability
- Extension from farm
- Self -consumption to residential consumers

***Potential Community Case 5*: BECoop energy communities**

Location: Lezo & Itziar Municipalities

Lead stakeholders: Local volunteers

Focal points: Heating

Drivers/ Needs: Small villages seeking for low carbon heating technologies

***Challenges*:**

- Leading Initiative
- Gaining local support

***Potential Community Case 6*: Biomass collection centre - Wood chips production business**

Location: 6 different small rural villages

***Lead stakeholders*:** Local GOI volunteers, supported by local authorities and GOIENER

Focal points: Heating (woodchips)

Drivers/ Needs: Forest maintenance activities

***Challenges*:** Ageing population - Difficulties in harvesting works

Overall, the identified opportunities and their implementation, could lead to:

- Energy savings and carbon footprint decrease for thermal supply technologies
- Better local forest maintenance and fires prevention activities
- Social cohesion and job opportunities creation

4.2 Greek Pilot

The Greek pilot has identified **3 promising potential cases of communities**. These cases are excellent candidates and possibly one of them could be further supported by the project. The key identified opportunities regarding RE uptake in the Greek pilot covered mostly aspects of exploiting existing forestry and agriculture residues. Below the three candidate cases are presented:

***Potential Community Case 1*: Development of a Biomass Trade Centre (Biomass yard) for the exploitation of agroforestry residues for energy production.**

Location: Region of Karditsa

***Lead stakeholders*:** Forest & Agriculture Cooperatives

Focal Points: District Biofuels (pellets, chips, briquettes etc.) for heating purposes

Drivers/Needs:

- Exploitation of local agriculture biomass residues (e.g., pruning, maize, cotton, straw residues)
- Supply of solid biofuels (cover of the heating demands of local municipal buildings, industries, greenhouses etc.)
- Feed the newly established district heating unit in the Amyntaio region with residual biomass
- Support of rural development (creation of new jobs)

Challenges: Legislation framework barriers and lack of logistic infrastructures

***Potential Community Case 2:* Collection and exploitation of coffee residues, produced by local coffee shops in the region of Karditsa for the production of energy.**

Location: Region of Karditsa

***Lead stakeholders*:** Coffee shops; ESEK; Municipality & Local Authorities; Citizens

Focal Points:

- Biofuel (mixture of coffee residuals and city trees pruning for pellet production)
- Installation of biomass boiler in public buildings and combustion of the produced pellet for heating

Drivers/Needs:

- Satisfaction of local heating demands (public buildings)
- Exploitation of city trees and coffee residues
- Cover a part of municipal energy needs
- Distribution of the biofuels to the local vulnerable citizens through the structures of the municipality

Challenges: Raise awareness , drive behavioural change

Potential Community Case 3: **Potential deployment of bioenergy community for the exploitation of forestry residues of the Lake Plastira municipality.**

Location: Lake of Plastira Municipality

Lead stakeholders**:** Municipality & Local Authorities; Forest Cooperatives; ESEK; Citizens

Focal points: Biofuels (pellets, etc.) for heating purposes

Drivers/Needs:

- Exploitation of the local forest residues
- Support of the rural economy (more jobs, less unemployment)
- Positive environmental impact
- Alternative tourism in the area

Challenges: Legislation frameworks (forest residues management) make difficult the exploitation

Overall, the identified RECoops and their potential deployment could have significant impact in the region. More specifically they could help with:

- Exploitation of huge amounts of residual forest biomass (found in unexploited mountainous areas)
- Contribution to the RE uptake
- Support of rural development (new jobs, less unemployment)
- Sustainable forest management
- Bioenergy production from untapped agricultural residue (which otherwise get burned on site or incorporated into the soil)

4.3 Polish Pilot

The Polish pilot has identified **3 potential cases** that can be selected to be further supported in the framework of BECoop project. The key identified opportunities regarding RE uptake in the Polish pilot covered mostly aspects of the deployment of BECs. The three identified cases are presented below:

Potential Community Case 1**: Agricultural biogas coming from pig and cow breeding and sewage treatment plants**

Location: Rural areas of Oborniki Śląskie commune

Lead stakeholders: Cow and pig farms

Focal points: Electricity & Heating

Drivers/ Needs**:** Socioeconomic benefits

Challenges**:**

- Community conflict
- Location problem of biogas plant
- Lack of district heating network
- High costs of building a district heating network in a dispersed area

***Potential Community Case 2*: Exploitation of the commune's rich biomass produced by industry (sawmills, carpentry, furniture factories), and agroforestry.**

Location: Rural areas of Oborniki Śląskie commune

Lead stakeholders: Entrepreneurs; Farmers; State forests

Focal points: Biofuels (Pellets, chips, briquette)

***Drivers/ Needs*:** Circular economy

***Challenges*:**

- Legislation framework
- Lack of trust in the government. Instability of regulations, lack of clarity and low stability of legal regulations

***Potential Community Case 3.* Deployment of bioenergy community in the municipality area**

Location: Municipality area of Oborniki Śląskie

Lead stakeholders: Rural little administrative councils

Focal points: Bioenergy heating system

***Drivers/ Needs*:** Creation of a scientific, technical environment conducive to the creation and implementation of such projects

***Challenges*:**

- Lack of knowledge on "what is an energy cooperative? What are the benefits of membership?
- Lack of local success examples
- The creation of a supply chain and the investment cost are the biggest challenges of such initiatives
- The definition of biomass is not well- understood by the public.

Overall, the identified opportunities and their implementation, could lead to:

- Local development (less unemployment)
- Exploitation of biomass-rich areas
- Industrial power generation
- Environmental benefits

4.4 Italian Pilot

The Italian pilot has identified **2 interesting cases** that could be further supported by the project. The key identified opportunities regarding RE uptake in the Italian pilot covered mostly aspects of deployment of BECs. The two identified cases are presented below:

***Potential Community Case 1*: Potential Biomass District Heating plant establishment**

Location: Riccomassimo (Province Trentino) and Magliano Alpi (Piemont Region) Municipalities

***Lead stakeholders*:** Local authorities supported by FIPER and RSE

Focal points: District Heating

Drivers/Needs:

- Local development
- Exploitation of forest biomass
- Benefits and repercussions for the community from both energy and socio-environmental perspective

Challenges: Legislation frameworks and access credit

***Potential Community Case 2*: Potential participation of existing energy producers in RE (non-profit)**

Location: Primiero, Prato allo Stelvio regions

***Lead stakeholders*:** The historic electricity cooperative Prato allo Stelvio and the ACSM public company (multi-utility)

***Focal points*:** Energy Renewable community

Drivers/ Needs:

- Management of natural resource (wood, water resources) of mountain areas
- Generation of common well-being
- Fight against energy poverty
- Growth and development opportunities - Oil-free areas - Consolidation of the existing biomass capacity available in the area

Challenges: Legislation frameworks; until now REC is defined only for FV plant until 200 kW

Overall, the identified opportunities and their implementation, could lead to:

- Consolidation of the existing biomass capacity available in the area
- Identification of possibilities for revamping and diversification of sources (accumulation)
- Growth of the socio-economic and environmental impact for the community
- Simulation of new management and evolution logics of the local energy system
- Mitigation & resolving of the conflicts, arising from the resources use
- Generation of "common well-being"
- Energy safety
- Growth opportunities

5 Main learnings and next steps

The first round of activities has been very successful. Different stakeholder groups were engaged in each pilot area while also "lead users" and a first pool of motivated stakeholders that are committed to participate in BECoop actions were identified. Finally, a list of potential BECoop REScoops in each pilot area has been drafted and will be used in order to select the communities that the partners are willing to support.

Key early learnings:

- The creation of district bioenergy heating systems, where consumers are not responsible for its maintenance, could lead to stronger engagement of, especially vulnerable, communities to RESCoops.
- Facts and realistic figures can convince easier people to engage to RESCoops
- Possible lower prices of bioenergy districting heating, could be a significant factor that would persuade consumers to switch to it
- Another significant factor that can lead to people's engagement is to simply explain to them the ideas and benefits that a RESCoop could bring. Also, local leaders could play a significant role in this.

The early learnings acquired from the SEV webinar were complemented with pilot's ideas that were identified in the first round of events.

- Valorisation of animal waste from cow farms
- Woodchips production and forest maintenance activities service developed in a vocational training centre.
- Utilization of local agricultural residues for supplying the district heating unit
- Deployment of BECs
- Exploitation of forest biomass (logging residues) by the municipal authority in the local mountainous areas
- Forest biomass centre for local demand
- Agricultural biogas coming from pig and cow breeding and sewage treatment plants.
- Exploitation of the commune's potential in rich biomass with industry - sawmills, carpentry, furniture factories and from agriculture, forestry.
- Energy producers' potentially participation in RE (not for profit)
- Energy production using coffee residual from local coffee shops

Both sets of learnings indicate areas of interest and processes that can help maximizing stakeholder engagement in the BECoop project actions that will be deployed in the coming months.

5.1 Next steps

In the second part of this task, we will further support the empowering of our local partners towards creating community structures focusing on biomass heating activities, namely the BECoop bioenergy RESCoops.

Building on the initial suggested visions and engagement actions and on the community cases that were identified during the first round of activities, CBS, together with the project partners, will co-**devise a management time plan to support and monitor the pilots and their local committed stakeholders to:**

- define local activities
- locally select the ideas with the highest possible impact
- structure a step-by-step guide with local milestones to be achieved
- designate roles and responsibilities

These activities will be carried out in alignment with the learnings from the results from tasks T1.1, T1.2 and T1.3, as well as connected to activities and events carried out in related tasks from WP3 (T3.2, T3.3) and WP4 (T4.1).

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Annexes

Annex I: Warm up event guidelines

Preparing for the event:

1. Broad stakeholder reach: identify the relevant local stakeholders ('including open to the local citizens, authorities and businesses of these areas, while special emphasis will be put on vulnerable and economically disadvantaged populations') to be identified by each pilot partner.

Partner	Stakeholder

2. Define a date and define a suitable time (after work hours, Friday happy hour, weekends, while also being aware of local holidays).
3. Prepare an online sign-up sheet
4. Identify key hashtags to be used in the communication text
5. Identify key stakeholder groups that need to be represented in the event.
6. Prepare the event communication text to be distributed across social media channels, email, etc.
7. Send out communication text two weeks before the event.
8. Define which software will be used and for what activity
9. Prepare slides for presentation
10. Based on sign-up sheet information, send out a reminder to the potential attendees the day before the event.

Holding the event:

The event should be organised in the following:

Event structure	Time	Description
INTRODUCTION	5'	The facilitator introduces himself and gives and overview the event structure and ask participants to sign online consent: https://ec.europa.eu/eusurvey/runner/BECoopConsent
	15'	The facilitator asks the attendees to introduce themselves and ask them what they expect of the session.
	10'	The facilitator introduces BECOOP and related pilots
INITIAL DISCUSSION	5'	Introduce the Collaborative tool. How it's used and make sure attendees can join.
	10'	Using the collaborative online tool (Miro, Zoom whiteboard, gDraw), ask the participants each to write down best actions towards bioenergy uptake and the setting up of Renewable Energy cooperatives/federations/communities.
	15'	Discuss about ideas to carry that out. The support coordinator should take note of these ideas on the shared online collaborative tool while participants discuss.
BREAK	5'	Coffee-break
DEVELOPING THE IDEAS FURTHER	5'	1. If using zoom, Meet or Teams, there's the possibility of having break out rooms and have people assigned to them automatically. If this tool is being used, you can then divide the group in smaller groups to discuss how to best develop some of the ideas suggested. Before going into the breakout rooms, let them know that: ● They have to decide who will moderate the room and the one doing that will use the shared online collaborative to take the notes. ● They should have at least two ways to execute the ideas. 2. If the communication tool is other than Zoom or Teams, go back to the shared board and while the facilitator engages the participants in choosing the ideas and discussing how to deploy them, the support coordinator will take notes on the collaborative tool.
	30'	Breaking down the ideas into actionable tracks
	15'	Presenting the ideas back to the main conference space (if in breakout rooms) From within the attendees, ask who would like to be involved in deploying these ideas. If none is interested, ask them why and how they would like to be involved in the project events.
CONCLUSION	5'	Wrap-up and promote the upcoming survey T1.3 by mentioning it and adding the link in the chat of the online platform.

Overall logistics:

- The event should last a max of 2 hours due to its online character and to be considerate to attendees' times.
- The events should take place between ultimo March 2021 (31/03-2021) and primo October 2021 (01/07-2021).
- The events need to be documented, so ask attendees for a picture permission (this is integrated in the consent form).
- The events need to have one facilitator, who will lead the event, and one support coordinator, who will take notes, support with external programmes and collect answers for Q&A (if the event attracts more than 40 attendees, you might need 2 support coordinators).

Post-event guidelines

- The day after the event write a thank you email highlighting the main event learnings and send the link to the T1.3 survey.
- Email the ones who volunteered and invite for a follow-up meeting to agree on the actions to be deployed based on the ideas and actions developed.

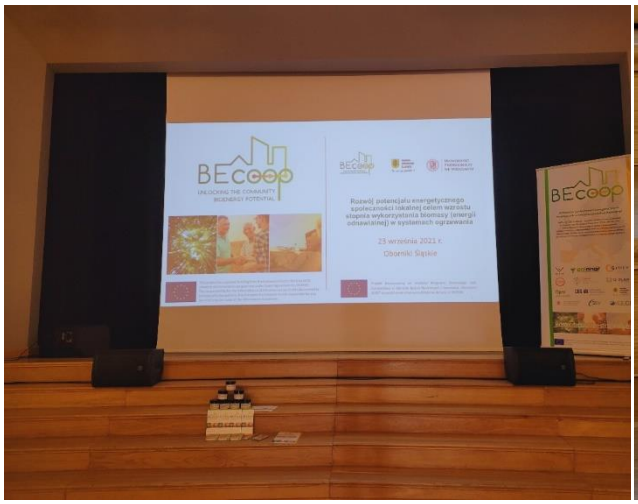
Reporting Template

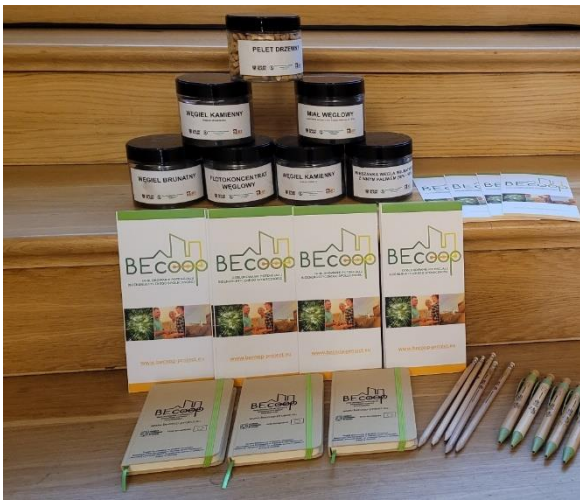
The table below should be filled out and sent back to CBS

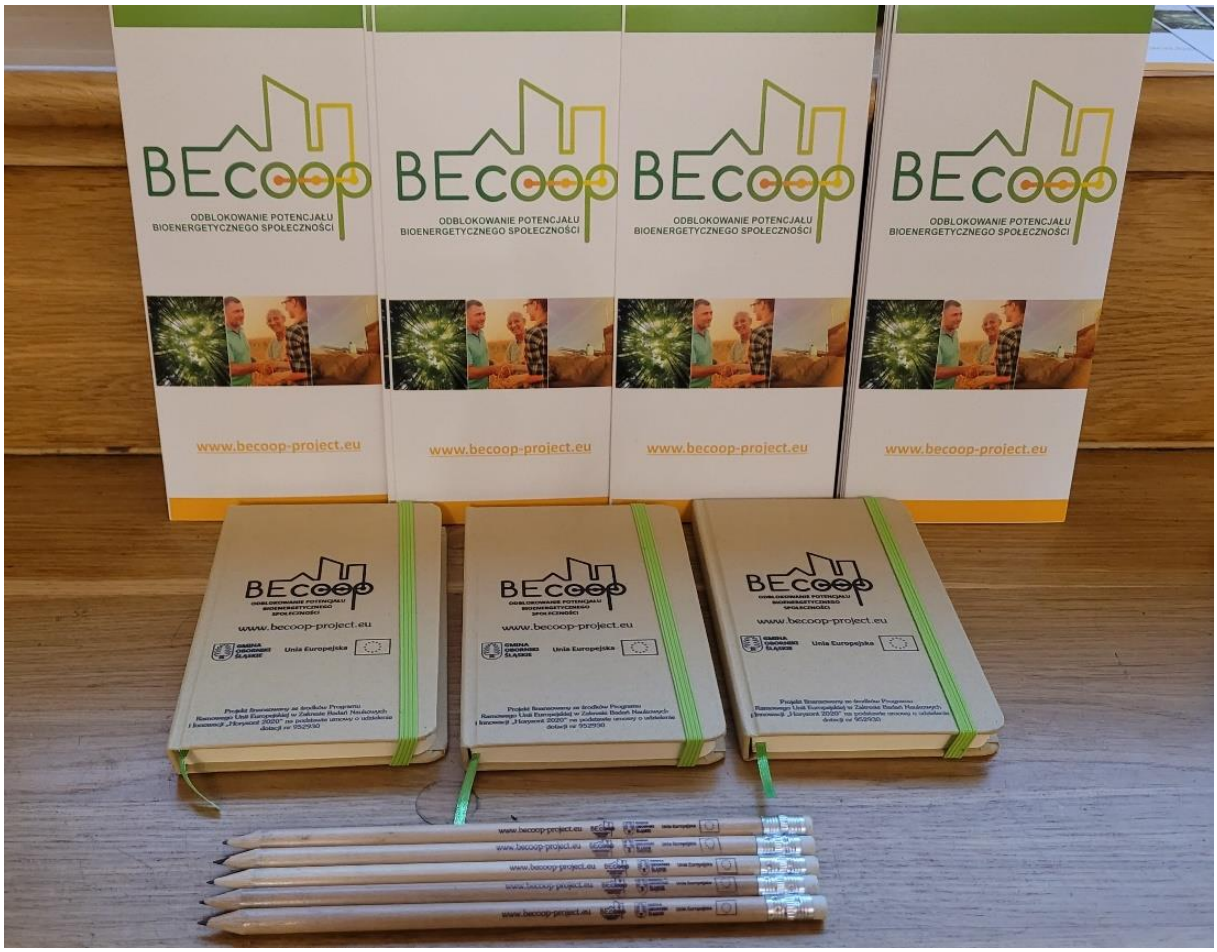
Time	Description
Number of attendees	
Which stakeholder groups were represented	For each stakeholder group, please specify: ● potential contribution ● current level of engagement ● desired level of engagement ● channel of communication used to reach them
Which stakeholders were not reached and why	
Identified opportunities regarding RE uptake	
Identified opportunities regarding the formation of RE cooperatives/federations/communities	
Ideas to support RE uptake	
Ideas to support the formation of RE cooperatives/federations/communities	
Which ideas were developed into actionable processes	
Idea 1 and actionable process	
Idea 2 and actionable process	
Idea 3 and actionable process	
How many participants were interested in being directly involved in the action	
How many committed to it	

Annex II: BECoop promotional material example

Pictures of the Polish pilot promotional material (presented/distributed during the warm-up event):







Annex III: Pilot events' dissemination links

Italian Pilot

The RSE pilot projects: analysis methodology and preliminary results:
https://drive.google.com/file/d/1p8QleL1OnZe-ZK6teZZoDF8a_pADsJRT/view

CER and collective self-consumers for the aggregation of local business chains: the experience of Magliano Alpi and the prospects for national reply:
https://drive.google.com/file/d/1yqOBm2bIp5EABsgJfhqC_9bhZ1edATT5/view

CER RICCOMASSIMO - Renewable energy community in a mountain village:
https://drive.google.com/file/d/1nrtJpQwq1OJFyfdit4CZazk-lWkTF9p-/view

Fiper for the promotion of Renewable Energy Communities, BECoop project:
https://drive.google.com/file/d/1Tf_Q1DZRpTq4-uYzjjZci2ei7ufeFoLu/view

CER and Collective Self-consumption: the cases supervised by ènostra:
https://drive.google.com/file/d/1ZXuQCDsAcs3-IcVgtkmpsWv94ZLPZwdO/view

Energy communities to increase self-consumption and control the load profile for users:
https://drive.google.com/file/d/18DiOQgM-RYA-ro4t9lC6Rgn4MaVIS_gN/view

Energy communities in Italy:
https://drive.google.com/file/d/1Rysyu2FMwu87WYsTK3oOVl7UPaWu7oxR/view

Polish Pilot

Links with information regarding the Polish pilot events:

http://www.oborniki-slaskie.pl/news/zapraszamy-na-kolejne-spotkanie

http://www.oborniki-slaskie.pl/news/projekt-becoop