

# PENTAHELIX GUIDELINES

#### PENTAHELIX

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## **Executive summary**

The PentaHelix taskforce method provides a new multilevel and multi stakeholder approach for strategic energy and climate action plan (SECAP) development. The method is based on developing taskforces, where stakeholders from all pillars of the society (public authorities, industry, academia, NGOs, and citizens), join forces to develop and implement SECAPs for one or more municipalities. The taskforce method has been tested in several European countries, and has been shown to be a powerful tool for increased implementation, due to better anchored processes. The successful development and operation of the taskforces is dependent on the municipality being able to develop good dialogue and a high level of trust with the taskforce members. The PentaHelix guidelines outline a number of approaches that can be used to build a well functioning taskforce with highly engaged stakeholders. The guidelines also include useful tools for different phases of the task force, such as advice for how to choose taskforce members, meeting agendas, and a case example of a taskforce workshop focusing on agriculture.

## Introduction

## Project background

The PentaHelix project focuses on developing and testing a new approach for **integrating multi-level governance planning for sustainable climate and energy actions**, where key stakeholders from all levels of governance and all parts of society are involved throughout the process. In this integrated approach, focus is on five different stakeholder groups, who constitute the PentaHelix pillars:

- Public authorities (local, regional, national and international);
- Industry (and businesses such as SMEs, farmers, trade etc);
- Academia (research and educational institutes);
- Non-governmental organisations (NGOs) (associations, interest organisations, etc);
- **Citizens** (house owners, car owners, commuters etc).

Representatives of the PentaHelix pillars constitute the task force groups, that serve as drivers for a broader scope for the development and implementation of Sustainable Energy and Climate Action Plans (SECAPs). The taskforces are bringing in valuable insights and identification of potential measures, system solutions and a better understanding of drivers and barriers for a more sustainable society as a whole, in each specific region. The approach was developed and tested in Belgium, Croatia, Latvia, Norway, and Spain, which enabled its validation across a wide set of different economic, climatic, social, and political contexts. In each of these countries pilot municipalities were chosen.



Furthermore, the project has developed a peer-to-peer online platform for SECAP development that can be used by multiple public authorities in joint planning and implementation. This enables the integration of different administrative levels and geographical planning areas. In addition this approach enhances the cost efficiency in the entire planning and implementation process due to synergies and economies of scale.

## Scope of the report

This report outlines guidelines for the Pentahelix method for SECAP development and implementation, and how municipalities throughout Europe can utilize and adapt them to their local work with climate targets and measures. The guidelines were originally developed in February 2020, and have been tested by 60 municipalities in six different regions in Europe. Based on their experiences, the guidelines have been updated in September 2021. The purpose with these guidelines is to provide a recipe for municipalities and regions that want to take advantage of the Pentahelix method in their SECAP processes.

## What is a SECAP?

Sustainable Energy and Climate Action Plans (SECAPs) are strategic plans that local authorities develop and adopt to improve their work on climate issues. The plans are useful tools to increase the implementation of climate measures, in order to reduce climate emissions and prepare the municipalities for the consequences of a changing climate. In some countries, SECAPs are mandated by law, in other countries, SECAPs are usually developed as a part of the process to join the Covenant of Mayors.

Covenant of Mayors has developed a useful methodology described in Guidelines [1] and templates [2] for SECAP development. To make sure that the plans can be easily modified and updated, however, it is recommended that the PentaHelix SECAPs clearly separate between:

- A. Those parts of the plan that are unlikely to change on a short time basis:
  - assessment of the current situation, with baseline calculations and general descriptions of local or regional climate emission sources,
  - vision and main goals for climate mitigation and adaption
- B. The part of the action plan that changes from year to year as new measures are implemented. This can be altered annually, or every second year. To see how this part of the plan can be set up, you can look at the "Mitigation Actions" (available at [2]). This part of the SECAP should preferably be integrated with the municipality's budget processes, and should include measures focusing on both technical, economic and social aspects.

In addition, we recommend to

C. Develop a "climate budget"[3]. This is an overview of all actions that need to be implemented over the long-term period to reach the vision set in part A. This is also where it is possible to make a note of actions suggested by the task force or other actors, that currently do not have the political drive to implement, and/or lack funding. An example of a climate budget from a PentaHelix pilot municipality is available at [4].



#### Involvement processes – a key aspect of the PentaHelix taskforce method

The key to a successful SECAP is a good involvement process, including a wide range of stakeholders from all **pillars of the PentaHelix: public sector, private sector, academic sector, NGOs, and the civic society.** Throughout the process, from the development of the plan, through the implementation phase, and to the re-evaluation phase, the municipality should aim for real involvement of all different types of stakeholders.

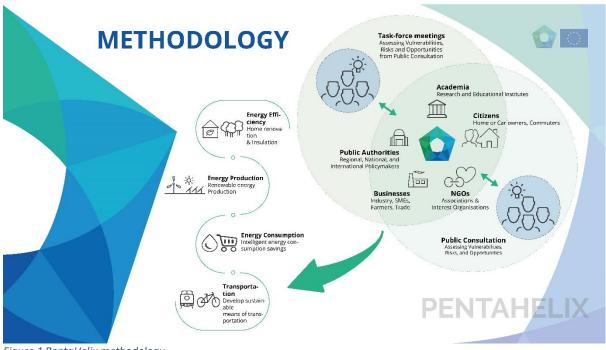


Figure 1 PentaHelix methodology

To structure the involvement process and ensure that all parts of the society are involved, a local or regional "PentaHelix taskforce" should be established. This taskforce should include actors from all five pillars of the **PentaHelix**, preferably as representative of the local and regional society as possible. Testing the Pentahelix method has shown that it enables a more successful SECAP since:

- A better anchored SECAP has a higher probability of being implemented, since both targets and measures are influenced by and supported by a wide range of stakeholders in the municipality;
- It fosters a more ambitious and realistic SECAP, based on quality controlled data and expert knowledge from the local and regional stakeholders that will take part in implementing the measures;
- The process provides capacity building in the local municipality through access to improved data, knowledge, and new and innovative ideas;
- The taskforce platform fosters the exchange of knowledge and provides opportunities to learn about and join related networks and funding opportunities.
- Dialogue between different stakeholders may mitigate potential conflicts and improve cooperation, thereby increasing the implementation rate of the SECAP. The stakeholders learn about current local policy and become ambassadors for the municipal implementation of the SECAP. Local authority and stakeholders strengthen each other's projects and discover common ground for new shared projects. Since a



well anchored climate policy necessarily has a broad scope, it might encourage integrated system thinking for both municipalities and stakeholders.

- The municipality and stakeholders are more aware of the current situation regarding climate emissions, as well as risks and vulnerabilities. More importantly, they become more knowledgeable about mitigation and adaptation actions strategies and the available funding opportunities (funds, grants, credits).
- PentaHelix approach fosters multi-level governance involvement and coordination, as well as integration of the SECAP into other local/regional/national documents. The inclusion of a broad range of stakeholders forces better coordination and integration between SECAP and the rest of the municipal planning system. The SECAP becomes a living document, as more stakeholders and departments are working on SECAP development and implementation. By requiring inputs from different sectors, the coordination between different authorities and different city departments, as well as the process of data collection, is improved.

## How to build the PentaHelix taskforce:

The PentaHelix taskforce should consist of one to three actors from each of the five parts of the PentaHelix:

- A. The public sector
- B. The private sector
- C. NGOs
- D. Private citizens
- E. Academia

The following criteria might be of help when choosing the actors for the taskforce.

- Actors that are able and willing to follow the entire planning process, from the preparation of the plan, to the implementation of the measures
- Actors that contribute constructively to the process
- Actors that have a network in the relevant sector
- Actors that can represent a larger variety of stakeholders from their pillar of the PentaHelix

Examples of types of actors that can be invited to join the PentaHelix taskforce:

## A. The public sector

I.Administrative representatives from municipalities, regional government, national governmental agencies

II.Political representatives from municipalities or regional government (elected to represent the local or regional authority in the task force)

Be aware of:

• Making sure the representatives have relevant knowledge (broadly within energy, environment, climate), and have authority to represent their local, regional or national agency. It can be useful to give the municipality guidelines



about what hierarchical level the representatives should belong to, especially if there are representatives of several municipalities present.

• Avoid choosing political representatives that have not been elected or given a mandate by the relevant authority to be their representative in the taskforce

## B. The private sector

I.Representatives from employer's unions, chamber of commerce, or similar organizations. (for the assistance, the EBN network can be utilized [5])

II.In municipalities that are dominated by one or a few larger companies, representatives of these industries might be included

III.Representatives from the ESCOs / cooperative structures

#### Be aware of:

- The SECAP must be, and must be perceived to be, neutral, and equally beneficial to all parts of the private sector. If the taskforce members represent a single company or industry, extra care must be taken to include other companies or industries through workshops, public hearings, etc.
- The private sector should be challenged to increase the level of ambition of the SECAP.

## C. NGOs

I.Local or regional environmental organizations

- II.National environmental umbrella organizations for the assistance, the CAN Europe network can be utilized [6] )
- III.Unions organizing natural scientists might also provide knowledgeable and relevant representatives
- IV.If present, youth environmental organizations should have their own representative

#### Be aware of:

• Look for representatives that contribute constructively to the process, and are willing to focus on knowledge and compromises, rather than focusing on conflict

## D. Private citizens

I.Residents' associations

- II.Employee's unions and other organizations that cover a large number and variety of citizens. These can be umbrella unions, and/or unions focusing on industries that are important in the region
- III.Inter-religious organizations (ecumenic boards, cross-religious cooperative boards, etc)
- IV.The municipality might already have panels representing specific groups: handicap panels, boards for elderly, youth panels, immigrant advisory boards, etc.

## Be aware of:



- Look for organizations that are perceived as neutral, and that are open to all or most citizens.
- Look for representatives that contribute constructively, and who will not focus too narrowly on small, local topics
- Look for representatives that are able to mobilise a broad range of citizens

## E. Academic sector

- I.Academic or administrative employees (including emeriti) at local or regional universities or colleges
- II.Researchers from local or regional research centres

## Be aware of:

• The SECAP should be operational and focus on actions that can be implemented within a limited time horizon. Be careful that the research partners do not shift too much of the perspective and resources towards future horizons and new innovations.

## How to organize the taskforce

The taskforce should be included as early as possible in the process and continue to be included throughout the entire planning process (development, implementation, re-evaluation). This helps to ensure that the SECAP is well anchored in all parts of society.

The taskforce mainly functions as a reference group, but their role is not limited to this. The members of the group should be chosen carefully, with focus on those who have an extensive network within their part of the PentaHelix pillar, and those with the ability to mobilize relevant actors from this sector for workshops. They should also be encouraged to contribute actively with relevant knowledge and information.

It takes time to build the necessary trust and confidence in a group. If possible, the taskforce should build on existing networks. If no such networks exist, there are several ways to build a SECAP taskforce from the ground up:

- Open public meetings, or meetings where a large number of stakeholders from all the PentaHelix pillars are invited, to ensure that the process is perceived as open, fair, and inclusive, and that interested actors have the opportunity to take part in the taskforce.
- Focusing on children and youth in these first open meetings, for instance by arranging art or innovations competitions can be a way to raise awareness in a larger part of the community and get more people interested in taking part in the SECAP process.
- If there are specific pillars that are harder to reach than other, organised bilateral meetings or targeted communication with specific groups of the stakeholders might be a way to establish a base for cooperation.
- Climate is a very broad issue, and not all actors are interested in all aspects. Arranging meetings, or split sessions in meetings, where it is possible to focus on narrower topics, might increase these actors' interest in later participating in addressing the broader climate issues.



Local adaptations need to be made regarding the size and composition of the taskforce, the number of meetings, and meeting agenda.

## Number of meetings

In areas where there is a good knowledge base, and an established group that can take the role of a taskforce, the taskforce will be able to start working efficiently from the start, and 1-2 annual meetings might be sufficient. If the taskforce has to be built from scratch, it might be necessary to increase the number of meetings. Too many, or too long, meetings will be perceived by several of the actors as "time wasting". Too few or short meetings will reduce the usefulness of the group, or make the process to be perceived as rushed.

## Participation tools

Based on local culture and the municipalities previous experience with stakeholder dialogue, there needs to be a flexibility when finding ways to get the different groups engaged. Sometimes, rather than meetings, it might be more expedient to send the taskforce members baseline emission data, drafts for commenting, etc. Allowing participants to choose between different participation instruments, such as phone calls, emails, online platforms, etc, can also create goodwill, and make it easier to establish a constructive dialogue. This is useful when the municipality is trying to understand technical details or issues where one particular stakeholder has extensive knowledge.

## Clear dialogue with stakeholders

By switching between broader topic open meetings with the whole taskforce, and targeted meetings with single stakeholder or stakeholder groups, the municipality can build closer cooperation with all stakeholders without some of them feeling their time is wasted, or that the communication is at a level they can not understand.

It is important to clearly communicate the role and mandate of the taskforce compared to the municipal planning process, and to manage the expectations of the participants. Stakeholders commonly focus on what the municipality can do, and aim to influence this. But the taskforce should not merely be a reference group to influence public climate measures. To reach ambitious climate targets it is important that they also embrace a more active role in developing and implementing measures. Useful questions for the taskforce members to reflect on may be:

- Which climate actions can I do as an individual?
- Which climate actions can I do in my role as a [industry actor, representative of an NGO, etc]?
- How can the municipality help me to implement more measures?
- How can the municipality stop hindering me in implementing more measures?
- How can I cooperate with other stakeholders in implementing more measures?

Do not expect all stakeholders to fully answer all questions openly in a stakeholder meeting. Particularly the industrial actors may have business ideas that they do not want to share



openly. But keep an eye out for taskforce members receiving external funding or publishing media stories about them implementing climate measures, and give them credit and opportunity to present their work for the rest of the taskforce.

## Suggestion for first taskforce meeting agenda

- 1. Short introduction to what a SECAP is
- 2. What is the suggested timeline of the process, and where is the municipality now?
  - a) If a vision or main goal already has been suggested or decided politically, introduce this, together with the relevant national and EU goals
  - b) What is the mandate of this group; what should the participants be expected to contribute, and what can they expect to have influence over?
- 3. Presentation round; who are the actors in the room:
  - a) What is their background?
  - b) Who do they represent?
  - c) Does the organization or group they represent already have climate targets?
  - d) Do they already have visions or goals for the SECAP work, or for what they want to achieve through their participation in the taskforce?

4. Creative workshop: Which climate measures should be implemented in your municipality/region (NB: do not sort the input, do not qualify or criticise. All ideas are good ideas in this phase)

5. Based on the ideas in #4: are there any suggestions to workshops, meetings, or other activities that can be planned to go deeper into one or more of these topics? How can the different members of the taskforce contribute to this/these activities?

6. Which other actors and stakeholders should be invited to the workshops? Enlist the participants in mapping relevant stakeholders.

7. Establish meeting plan (set next meeting times and dates)

## Suggestion for later taskforce meeting agenda during SECAP development process

- 1. Welcome, and short introduction round if there are new members to the meeting
- 2. Approval of agenda and minutes from previous meeting
- 3. Follow up on action points from previous meeting
- 4. Presentation from a municipality on current status on SECAP, with questions from taskforce
- 5. Discussion/workshop on how to solve issues at the current state of development
- 6. Action points to follow up until next meeting

## How to involve the different stakeholder groups

It can be challenging to motivate certain stakeholders to take part in the process. It will vary from region to region which groups are easy and hard to reach, and the climate communication guidelines [7] provide a range of tips on how to motivate different types of actors to take an active part in addressing the climate issues. In general, it is important to:

• show that the taskforce is a serious activity that is well anchored in the municipality, for instance by having the mayor sign the invitation to the first meeting.



- emphasise the benefit of taking part in the taskforce, for instance by showing the citizens that they are main beneficiaries of energy and climate measure implementations.
- show the stakeholders that their effort is appreciated and their input is taken seriously

When relevant actors have been mapped, and workshop topics chosen, these issues should be considered during the detailed planning of the specific workshops:

- Is this a regional or local issue? Is it relevant to discuss on a regional level with larger stakeholder, inter- or intra municipal, or maybe the issue is best discussed within one local community at a time?
- Which stakeholders should participate at which level; some may be relevant for the planning phase or the feedback phase, others are essential for a relevant discussion at the workshop? It is important to have a good plan, so the important stakeholders do not weary due to too many meetings and workshops.
- Map the interests of the target groups: what would motivate them to participate? Is it possible to show the usefulness of participating; getting new knowledge, getting an edge over the competition, etc.? Are there any key actors that can be recruited early, that can motivate others to participate?
- What is the purpose of including this stakeholder? Do they have knowledge necessary for the SECAP? Can they help change the direction of the discussion and bring in other viewpoints? Do they have new solutions, new ideas, innovative methods, etc?
- How will the input be received (handwritten notes from participants, online input, secretary from each group)? And how will the participants receive feedback on their input? It is important to be fully transparent on how the ideas and suggestions have been included in the SECAP or related plans, and why some measures have not been included.
- One size does not fit anyone; **target the workshop and communication to the target group**. Invest in relevant and good key note speakers that lift the quality, message, and broaden the view.
  - The industry often prefers efficient meetings with clear goals, focusing on consequences and costs. Getting knowledge about climate regulations and possibilities for funding, can be motivating, and may be a good starting point for the discussions.
  - The agricultural sector often prefers to have time and room for dialogue, and see a value in meeting people face to face. The timing of the meeting is very important, with respect to growing and harvesting seasons, hunting seasons, etc.
  - Children and youth often have high energy and can be impatient to see results. Variation in methodology throughout the workshop or meeting is important,





to avoid them getting impatient. It will often be easier to get concrete advice on specific topics, than more general and overarching goals. The organizers should be prepared to receive a lot of input in a very short time. To reach a broader range of children and youth, it is better to go to them where they are; in school, in football clubs, in youth clubs, or through social media.

- Citizens are challenging to reach since it often is the same people attending the meetings every time, non regarding what the topics are. Focusing on local topics, having an engaging speaker about a topic close to heart, or meeting people on arenas where they already are present, might help. It is important to be aware of what the burning topics in the local society are. Will a focus on these enhance the discussion, or divert it? There should be a plan for how to keep on track, while keeping the people engaged. Often, answers to common "hot topics" can be prepared in advance. (See Climate communication guidelines, available at the PentaHelix website [7], for detailed advice). Sometimes, it takes time for information to spread. Keeping an open line over time; online, in social media, or via meeting points such as the library, might help reach more and other people than if the public are invited to a few events on specific dates.
- NGOs often have very clearly defined issues they are fighting for, and will usually appreciate the opportunity to cooperate with the municipality or other actors on these topics.
- For the public sector, international, national and regional targets may be a good starting point, with a focus on how these affect the city both on positive and negative terms; Which measures will the city have to implement to follow the legal demands, and which measures can the city get funding for due to new climate targets? For local authorities with climate ambitions, focusing on their own goals, visions, and strategies can be a good starting point.
- Academic stakeholders have an interest in meeting other stakeholders for possible collaborations but are also interested in learning situations for their students. It is usually of greater interest for them to participate in a workshop together with other relevant stakeholders (industry, agriculture, etc), rather than more targeted/isolated meetings.
- Some workshops may contain several stakeholder groups, and achieve more results through dialogue across the sectors. Including youth in these dialogues might reduce the tension that might arise due to cultural differences. In these workshops across sectors, it is important on focusing on building cooperation and alliances to find good climate measures.
- Time of day is important to consider, and possibly vary. Professional actors such as the public, private and academic sectors, will be easier to reach within office hours. Representatives of NGOs and citizens will often only be able to take part in meetings during the evening. Meetings in early or late evening may



also reach different actors, due to parental duties. Part of the timing issues may be resolved by having the meetings online, but to ensure good dialogue and understanding this should preferably not be done until the taskforce is well established and the group knows and trusts each other.

## Challenging external conditions – data and finances

Stakeholders seek realistic and ambitious goals and expect realistic calculations based on trustworthy data in order to focus on the most relevant measures, not only from a climate perspective but also regarding other sustainability areas (environmental, social and economic). Providing reliable data is a necessity from early on in the SECAP process, but might be a challenge for many municipalities. In some areas, transparency of data might also be a challenge, since not all raw data can be openly shared. By being open and honest about the available data, and where there is a lack of knowledge, the stakeholders can be invited to contribute to improving the data. Particularly the industry and energy companies can play important roles in quality control of publicly available data.

Finding financing for the measures can be a challenge, and it is important that the taskforce members are aware of the opportunities they can find to implement their measures, and which measures are easier and more difficult for the municipality to find funding for. Some funding opportunities are only available for private actors, others only for NGOs. With a cohesive taskforce it will be possible to utilize a larger variety of funding options. As the taskforce work progresses, it can be useful to arrange specific workshops and information meetings on funding opportunities, or to include targeted information about this issue at relevant taskforce meetings.

## How to keep the taskforce engaged during implementation

After the development period, the taskforce will play an important role in implementing measures. As the target date of the SECAP implementation approaches, they will help evaluate and develop a new and improved SECAP. Since these processes are different from the development phase, and due to the long time period, it is challenging to keep a long-lasting taskforce. The most important tool in this process will be to expect and embrace changes: changes in representatives from the different pillars of the pentahelix, changes in the dynamics of the group, and changes in how the work and meetings are carried out.

Experiences from the PentaHelix project shows that the taskforce model raises interest in neighbouring municipalities, as can be seen from a large number of replicators. In cases where the taskforce is local, there will be a need to spread information so new municipalities can establish taskforces. In the case of regional taskforces, there will always be variation between the local municipalities in wherein the SECAP process they currently are: some are in a development phase, some in the implementation phase, and some in an evaluation phase. In addition, the taskforce should preferably be involved in other relevant municipal planning processes, to ensure that the SECAP is well integrated in the planning system. This wide range



of activities might be challenging for a single taskforce to cope with, but if the work process and meetings have a good structure (see suggested agenda below), seeing several phases of the process in connection might increase the opportunity for cooperation and knowledge sharing. The taskforce should also make effort to continuously involve larger parts of the municipality in the SECAP processes, by taking active part in continuous information and replication activities.

Financing the taskforce outside a project framework might also be a challenge, although the work involved with running a taskforce is substantially less than establishing it. In some municipalities, the PentaHelix taskforce can become part of the regular systems for interactions, similar to a youth council or other topical advisory boards, and the administrative work can be included in the duties of a climate advisor or secretary. In other places, there might be national or regional financing available to support these types of networks or cooperation. One PentaHelix taskforce that has been established through the project has chosen a business model where the stakeholders, particularly from the public and private sectors, contribute to the financing through a partnership model. This model requires a high degree of trust and transparency from all stakeholders, and a strict control regime that ensures there is no room for or reason to suspect any form of corruption. The positive side of the model is that the partners get a very strong sense of ownership to the taskforce and are willing to invest time to ensure they get value from their participation.

## Suggestion for later taskforce meeting agenda during SECAP implementation process

To ensure that the process keeps being open and transparent, it is important to have a clear focus on communicating what the taskforce is, and how new stakeholders can take part. One way to do this is to set up a local climate communication portal; a home page for all climate actions in the local community. Social media can also be utilized to spread awareness and information about what is happening. More information about how to efficiently communicate about climate can be found in the PentaHelix climate communication guidelines [7].

Suggested agenda:

- 1. Welcome, and short introduction round if there are new members to the meeting
- 2. Approval of agenda and minutes from previous meeting
- 3. Follow up on action points from previous meetings
- 4. Presentation from one or more taskforce member on a climate measure they are currently implementing or taking part in.
  - a. Feedback from other stakeholders: is anyone working on anything similar? Is this a topic where there is room for cooperation? How can the other stakeholders contribute to the measure becoming an (even larger) success?
- 5. Presentation from the municipality/-ies on current status for SECAP development and/or implementation
  - a. If several municipalities: what can they learn from each other? Are there any measures they can cooperate on?
- 6. Action points to follow up until next meeting



## Example of stakeholder cooperation

Some topics can be solved through one or more workshops, other times it might be useful to establish a smaller group that focuses on a specific topic over a longer time. This case description shows one way to do this with actors from the agricultural sector.

## Case: Climate- and Energy planning with focus on Agriculture and Forestry.

Team Agriculture and Forestry was established through an invitation to municipalities to participate in a work to help with the climate- and energy planning. The team consisted of 8 members, 5 volunteers from the agricultural/forestry administration in different municipalities, member from the County Governor (national authority) and the team leader from Viken County Council / Klima Østfold [8].

## The group's mandate :

- Identifying need for new knowledge and get an updated knowledge base
- Suggest goals, strategies and work to do.
- Give a timetable for the work
- Communicate and share knowledge relevant to agriculture and forestry.

## The deliveries:

The team produced 2 workshops, 2 short summaries and a 30-page report together with a scientific institute (NIBIO) during mainly 2018. The team had 4 meetings + 2 workshops during the time available. The team also established a reference group to keep the work relevant to the farmers and businesses influenced by the municipal SECAPs.

The reference group consisted of 9 members from:

- Individual farmer, known for his work and climate focus
- The farmers' association
- Norwegian Agriculture Advisory group
- Forestry businesses
- Klimasmart Landbruk (project focusing on climate smart solutions for the agricultural sector)
- Innovation Norway (national funding agency)

#### Work process:

- The team discussed and found main headlines for programs for two workshops
- The team developed main descriptions for a report to give guidelines to agriculture and forestry vs climate planning
- The team leader made the detailed program and supervised the workshops.

Workshop 1: Presentation of a newly produced app made for climate calculations on individual farms. The main question for the workshop was: "Will allocated data for all farms



be useful for local planning?" Invitations were sent out to local farmers through lists prepared in cooperation with the agricultural authorities. Many participated, due to the location – a nearby agricultural school. The participants were mostly young and coming farmers, but also experienced farmers and scientists.

Workshop 2: Forests and forestry – how to use forests to reduce  $CO_2$ ? The location for the workshop was in a heavily forested municipality, 30-60 minutes from the closest city. Although the participation was a bit below expectations, with only 20 participants, all of the most relevant actors from the different pillars of the PentaHelix were present.

Scientific report on climate status and measures for agriculture and forestry: The team leader led the dialogue with the scientists writing the report, and version 1.0 was produced. This version was sent to the reference group, who discussed the report in a meeting. Their comments were brought back to the authors before finishing version 2.0.

The workshop summaries and report have been distributed to the PentaHelix taskforce, and to the different municipalities that are developing PentaHelix SECAPs, to inspire climate planning in general and give some agricultural and Forestry answers in particular.

## Conclusion

As the negative consequences of climate change become ever clearer, the need for rapid implementation of substantial climate measures increases every day. The climate crisis is a "wicked problem", a challenge that has so many interdependent factors that it seems impossible to solve [9]. It can only be tackled through cooperation between all parts of the community. The development and implementation of a SECAP with the PentaHelix method can be a beneficial process to promote such cooperation within a municipality or region. Providing the necessary support and motivation to get all types of actors engaged in climate actions is not easy, but after testing the PentaHelix method it has become clear that this can be one way to provide the necessary structure to develop an engaging and well-organized SECAP development and implementation process. By testing it in different contexts the method has been proven adaptable to different geographic and cultural settings throughout Europe.



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