Tagung der Alpenkonferenz

Réunion de la Conférence alpine

Sessione della Conferenza delle Alpi

Zasedanje Alpske konference

XVI

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ANLAGE/ANNEXE/ALLEGATO/PRILOGA

4 Activity Report of the Mountain Agriculture and Mountain Forestry Working Group for the period between the XV and XVI meetings of the Alpine Conference

ACTIVITY REPORT OF THE

Mountain Agriculture and Mountain Forestry Working Group

FOR THE PERIOD BETWEEN THE XV AND XVI MEETINGS OF

THE ALPINE CONFERENCE (April 2019 – December 2020)

1. Overview of the mandate or relevant decision of the Alpine Conference

Summary of the main tasks according to the 2019-2020 mandate (for Working Groups) or decision ACXV/A6 of the XV Alpine Conference (for Boards)
ACTIVITY 1: Focus on **climate-friendly and climate-resilient mountain agriculture and sustainable management of mountain forests** in order to contribute to the **operationalization of the Alpine Climate Target System**, building on experience gained, good practices and shared knowledge in the Alpine region concerning the effects of climate change.   **ACTIVITY 2:** Exchange on the **relation between mountain agriculture, mountain forestry, tourism and biodiversity** by highlighting initiatives and projects dealing with this relation;   **ACTIVITY 3:** Participate in the **implementation of the Green Economy Action Program (GEAP)** through the support to implementing actions in relevant fields for mountain farming and forestry, especially eco-innovation, regional development, valorizing ecosystems and biodiversity, and living and working in a green economy.   **ACTIVITY 4:** Develop co-operative and innovative solutions for sustainable rural-urban relationships by highlighting **best practice examples related to the promotion of sustainable social economy models in the Alps**. This includes sustainable regional products and **local value added chains** in particular in the field of forestry and agriculture.

2. Meetings

Summary of the meetings (date, place, main topics and outcomes)
The first meeting took place in Turin on 8 and 9 October 2019 (lunch to lunch) and the following topics were addressed: • Presentation of the MAMF WG's mandate and its tasks/outputs

- **ACTIVITY 1:** Presentation of the methodology and template to meet the mandate objectives
- **ACTIVITY 2:** Input on the topics of the multi-thematic Workshop and first ideas on the organization of the workshop and stakeholder involvement
- **ACTIVITY 3:** Discussion on the future modality for the development of the activity of Green Economy Action Program Initiatives collection
- **ACTIVITY 4:** Members are encouraged to think about potential inputs for next meetings
- A small workshop was held to implement one of the activities in synergy with the Alpine Climate Board
- Presentation of the timetable and workplan for the next months
- Final Report: Short discussion on the proposal of the Table of Contents

During the meeting several experts intervened who provided thematic inputs for the reflections / discussions of the members on the various activities.

The main **meeting outputs** were the following:

1) Finalization / acceptance of the template for the start of the activity 1
2) Reflections on the potential setting of activity 3 in view of the next meeting
3) Reflections on the potential setting of activity 2

A detailed report of the meeting shared with the members was edited.

The second meeting took place online on the Teams web platform and included two morning sessions on May 14-15, 2020. The meeting was characterized by **round-video tables** that allowed a continuous and satisfactory exchange by all members. present.

The objectives of the meeting were as follows:

- Discussions on the results of **ACTIVITY 1**: presentation of the initiatives by the Members and discussion on the solutions for collecting missing contributions
- Presentation of the structure of the **First Chapter of the report** drawn up by the Italian Delegation also on the basis of the contributions of the first activity
- Detailed Presentation on **ACTIVITY 3**: methodology, templates and guidelines for compilation
- Thematic presentation on **ACTIVITY 4**: a proposal of paper and roadmap for a future activity in the next MAMF mandate

- Fixing the next steps for **Workshop**: discussion on the organization of the WS

During the meeting, the GEB leader intervened to provide input to members for carrying out Activity 3. Several members presented the initiatives with which they contributed to activity 1.

The main **meeting outputs** were the following:

1) Solutions and support for missing contributions in ACTIVITY 1 were provided
2) The finalization date of the report reviewing (and Activity 1) was set
3) The deadline for collecting at least one initiative for activity 3 was set.
4) Proposal for a half / one day virtual workshop where each country can contribute in three different forms was accepted:
   -video interview uploaded on a specific youtube platform and transmitted to the WS
   -presentation by an expert during the videoconference
   - brief presentation of an elaborate paper
   Members will also be able to choose a topic to explore.
5) A calendar for WS organization is proposed.
6) It was agreed to send a proposal form for the collection of topic and method proposals for the Workshop
7) A calendar for delivery and review of final report was accepted

Minutes and a detailed informal note of the meeting were shared with the members.

Members have been given the option to choose whether or not to have another meeting at the end of July in relation to the needs of the activities in progress.

A virtual workshop took place on 11 September on the ZOOM platform and hosted on air in the hall of Longarone Fiere (see below).

3. Activities carried out

Synthetic report on activities carried out (including outreach and communication activities)

ACTIVITY 1

Starting from the example of the activity of the Climate Advisory Board in the last mandate, MAMF aimed to collect initiatives through a template to be filled in by the experts appointed

by the Parties and observers to the Convention. The activity included three steps

1. **Synthesis of main national laws and initiatives for climate change mitigation/adaption**
2. **Collection of initiatives/good practices**
3. **Synthesis of collection and recommendations focusing to the contribution to the operationalization of the Alpine Climate Target System**

The structure and contents of activity 1 is illustrated in greater detail:

- Step 1 (first section of the template): collection of information on relevant policies in the Alpine countries, related to mitigation and adaptation (Legal basis of general and sector planning tools section)
- A step 2 (second and third section of the template): collection and specific description of the initiative (s) (Initiative / Good practice for sustainable management of climate change in the forest and agriculture sectors section), and identification of the role of the Alpine Convention in the initiative (objectives achieved, opportunities for promotion, etc.)
- An optional step where providing suggestions of recommendations for the dissemination and improvement of the initiative

Activity 1 develops in close synergy with the work of the Alpine Climate Board, which has included in its mandate a direct involvement of other WGs in the specific cooperation activities, one of which (Workshop on ACB) took place on the opening of the second day of the first MAMF meeting.

ACTIVITY 2

The workshop was organised, as agreed at the second MAMF meeting, as an online short event in the month of September 2020. This facilitated the involvement of experts, who can make a video of their speech before the workshop and allowed for the collection and storage of the workshop materials to be used in the Final MAMF Report. Additionally, the video workshop was a highly sustainable event.

To facilitate the organization of the event, we sent a short **"Workshop proposal form"** a few months before. After the collection of member's suggestions and availability to provide concrete contributions to it, we sent out a **draft agenda in the first ten days of August**.

This form helped MAMF WG to identify:

STEP 1

- The topics on which the participants will deliver their contribution and their link to the requirements of the mandate of the MAMF WG
- The relation between mountain agriculture, mountain forestry, tourism and biodiversity analysed in the contribution

STEP 2

- the way in which the contributions will be delivered (e.g. video interview with an expert, report by an expert at the workshop, presentation of good practices

STEP 3

- possible stakeholders / experts / bodies and organization potentially involved

STEP 4

- Possible channels to stream the event and promote the workshop contents and results.

ACTIVITY 3

The A3 aimed at managing the collection of activities (through a template) envisaged for the WG in full coherence to the GEAP in order to ease the assignment of each single initiative to a specific action field, sub-topic, and concrete actions as in the GEAP.

Moreover, for describing the initiatives collected in the MAMF WG we used the same categories adopted for the actions in the GEAP aiming at achieving tables that can be directly compared, and inter-connected to the actions listed in the GEAP.

Such an approach aimed to help demonstrate that the initiatives selected by MAMF WG are fit to implement the actions reported in the GEAP. **Aim of the work was to show how and to what extent a sample of initiatives identified in the framework of the MAMF WG implement the Actions collected in the GEAP in the domains of agriculture and forest management in the Alps.**

The methodology adopted by MAMF WG in the activity for selecting relevant initiatives developed as follows:

1. **Provide an assessment of the consistency of an initiative to the macro action field as set by the GEAP;**
   1.1. check if the initiative is consistent with the inspirational topics recalled by the GEAP for each macro action field and identify the action field

2. **Identify which action(s) of the GEAP the initiative participates to implement;**
    2.1. check type of activity and the description of the GEAP's action to determine the relevance of the initiative in implementing the GEAP action, or a part of it

3. **Provide a more detailed description of the activity** you selected by supplying as much information as possible for each of the relevant fields, by filling in the attached template in all the listed categories

In summary, the process described above was synthesized in a **tree diagram. Attached tables were also provided for carrying out the various steps of the activity.**

The **template** has been developed consistently with the one used for the GEAP actions.
It is organised in four sections, all referred to initiatives in the two macro-areas of mountain agriculture and forests:
    1. Identification of the initiative;
    2. Implementation of GEAP actions;
    3. Focus on the initiative and in-depth description.
Identification of the role of AC in the development and transferability of initiative

Together with the templates of A1 and A3, in-depth documents on the methodology used and guidelines for compilation were always provided

ACTIVITY 4

In the MAMF meeting in May the proposal was made to carry out this activity as a road map or a proposal document. Due to the reduced times determined by the COVID emergency and the large commitment required by the other activities of the mandate, it was decided to develop and implement this task in the next MAMF mandate.

COMMUNICATION

In both tasks, during the structuring phase of the activities, the MAMF WG interacted with the Alpine Climate Board and the Green Economy Board for a comparison on the methodology and the template.

All materials have been subject to a **review phase** by the members before the formal start of the activity. In each communication, the link of the **MAMF cloud** was provided.

Copies of any formal communication sent to members and all respective attached documents are sorted into individual folders on the MAMF cloud.

4. Results and outputs

Description of main results and outputs achieved

ACTIVITY 1: For the first activity, the output was the elaboration of **the first chapter of the final report** dedicated to the collection of initiatives aimed at adapting agriculture and forestry to climate change on the basis of experiences gained to contribute to the implementation of the Alpine Climate Target System 2050.

The chapter contains an overview on climate change in the Alps and the role of the Alpine Convention in the fight against it with a focus on the forestry and agricultural sectors. The activity of the MAMF group is then analyzed and presented and the methodology applied is described, showing the parallels with the structure of the Climate Target System 2050 and outlining the principles with which in the future it is possible to identify and apply initiatives aimed at implementing the Climate Target System.

Within the chapter, for six Alpine countries (Austria, France, Germany, Italy, Switzerland, Slovenia) the following is illustrated:

- a picture of the main adaptation and mitigation strategies present both at national and local / alpine level, with a focus on the sectors of interest.
- the impacts, vulnerabilities and resilience of climate change, with a focus on the sectors of interest
- a collection of initiatives appropriately described in all qualitative and quantitative aspects followed by a reference to:
  - which objectives of the Alpine System's objectives for climate 2050 contributes and how
  - the potential role of the Alpine Convention in the transferability / implementation / enhancement of the initiative and appropriate recommendations

Finally, through the information gathering work of the quick workshop in the first meeting and the activity carried out in parallel by the ACB, some pathways have been collected in the two sectors that can be studied in depth in the next mandate.

ACTIVITY 3: For the second activity, the output was the elaboration of the **second chapter of the final report** dedicated to the overview/collection of actual and proposed initiatives across the Alps consistent with the actions envisaged by the Green Economy Action Program, in the relevant fields.

In the second chapter of the report there is a collection of initiatives across the Alps consistent with the actions envisaged by the Green Economy Action Program.

The general framework in which the green economy is presented, especially at the Alpine level, is presented as a highly multisectoral and transversal theme, able to embrace the two sectors of interest (forestry and agricultural) at multiple levels (including those of sustainable management, tourism and biodiversity protection).

After a quick analysis of the structure and objectives of the GEAP, the methodology adopted by the MAMF for the collection of initiatives useful for the implementation of the GEAP itself is presented, underlining the strong correlation between the survey method structured by the MAMF and the one adopted in the GEAP.

In the four fields of action required by the task, countries have collected their own initiatives. Through the template they selected initiatives consistent with the activity. For each initiative is therefore reported:

- the GEAP action (s) that can implement
- the consistency aspects with respect to the GEAP, its fields of action and its topics
- a detailed description of the initiative, in economic terms, of targets and stakeholders, following the same descriptive categories present in the GEAP
- the reasons that make it an initiative capable of implementing a specific action (results and socio-economic and environmental impacts)
- the present or potential role of the Alpine Convention, following the same descriptive categories present in the GEAP
- a general reference to the implementation of the initiative with respect to the EU Green Deal

ACTIVITY 2:

The output for this activity was to **involve stakeholders and encourage them to take into account existing interdependencies between mountain forestry and agriculture, tourism and biodiversity**.

On 11 September 2020, MAMF organized a **virtual workshop** from 9:30 am to about 1:30 pm entitled "Mountain forestry and mountain agriculture for enhancing biodiversity and tourism".

The Workshop took place online on the ZOOM platform with simultaneous Italian-English translation and vice versa.

The event was broadcast live and hosted in ROOM B. Costantini at the "Fair and Festival of the Forests" in Longarone Fiere (11-13 September 2020, LONGARONE-https://www.longaronefiere.it/fiera-festival -forests) where in addition to a rich program of events and exhibitions, the fair dedicated a space to the Alpine Convention event.

The event included three sessions of thematic interventions moderated by experts from the various sectors:

- **SESSION 1**: Mountain food biodiversity & alpine tourism
- **SESSION 2**: Green economy and sustainable value-chains for mountain agriculture and forests
- **SESSION 3**: Alpine natural capital for green development of the farming and forestry sectors

The sessions included moments of discussion and reflection aimed at creating new synergies and channels of interest and exchange in the forest, agriculture, tourism and biodiversity protection fields.

The workshop aimed to involve project partners as well as startups, experts from the various Alpine countries of the Alpine Convention, the scientific collaboration of important bodies operating in the Alpine and non-Alpine territory, the research academy of Bolzano Eurac Research, and participation of the institutions and the Ministry of the Environment itself together with the Permanent Secretariat of the Alpine Convention.

In addition to the institutional greetings, several experts showed their presentations or sent video interviews and video clips projected during the event.

Short abstracts, introductions to the work of the experts and web links and videos were collected for the event and then collected in the MAMF report.

5. Cooperation

Description of cooperation initiatives and activities with other Alpine Convention Thematic Working Bodies and other relevant bodies and processes (e.g. EUSALP)

- Cooperation with ACB: quick workshop in the first MAMF meeting and elaboration of the pathways in the two sectors of interest

- Cooperation with GEB leader and Green Economy Editorial Board: feedback on the development of A3 and participation in the second meeting for thematic inputs on the activity

6. Attachments

List of the documents attached to this report, such as papers proposed for approval by the XVI Alpine Conference (thematic reports, guidelines, statements etc.) and supporting documents (workshop proceedings, survey reports etc.).

- *1) MAMF Report 2019-2020 (Chapter 1,2,3 for A1, A2 and A3)*
- *2) Poster Longarone Fiere Workshop MAMF (11 September 2020)*

MOUNTAIN AGRICULTURE AND MOUNTAIN FORESTRY
of
THE ALPINE CONVENTION

Final Report
Mandate 2019/2020

REPORT INDEX[1]

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[1] **Interactive index**: press CTRL on the TITLES to reach the paragraph

PART 2

Initiatives across the Alps consistent with the actions envisaged by the Green Economy Action Program………………………………………………**pag. 113**

 # PART 3

"Mountain forestry and mountain agriculture for enhancing biodiversity and tourism" Virtual WORKSHOP……………………………….pag. 169

INTRODUCTION

The following report is the result of the work of the **MAMF working group** carried out in **2019/2020**.
It includes the results achieved concerning the three objectives set by the Ministerial mandate received by the XV Alpine Conference in Innsbruck (2019).

In particular, the MAMF final report collects the contributions provided by the Parties and critically comments on the results achieved in the different activities developed over the last two years**.**

Therefore, this report aims to:

- provide a coherent framework for the three activities of the mandate;

- present in detail the three activities required by the mandate and carried out in the group in a single document.

Within the report, the contributions of the members have been harmonized and organized in agreement with all the experts who joined the group.[2]

The report is divided into three parts relating to three outputs, as set in the mandate.

PART 1

The first Part of the report collects the results relating to **ACTIVITY 1** of the mandate:

> *Focus on climate-friendly and climate-resilient mountain agriculture and sustainable management of mountain forests in order to contribute to the operationalization of the Alpine Climate Target System, building on experience gained, good practices and shared knowledge in the Alpine region concerning the effects of climate change.*

This Part includes the collection of initiatives aimed at adapting agriculture and forestry to climate change in the Alpine countries suitale to contribute to implementing the Alpine Climate Target System 2050.

After an overview on climate change in the Alps and the related activities of the Alpine Convention on the matter – especially in the fields of forestry and agriculture, the report proposes a methodology developed by the group in line with the structure of the Climate Target System 2050 aimed to identify coherent implementation policies and measures on the national and regional level.

The report then provides the following information for the Alpine countries[3]:

- a picture of the main adaptation and mitigation strategies present both at national and local / alpine level, with a focus on the sectors of interest;

- the regional impacts of, vulnerabilities and resilience factors to climate change, particularly in the agriculture and forestry sectors;

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[2] Consult the "**ANNEXES TO THE MAMF REPORT 2019/2020**" document for the **templates** and **tables** created and used for the different activities of the mandate

[3] Namely for Austria, France, Germany, Italy, Switzerland, and Slovenia.

- a collection of initiatives appropriately described in all qualitative and quantitative aspects followed by a reference to the targets of the Alpine Climate Target System 2050 they address and to the potential role of the Alpine Convention in the transferability, implementation, and enhancement of the initiatives;

- a list of consistent recommendations elaborated by the group.

PART 2

The second Part of the report collects the results of **ACTIVITY 3** of the mandate:

> Participate in the implementation of the Green Economy Action Program (GEAP) through the support to implementing actions in relevant fields for mountain farming and forestry, especially eco-innovation, regional development, valorizing ecosystems and biodiversity, and living and working in a green economy.

This Part includes an overview and a collection of implemented and planned initiatives across the Alps consistent with the actions envisaged by the GEAP, in the relevant fields.

The Alpine Green economy is presented as a multi-sectoral and cross-cutting topic including relevant aspects for both forestry and agriculture (such as sustainable management, tourism and biodiversity protection).

After a short presentation of the structure and objectives of the GEAP, the methodology adopted by the group for collecting national and regional initiatives contributing to the implementation of the GEAP itself is presented.

Initiatives potentially implementing GEAP actions in the fields of agriculture and forestry have been collected by using a template framed in line with the GEAP structure. For each initiative, the following information is reported:

- the GEAP action (s) that it can implement;

- the consistency to the GEAP, its fields of action and its topics;

- a detailed description of the initiative, including economic aspects, targets and stakeholders involved, using the same categories of the GEAP;

- the reasons determining the capability of the initiative to implement a GEAP action (results, and socio-economic and environmental impacts);

- the (potential) role of the Alpine Convention (recommendations) in support to the of the initiative;

- a general reference to any relationship between the implementation of the initiative and the EU Green Deal.

PART 3

The third and last part of the report presents the contributions collected during the Workshop "Mountain forestry and mountain agriculture for enhancing biodiversity and tourism" organized as part of **ACTIVITY 2** of the mandate:

> *Exchange on the relation between mountain agriculture, mountain forestry, tourism and biodiversity by highlighting initiatives and projects dealing with this relation.*

The chapter collects the topics under discussion and the initiatives presented by the experts during the event, with some references aiming to support the exchange of knowledge among stakeholders also after the event.

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In general terms, the final report of the MAMF group aims to present **a first essential collection of Alpine initiatives, projects and good practices in the fields of mountain agriculture and forest management addressing the themes recalled in the mandate**.

Additionally, the report provides **updated information on the national and regional institutional background, experience and innovative actions** for each of the topics addressed by the group (e.g. national and local strategies for adaptation to climate change in ACTIVITY 1; framework on the social and economic impacts of initiatives for a green economy in ACTIVITY 3), some **recommendations based on the results achieved on how to strengthen national and regional support to a few major goals of the Alpine Convention**, such as the implementation of the Alpine Climate Target System 2050 and the GEAP (e.g. ACTIVITIES 1 and 3).

Finally, it aims at summarizing the main results of a thematic workshop where several stakeholders from diverse fields have been involved as a way to **encourage integration among sectors based on existing and innovative interdependencies among mountain forestry and agriculture, tourism and biodiversity**.

PART 1

Climate-friendly and climate-resilient Mountain Agriculture and Forestry in operationalization of the Alpine Climate Target System

Activity 1 of the mandate: "**Focus on climate-friendly and climate-resilient mountain agriculture and sustainable management of mountain forests in order to contribute to the operationalization of the Alpine Climate Target System, building on experience gained, good practices and shared knowledge in the Alpine region concerning the effects of climate change**"

1. Climate Change in the Alps: the role of the Alpine Convention

The Alps are home to about 14 million people, 30,000 animal species and 13,000 plant species. In the region, climate change is occurring at a faster pace in the Alps than elsewhere: since the late 19th century temperatures have risen by almost 2 °C, i.e. twice as large as the northern hemisphere average.

The steep increase in temperature in the Alps has occurred in conjunction with an **increase in greenhouse gas emissions** especially in the industrial and transport fields. It is a serious threat to fragile ecosystems: by 2100 31% to 51% of Alpine plant species are projected to lose more than 80% of their suitable habitat, also due to the impacts from the **reduction of the surface of the glaciers and permafrost**[4].

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[4] CLIMATE CHANGE How it affects the Alps and what we can do Permanent Secretariat of the Alpine Convention, 2017
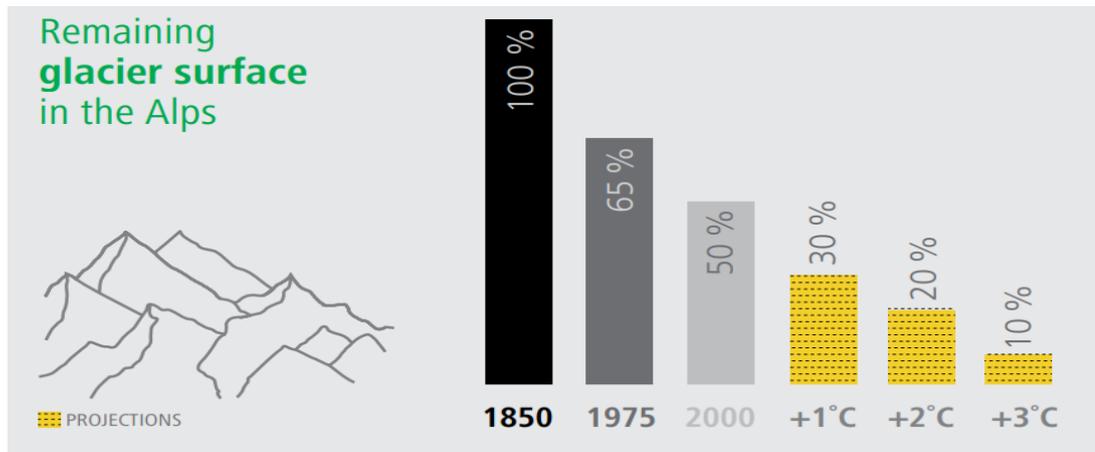
Fig. *From "CLIMATE CHANGE How it affects the Alps and what we can do Permanent Secretariat of the Alpine Convention, 2017"*

As soon as 2006, the Parties to the **Alpine Convention** adopted a **Declaration on Climate Change**[5] (IX Alpine Conference, Alpbach) and elaborated an **Action Plan on Climate Change in the Alps** (X Alpine Conference, Evian 2009)[6], including sectoral measures and good practices.

Since the XIV Alpine Conference (Grassau, 2016) climate change became a priority of the AC **Multi-Annual Work Programme (MAP)[7] 2017-2022**. The Ministers set up the **Alpine Climate Board** with the mandate to bundle existing climate change initiatives in the Alps and collect proposals for a concrete Climate Target System aiming at a "climate-neutral" and resilient Alpine region, in accordance with EU and international objectives.

The **Alpine Climate Target System** – adopted by the XV Alpine Conference in Innsbruck (2019) where a Declaration on " **Climate-neutral and Climate-resilient Alps 2050**"[8] was approved – for the purpose of MAMF WG, includes targets in the relevant fields of *biodiversity, forestry, and mountain farming*. In its 2019-2021 mandate, the Alpine Climate Board has been committed to develop an **updated Climate Action Plan**, in support to the implementation of the Alpine Climate Target System 2050[9] (2019).

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[5] https://www.alpconv.org/fileadmin/user_upload/Convention/EN/Declaration_Climate_Change_EN.pdf

[6] https://www.alpconv.org/fileadmin/user_upload/Organization/AC/X/ACX_B6_EN.pdf

[7] https://www.alpconv.org/en/home/news-publications/publications-multimedia/detail/multi-annual-work-programme-of-the-alpine-conference-2017-2022-priorities/

[8] https://www.alpconv.org/fileadmin/user_upload/Convention/EN/Declaration_Innsbruck_EN.pdf

[9]https://www.alpconv.org/fileadmin/user_upload/fotos/Banner/Topics/climate_change/20190404_ACB_AlpineClimateTargetSystem2050_en.pdf

The Declaration on **Climate-neutral and Climate-resilient Alps 2050** invites the Alpine countries to prevent and tackle the impacts of climate change.

Forest and agriculture are among the sectors where action is required according both to the Declaration and the new Alpine Climate Target System.

Concerning mitigation policies, reducing GHG emissions and promoting their storage can depend on strategies directly affecting agriculture and forestry. Among others: promoting the use of regional raw materials (e.g. wood) and locally grown food; and sustainable forest management and farming methods minimizing GHG emissions (e.g. conservative farming) and allowing for CO_2 storage in forests and grasslands.

FORESTS

Mountain forests are made up of trees with a life span up to 2-3 centuries or more. Alpine forests act as carbon sink, as a result of the forest-increment both in area and in biomass. Wood and biomass are essentially made of carbon where CO_2 can be stocked after it has been removed from the atmosphere via photosynthesis. Based on available data, by transforming the estimated biomass in the inventories in carbon on the base of 0.5 t carbon/t biomass, the total amount of carbon stocked in the above ground biomass of the alpine forest reaches 600 million t, which is the equivalent of 2.200 million t CO_2. According to a rough estimate, Alpine forests absorb every year 55 million t CO_2: a part of it is stocked in the growth of forest stock (accountable sequestration), a part is felled as structural wood (non-accountable sequestration) and a part as firewood (returned to atmosphere).

A wise forest management can significantly improve the performance of forests in storing CO_2. In sustainably managed forests, trees are harvested before their physiological age limit that allows for the ecosystem to remains in the more productive phases of the succession cycle. Additionally, wood products (construction, furniture, etc.) can stock the carbon for decades, before its release at the end of their life-cycle, when it is disposed of (often burnt producing energy and possibly replacing fossil fuels). Such a 'cascade' use of wood (primarily as a raw material, using only rest-products as fuel) can extend the carbon sequestration service[10].

Their distribution, in the long run, is largely determined by climate and soil conditions. Therefore, climate change can affect their stability through extreme events (wind gusts, dry periods, forest fires, floods, avalanches), expected to become more frequent, and pest

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[10] Angelini P. Reiterer M. (2015). The Statement On the Value of Alpine Forests and the Alpine Convention's Protocol on Mountain Forests in the framework of the international forestry policies beyond 2015. Innsbruck.

diseases attacking weakened trees. Climate change is expected to impact forest vegetation in three major ways:

- upward altitudinal and latitudinal shift of the forest timberline and shift in the distribution of species (already observed across Europe);
- increase in forest growth rate (already observed across Europe, with also reduced pressure playing a role);
- further development and impacts of pests and diseases, due to changed climate conditions stressing tree health[11].

Adaptation objectives proposed for forests and soils (e.g. forest recovery; sustainable use of soil), should be based on the integration of a set of items:

- the long life of trees that involves more uncertainty in planning;
- the social and economic pressures on how to manage forests (including the need to cut on forest management costs, the increasing demand for wood from different industries and energy, the increased concern and legal framework seeking to balance forest protection and wood mobilisation, the need to increase forest stability and resilience also due to their protective function, the increasing understanding of multiple forest ecosystem services, the sectoral impacts of demographic transition);
- adoption of risk management in forestry objectives and practice, by identifying the most exposed areas and being prepared to deal with emerging risks, including by providing operational and financial support to forest owners in case of damages;
- forest planning supporting resilience-oriented forest structures (development of stability in plants and their groups, maximum extension of regeneration to allow a quick recovery after extreme events), mixed forests, natural regeneration and uneven-aged patchy structures to maximize natural gene pools and forest resilience;
- reliable monitoring of damage occurrence and cooperation on/ exchange of data and experience for tackling climate change risks and damages;
- communication of the role played and the ecosystem services provided by, Alpine forests to the local and regional level, aimed to make the beneficiaries aware and open to set up payments schemes (PES) for the services received from forests[12].

A special attention has been paid on the protective function of mountain forests by the Alpine Convention. They actively protect against avalanche detachment, can stop rock falls, prevent erosion and form deep soils that reduce runoff; and because of their large extent in the steep slopes around human settlements and infrastructures. Different regulations and definitions are applied across Alpine countries to protective forests: therefore, the area identified with protective functions differs meaningfully from country to country. Often protective forests are defined based on the natural hazards they mitigate: rock- and stone-

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[11] Ballarin-Denti A. et al. (2014). Guidelines for Climate Change Adaptation at the local level in the Alps. Innsbruck.

[12] Ballarin-Denti A. et al. (2014).

fall; avalanche; landslide; torrent activity and debris flow. Two types of protective forests are usually found:

- *Object protection forests*, which link to objects (housing, buildings, infrastructures) to be protected from natural hazards damages;
- *Site-protection forests*, as forest stands with ecological sensitive soil conditions at the upper and lower timberline, where regeneration is problematic, economic exploitation is difficult/impossible and only allowed under specific requirements.

The effectiveness of the protective function can be ensured only by combining natural conditions with technical measures in forest management, implying higher costs for owners in case of damages and for maintenance. It is important to notice how protective function does not exclude tree felling and wood production. In protective forests, management and monitoring are necessary; wood production is usually compatible but more expensive: in some cases, trees are felled to regenerate the forest but not harvested to maintain a temporal protection through the roughness of the terrain: these very particular measures are financed by the state or by the beneficiaries of the protection[13].

MOUNTAIN AGRICULTURE

Mountain agriculture too risks to be heavily affected by climate change. Changes in precipitation patterns and average air temperatures increase affect hydrological regimes with an immediate impact on the use and distribution of water for agricultural uses. Seasonality of precipitation and inter-annual variability may affect crop yields, crop quality and even crop choice. Increases in temperature lead to higher evapotranspiration rates, thereby increasing crop water requirements across the Alps.

Increase in temperature coupled to an increase in atmospheric CO_2 levels are expected to have a fertilising effect on crop growth for some species, and on grassland productivity. Higher temperatures at critical times of the growing season may prolong the vegetative period resulting in a short term increase in agricultural yield and more productivity. Furthermore, the extension of the frost-free period in elevated areas further increases the extension of growing season of major Alpine crops. Finally, rising temperatures are projected to cause changes in current distribution of crops, extending the potential distribution area of some crops and reducing it for others. Climate change is expected to increase the spatial distribution and intensity of existing pests, diseases and weeds due to higher temperatures and humidity.

Future increase in forest fire risk, drought events, and more intense precipitations is likely to intensify hydrological erosion in the next decades. Furthermore, increases in

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[13] WG Mountain Forests of the Alpine Convention (2019). The protective function of Alpine mountain forests.

temperatures accelerate the process of mineralization of the soil organic matter decreasing soil organic carbon pools.

Climate affects animals both directly and indirectly. Indirect effects include climate influence on grassland and crops, and on water availability. Additionally, climate may also affect survival of pathogens and/or their vectors, which may cause risks for health in animal and human populations.

Thus more climate resilient agricultural practices and production systems can be introduced and supported, soils' organic matter improvement and resilience to water stress enhanced through sustainable management practices, support mechanisms for farmers to cope with extreme events introduced, a stronger link between agriculture and eco-tourism can be incentivised as a support to farmers' income, and stakeholders' involvement may help adapt farming practices and crops, and disseminate science-based information[14].

In the new **Action Plan on climate change in the Alps** being drafted by the ACB in 2019-2020, **specific sequences of measures are reported for Alpine agriculture and forestry,** jointly developed with WG MAMF.

In the field of **mountain agriculture**, they focus on the promotion of Alpine Products and increase in locally retained value added for a sustainable and climate-friendly agriculture, and on moving to organic and climate-friendly methods in Alpine farming.

In the field of **mountain forestry**, they focus on a fuller use of the potential of protective forests, the promotion of forests as carbon sinks, the conversion of forests to resilient ecosystems, the development and implementation of an alpine-wide sustainable forest management approach.

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[14] Ballarin et al. (2014).

2. Alpine Climate Target System 2050 and MAMF activity 2019-2020

Since 2016, the Alpine Climate Board (ACB) has been committed to the creation of a climate target system eventually approved by the XV Alpine Conference (2019). For designing the Alpine Climate Target System, the ACB proposed soft, but verifiable objectives for 2050 whose implementation may enhance the added value of alpine-wide cooperation.

The Climate Target System is based on the existing international, EU and alpine legal framework (**roof**) and on four **general principles** guiding the process. Two **overall strategic targets** (climate neutrality and resilience) have been operationalized in **sectoral climate targets**. The whole system strongly relies on **communication**, and includes a few **recommendations** on its implementation (the details can be found in the figure below).
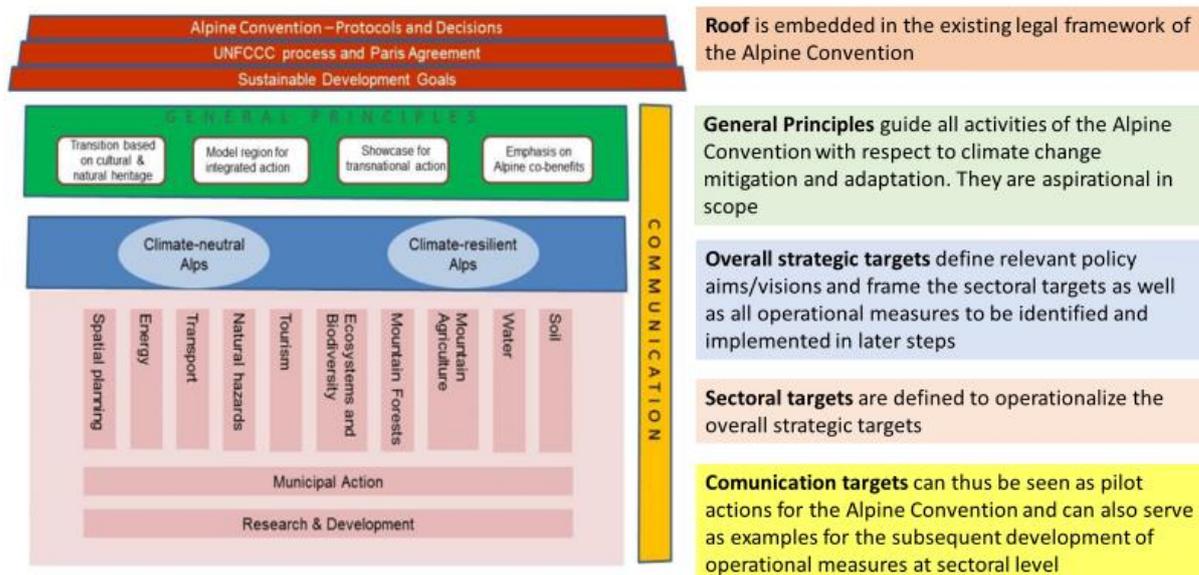
Fig. Climate Target System

Forests

Against the background presented, the Alpine Climate Target System 2050 identified four targets for forests which include the enhancement of the protective function of mountain forests, the improvement of their role as carbon sinks, an accelerated forest conversion by using more compatible climate-resilient species, and the adoption of sustainable forest

management in analpine-wide perspective where different regional uses of wood are balanced and priority goes to long-lived good products[15].

Agriculture

Against the background presented, the Alpine Climate Target System 2050 identified four targets for mountain agriculture. They include promoting energy self-sufficiency of farms to cover energy consumption with renewable energy sources; developing regional value-chains implying reduction on CO_2 emissions from transportation; promoting organic farming and certification of products from the Alps; using diversified crops, species and animal breeds to set up a climate-resilient agriculture in the Alps[16].

The **XV Alpine Conference** set up the Working Group (WG) on **Mountain Agriculture and Mountain Forestry (WG MAMF)**. This WG contributes to Priority 4 "Greening the Economy" of the MAP 2017-2022. The mandate of WG MAMF includes three activities. Here we focus on Activity 1. The group embraced mountain agriculture, sustainable management of mountain forests and their value chains with a particular attention to climate change and green economy. **The WG participated in operationalising the "Climate Target System 2050 of the Alpine Convention".**

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MAMF WG Activity

Activity 1 aims to support the operationalisation and implementation of the Alpine Climate Target System 2050 by focusing on climate-friendly and climate-resilient mountain agriculture and sustainable management of mountain forests. In particular Activity 1 builds on experience, good practices and shared knowledge in the Alps on the effects of climate change, with the purpose of drawing up an overview of initiatives aimed at adapting agriculture and forestry to climate change.

The Alpine Climate Target System aims to develop a system of objectives consistent to the international commitments of the countries involved (UNFCCC, EU and Alpine Convention) and aligned with the features of the Alpine territory. The resulting targets

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[15] Alpine Climate Board (2019). Climate-neutral and Climate-resilient Alps 2050. Innsbruck.

[16] Alpine Climate Board (2019).

should apply to the whole Alpine territory and be addressed through joint or consistent actions by several Alpine stakeholder groups.

The MAMF applies a similar approach limited to the mountain forest and agriculture sectors. Therefore, at first, information was collected on the legal bases and policies in place in the Alpine countries, with reference to mitigation and adaptation actions in these two sectors. In particular, the following steps have been implemented:

- Research / collection of national, alpine, regional and sub-regional laws and policies on climate adaptation / mitigation also across sectors (Section 1: Legal basis and general and sector planning tools).
- Identification of climate change impacts on the territory and on specific sectors (Section 1: Legal basis and general and sector planning tools).
- Sectoral targets and actions in the sectors of mountain agriculture and forests (Section 2: Initiatives and good practices for the sustainable management of climate change in the forest and agriculture sectors)
- Communication and recommendations for developing alpine-wide operational measures by exploiting the potential of the Alpine Convention and its instruments. (Section 3: Communications and recommendations: potential role of the Alpine Convention)

3. Legal basis and general and sector planning tools

3.1 Framework of adaptation and mitigation strategies

The added value of the **Alpine Climate Target System**, with respect to other national and international targets, lies in the specific characteristics, impacts and needs of the Alpine area and on the existing experience of the Alpine Convention.

Cooperative approaches based on **multi-level governance and stakeholder involvement** play an important role for the Alpine Convention. The activities which can be promoted through the Convention may allow for the development of common strategies and actions at an alpine-wide level, directly involving all Alpine countries and the Alpine Convention Observers. The Alpine Convention's cross-cutting scope, its legal basis and activities cover topics being especially relevant for the Alpine area. This broad scope of action allows for effective implementation and visibility of climate actions.

Showcase for transnational action	Many activities for climate change mitigation and adaptation require transnational action at the level of the Alpine Convention, to avoid unwanted overlaps between diverging national and/or regional approaches, create a higher impact in the overall Alpine area and increase visibility for the transnational dimension of problems and solutions. While the need for alpine-wide action is also relevant for other policy fields, there is a specific challenge with respect to climate change action, due to its cross-cutting and multi-level character. The Alpine Convention will move ahead with showcases for common action, which involve the relevant public and private stakeholders to avoid that mitigation and/or adaptation measures get stuck in the "implementation pipeline".

Fig. *Climate Target System 2050*

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MAMF WG Activity

In coherence with the roof and general principles of the Alpine Climate Target System, **the first step of MAMF activity 1** is a **review of relevant legal and strategic tools** in the Alpine countries, related to mitigation and adaptation initiatives to climate change in the agricultural and forestry sectors.

The description of the practices collected refers to:
- a geographical level (also within the Alpine territory),
- a thematic level (specific sectors),
- regional impacts and vulnerability (in specific areas and economic sectors)

AUSTRIA

National policies

In 2012, Austria was one of the first EU states to combine a **strategic approach** to climate change adaptation with a comprehensive action plan for the implementation of concrete recommendations for action.

Based on new scientific results, major findings from the 2015 progress report and current political developments, this strategy, **The Austrian strategy for adaptation to climate change[17]**, was fundamentally revised and further developed in 2016. All ministries concerned, the Federal Provinces as well as interest groups, stakeholders and NGOs were involved in the process.

The previous structure has remained unchanged. The paper comprises a **strategic part** (Context)[18] and an **Action Plan[19]** with concrete recommendations for action. 14 fields of activity are addressed in detail.

The revised strategy was adopted by the Council of Ministers in **August 2017** and acknowledged by the Conference of the Provincial Governors on 10 November 2017.

It represents the comprehensive guiding document for all of Austria's activities concerning the adaptation to climate change.

Many decisions having long-term effects - be it in flood control or in the field of infrastructure - must be taken in a way that they provide the most detailed picture possible of trends that result from climate change already now. The Federal Government continues its support of research activities, thus deepening the scientific basis for decision-making and the successful implementation of the Strategy for Adaptation to Climate Change.

Alpine policies

The **Austrian strategy for adaptation to climate change** comprises objectives and recommended actions for the following sectors:

- Agriculture

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[17] The strategy can be downloaded on the following website:
https://www.bmnt.gv.at/umwelt/klimaschutz/klimapolitik_national/anpassungsstrategie/strategie-kontext.html

[18] file:///C:/Users/Blu-d/Downloads/NAS_Context_2017%20english%20full%20size.pdf

[19] file:///C:/Users/Blu-d/Downloads/NAS_Action%20Plan%202017%20english%20full%20size.pdf

- Forestry
- Water resources and water management
- Tourism
- Energy
- Construction and Housing
- Protection against natural hazards
- Disaster Management
- Health
- Ecosystems and biodiversity
- Transport infrastructure including aspects of mobility
- Spatial planning
- Business/Industry/Trade
- Cities – urban green and open spaces

There is **no specific alpine section** in the strategy but many of the above sectors have a close connection to the alpine region and in some recommendations like **sustainable soil composition/protection of soil fertility** and **preservation/revitalization of pastures** there are references to the Alpine Convention.

In the Alps, the signatories of the **Alpine Convention** have become active and adopted the **Action Plan on Climate Change in the Alps in 2009**. Its aim is to make the Alpine region a role model in preventing and adapting to climate change. The Alpine countries have committed themselves to implementing the climate action plan by adopting concrete measures to fight climate change and providing the necessary resources for this purpose. Acting on a request by the European Council, a **macro-regional strategy for the Alps has been in preparation since 2013**, and this also has the task of addressing climate change (EUSALP Process 11). Together with six other Alpine countries, Austria is actively involved in its development[20].

Agriculture and Forestry Sector	Both **agricultural sector and forestry sector** are specific sections of the Austrian strategy for adaptation to climate change. For both sectors recommended actions are described. For **agriculture in mountains**, the maintenance of extensive land use in mountainous and alpine elevations and the preservation of existing pastures and revitalization of abandoned pastures are recommended.

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[20] Helmut Hojesky from the Austrian Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology is Chair of the Alpine Climate Board 2019/2020 and also aware of the targets and implementation of the Alpine Climate Target System 2050. Further the PLANALP group Dealing with Natural Hazards is chaired by Austria and developed a Report on the state of the Alps focusing on natural hazard risk governance (connection to mountain forests).

The objective is the maintenance of protective and recovery function, of feed production and the targeted revitalization and rehabilitation of abandoned alpine pastures under consideration of nature conservation aspects.

Also for **forestry management** the sustainable soil composition/protection of soil fertility is considered**.**

FRANCE

National policies[21]

The adaptation process of France to climate change, initiated at **national level** by the Ministry of the Environment at the end of the 1990s, is complementary to the **mitigation actions**. It aims to **limit the impacts of climate change** and the associated damage on socio-economic activities and on nature. The objective of public adaptation policies is to anticipate the impacts to be expected from climate change, to limit their possible damage by intervening on the factors that control their extent (for example, the urbanization of risk areas) and to take advantage of potential opportunities.

1.Climate-impact knowledge GICC 1999
2.National Strategy 2006
3.National consultation 2009-2010
4.PNACC (National Climate Change Adaptation 5.Plan) 2011-2015
6.PNACC 2015 assessment
7.Development of 2016-2017 proposals
8.2nd PNACC - 2018-2022
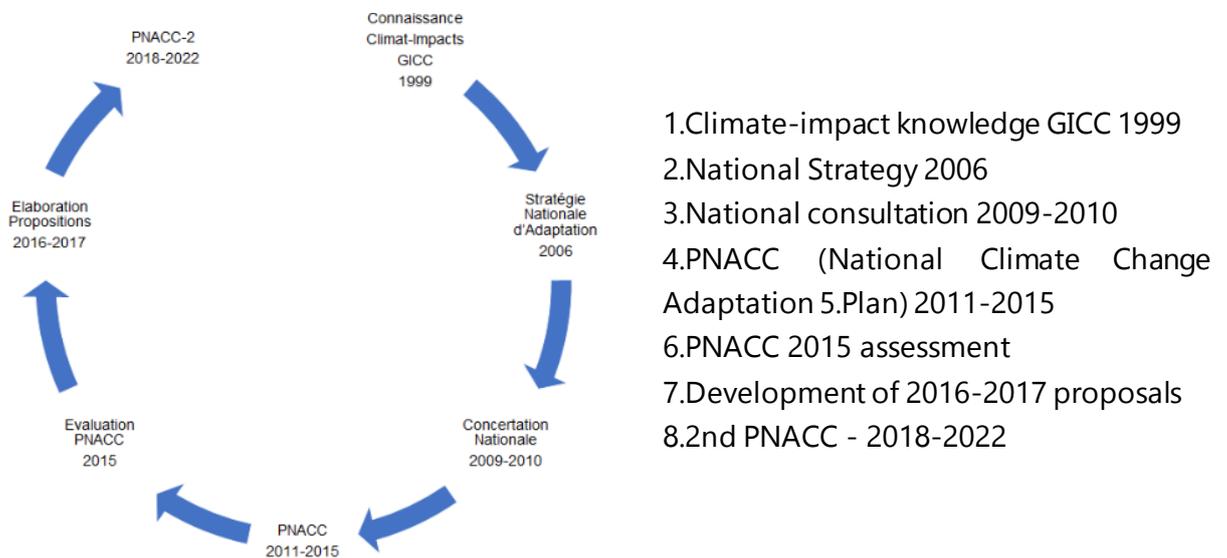
Fig. *Chronology of official documents on adaptation to climate change in France (*https://www.ecologique-solidaire.gouv.fr/adaptation-france-au-changement-climatique)

The **National Climate Change Adaptation Strategy** expresses the State's point of view on how to tackle the issue of adaptation to climate change. This strategy was developed within the framework of a broad consultation, led by the National Observatory on the effects of global warming (ONERC), involving the various sectors of activity and civil society under the responsibility of the interministerial delegate for sustainable development. It was validated by the Interministerial Committee for Sustainable Development meeting on November 13, 2006 by the Prime Minister.

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[21] **https://www.ecologique-solidaire.gouv.fr/adaptation-france-au-changement-climatique**

With the objective of presenting concrete and operational measures to prepare France to face and take advantage of new climatic conditions, France adopted in 2011 its first **National Plan for Adaptation to Climate Change** (**PNACC**)[22] and its Annex[23] for a 5 year period.

The fruit of extensive consultation in 2010 which led to more than 200 recommendations which served as the basis for its implementation, this first PNACC was presented on July 20, 2011 by the Minister of Ecology.

First plan of this magnitude published in the European Union, the recommended measures concerned all sectors of activity around 4 objectives:

- protect people and property
- avoid inequalities in front of risks
- limit costs and take advantage of benefits
- preserve natural heritage

The first PNACC 2011-2015 was intersectoral and interdepartmental. It covered 20 areas: transversal actions, health, water, biodiversity, natural risks, **agriculture, forestry**, fishing and aquaculture, tourism, energy and industry, transport infrastructure and services, town planning and built environment, information, education and training, research, financing and insurance, coastline, mountains, European and international action and governance.

The variety of themes dealt with in the PNACC perfectly illustrated the logic pursued: incorporating adaptation into all public policies.

The 2014 environmental conference concluded that the national adaptation strategy should be strengthened after carrying out an external evaluation of the PNACC. The report was submitted to the National Council for Ecological Transition (CNTE) for advice on December 17, 2015.[24]

After the success of **COP21**, France launched work to update its adaptation policy in line with the Paris Agreement. With its second national adaptation plan to climate change (UCC-2), France is effective adaptation from the middle of XXI th century in a regional climate in mainland France and the overseas consistent with an increase in temperature of + 1.5 to 2 ° C globally compared to the XIX th century.

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[22] https://www.ecologique-solidaire.gouv.fr/sites/default/files/ONERC_PNACC_1_complet.pdf

[23] https://www.ecologique-solidaire.gouv.fr/sites/default/files/ONERC_PNACC_Eng_part_2.pdf

[24] https://cgedd.documentation.developpement-durable.gouv.fr/documents/Affaires-0009000/010178-01_rapport.pdf

Significant changes are proposed through this **second National Climate Change Adaptation Plan**[25]. They concern in particular a better treatment of the link between the different territorial scales, the strengthening of links with international and cross-border and the promotion of solutions based on nature.

Alpine policies

In the context of climate change in France, **regional policies** are active[26] and there is a request for the opinion of the Alps on regional plans, but no specific "alpine section" is considered.

The DREAL (Regional Directorate for the Environment, Planning and Housing) is the regional service of the Ministries of **Ecological and Solidarity Transition** (MTES) and of **Territorial Cohesion and Relations with Communities** (MCTRCT). Under the authority of the regional prefect and the prefects of the departments, it participates in the implementation and coordination of public policies of the State within its fields of competence.

Under the authority of the regional prefect and the prefects of the departments, the DREAL participates in the implementation and coordination of public policies of the State in terms of:
• sustainable development and planning
• ecological transition
• fight against climate change,
• preservation of the quality of the environment (water, air, soil), biodiversity and landscapes,
• prevention of pollution, risks and nuisances
• housing, construction and urban renewal
• transport and infrastructure

DREAL also contributes to informing and educating citizens on the challenges of sustainable development, raising their awareness of risks, and participating in the emergence of a green and equitable economy.

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[25]https://www.ecologique-solidaire.gouv.fr/sites/default/files/2018.12.20_PNACC2.pdf

[26]http://www.auvergne-rhone-alpes.developpement-durable.gouv.fr/seminaire-regional-plan-climat-air-energie-a15054.html

In the fight against climate change facing its challenges, decisions have been taken at different scales, international, European, national and local. DREAL intervenes on several levels and titles, in particular through local action.

As part of its missions, DREAL co-manages the regional observatory on the effects of climate change, the foundations of which are based on:

- develop and disseminate knowledge on climate change and its effects;
- encourage the development and implementation by stakeholders of adaptation strategies;
- constitute a place of exchange and consultation between the actors concerned by the problem of climate change, by setting up meetings and thematic working groups. It is complementary to the OREGES (Observatory of energy and greenhouse gases), which focuses on aspects related to mitigation.

Agriculture and Forestry Sector

In the **Plan climat national** there are actions about "Nature and environments" such as **soil or forest**[27], and actions about "Economic sectors" such as **agriculture**[28]

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[27] https://www.ecologiquesolidaire.gouv.fr/sites/default/files/ONERC_Concertation_PNACC2_Fiches%20recommandations%20Prevention%20resilience.pdf

[28] https://www.ecologiquesolidaire.gouv.fr/sites/default/files/ONERC_Concertation_PNACC2_Fiches%20recommandations%20Filieres%20economiques.pdf

GERMANY

National policies

The German cabinet adopted the **German Climate Adaptation Strategy[29]** in 2008, which described need and possible courses of action towards the effects of climate change. The linked action plan concentrated on climate impact monitoring and early warning systems and collected existing state initiatives and processes to prepare for climate change.

In 2016, the Federal German government resolved the newly revised **National Climate Protection Plan 2050[30]** to define the political framework for detailed climate protection actions fulfilling the Paris Agreement and national goals regarding greenhouse gas neutrality, limiting global warming and supporting a low carbon economy. It stresses among others the contributions of forests, forestry and the wood value chain for climate change mitigation and adaptation. The resulting working plan called **Climate Protection Program 2030[31]** outlines specific steps to meet the national climate protection goals by adapting legislation and implementing national funding programs in order to cut greenhouse gas emissions as well as promote renewable energy sources and new climate-friendly technologies.

The **National Climate Protection Initiative[32]** provides financial support for climate protection projects since 2008. The world's first **law on climate protection[33]** was adopted on 18 December 2019 to specify annual sectoral emission targets, e.g. for agriculture and forestry, and to establish transparent control mechanisms for these targets. It is one of numerous new laws and acts passed to help regulate Germany's carbon dioxide emissions for mitigation purposes. Moreover climate protection will be one of the key topics of the current German EU Council presidency.

In compliance with actions on federal level Bavaria adopted the renewed **Bavarian Climate Protection Program 2050 (KLIP2050)**[34] in 2014 focusing on financial support for

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[29] *http://www.bmu.de/fileadmin/bmu-import/files/pdfs/allgemein/application/pdf/das_gesamt_bf.pdf*

[30] *https://www.bmu.de/themen/klima-energie/klimaschutz/nationale-klimapolitik/klimaschutzplan-2050/*

[31] *https://www.bundesregierung.de/resource/blob/975226/1679914/e01d6bd855f09bf05cf7498e06d0a3ff/2019-10-09-klima-massnahmen-data.pdf?download=1*

[32] *https://www.klimaschutz.de/*

[33] *https://www.bmu.de/gesetz/bundes-klimaschutzgesetz/*

[34] *https://www.bestellen.bayern.de/application/eshop_app000006?SID=292166837&ACTIONxSETVAL(pdfload.htm,A ARTxNODENR:344761,USERxPDFNO:PDF)=Z*

municipal climate protection, conserving and developing natural carbon sinks as well as promoting cross-sectoral adaption strategies and research. The accompanying **Climate Protection Offensive's**[35] working plan specifies ten fields of actions:

- Climate-adaptive forest management
- Wetland restoration
- Water protection and management
- Climate-friendly agriculture, organic farming and food
- Innovation and research
- Energy
- Environmentally-conscious mobility
- Increase in climate architecture
- Increase in wood construction
- Greenhouse gas neutrality of state and municipalities

Furthermore, the **Bavarian Climate Adaptation Strategy**[36] assesses the expected impacts of climate change in various fields and lists operative measures for agriculture, forestry, nature and soil conservation, civil protection, human health, regional and construction planning, transportation and energy, industry, tourism and finance. To address climate change impacts and implement precaution and adaptation measures in an early stage a bundle of initiatives, programs and research projects was promoted by the Bavarian Government in recent years. Continuing the flood action plan (AP 2020plus), enhancing local flood protection and water management measures, promoting local forestry initiatives as well as conversion of monotonous forest stands into climate-adapted, resilient mixed forests based on climate models, financially supporting climate-friendly and nature-compatible agriculture practices, restoring wetlands as carbon sinks and taking actions in accordance to the Bavarian biodiversity program 2030 are only a few.

Alpine policies

The most important instrument for sustainable development and protection Bavarian alpine space is the alpine convention and its protocols as well as the EU-Strategy for the Alpine

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[35] https://www.stmuv.bayern.de/themen/klimaschutz/klimaschutzgesetz/doc/klimaschutzoffensive_lang.pdf

[36] https://www.bestellen.bayern.de/application/eshop_app000002?SID=651786580&ACTIONxSETVAL(pdfload.htm,AARTxN ODENR:349824,USERxPDFNO:PDF)=Z

Region (EUSALP). The **Eco-Plan Alps 2020**[37] compiled by the Bavarian State Ministry of Environment and Consumer Protection in 2012 defines a dynamic and strategic framework to conserve and improve ecological conditions and natural resources of the Alps with regard to guidelines of the Alpine Convention.

Agriculture and Forestry Sector	Within **Bavarian Climate Adaptation Strategy** a special section on the Bavarian Alps concentrates on relevant fields of action like water management, agriculture, forestry, environmental protection, soil and geological hazards and tourism. Together with Climate Protection Offensive's feasible measures are identified: - Special funding programs for the adaption, conversion and restoration of mountain forests - Further development of alpine research - Reinforcing monitoring of alpine climate, geological risks and species composition - Adaptation of alpine framing practices and pasturing concepts - Supporting climate-compatible alpine tourism.

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[37] *https://www.cipra.org/shared/pdfs/file_oekoplan-2020-bayern.pdf_e8e88dc9372740ae1ec3e35d1c37eb2b*

ITALY

National policies

In Italy, the awareness of climate anomalies and increased frequency of impacts and extreme climate events has highlighted the need to lay the foundations for a national climate policy that includes both mitigation and adaptation measures to deal with causes and effects of climate change.

In 2020, the two main references for climate change mitigation and energy, and adaptation to climate change are the National Integrated Plan for Energy and Climate (PNIEC, revised in 2020) and the National Adaptation Strategy (NAS, 2015) and Plan (NAP, 2017), respectively.

Among the **mitigation strategies**, the **National Integrated Plan for Energy and Climate (PNIEC, 2020)** aims at setting a change in the energy and climate policies in Italy. It aims to allow the country to meet the EU targets on energy efficiency and security, use of renewable energy sources (RES), implement a single energy market to attain competitiveness in the sector by 2030. It gives citizens a pivotal role in the energy transition and as beneficiaries and actors of climate and environmental policy. The economy of the country is expected to gradually move to a circular model that provides benefits to the society at large from a wise environmental management. Green and clean energy become drivers for an industrial and ecologic reconversion in the whole country.

The Plan includes five lines of action being integrated with each other: decarbonisation, energy efficiency, energy security, development of internal energy market, research-innovation-competitiveness.

In short the overarching goals of the Plan can be summarised as: a reduction by 56% of emissions from large industry plants; by 35% in the tertiary, land transport and civil construction sectors; and a target of 30% of total energy production from RES.

Climate change **adaptation measures** were already present in some sectoral strategic national documents such as the **National Biodiversity Strategy (2010)**[38] and the White Paper **"Challenges and opportunities of rural development for mitigation and adaptation to climate change" (2011)**, issued by the Ministry for Agriculture.

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[38] *https://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/Strategia_Nazionale_per_la_Biodiversita.pdf*

However, the main climate change adaptation policy documents at the national level in Italy are the **National Adaptation Strategy (NAS, 2015)**, and the **National Adaptation Plan (NAP, 2017)**. They set times and approaches for internalising adaptation in national, district, regional and local sectoral Plans and Programs.

NAS identifies potentially vulnerable sectors, assesses present and expected impacts of climate change on them, their vulnerability to present and future impacts, and their adaptive capacity. It considers also some cross-sector aspects. NAS also tries an evaluation of already implemented adaptation measures in sectors and (when possible) a comparison between costs of inaction and costs of adaptation for each sector. Specific physical and geographical vulnerabilities are recognised to **"mountain areas" (Alps and Apennines)** and the "Po river basin". Both forestry and agriculture are among the NAS vulnerable sectors.

In short, the NAS provides a vision to address climate change adaptation, actions and guidelines to build adaptive capacity, and concrete proposals on cost-effective adaptation measures and priorities.

Six macro-climatic regions are identified in the country consistent with expected variations in temperature and physical phenomena as well as with impacts of climate change classified as threats and opportunities (i.e. negative and positive ones) for each of the macro-regions and sectors. Every impact has been assigned a level of intensity (from low to high). In line with EU and international practice, adaptation measures are divided in three types (soft, grey and green).

National adaptation measures for the **forest and agricultural sectors** include providing support to ecosystem services-based solutions, promoting forest planning to prevent and manage risks, simplification and harmonization of forest laws and planning, improving resilience to different types of stress or impacts that may increase due to climate change, and investing in plants and infrastructures (e.g. forest roads) that may ease the implementation of sustainable forest management and production & consumption in the sector (PNACC).

The adaptation measures envisaged in NAS fall within national policies of environmental protection, prevention of natural disasters, sustainable management of natural resources and health protection, as well as within the conditionality of greening and rural development programs (RDP) of the Common Agricultural Policy (CAP). They aim at the protection of the soil through the reduction of erosive phenomena, the conservation of the organic substances of the soil, the protection of the structure and the maintenance of the soil in conditions suitable for cultivation, environmental quality in general, and management and the protection of water resources and their quality. Additionally

improvements in education and training on new farming techniques in the sector (including the selection of climate-resilient and resistant genotypes and breeds) as well as some significant business-oriented measures have been indicated. To be mentioned, the improvement of business efficiency, their economic and environmental sustainability and territorial integration also through multifunctionality, the enhancement of insurance and investments for enhancing risk prevention and management in agriculture, regional economic assessment of the benefits and costs of the implemented adaptation measures (PNACC 2017).

Alpine policies

In Italy at the **regional level**, the main adaptation action in the **forest sector** refers to planning multifunctional forest management oriented to soil defense and reduction of hydrogeological hazards as well as to ecosystem protection. Additionally measures are envisaged that aim to increase the resilience of forest ecosystems to climate stressors by maintenance and improvement of surface land, promote awareness of local communities on threats and impacts of climate change on forests and coherent good practices of management and interaction with such ecosystems, and ensure the good health of forest ecosystems and their ability to deliver all their services.

Examples of regional adaptation measures in the **fields of agriculture** and cattle breeding include protection and enhancement of phytosanitary monitoring systems in order to reduce potential spread of pests and exotic species, and plant diseases; development of economic models in support to adaptive agriculture and business; incentivisation of conservative agriculture techniques increasing climate resilience of crops and soils; promotion of good practices in adaptive cattle breeding by means of selection of more resilient breeds and forage types.

As **regional/alpine level** example, the **Lombardy Region** adopted a **Regional Strategy for Adaptation to Climate Change (RAS)**[39] in 2014, and in

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[39] *https://www.regione.lombardia.it/wps/portal/istituzionale/HP/DettaglioRedazionale/servizi-e-informazioni/cittadini/Tutela-ambientale/Qualita-dell-aria/adattamento-al-cambiamento-climatico-verso-una-strategia-regionale/adattamento-al-cambiamento-climatico-la-strategia-regionale*

2016 developed the **Regional Action Document[40] (RAD)** for Adaptation to Climate Change, i.e. an adaptation planning document (de facto to be considered as a "plan"). Within these documents, there are no sections specifically dedicated to alpine areas, but the theme of diversity and specificity of the **alpine context** is taken up within the different parts of the documents.

Agriculture and Forestry Sector	In the **fields of agriculture and forestry**, 15 fully relevant measures to be implemented in the short run exist in NAP and 10 in RAD which, having regard for the total number of measures, means that the latter includes a larger set of measures directly addressing these two sectors (GoApply!, 2019).

In particular, in the **agricultural sector** the proposed **actions of RAS** regarding the protection and enhancement of phytosanitary surveillance systems, but also of the creation and testing of reference economic models for "adapted" agricultural development with specific objectives such as:

- Ensure support for the adaptation processes of the sector to climate change.
- Provide a context of vision for an "adapted" agricultural development to actively accompany the choices of the operators in this sense.
- Co-produce, disseminate and transfer the knowledge acquired and the results of any experiments with and to all interested actors.

Other actions concern the **promotion of the use of agronomic techniques of conservative agriculture** to increase the resilience of cultivation systems and soils to climate change, with the objectives of:

- Making regional cultivation systems more resilient to climate change and the stress factors related to it, also in harmony with the mitigation objectives (exploiting the potential of carbon storage in soils).
- Increase the resilience of agricultural and forestry soils in the face of the pressure factors of expected climate change;
- Promote conservative soil management by enhancing their functions.

On local adaptation for the **Italian Alps** it is worth mentioning the attempt to implement an international voluntary declaration on principles for local adaptation planning (known as the "**Budoia Charter**", promoted in 2017 by the international network of municipalities "Alliance in the Alps") building upon the "Guidelines for local adaptation to climate change |

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[40] *https://www.regione.lombardia.it/wps/wcm/connect/946249ce-87c4-4c39-88f9-5eab3a264f14/Documento+Azione+Adattamento+RL_9dic.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-946249ce-87c4-4c39-88f9-5eab3a264f14-lCXS9h4*

in the Alps" (2014). This exercise has brought to the **harmonisation of the impacts and targets set** at the international level by the Guidelines, the ones of National Action Plan and the ones of Regional Adaptation Document as available for Regione Lombardia (at least for the two sites localised within that region). Forests and agriculture were among the sectors under investigation and specific alpine-wise measures have been set for the involved sites as well as sectoral planning tools suitable to be modified coherently with the identified targets and measures have been identified[41].

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[41] For further information see the Project on the implementation of the Budoia Charter, promoted by the Italian Delegation to the Alpine Convention and supported by the Permanent Secretariat of the Alpine Convention that was developed under the scientific guidance of Fondazione Lombardia per l'Ambiente (FLA) in 2018-2019. For a description of the process, see: Cetara et al. (2020) Governing and Planning Local Climate-Change Adaptation in the Alps.

National policies

Slovenia has a **Strategic Framework for Climate Change Adaptation**. The Ministry of Environment and Spatial Planning (MESP) developed the Strategic Framework[42], which was approved at the end of 2016. It proves a long-term vision and strategic guidelines for adaptation –related activities. The ambition is for Slovenia to be fully adapted to climate impacts by 2050 and to develop into a climate resilient and sustainable society with a high quality of life.

The Strategical Framework includes four separate annexes:
1. A guide to Terminology[43].
2. Assessment plan for analysing climate impacts until the end of the 21st century[44].
3. Comparisons of good adaptation processes in other European Union (EU) member states[45].
4. Methodology for determination current and future vulnerability levels for Slovenia regions[46].

The Framework Programme for Transition to a Green Economy[47] adopted in October 2015, together with **Plan of Governmental Activities for 2015-2016**, refers to the need for integration in sectoral strategies. It links climate adaptation particularly with the objectives of biodiversity conservation, green jobs creation, sustainable urban development, and green agricultural practices.

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[42] MESP, 2016; Strategic Framework for Climate Change, Official Journal OJ:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_ang.pdf

[43] MEPS, 2016; Annex 1 to Strategical Framework,

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga1.pdf

[44] MEPS, 2016; Annex 2 to Strategical Framework,

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga2.pdf

[45] MEPS, 2016; Annex 3 to Strategical Framework

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga3.pdf

[46] MEPS,2016; Annex 4 to Strategical Framework

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/podnebne_spremembe/SOzP_priloga4.pdf

[47] MEPS, 2015. The Framework Programme for Transition to a Green Economy – OPTGE Action Plan for implementation (AP OPTGE) and Plan for Governmental activities and for Government services (PGAGS) 2015-2016, Official Journal OJ http://www.vlada.si/fileadmin/dokumenti/si/projekti/2016/zeleno/opzg_akcijski_nacrt_in_nacrt_aktivnosti.pdf

In the **new Spatial Planning Law**[48], which came in force on June 1st 2018, climate adaptation considerations are expected to form an integral part of development processes at local and the regional level.

Slovenian's Strategical Framework intended to be followed up by a **National Adaptation Plan (NAP currently in preparation),** which will take into an account **national risk assessments and a comprehensive national climate vulnerability assessment**[49]. The NAP drafting process has not yet started, as vulnerability assessments for the sectors and municipalities are still ongoing[50].

The Strategic Framework encourages the mainstreaming of adaptation at all regional and local levels. According to the **new umbrella Spatial Planning Law**[51] the regions are by 2023 required to develop regional development plans and regional spatial plans that should include climate vulnerability assessments. Climate adaptation considerations, including green infrastructure, should now form an integral part of spatial, urban and land-use planning processes at all levels. This is in line with a new strategic approach under development[52] that would integrate development planning and spatial planning at regional level, instead of relaying only on municipality –level spatial planning.

Close-to-nature forestry

Sustainable, close-to-nature and multifunctional forestry are the main principles for preserving forest area, regardless of the ownership, and ensuring a multifunctional role that includes environmental, social and economic aspects.

The **Slovenian National Forest Program** is a basic strategic document aimed at defining a national policy for the sustainable development of forest management. It represents the implementation of the Environmental Action Program at national level, which identifies four priorities: climate change, nature and biodiversity, environment and health, quality of life, natural resources and waste. Forests play an important role in mitigating climate

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[48] Government of the Republic of Slovenia, 2018, Law on Spatial Planning, Official Journal OJ:

[49] MESP climate adaptation activities; Official Journal OJ:

http://www.mop.gov.si/si/delovna_podrocja/podnebne_spremembe/prilagajanje_podnebnim_spremembam/; accessed 03.05.2018

[50] Personal communication with MS contact

[51] Spatial Planning Law of the republic of Slovenia, 2018

[52] Project V6-1652, CRP 2016, 2016:

http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/ragionalno_prostorsko_nacrtovanje/model_povezovanja_ prostorsega_nacrtovanja.pdf

change through carbon sequestration and wood production for wood products and energy. Climate change has certainly an effect on forests (droughts, storms and insects). In chapter 6.3.2 Forests and climate change, forest management objectives are defined; ensuring a CO_2 sink; increase the use of wood as a material and energy source; and adapt forest management to climate change.

Alpine policies

In Slovenia, municipalities are the only level of self-government; they have an extensive role regarding spatial and urban planning, housing, water management, economic development, tourism and environmental protection. Agriculture, forestry and water management are the only sectors with active management plans containing adaptation.

Sectoral plans address adaptation and include:
- **the Strategy for Adaptation of Slovenian Agriculture and Forestry to Climate Change (2008)** with an action plan implemented within the **national Rural Development Programme 2014-2020.**
- **Resolution on the National Forest Program**[53]
- **The Natura 2000 Management programme for Slovenia for the period 2014-2020**[54]**.**
- **The River Basin Management Plans for the Danube and Adriatic Sea Basins 2016–2021**, which focus on drought, and
- the **Flood Risk Mitigation Plan on flood protection projects**.

In the water management sector, the adopted **Water Management Plan for the Danube and Adriatic See Basins for the 2016–2021 Period,** which also defines measures that contribute to climate change adaptation.

Since 2006, Slovenia has been the host of the **Drought Management Centre for Southeastern Europe – DMCSEE** (under the United Nations Convention to Combat Desertification – UNCCD and the World Meteorological Organisation – WMO). The groundwork for the National Action Plan for Drought Management in Slovenia was prepared in the framework of DMCEEE, which examined current drought management in Slovenia and put forward specific proposals for its improvement.

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[53]Resolucija o nacionalnem gozdnem programu (ReNGP),Uradni list RS št. 111/07
(Resolution on the National Forest Program (Official Gazette of the Republic of Slovenia, No. 111/07)
[54] http://www.natura2000.si/en/natura-2000/life-management/programme-management/

For biodiversity conservation, **the Natura 2000 Management programme for Slovenia for the period 2014-2020** has been adopted for the management of NATURA 2000 sites. It determines conservation goals and measures for habitats and species, aiming to maintain or improve their conservation status and thus also to improve their resilience to climate change.

Administration for Civil Protection and Disaster Relief under Ministry of Defense, is the national coordination body for risk assessment processes (providing links with adaptation related policies through Inter-ministerial working group on Disaster Risk Assessments) and also responsible for national emergency response plans in co-operation with other ministries.

Climate adaptation initiatives at the local and /or regional levels are so far mostly based on on-off participation in various projects (e.g. pilot research, transnational cooperation, LIFE). Some of the frontrunners include the municipality of Ajdovščina, which developed its local draft adaptation strategy55 based on the regional "**Strategy of agricultural sector adaptation to climate change in the Vipava Valley 2017-2021**".

Agriculture and Forestry Sector	The latter is one of the key documents in the framework of the **LIFE project ViVaCCAdapt** developed by the Ajdovščina Development Agency and financed by the LIFE Programme and the Ministry of the Environment and Spatial Planning of the Republic of Slovenia. A key document response to local user need, a reflection of the situation on the field, and that it includes measures, which comply with sustainable development guidelines. Objectives: 1. To provide the evidence-base for adapting local agriculture to climate change. 2. To determine the priority measures for adapting local agriculture to climate change. 3. To provide guidelines for implementing measures for adapting local agriculture to climate change. By 2021, the agricultural sector in the Vipava Valley will implement evidence-based decisions on adaptation measures aimed at **improving agriculture's resilience** to the expected climate change impact.

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[55] Ajdovščina municipality, 2017 Proposal for Strategy on the Agricultural sector Adaptation to clime change in the Vipava Valley of Municipality Ajdovščina for the period 2018-2021, Official Journal OJ: https://www.ajdovscina.si/mma/strategija-kmetijstvo.pdf/2017121813180177/?m=1513599475

SWITZERLAND

National policies

Switzerland pursues an active policy on reducing greenhouse gases, thus contributing to the internationally agreed target of limiting global warming to considerably less than 2 °C, and ideally 1.5 °C. The **CO$_2$ Act[56]**, the heart of Swiss climate policy, thus pursues **a domestic emission reduction target for 2020 by at least 20% from their 1990 levels**[57], and is concerned with different instruments for buildings, transport and industry.

After the ratification of the Paris Agreement in 2018, the Federal Council decided in 2019 that Switzerland should reduce its **greenhouse gas emissions to net zero by 2050**. A **long-term climate strategy[58]** that will indicate how Switzerland can reduce its greenhouse gas emissions to net zero and what measures will be needed to achieve this target is currently in development.

However, since even if global warming can be restricted to 1.5 °C, **adapting to the effects of climate change** becomes more and more important. In 2012, the Federal Council adopted the first part of its **strategy for adaptation to climate change in Switzerland**. This sets out the goals and principles for adaptation at the Federal level, identifies the areas for action in nine sectors and describes the cross-sectoral challenges. In 2014, the Federal Council completed its adaption strategy by an **action plan** that summarises the Federal Offices' concrete adaptation measures to climate change in different sectors[59].

Alpine policies

There **is no specific national policy** for coping with climate change in Alpine and mountain regions. The **Swiss strategy for adaptation to climate change** of 2012 and the

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[56] Key topics of the CO$_2$ Act can be found on the following website:

https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate-policy.html

[57] The Swiss Parliament is currently discussing a total revision of the CO$_2$ Act that sets out objectives and tools for reducing greenhouse gas emissions in the period up to 2030, key topics of the ongoing debate are summarized on the following website:

https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate-target2050.html

[58] For further information cf: https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate-target2050/langfristige-klimastrategie.html

[59] Both strategy and action plan can be downloaded: https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/anpassung-an-den-klimawandel/strategie-des-bundesrates-zur-anpassung-an-den-klimawandel-in-de.html

related **action plan** of 2014-2019 defines objectives and 63 measures to be taken in the following sectors:

- Water management
- Natural hazards
- Agriculture
- Forestry
- Energy
- Tourism
- Biodiversity management
- Health
- Spatial development.

Although neither the strategy nor in the action plan has a specific alpine focus, many of the above sectors have a close connection to the alpine region such as, e.g., water and natural hazards management, agriculture or forestry.

Agriculture and Forestry Sector

For **Mountain Agriculture,** the Swiss strategy for adaptation to climate change proposes to adapt agricultural production optimally to the changes in site suitability. This allows to maximise production potential e.g. due to the prolongation of the vegetation period by at the same time reducing risk and hazard exposure which may increase e.g. due to more frequent and severe shortages in water supply, droughts or heavy rainfall.

In **Mountain Forestry,** the first adaptation measures should reduce already existing risks and increase adaptability through carefully planned regeneration, particularly in forests with a protective function. Careful planning also helps to reduce future risks such as, e.g., forest fires due to rising temperatures and frequency of drought periods.

3.2 Impacts, vulnerability and resilience capacity

Climate change impacts the Alpine ecosystem and its inhabitants in several ways.

For example climate change alters pre-exiting patterns of **natural hazards** in the Alpine region: avalanches, landslides, floods, forest fires etc. Extreme weather events tend to occur more frequently, and risks are becoming less predictable. Permafrost degradation increases the risk of ice and rock fall and damage to high-altitude infrastructure.

The Alps are known as the main freshwater supplier for Europe, but climate change leads to changes in **precipitation patterns**. There tends to be less snow but more rain in winter and less water in the summer, with drought episodes becoming more frequent, especially in the southern and south-eastern Alps. The decrease of snow and the melting of glaciers also reduce the amount of stored water.

Many Alpine **plants and animals** are specialists for cold areas. As the climate gets warmer, they have to move to higher altitudes. This leads to a loss of habitat surface. Some species may eventually be displaced by more competitive ones from lower regions.

Tourism in the Alps is highly dependent on the natural attractions (landscape, snow, wild water) which are potentially affected by climate change. Infrastructure and even hiking and mountaineering routes are now subject to a higher risk of natural hazards. Tourism itself contributes to climate change, especially through the prevalent use of motor cars for recreation in the Alps.

All the above-mentioned sectors can be considered, at least to some extent, related to agriculture and forestry, since they affect the alpine landscape as well as the behavior of people, visitors, policy makers and companies in the Alps. However, more specific impacts have been identified concerning mountain forests and agriculture in the Alps – on which this report mainly focuses.

Agriculture and Forestry Sector

Due to climate change, **mountain forests** are at increased risk from dry periods and extreme events such as wind gusts and forest fires. Weakened trees also become more vulnerable to pest diseases. On the other hand, the forest cover is growing in the Alps due to the abandonment of cultivated areas and the rise in temperature. **Sustainable forest management** is key to the Alpine climate change strategy, because forests provide a carbon sink, they supply wood as construction material and renewable energy source and they offer

natural protection from avalanches, floods and other disasters – at a cost up to ten times lower than artificial protection structures.

Climate change is already affecting **mountain agriculture** through droughts and extreme weather events, the expansion of forests and, most significantly, the reduced weather predictability. On the other hand, new climatic conditions may allow the cultivation of alternative crops in the Alps, such as vine. Extensive Alpine agriculture with a careful use of natural fertilizers can have a lower carbon footprint and help mitigate climate change: biomass from agriculture is an increasingly relevant source of renewable energy and the development of local and **regional value chains** can reduce emissions from food transport.[60]

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MAMF WG Activity

The activity carried out by WG MAMF is based on a short analysis of sectoral impacts of climate change in the region, and incorporates the need to achieve both climate change mitigation and adaptation in the Alps, through climate change policies and measures to be included in long-term decision making and addressing local communities and the regional alpine economy (Alpine Climate Target System, 2019) (see figure below).

TWO STRATEGIC TARGETS

Climate-neutral Alps   Until 2050, the Alps will reduce their greenhouse gas emissions in line with science-based reduction targets. Representing a wealthy region at the heart of Europe – and yet one particularly vulnerable to rising temperatures, the Alpine States are called upon to implement measures regarding energy efficiency and renewable energy and to develop a climate-neutral economy. Joint action at the level of the Alpine Convention will create an added value to national and regional approaches. This vision includes innovative approaches with respect to lifestyles and consumption patterns and relates to greening all economic sectors as well as private activities.

Climate-resilient Alps   Climate change vulnerabilities and impacts need to be included in long-term decision-making, in order to minimise negative effects on the ecosystems, the communities and the local and regional economy and to turn challenges into potential benefits. Under this vision, the Alps take a pro-active and holistic approach, focusing on soft and green adaptation measures, rather than on defensive and infrastructure-based ones.
Soft measures which focus on awareness raising and the improvement of adaptive capacities at all levels empower the development of smart and flexible adaptation approaches, in line with other planning and development processes. For instance, tourism regions reflect new lifestyles and new demand aspects and at the same time integrate adaptation issues into the planning process.
Green adaptation measures focus on biodiversity, ecosystem-based approaches as well as green infrastructures, and are thus in line with the high commitment to the Alpine environment.

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[60] CLIMATE CHANGE How it affects the Alps and what we can do Permanent Secretariat of the Alpine Convention, 2017

Activity 1 of WG MAMF describes the **main impacts and the consequent relevant problems for Alpine countries and their regions mainly in the forest and agricultural sectors.** Additionally, wider strategies or measures addressing mitigation or adaptation in the forest and agricultural sectors are recalled for countries and regions, and whether they include some mountain-specific parts.

AUSTRIA

In Austria, climate change is making itself more and more clearly noticeable. Its existence is demonstrated by measurements and observations, and it is proceeding faster than the global average (APCC14). Austria is particularly affected by climate change due to its location within the **Alpine region**. The temperature in Austria has risen by about 2°C since 1880, and is thus considerably above the global temperature increase of about 0.9°C. The effects are already evident, among other things in the shrinking of glaciers, longer vegetation periods and the increase in temperature extremes. For the development of robust **adaptation measures** that are flexible and support rapid reactions, an integrative view of the entire soil – plant – water (irrigation) system und the corresponding ecosystems is necessary.

Agriculture and Forestry Sector

The guiding principle of a resource-conserving and sustainable use of materials and the natural basis of production must be followed in the development of adaptation measures in the **agricultural sector**. Adaptation to changed boundary conditions as a result of global change – such as increasing prices for production factors (energy, fertilisers, water) and changes in the international agricultural market, such as changes in the global demand – must be taken into consideration.

In **forestry** in particular, as a result of the long rotation intervals (in commercial forests mostly 80 to about 120 years) considerably long lead times must be taken into account before measures take effect. Based on well-founded analyses of the impacts of climatic change, appropriate forest cultivation strategies must be established for timely adaptation. Rapid climatic changes have a direct effect on the vitality and stability of the forest. Since it is not possible to adapt the forests to hypothetical changes in a tailor-made way, it is necessary to support the natural self-regulation mechanisms and thus the adaptive capacity of the forests. Measures with that goal are considered to be robust. The forest and in particular the forest soil are by far the largest carbon sink in Austria. Climatic change can

have an impact on the carbon stored in forests. It is therefore important to develop a connected set of measures that contribute to climate change mitigation and to stable, multifunctional forests.

FRANCE

Agriculture and Forestry Sector

The impacts of climate change in France have led to the need to start considering certain measures such as:

• Allow farmers and the various upstream and downstream sectors of the agricultural sector to adapt to climate change

• Allow the farming community to continue to provide food for the population while by responding to other societal demands

• Secure and amplify the agro-ecological transition and the development of a bio-economy sustainable to allow territories to adapt, create jobs and contribute more to fight climate change

• Move from an expensive policy to manage climate crises to a policy anticipating climate change and adaptation by facilitating the transition from agricultural model towards agroecology, more diversified, more adapted to its environment, and therefore more resilient to climate change in order to maintain services related to agriculture and its competitiveness

GERMANY

Climate change has reached Bavaria. Its effects are already perceptible today indicated by scientific measurements, studies and observations. Since 1881 the average annual temperature in Bavaria has risen by 1.4 degrees Celsius. The **Bavarian Alps** are measurably even more affected for the average annual temperature has increased by 2 degrees Celsius in the last hundred years, twice as much as global average.[61] Visible and popular impacts are shifts of the altitudinal zones, longer vegetation periods and the spread of heat-loving species. The last few German glaciers will soon be history. Experts predict changes in precipitation and snow condition and an increase in frequency and severity of weather phenomena and natural hazards in alpine region. Fast changing climate conditions pose a threat to alpine ecosystems leading for example to changes in species composition, loss of

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[61]

https://www.bestellen.bayern.de/application/eshop_app000009?SID=1625728884&ACTIONxSETVAL(pdfload.htm,AARTxN ODENR:344861,USERxPDFNO:PDF)=Z

protection functions, biodiversity and economic values and cause additional stress and danger to society.

<table>
<tr><td>Agriculture and Forestry Sector</td><td>

Changing climate transforms conditions for farming, crop cultivation and forestry. Integrated, **inter-sectoral mitigation and adaptation strategies** are crucial to maintain the sustainable use of natural resources and further provide essential services to society.

The **agricultural sector** is directly depended on weather and climate conditions and faces therefore various challenges like limitation of resources and vulnerability to extreme weather events. At the same time some regions and branches may also profit from changing climate. For example rise in temperature will cause more rapid growth of cattle feeding plants even on mountain pastures, so particular adaptation measurements like altering the time schedule for traditional mountain pasturing and optimize grazing management will become necessary. Due to short production periods adapting to gradual climate changes seem feasible. It's important to create a reliable framework for allowing self-adapting processes helping farmers to evaluate methods with regard to resource efficiency, climate resilience and meeting the demands of society. Diversification and specific climate-adapted production measures are part of the future orientation of the agricultural sector.

Forests, forest soils and sustainable forest management contribute to combat climate change but at the same time rising risks of natural hazards, climate-related forests threats like fire, drought, storms and pests will severely affect multifunctional mountain forests, especially on shallow and exposed sites. Destabilized and weakened forests as a result of rapid climatic changes not only pose a threat to local communities. The extensive loss of protective functions for example will affect even communities far in the alpine foothills.

Since forest ecosystems are characterized by longevity adaptation to climate change is on one hand hard to plan, because future climate development predictions are afflicted with major uncertainties. On the other hand time is needed for implementation and full effectiveness of adaption measures. Besides establishing approved and climate-adapted forest management methods spreading the climate risk is one of the key strategies when preparing mountain forest to changing climate. The goal is to strengthen the adaptability, natural resilience and self-regulation of forests. Active management measures include conversion to mixed forests stands, regulate deer browsing, building carbon storage abilities and fighting pests. Permanent monitoring and further research is needed to understand the complexity of changes, their far-reaching effects and to build a better base for prediction as well as suitable strategies to respond.

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ITALY

The National adaptation strategy (**NAS**), analyses and assesses the state of knowledge on the **risk and vulnerability to climate change at national level for relevant sectors.**
In Italy the critical issues concern water management and the risks caused by extreme weather phenomena. The Report also considers intersectoral aspects such as estimating the cost of the impacts of climate change, and provides an in-depth analysis of the Alpine and Apennine areas, and the Po river basin district, which constitute particularly vulnerable environmental systems.

In Italy, the most significant expected **impacts** in the coming decades will be due to the exceptional rise in temperatures (especially in summer), the increase in the frequency of extreme weather events (heat waves, droughts, episodes of intense rainfall) and the reduction of rainfall annual averages and annual river flows. This will determine:
- a possible worsening of the already existing conditions of strong pressure on water resources, with a consequent reduction in the quality and availability of water
- possible alterations of the hydro-geological regime which could increase the risk of landslides, mud and debris flows, rock collapses and lightning floods
- possible soil degradation and higher risk of soil erosion and desertification
- greater risk of loss of biodiversity and natural ecosystems, especially in **alpine areas and mountain ecosystems**
- a reduced (or more expensive) winter tourism offer and a lower tourist attraction in the summer season
- a drop in productivity in the agriculture and fisheries sector
- greater risk of forest fires and drought for Italian forests
- potential reduction of agricultural productivity especially for wheat crops, but also for fruit and vegetables; the cultivation of olive, citrus, vines and durum wheat could become possible in the north of Italy, while in the south and in the center the cultivation of corn could worsen and be even more affected by the availability of irrigation water.

The document reports, among the critical situations, those relating to the **Alpine region and mountain ecosystems**, such as the loss of glaciers and snow cover. In the Italian mountain areas, and in particular in the Alpine arc, it has been recognized that the effects of climate change will be three times higher in magnitude than the world average (OECD, 2007[62]) with an increase in higher temperatures, a decrease in summer rainfall, an increase

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[62] OECD. (2007).Climate change in the European Alps. Adapting winter tourism and natural hazards management. ISBN. 92-64-031678-

in winter rainfall, a high vulnerability to a wide spectrum of natural hazards and to an increasing demographic and environmental pressure.

Agriculture and Forestry Sector	Climate impacts on the **Italian forests**, coupled with a reduction of the share of managed forests, affect the multifunctional role they play by providing economic/productive, environmental and social benefits to the community. Forest ecosystems provide a set of public services ranging from protection of settlements, infrastructures and human activities from natural hazards, hydrogeological protection, water regulation, landscape and biodiversity conservation, recreation, and others. Special vulnerabilities include lack of stability of forest ecosystems, increased forest fires, meteorological extreme events, and increased incidence of pests. As a consequence, productivity and growth rate, change in species composition, altitudinal and latitudinal shifts of forest habitats with loss of biodiversity, change in water and carbon cycles. Climate impacts have also been considered in the **farming sector** that should be addressed with appropriate adaptation actions including changes in the demand of crop cycles and cultivation methods. The increase in the atmospheric concentration of greenhouse gases can influence the **agro-ecosystem** through the direct effect of the increase in the CO_2 concentration (generally positive), and the indirect effect due to changes in thermal and rainfall regimes. The main consequences of these effects in the Mediterranean environment may lead to: the decrease in production of the main agricultural crops, the shift of cultivation areas to the north, the decrease in the availability of water resources, the need to introduce varieties / species more tolerant of water and thermal stress , the frequency increases of extreme climatic events (heat waves, heavy rains, dry periods), the variation in the spread of plant diseases and weeds. In the national context, a reduction in the area suitable for the production of traditional crops is conceivable. In particular, those regions characterized by a widespread use of **traditional cultivation** systems for the production of quality food will be vulnerable. Only the introduction of adequate adaptation strategies will allow to minimize or otherwise reduce the vulnerability of these areas. The **Regional Strategy for Adaptation to Climate Change (RAS) of the Lombardy Region** identify specific indications for impacts in mountain areas in different sectors. The main climatic impacts on the **agro-ecosystem** are linked to the drop in agricultural production for greater water stress on crops, losses of agricultural land due to the increase in instability hydrogeological, increase in the spread of plant and animal pests, displacement

the range of different crops and increased damage to vegetation from higher ozone levels. As regards the **forests,** the impacts, both in the short and long term, are attributable to the general modification of the climatic-vegetational conditions with increased risks and vulnerability due to aridity stress, fire risks, hydrogeological instabilities, increased pathologies, changes in the composition.

SLOVENIA

Due to diverse landscape and various climate types, Slovenia is already witnessing changes in climate variables such air temperatures, precipitation patterns and extreme weather events. Based on Slovenian Environment Agency data, the average yearly air temperature in Slovenia has increased by 1.7 degrees Celsius since 1961. Climate change scenarios for 2050 show air temperature in Slovenia will continue to rise, increasing on average by two degrees Celsius over the country.

In Slovenia the **National adaptation strategy** (**NAS**), analyses and assesses the state of knowledge on the **risk and vulnerability to climate change at national level for relevant sectors.**
Agriculture, forestry and water management are the only sectors with active action plans containing adaptation. There is no systematic approach or coordination of local/regional adaptation, although guidance documents exist on integrating adaptation into spatial planning and impact assessments.

The consequences of climate change are already evident in forestry, agriculture, water management as well as in deterioration of habitats. As climate change mitigation and adaptation is a long-term and very complex process that requires interdisciplinary action by various sectors and levels of society, the proposed programme addresses selected challenges recognized as implementing gaps in the current Slovene climate change related policies, namely:

- High greenhouse gas emissions from transport;
- Lagging behind leading European countries in the use of renewable energy sources and low-carbon energy supply;
- Moving towards a more circular economy to increase material productivity, strengthen a low-carbon society and green economic growth;
- Preserving ecosystems with an important function in mitigating climate change;
- Insufficient multi-sector governance in addressing complex climate and environmental policies.

Mainstreaming of adaptation is carried out mainly through SEA/IEA instruments. However, agriculture and forestry sectors have their own strategies and carry out measures for considering impacts of climate change. In the context of the climate change, many adaptation measures are implemented in the framework of **the Common Agricultural Policy's Pillar 1 and Pillar 2 in the current programme period 2014-2020**. For example,

The Rural Development Programme (RDP 2014-2020)63 encourages adaptation measures, supported by a number of applied research project.

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At the beginning of the year 2020, Slovenia adopted the **Resolution on the National Programme on Strategic Orientations for the Development of Slovenian Agriculture and Food Industry "Our Food, Rural and Natural Resources after 2021**64**"**, which provides a basis for national measures and a standardized strategic plan for implementing the Common Agricultural Policy beyond 2020.

With this strategical document Slovenia is:

> **PRESERVING** - Sustainability of agricultural practices, diversity of farms, taste of our food, sustainable use of forests, cultivation of the landscape.

> **BUILDING** - On tradition and attachment to the earth, on trust and on values.

> **CHANGING** - By promoting knowledge, creativity, innovation, networking, cooperation, entrepreneurial approaches.

Three main objectives and one horizontal that the Resolution stresses are:

> **Robust and competitive food production and processing**
> **Sustainable management of natural resources and provision of public goods**
> **Preservation of the vitality of the rural areas refining on higher quality of life and economic activity in rural areas.**
> **Horizontal objective: strengthening the creation and transfer of knowledge.**

Pursuing the objective of the sustainable management of natural resources and provision of public goods relies in part *on reducing adverse impacts on water, soil and air, mitigating climate change, protecting biodiversity, preserving the rural cultural landscape, and ensuring animal welfare.*

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63 RURAL Development Programme 2014-2020, https://www.program-podezelja.si/en/rural-development-programme-2014-2020

64Resolution on the national programme of strategic guidelines for agriculture and food production in Slovenia entitled **Our Food Countryside and Natural Resources after 2021** (Resolucija o nacionalnem programu o strateških usmeritvah razvoja slovenskega kmetijstva in živilstva "Naša hrana, podeželje in naravni viri od leta 2021)", adopted on January 29th, 2020, Official Journal O 8/2020.

SWITZERLAND

There is no official nation-wide assessment of impacts, vulnerability and resilience capacity in alpine or mountain region in Switzerland. However, in the Swiss strategy for adaptation to climate change specifies **main challenges and opportunities for climate change adaptation for different regions** (lowlands, Alps, further regions) and sectors in Switzerland as well.

To better assess specific regional and sectoral impacts and adaptation strategies, Switzerland has set up a **pilot programme "Adaptation to climate change"**. Within this programme, innovative projects in Switzerland's cantons, regions, cities and communes are supported. These projects show practical ways that Switzerland can adapt to the changing climate. In its first phase, thirty-one projects have been realized between 2014 and 2016[65]. In 2019, the second phase of the programme started. The programme comprises 50 projects on the following six topics

1. Increase in heat stress
2. Increase in summer drought
3. Increase in flood risk, Decrease in slope stability and more frequent land movements
4. Changes to habitats, species composition, and the landscape.
5. Spreading of pests, diseases and non-native species
6. Raising of awareness, information and coordination

About 500 individuals from public and private organisations are involved in implementing the projects. The results should be available by the end of 2022[66].

While the pilot programme does not have a specific Alpine or mountain focus, evidence from the Interreg Alpine Space project GoApply[67] indicate that particularly **mainstreaming climate change adaptation into sectoral policy making** may be an important factor to increase the long-term resilience of mountain regions and its prevalent sectors such as forestry and agriculture under changing climate conditions.

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[65] For further details and realized projects see: https://www.nccs.admin.ch/nccs/en/home/measures/pak/pilotprogramm-anpassung-an-den-klimawandel2.html

[66] A synopsis of all planned projects and the organization of the second phase of the programme see: https://www.nccs.admin.ch/nccs/en/home/measures/pak.html

[67] See the project homepage for more details and examples: https://www.alpine-space.eu/projects/goapply/en/project-results/results-overview/reports-and-publications

Agriculture is directly exposed to progressive warming, changes in the water-cycle and soil characteristics as well as to the potential greater frequency and intensity of extreme events. On the one hand, the potential annual production of meadows will increase due to the longer growing season. Livestock production can benefit from cheaper domestic feedstuffs and a longer grazing period. On the other hand, the risk of shortages of water and the probability of higher frequency and intensity in extreme events (droughts, rainfall, natural hazards) increases.

Forestry will be affected by climate change in several respects. Warming and a change in precipitation distribution will lead to major changes in the site conditions for forests. With the expected increase in dry spells, the risk of forest fires will also rise. Furthermore, there will be damage caused by indirect factors such as the spread of harmful organisms. These changes also have direct effects on the timber processing industry and trade, for example due to forced usage and shifts in the supply of certain wood species. Yet, positive developments, such as additional wood growth or a rising tree line, will occur only gradually.

4 Initiatives and good practices for the sustainable management of climate change in the forest and agriculture sectors

4.1 Initiatives in the Alpine countries for the implementation of the Climate Target System 2050: sectoral approach

The Climate Target System 2050 of the Alpine Convention follows a **sectoral approach** in line with the Convention, its Protocols and working bodies. It defines targets in ten different sectors - complemented by two transversal fields of actions. Sectoral targets are based on the recommendations of the Stock-taking Report of the ACB, but they also consider activities and goals of the AC thematic bodies. They all relate to the time-horizon of 2050. The **targets for mountain forests and mountain agriculture** are reported in the tables below.

Mountain Forests Targets (_Fo)		
T_Fo1	Potential of protective mountain forests fully used	The protective function of mountain forests is maintained, restored and enhanced (including adaptation of forest ecosystems to climate change through sustainable adaptive forest management).
T_Fo2	Mountain forests as carbon sink	Mountain forests are adapted to climate change with the aim to maintain their positive role for the local climate and protect or, if possible, further strengthen their carbon sink role.
T_Fo3	Accelerated forest conversion	Conversion of forest ecosystems to close-to-nature forests is achieved, using endemic forest species adapted to climate change.
T_Fo4	Alpine-wide sustainable forest management	A prioritized forest management is fully implemented to balance different regional uses under changing climate conditions (wood as basis for wood products, biomass, non-wood forest products such as resins etc.), supported by an effective system for monitoring the health condition of mountain forests. Priority is given to the production of long-lived wood products.

MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

ALPENKONVENTION
CONVENTION ALPINE
ALPSKA KONVENCIJA
CONVENZIONE DELLE ALPI

italian delegation
alpine convention

Mountain Agriculture Targets (_Agr)		
T_Agr1	Energy self-sufficiency of Alpine farms	Through the development of sustainable and site-suitable renewable energy systems, Alpine agriculture is able to cover its energy consumption in a self-sufficient way.
T_Agr2	Alpine value chains for agricultural products	Regional value chains/circular economy are established to reduce transport emissions ("food miles", "product carbon footprint").
T_Agr3	The Alps as model region for organic farming	Mountain agriculture takes on a model role for a shift towards organic farming. The predominant share of Alpine farms is managed on the basis of the principles of organic farming and is certified by relevant labels (incl. aspects of artificial fertilisation, import of fodder, etc.).
T_Agr4	Resilient and climate-friendly mountain agriculture	To cope with climate change impacts, mountain agriculture is based on diversified species and crops which suit local conditions, promoting the conservation of traditional crop varieties and animal breeds in regard of a broad pool for adaptation.

Fig. Alpine Climate Target System

4.2 Communication and recommendation

Communication is a transversal field of action of the Alpine Climate Target System. The achievement of the targets demands for an **active involvement of stakeholders** in all sectors. The "Communication level" provides stakeholders with the information, instruments and skills to act: it includes a comprehensive communication strategy aimed to assure that all interested stakeholders are reached. An effective climate communication strategy of the Alpine Convention should include:

PROPOSAL FOR OPERATIONAL COMMUNICATION AND INFORMATION ACTIVITIES	
Integrated information hub	Develop an integrated information hub and provisions for a better access to climate services, building on existing hubs/information portals. Such integrated information hub should be maintained in a dynamic way to keep track of the state-of-the-art, and it should include elements for active user involvement (e.g. an exchange forum for municipal stakeholders).
"Transition dialogue" – Shaping climate-neutral and climate-resilient Alps 2050	Activities towards awareness raising and a societal dialogue on the impacts of implementation of the climate target system: What does the climate target system mean for life, lifestyles, consumption patterns and behavioural change in the Alps 2050 and what can citizens contribute? This transition dialogue should consider state-of-the-art knowledge on climate communication.
Mainstreaming climate change aspects into schools and training	Strengthen the inclusion of climate change related information in school, higher education and continued education curricula, including "training the trainers".
Greening of Alpine Convention operations	Implementation and communication of the Green Event standards for the organisation of events of the Alpine Convention (catering, accommodation, travel). Continuation of the efforts of the Permanent Secretariat to reduce the CO_2-footprint of the offices.

Fig. Alpine Climate Target System

- **Target audience**: policy makers at local, regional and national level, public administrations responsible for all relevant sectors, the scientific community, educators, communicators, the general public and particularly young people.
- **Communication methods / tools**: for reaching out all target groups, inform them on the target system and its underlying knowledge, different communication channels and direct and indirect methods for involving stakeholders tailored to specific target audiences are developed.
- **Innovative communication formats**: the concrete visions for the development of the Alpine region proposed by the Alpine Climate Target System allow for implementing interactive methods for involving target audiences.

1. OVERALL IMPLEMENTATION – Ambitious targets require ambitious action

The successful implementation of the Alpine Climate Target System will only be possible if all Alpine countries strengthen their cooperation and if they give a clear priority to implementing the Alpine Climate Target System.

Prioritize Alpine-wide coordinated action in national climate action	The Alpine countries will give a high priority to the implementation of common and Alpine-wide approaches within their respective national and regional frameworks – only a common approach with harmonized policies will lead the way towards a full decarbonisation of the Alpine area as well as an effective adaptation to climate change impacts. The ACB will develop proposals for implementation measures under consideration of this priority.
Integrate climate change mitigation and adaptation in all activities (Climate-proofing)	The ACB works together with all thematic working bodies of the Alpine Convention to ensure that their mandates for the new working programme are climate-proofed (consideration of mitigation and adaptation impacts in each activity of the mandate). The implementation of the target system will only be possible if co-benefits/synergies with other fields of action are used to their full extent.
Initiate pilot actions	The ACB will initiate the implementation of pilot actions which are seen as a crucial chance for the Alpine Convention to increase its visibility in the climate policy field and to effectively work towards implementation of the target system. Specific proposals can be brought forward by Alpine countries and/or stakeholders. Specific responsibilities need to be defined for each pilot action.
Mobilise resources	The strong commitment towards implementing the Alpine Climate Target System will have to be reflected in appropriate human and financial resources. The ACB will reflect on means to support specific actions.
Foster exchange with other mountain regions	The ACB, supported by the Permanent Secretariat, will strengthen the exchange with other mountain areas, such as communication outreach activities (e.g. through UNFCCC COP side-events).

The Alpine Climate Board recommended actions at all levels for the implementation of the Alpine Target System by 2050. These recommendations have been duly considered by the MAMF WG, when selecting the practices presented in this section of the report for mountain agriculture and mountain forestry – that are expected to show a significant consistency with the contents of the recommendations by th3 ACB, as in the Table.

Develop a monitoring tool	A monitoring tool, including a set of well-defined indicators to monitor the target achievement as well as implementation of specific activities, will be set up by the ACB.

2. UPDATE OF THE CLIMATE ACTION PLAN – An up-to-date Action plan increases capability to act and agility

An updated Climate Action Plan brings together the specific activities on all different levels and streamlines them better. The update of the Climate Action Plan of Evian would thus be a potential output of the next working phase of the ACB.

Review of adaptation and mitigation measures of Action Plan	Comprehensive review and possible amendment of the measures proposed in the Climate Action Plan 2009 will be conducted, taking into account the Alpine Climate Target System 2050 and the outcome of the regular stock-taking (see below).
Regular update of stock-taking	The stock-taking of climate change mitigation and adaptation activities[2] with relevance for the Alpine Convention will be updated regularly to feed the update of the Action Plan and the information hub.

3. COMMUNICATION AND COOPERATION – Ambitious action requires a broad and active support

The implementation of the full Alpine Climate Target System until 2050 will only be possible with the active support of all relevant public and private stakeholders including civil society. This will require a comprehensive communication strategy to better inform and empower all relevant stakeholders including civil society about the ACB's activities and their involvement in all follow-up activities.

Develop a Communication strategy	To increase visibility on and awareness of the target system, the ACB will develop a comprehensive communication strategy. This communication strategy will include information on the relevant target groups, the specific tools (e.g. events, information hub, different presentation formats for target system), as well as the process to develop the tools and put them to use.
Explore new forms of cooperation	On the basis of the stakeholder event to be organised in the frame of the ACB, the stakeholder needs in order to overcome the implementation gap will be assessed. Specifically, new forms of cooperation between the ACB and stakeholders, especially other existing Alpine-wide networks (such as the Alpine Partnership for Local Climate Action, ALPACA) and the possibility to jointly develop pilot actions and further implementation activities will be explored.

Fig. Alpine Climate Target System

4.3 MAMF approach

Based on the sector targets for mountain forests and mountain agriculture, the MAMF WG aims to identify across the Alps initiatives and good practices that support the **implementation of the sector targets**.

By using a structured template, the members of MAMF WG identified and provided a description of the initiative based on the following categories:

a) type of activity,

b) sector concerned,

c) stakeholders involved,

d) possible benefits obtained or obtainable through implementation,

e) replicability,

f) potential role of the Alpine Convention in supporting its implementation or dissemination.

In addition, aiming to address the section on **communication and recommendations** of the Alpine Climate Target System 2050, the members of MAMF WG shared their views on possible future activities to be adopted in the framework of the Alpine Convention that may help disseminate good practices in the fields of sustainable forest management, and climate-friendly agriculture. They also proposed some first recommendations to be better discussed on the occasion of the workshop foreseen by the mandate.

4.4 Collection of national initiatives

AUSTRIA

❖ ADAPT-CATMILK

1. Description of the Initiative

Field: Mountain agriculture and dairy production

In Austria **ADAPT-CATMILK** is an initiative aimed to climate **adaptation in Austrian Cattle and Milk Production**. This initiative is an applied research project under the Austrian Climate Research Programme (ACRP) and involves subsectors in the field of sustainable agriculture such as dairy (milk) production and cattle production.
 The project, started in June 2014 and ended in September 2016, has had implications on agricultural economics and agricultural policy with a positive impact on the field of greenhouse gas emissions.

Cattle and dairy farming are **the most important farming activities in Austria** with respect to the value of production. In contrast to many other systems around the globe, Austrian cattle and dairy farming heavily relies on forage production from rain-fed permanent grasslands and therefore **greenhouse gas (GHG) emissions** are relatively low compared to other systems.
Climate scenarios indicate that changes are expected to be exceptionally severe in alpine regions. **Changing patterns of rainfall** and more frequent droughts would impose the risk of significant adverse consequences for forage production in Austria. Cattle and dairy farming may also be affected by **increasing heat stress** and new livestock diseases.

Farmers usually respond to external changes such as climate variation by **adapting production and land use systems** to efficiently utilize and manage their farm resource endowments. There is abundant literature dealing with measures to reduce GHG emissions from cattle and dairy farming, however, there is less evidence on the options livestock farmers have to respond to adverse climate conditions in Alpine regions.
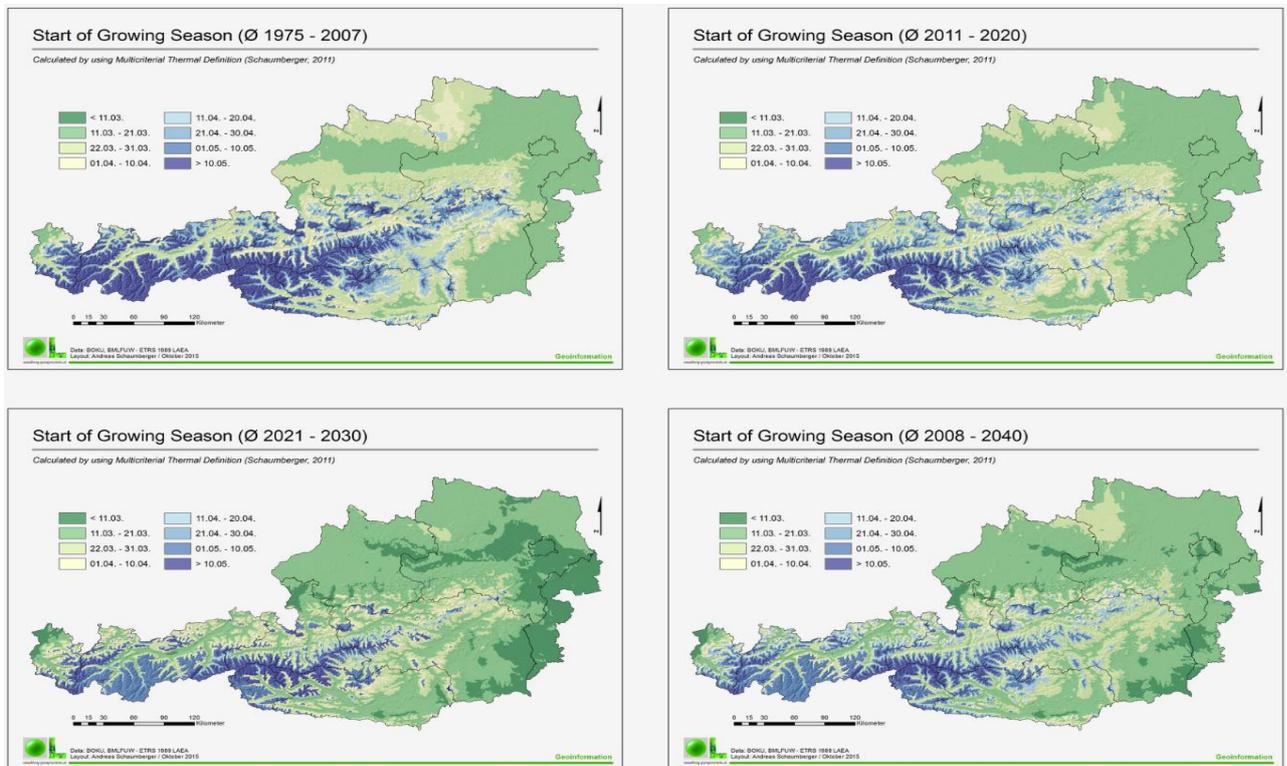
Fig.: *Change of start of growing season*
Source: ADAPT-CATMILK, Andreas Schaumberger, LFZ Raumberg-Gumpenstein

Stakeholder and aims

The involveded stakeholder are the project partners, in particular Österreichisches Institut für Wirtschaftsforschung (WIFO) and Institut für Nachhaltige Wirtschaftsentwicklung an der Universität für Bodenkultur Wien (INWE-BOKU)

The research projects aimed to **achieve quantitative results that are spatially explicit** and therefore can serve farmers in different locations, extension services and the administration for decision support. Among the objectives of the research project was to link researchers from Austria to the **international community**. All researchers involved in the project have been part of the **network of European researchers** in the MACSUR project (www.macsur.eu) as well. The results will allow policy makers to base their decisions on evidence that is not limited to the Austrian situations but includes spillover effects to foreign countries as well.

During the project, material was prepared for practitioners (i.e. farmers, extension services, breeding organizations, developers of agri-environmental programs) to foster farm and administration decision making with respect to the challenges of climate change. For this purpose, the well-known website www.landnutzung.at was used to publish data sets (grassland yield data), technical papers, and model components.

Mitigation and adaptation aspects

Mitigation and adaptation are often analyzed separately due to the nature of the problem. But it is also necessary to consider both areas combined to assess the mutual land use benefits of cost-effective farm mitigation and adaption measures. Besides its vulnerability to climate change, cattle and dairy farming is among the **largest emitters of GHG in agriculture**.

There is clear need for an integrated quantitative assessment of the Austrian cattle and dairy sector with respect to climate change mitigation and adaptation potentials. So two of the objectives of the project were to find out how Austrian cattle and dairy farmers can cope with climate change and to find out how the Austrian cattle and dairy farmers can respond to climate change mitigation.

WIFO ■ mitigation options BOKU

measures	description
Increase in lactation dairy cows	Increases number of lactations per cow; as a consequence reduced demand of heifers for replacement
Increase in efficiency of livestock	Increases yields of all livestock products except for dairy; assumed to be result of breeding and better (herd) management; no additional feed demand and costs assumed; milk increases are covered by index milk yield per cow
Increase in quality grassland/silage	Increases protein and energy content of all forage products, i.e. forage from permanent and temporary grasslands and silage maize; assumed to be the result of improved crops, better management; no additional costs assumed
Feeding efficiency increase	Reduced protein and energy demand of pig production; no changes in costs and manure production assumed
Reduction of losses manure nutrients	Reduced loss of nitrogen from all livestock manure; assumed to be the result of better management free of additional costs
Reduction of losses of fertilizer	Reduced loss of nitrogen from all mineral fertilizer; assumed to be the result of better management and spreading equipment free of additional costs
Additional energy crops	Model is forced to increase area of short rotation forestry
Tax on mineral fertilizer	Costs of mineral fertilizers are increased

Fig. *Presentation "Adaptation and mitigation in Austrian cattle and milk production - scenarios for 2050", Sinabell et al.-April 2016* [68]

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[68] https://www.landnutzung.at/dokumente/CATMILK/presentations/2016-Sinabell-CATMILK-Graz.pdf

Results Many of the resources mobilized in this project have been directed to gain better insights into the heterogeneity of agricultural production conditions in Austrian farming under climate change. The most visible achievements are a **new data set of grassland yields** under climate change for the whole territory at a very detailed spatial scale, further enhancements of a spatially disaggregated agricultural sector model and a cost analysis tool that is designed to capture the economic aspects of different production and management conditions in Austrian agriculture such as required to analyse climate change mitigation and adaptation strategies.

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ **Goal T_Agr4 _ Resilient and climate-friendly mountain agriculture** The scientific outputs deal with a range of options to mitigate GHG emission and of policy/market/climate change effects on dairy and cattle production.
❖ **Goal T_RD3_ Alpine-wide climate-data availability** Climate-data based climate change scenarios are an important part of the project. The project is a piece of applied integrated science. The final purpose is to serve certain means and to address obvious challenges of our society. Considerable resources were therefore set aside in order to get farmers involved in the project and to disseminate results not only in scientific channels.

3. Communications and recommendations: potential role of the Alpine Convention

The tools developed in this project **can be transferred to other regions** of the Alpine Convention.

An important implication is that the same policy incentives may have very different effects depending on local production conditions so when transferring the tools developed in this project to other regions one has to regard the heterogeneous topography, meteorological conditions, agricultural production capacities and production costs. Another implication is that climate change will affect producers of the same commodity in sometimes opposite directions – again depending on local conditions.

These findings lead to one of the main conclusions of the research project: in order to understand the vulnerability of agriculture due to climate change and its contributions to GHG emissions it is necessary to account for the **spatial heterogeneity of production conditions**.

The Alpine Convention can contribute to further **dissemination** by collecting such projects in thematic reports or by presentations of projects like this during meetings of the Alpine Convention.

Other sectors corresponding with the Alpine Climate Board addressed by the project ADAPT-CATMILK are the Research and Development targets of ACB (scientific output of the project), the Ecosystems and Biodiversity targets of ACB (maintenance of pasture areas) and the Municipal Action target (municipalities as the "transition engines", the places of knowledge transfer not only in scientific channels).

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Ecosystems and Biodiversity	cattle and dairy farming maintain pasture areas
Municipal Action	knowledge transfer, cattle and dairy farmers can respond to climate change mitigation, not only in scientific channels
Research and Development (R&D)	scientific output is a range of options to mitigate GHG emission and of policy/market/climate change effects on dairy and cattle production

4. Insights

Further information including publications, presentations and mapsets on the project ADAPT-CATMILK can be retrieved on the project's website.[69]

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[69] https://www.landnutzung.at/Catmilk_info.html

❖ GreenRisks4Alps PROJECT

1. Description of the Initiative

Field: Mountain forestry. The project concerns the forest management sector and involves also the sectors of protection forests and natural hazards.

The **GreenRisks4Alps** Project is a project, started in April 2018 and ends in March 2021, aims to the development of ecosystem-based approaches for the support of **risk management activities** in connection with **natural hazards** and climate change. Forests and mountain ecosystems are of outstanding importance in the global reduction of natural hazards and risks, but above all in the Alpine region, and are increasingly regarded as equivalent to technical measures or other mitigation concepts. Forests provide efficient protection against avalanches, torrents, landslides and rockfalls.

Fig. *Green Risk4Alps Poster*[70]

So far, however, few strategies or policies have been developed to integrate forests and ecosystem services into risk management and to balance the many interests, requirements and costs.

The challenges facing the Alpine Space are dramatic: limiting settlement space, increasing costs for the protection of settlements, more conflicts due to rising demands and expectations, or critical development of economies such as **"monoculture tourism"**. Without an appropriate, territorially specific implementation of mountain ecosystem services (including forests) in a risk reduction strategy, sustainable development in the Alpine region will be difficult to achieve.

Stakeholder and aims

The project included the involvement of several project partners in addition to the **International Project Consortium**, in particular research institutions and universities from many alpine countries (see **Insights**).

The overarching goal of GreenRisk4alps is the development of ecosystem-based concepts to **support risk governance** with respect to natural hazards and climate impacts. GreenRisk4alps brings the forest into affordable and long-term oriented risk management by balancing green, technical and preventive risk strategies. GreenRisk4alps promotes ecosystems and in particular mountain forests as an intrinsic part of all spatially relevant measures to reduce natural hazard risks: actively and preventively.

GreenRisk4alps has a **clear strategy to overcome conflicts and resistances** in doing eco-system-based disaster risk reduction (Eco-DRR): all relevant actors are involved and provided with **new mitigation alternatives** and **scientific communication support**. Transalpine solutions aim to involve communities (pilot action regions) and governance institutions in the project.

Mitigation and adaptation aspects

Pending the final results, the project shows aspects of replicability as a **climate-friendly initiative** in the sector of forest management. The meeting is climate friendly with respect to **minimization of travel**. The topical link to climate friendliness arises from the climate mitigation effects of forest ecosystems.

Results

The theme of the entire research project is the protection of mountain forests in order to ensure that forests can **sustainably maintain** their **protective function**.

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[70] https://www.alpine-space.eu/projects/greenrisk4alps/en/outputs/downloads

2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how

- ❖ **Goal T_Fo1_Potential of protective mountain forest fully used** (strong implementation)
- ❖ **Goal T_Fo2 _Mountain forest as carbon sink** (partial implementation)
- ❖ **Goal T_Fo3_ Accelerated forest conversion** (partial implementation)

The project is an example of applied integrated science. The purpose is to develop functional tools and concepts for ecosystem-based risk management strategies that are published as handbook for practitioners.

3. Communications and recommendations: potential role of the Alpine Convention

The tools developed in this project can be transferred to other regions of the Alpine Convention because the project outcomes are based on many international experiences. The Alpine Convention can use and promote the developed tools. The tools should be sufficiently flexible to be applied in a variety of regions or settings.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Spatial planning	Dealing with natural hazards always implies governance actions in order to make the areas available
Natural Hazards	The central topic of the project are protection forests in mountain regions and the preventive approach to natural hazards
Ecosystems and Biodiversity	The project uses the natural ecosystem dynamics for efficient protection against natural hazards.
Water	The project deals with water as a problematic factor in terms of flooding.
Soil/Land	The project deals with soil and land which are potentially threatened due to erosion.

Research and Development (R&D)	The project develops a toolbox for forest management.

4. Insights

Other project partners: BFW I Austrian Forest Research Center (AT), DISAFA I Department of Agricultural, Forest and Food Sciences, University of Turin (ITA), EURAC I European Academy of Bozen-Bolzano – EURAC Research (ITA), DISAFA I Department of Agricultural, Forest and Food Sciences, University of Turin (ITA), IRSTEA I National research institute of science and technology for environment and agriculture, Grenoble regional centre, IRSTEA (FRA), LWF I Bavarian State Institute of Forestry (GER), MFM I Forestry company Franz-Mayr-Melnhof-Saurau (AT), SFM I Safe Mountain Foundation (ITA), UL I University of Ljubljana, Biotechnical Faculty, Department of Forestry and Renewable Resources (SLO), UGOE I University of Göttingen, Department of Forest and Nature Conservation Policy (GER), WSL I Swiss Federal Institute for Forest, Snow and Landscape Research (CH), WLV I Austrian Service for Torrent and Avalanche Control (AT), ZGS I Slovenia Forest Service (SLO)

Further information including publications, presentations and mapsets on the project GreenRisk4Alps can be retrieved on the project's website.[71]

❖ Chance climate change STIEFINGTAL - The model region for summer overheating

1. Description of the Initiative

Field: The field of application of this initiative is mountain agriculture and mountain forestry.

The alpine region Stieflingtal participates the KLAR! – funding programme for climate adaption model regions (The KLAR! funding program was launched in 2016; financed by the Climate and Energy Funds. The participating regions have to provide a detailed concept with

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[71] https://www.alpine-space.eu/projects/greenrisk4alps/en/home

min. **10 concrete adaptation measures** (balanced mix of green, grey & soft/ smart options). The adaption measures are monitored and reported to the funding body. In a first call 20 regions applied, many of them are located in the Alps - in a second call 24 additional regions participate.

Information transfer, excursion and advisory service in the model Stiefingtal were applied in the sector agriculture and forest:

• protective measures in the vegetation against drought, wind and soil erosion with regard to e.g. increase of soil carbon, adapted crop rotation, hedges against erosion, mulch and direct seeding, use of organic fertilizers

• measures for animal health promotion e.g. Construction and insulation materials in stable construction to prevent heat loss in winter and to avoid overheating in the summer and thus to protect both the climate protection and adaptation to climate change

• supporting regional biodiversity e. g. biological pest control, pesticide renouncement

• CCA recommendations for forest management and carrying out a planting action of climate fit fruit and forest trees.

The project lasted from 2018 to 2020.

Stakeholder and aims

The project has a bottom-up approach that integrates **all relevant regional stakeholders**. Therefore, community association, communities, relevant and interested Businesses, opinion leaders, intermediaries, Interest groups, active citizens, associations, schools, authorities (eg district authorities), Fire departments, rescue and various experts in the implementation are included.

Also a coordination and collaboration with the Province of Styria and the Environment Agency Austria exists. The purposes of initiative for **sustainable agriculture** are:

• Protective measures in the vegetation against drought, wind and soil erosion

• Minimization of pests and neophytes

• Strengthening and development of regional biodiversity

• Adaptation measures for animal health promotion

Purposes for the sector of **forest management** are:

• Planting of climate-fit fruit and forest trees

• Consulting/advice for forest owners with a focus on small forest owners

Mitigation and adaptation aspects

The adaptation measures implemented within the KLAR! model region Stieflingtal respond to a variety of **climate change impacts**, in particular for the **agricultural adaptation aspects**. In the sector of forest management, the measures are related to **climate friendly forestry**.

Monitoring of the measures applied is planed; but the results are not yet available. The actions taken are mainly in the fields of awareness raising, training and advice for farmers. Thus, the indicators applied are rather referring to number of farmers attending excursions or seminars (and not on reduction of CO_2.

2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_Agr4 _Resilient and climate-friendly mountain agriculture** ❖ Goal **T_Eco1 _Preserve Ecosystem and Biodiversity** ❖ Goal **T_Eco4_Alpine ecological connectivity** ❖ Goal **T_Fo3 _Accelerated Forest conversion**

3. Communications and recommendations: potential role of the Alpine Convention

The ideas developed in this project can be transferred to other regions of the Alpine Convention, also through the activities of the Working Groups. Other sectors corresponding with the Alpine Climate Board addressed by the model region Stiefingtal are flood control (referring to Natural hazards targets of ACB) and thermal insulation of houses (referring to Energy targets of ACB).

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Spatial planning	Establishment of climate-friendly infrastructures, residential areas, Fresh air corridors (cold air spaces) and green areas
Energy	Thermal insulation of houses
Natural Hazards	Preventive measures for flood protection
Ecosystems and Biodiversity	Strengthening regional biodiversity; reduction of neophytes' maintenance of biotopes; hedges, strengthening of natural predators (perches for birds of prey, bats, etc.)

4. Insights

Further information including publications, presentations and mapsets on the project can be retrieved on the project's website.[72]

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[72]https://klar-anpassungsregionen.at/regionen/chance-klimawandel-die-modellregion-stiefingtal-gegen-sommerliche-ueberhitzung

FRANCE

❖ The SENTINEL MOUNTAIN PASTURES PROGRAM: a dialogue space to anticipate impacts of climate change on mountain agriculture

1. Description of the Initiative

Field: sustainable agriculture, in particular in the sector of protection of local biodiversity and mountain ecosystems, maintenance of a diversified bundle of ecosystem services and sustainability of the farm system.

Mountain pastures play a fundamental role for farm systems by providing non-cultivated fodder resources directly grazed by flocks, and by enabling specific management at the farm level (breeding calendar, pest control, work load...). Climate change challenges agropastoral practises by **modifying the range and variability of meteorological conditions** to which they are adapted. The Sentinel Mountain Pastures program is a **transdisciplinary network** extended over the French Alps that aims at understanding and **anticipating impacts of climate change on high altitude grasslands**. For up to 10 years in 2019, evolution of weather conditions, vegetation and agropastoral practises are monitored and analysed over 30 mountain pastures and associated farm systems.

Stakeholder and aims

The program brings together **scientific, technical and local knowledge**, with the objective of **supporting adaptation of farm systems** while ensuring the high environmental quality of mountain pastures. The sentinel pastures are located within the perimeters of national and regional alpine parks, which offer a particularly supportive setting to develop this 'research and development' initiative. The Sentinel Mountain Pastures network includes:

- Scientists from varied disciplines (agronomists, ecologists, sociologists...)
- Agricultural and pastoral advisors
- Shepherds and herders
- National and regional park teams
- Institutional partners (regional and national scales mostly)

Mitigation and adaptation aspects

The Sentinel Mountain Pastures program can be considered an initiative for an agriculture "**resilient to climate change**". The program strives to build knowledge on the impacts of climate change at the social-ecological system level. Several protocols are implemented by project partners to collect evidence of change or persistence at the levels both of ecological characteristics of mountain pastures and of their pastoral uses. Further, the program develops **operational tools and frameworks to support the resilience of mountain agriculture to climate change**, e.g., regarding the sensitivity of different pasture types to climatic events such as droughts or frost during the growing season. The Sentinel Mountain Pastures program also provides a space for dialogue among all partners to exchange on knowledge and practises, organized around different events such as working group meetings, annual plenaries or on-field discussions.

Results

New tools are needed to support adaptive management of mountain pastures in a context of climate change and increasing associated uncertainty. Based on a multiple evidence-based approach, we developed a **vulnerability analysis framework** addressing the different physical, ecological, agro-pastoral and socio-economic dimensions of their agropastoral uses. Building on results from the Sentinel Mountain Pastures program on the French Alps, this framework: i) characterizes pastures' exposure to climatic hazards in relation to physical features (location, slope, orientation...), ii) identifies the sensitivity of pastures' vegetation to climatic hazards, and iii) assesses adaptive management capacities on the mountain pastures and in the interaction with the farm systems. This framework has been published in English in 2019 (Deléglise et al. *MRD*. 2019).
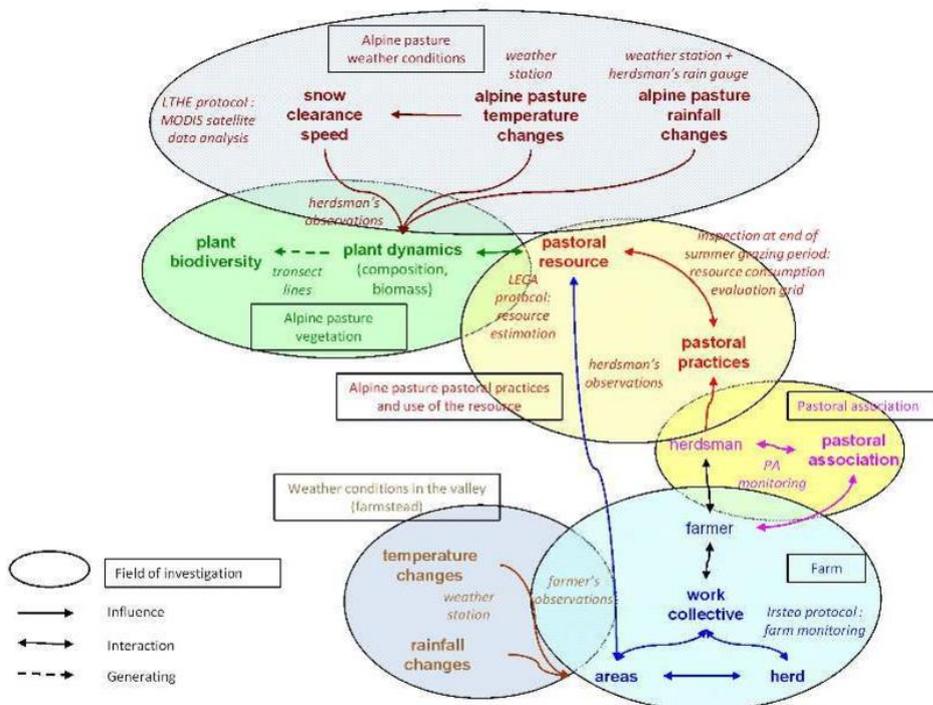
Fig. The Sentinel Alpine Pastures Programme. Dobremez, Laurent et al. "Sentinel Alpine Pastures: An original programme for a new form of shared governance to face the climate challenge." (2014).

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_Agr4 _ Resilient and climate-friendly mountain agriculture** The initiative contributes to T_Agr4 by monitoring impacts of climate change on agropastoral systems and by identifying possible adaptation strategies.

3. Communications and recommendations: potential role of the Alpine Convention

The Alpine Convention could provide a space to present and discuss this initiative with pan-alpine partners (workshop, conference and other disseminations initiatives). The Alpine Convention could have a role in **publicizing the process**, share it with other Alpine countries, and perhaps reproduce it elsewhere in the Alpine region.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Tourism	Mountain pastures are multifunctional spaces where tourism and pastoralism need to co-evolve jointly.
Ecosystems and Biodiversity	Successful adaptations to climate change can only occur if pastoral activities are in line with ecological capacities, and the dynamics of ecosystems and biodiversity are closely connected to management practices of the agropastoral system.
Water	Management of water resources is a key issue to climate change adaptation.
Research and Development (R&D)	The Sentinel Mountain Pasture Program is a R&D program.

References for the project:

- Dobremez et al. (2014). Sentinel Alpine Pastures: An original programme for a new form of shared governance to face the climate challenge. *Journal of Alpine Research*[73]
- Nettier et al. (2017). Resilience as a framework for analyzing the adaptation of mountain summer pasture systems to climate change. *Ecology and Society*. 22(4):25 [74]
- Deléglise et al. (2019). Towards a method for diagnosing the vulnerability to climate change of summer mountain pastures. Mountain Research and Development. 39(2) [75]

For more info: Sentinel Mountain Pastures program website[76] – Coordination Inrae
CONTACT POINTS: Emilie Crouzat emilie.crouzat@inrae.fr and Hermann Dodier hermann.dodier@inrae.fr

❖ 4P1000 APPROACH: carbon for our mountain orchards under an official quality sign

1. Description of the Initiative

Field: sustainable agriculture, in particular fertility of living soils and fight against global warming

The international initiative **4 per 1000**, launched by France on 1 December 2015 at the COP 21, consists of federating **all voluntary stakeholders of the public and private sectors** (national governments, local and regional governments, companies, trade organisations, NGOs, research facilities, etc.) under the framework of the **Lima-Paris Action Plan** (LPAP).

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[73] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwips4ef9rzmAh UPDmMBHQ4LBNQQFjAAegQIChAB&url=https%3A%2F%2Fjournals.openedition.org%2Frga%2F2455&usg=AOvVaw2 HPxsUsYQJVn9jyqlLSvwi

[74] https://www.irstea.fr/sites/default/files/ckfinder/userfiles/files/Nettier_et_al_2017_resilience.pdf

[75] https://bioone.org/journalArticle/Download?fullDOI=10.1659%2FMRD-JOURNAL-D-18-00077.1

[76] https://www.irstea.fr/fr/irstea/nos-centres/grenoble/nos-recherches-et-expertises-en-quelques-fiches/alpages-sentinelles

The aim of the initiative is to demonstrate that agriculture, and in particular agricultural soils can play a crucial role where food security and climate change are concerned.

Supported by solid scientific documentation, this initiative invites all partners to state or implement some practical actions on soil carbon storage and the type of practices to achieve this (e.g. agroecology, agroforestry, conservation agriculture, landscape management, etc.).

Stakeholder and aims

The stakeholders involved were 4p1000 Market Consortium, the syndicate of the Apricot des Baronnies and the syndicate AOP Olive de Nyons and des Baronnies. Other stakeholders in the **Insights**.

The ambition of the initiative is to encourage stakeholders to **transition towards a productive, highly resilient agriculture**, based on the appropriate management of lands and soils, creating jobs and incomes hence ensuring sustainable development. The Executive Secretariat of the "4 per 1000" initiative is hosted by the CGIAR System Organization, an international organization based in Montpellier.

Some objectives of the initiative are:

- Nourish the soils with manure and compost
- Restore crops, pastures, and degraded forests and the arid and semi-arid areas of our planet
- Plant trees and legumes, for example (which also fix nitrogen from the atmosphere in the soil, favouring the foliar growth of plants)
- Collect water at the foot of plants
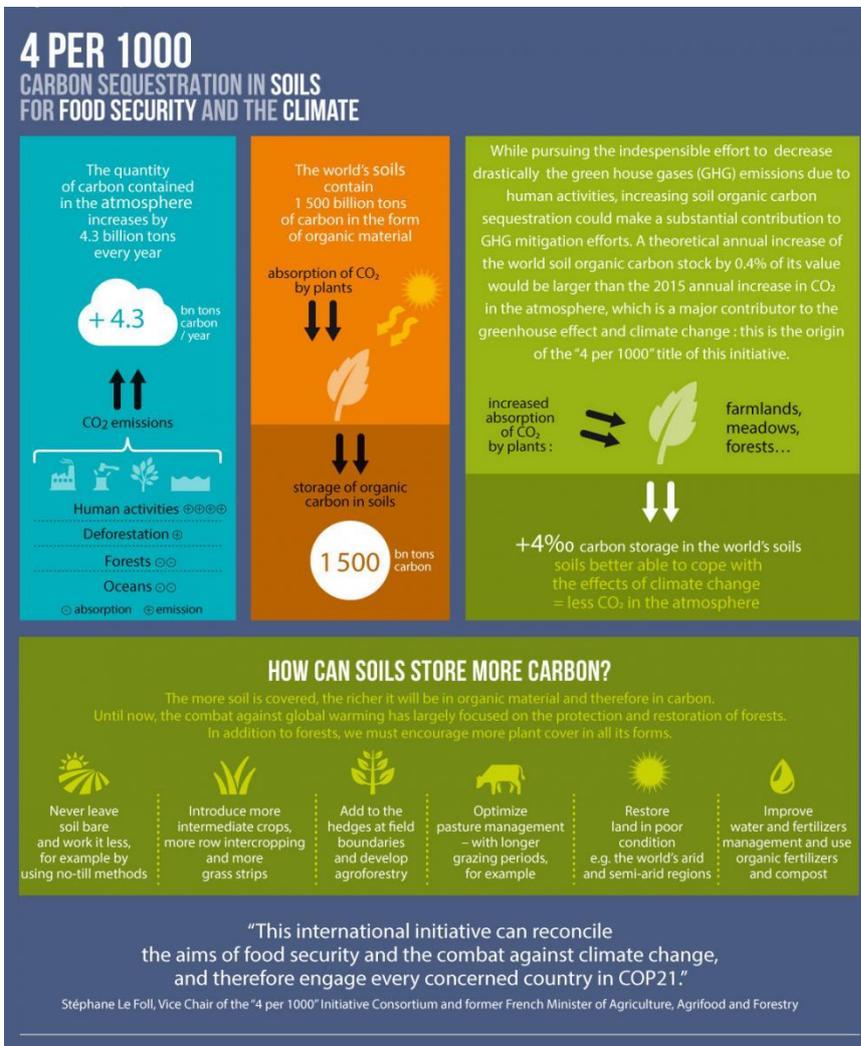
*Fig.*4P100 in a glance

Action implemented in 2018 in Drôme Departement Carbon for our mountain orchards under an official quality sign.

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Mitigation and adaptation aspects

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The initiative aims at an agriculture **resilient to climate change**. The increase in the amount of carbon in soil contributes not only to stabilise the climate, but also to ensure food security, i.e. to provide food in sufficient quantity. Primarily composed of carbon, the organic matter in soils plays a role in four important ecosystem services: resistance to soil erosion, soil water retention, soil fertility for plants and soil biodiversity. Soils rich in organic matter and by consequence in carbon are better suited to withstand the impact of climate changes because they are more resistant to erosion and retain water a lot better, especially during extreme events such as droughts.

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Results

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According to what has just been described, it has been calculated that the implementation of this initiative has determined an **increase in soil carbon** by 0.04% per year.

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2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_Agr4_ Resilient and climate-friendly mountain agriculture**   To cope with climate change impacts, mountain agriculture is based on diversified species and crops which suit local conditions, promoting the conservation of traditional crop varieties and animal breeds in regard of a broad pool for adaptation.   ❖ Goal **T_S2 _ Enhanced Alpine soil quality**   Alpine soil quality is improved. Especially wetlands and peatlands including riparian forests, are re-established as CO_2-sinks in the Alps. Soil erosion is avoided to maintain the function of Alpine soils for mountain agriculture and other sustainable uses.   The objective of the initiative is twofold: 1- Improve soil fertility to cope with global warming   2- Fight against global warming

3. Communications and recommendations: potential role of the Alpine Convention

This replicable approach calls for new practices in the orchard, especially on plant cover. The

implementation of experiments and the linking of feedback from these new orchard practices throughout the Alpine region would be extremely profitable.

The establishment of communication supports for arborists is also important.

Fig: *Installation of Vetch + Rye cutlery in apricot orchards*

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Natural Hazards	Fight against erosion
Ecosystems and Biodiversity	Living soils are the basis of biodiversity in the orchard
Water	In dry mountain areas, increasing the organic matter in the soil is essential to store more water
Soil/Land	Direct link
Research and Development (R&D)	Repository on innovative practices

4. Insights

All information about the initiative are on the official website.[77]

For more info and stakeholder in "living agriculture": http://agricultureduvivant.org/

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[77] https://www.4p1000.org/

GERMANY

❖ The Bergwaldoffensive"(BWO) – State initiative to promote forest adaption measures to climate change in the Bavarian alpine region

1. Description of the Initiative

Field: Forest management (silviculture / forest adaptation / advising forest owners / participation)

The "Bergwaldoffensive" (BWO) as part of the renewed **Bavarian Climate Protection Program 2050 (KLIP2050)**[78] covers the whole Bavarian alpine region. Since 2008 it has supported private and municipal forest owners with various measures regarding forest management, biodiversity protection, stakeholder participation, awareness raising and knowledge transfer to prepare mountain forest for expected climate changes. The guiding principle of the BWO initiative is 'prevention is better than cure'. The participatory approach and project-based character of BWO are unique within the Bavarian forest administration. Special staff members based at local forestry offices plan and manage projects in defined project areas to raise the stability and resilience of mountain forests to climate change impacts. They bring together stakeholders and society to balance competing interests with help of round tables and foster applicable solutions as well as raise awareness about climate change and its risks to multifunctional mountain forests.

Because of the economically challenging conditions of mountain forest management a lot of adaption measures would not be realized without state assistance. Therefore mainly the State of Bavaria provides financial support to promote climate-appropriate forest adaption and supporting actions like forest road construction, hunting and visitor management concepts and agreements on forest pasture.

Fig.: The Bergwaldoffensive"(BWO) logo

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[78] https://www.cipra.org/shared/pdfs/file_oekoplan-2020-bayern.pdf_e8e88dc9372740ae1ec3e35d1c37eb2b

Stakeholder and aims

Forestry administration staff selects project areas and initiates or accompanies measures and projects to adapt mountain forest to changing climate. Concrete measures can only be realized by or with approval of **landowners**. Additionally forestry administration members act as organizers and mediators in various processes including stakeholder participation at round tables, decision making in project areas and promoting balanced solutions. Building stakeholder networks on a local and regional basis is key to many challenges in the alpine region and can be easily transferred to different subjects.

At **local and regional** level following stakeholders may be involved in decision processes within the project areas:

- private and municipal forest owners
- state forest company BaySF
- representatives of mountain pasture and agcriculture
- representatives of nature conservation (NGOs)
- hunters
- representatives of local tourism
- specialist authorities such as forestry and water management offices, nature conservation agencies, hunting authorities, State Building Construction Department etc.
- municipalities, local policy makers

At State-wide level it's important to link foresters, policy makers, research institutes and alpine communities to understand the challenges of a changing environment and its impacts on mountain forests and society. It's crucial to pool knowledge of suitable strategies to tackle these challenges as well as to provide funds for research and target-oriented forest management.

The actors of the project are:

- Research institute „Bavarian State Institute of forestry" (Practical research regarding mountain forests and climate change)
- Ministry of Food, Agriculture and Forestry of Bavaria (Organization, moderation and funding of activities within the BWO initiative)
- Regional and state-wide policy makers

Mitigation and adaptation aspects

The project has a **climate friendly** approach: supporting sustainable mountain forest management helps to conserve and establish multifunctional forests, which provide countless functions such as carbon storage, natural hazard protection, protection of biodiversity and erosion control. Forest and soil protection as well as humus management are important to maintain natural carbon sequestration processes. Promoting regional value chains and rural development through sustainable forestry has various climate friendly effects including long lasting timber products for carbon storage, substitution effects and shorter transportation distances with lesser greenhouse gas emissions.

The project is also considered **resilient to climate change**[79]: supporting proper and sustainable mountain forest management helps to establish climate-adapted, mixed forests, which combine not only economic and ecological values and functions but are more resilient to natural disasters and the spread of pests due to changing climate.

Results

49 BWO projects areas are currently supervised by the Bavarian forestry administration. In 12 years over **3.500 single measures** were realized under the BWO patronage to adapt Bavarian mountain forests to climate change. These include the establishment of over 900 hectare climate-adapted, mixed forest stands by planting over half a million tree saplings. Goal-oriented forest management and harvest measures enable the natural regeneration of near-natural mixed mountain forests on 1300 additional hectares. In total 180 kilometer of nature-compatible forest roads were built to improve accessibility as requirement for active forest adaption measures.

Apart from forest management the "Bergwaldoffensive" succeeds in raising awareness in **local communities** for the vulnerability of mountain forests regarding climate change and the accompanying increased risk of natural hazards.

2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_Fo1: Potential of protective mountain forests fully used** The presented initiative main focus is to protect and adapt protective mountain forests and maintain and improve their protective functions in changing climate.

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[79] See other examples at http://www.manfredproject.eu/

3. Communications and recommendations: potential role of the Alpine Convention

The **integrated approach to involve stakeholders** and find common solutions in participation processes not only for climate-aware forest management can be transferred easily to other regions of the Alpine Convention and even different working fields. Forming multinational project areas to foster exchange with adjacent mountain regions might also be scenario worth thinking about.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Natural Hazards	Conserving and developing climate-adapted, resilient protection forests helps to prevent or minimize the risk of natural disasters.
Ecosystems and Biodiversity	Maintaining woodland ecosystems and near-nature forests with their various ecological functions like species habitat, water regulation, carbon storage and climate regulation contributes to conserve alpine nature.
Tourism	Providing attractive forest landscapes, helping to balance competing interests and establishing visitor guidance concepts contributes to a nature-compatible and sustainable tourisms in the Bavarian Alps.
Soil/Land	Providing attractive forest landscapes, helping to balance competing interests and establishing visitor guidance concepts contributes to a nature-

	compatible and sustainable tourisms in the Bavarian Alps

4. **Insights**

For further information (in German) about the BWO is it possible to visit websites:
http://www.aelf-ke.bayern.de/forstwirtschaft/063340/index.php
http://www.lwf.bayern.de/waldbau-bergwald/schutzwaldmanagement/010435/index.php

ITALY

❖ Public COMMUNICATION ACTIONS on the Tempesta Vaia

1. Description of the Initiative

Field: forest management

The **Tempesta Vaia** of October 2018 which hit the forests of north-east Italy intensely had a strong media impact, both for the extent and severity of the damage and for the affected areas, where the traditional and fascinating landscape dear to tourists and hikers has been turned upside down.

The media have often offered messages of destruction and of upset territories by striking traditional visitors and lovers of these areas who have become aware of the landscape value of these woods and the importance for tourism activities.

On the occasion of the FORLENER National Fair, **ERSAF** produced an **illustrative exhibition** of what happened, the ecological significance, future prospects and lessons to be learned.

Fig. ERSAF exhibition brochure

This exhibition had a great success which has been exported to many other Italian locations. Together with the exhibition, a short information leaflet was produced, the interest of which was captured by the National Ministry of Agriculture and Forests and by the Federation of Wood Industries which financed a reprint of **50,000 copies** distributed at all tourist sites in the areas affected by Go to be given to tourists and visitors to the areas to make them understand the meaning of what happened.

Stakeholder and aims

The stakeholders involved were mainly the categories of Alpine tourism: hotels and B & Bs, hotel and tourist associations, refuges, farmhouses, etc. This extensive initiative is considered a first step and a study basis for a **climate friendly forest management**.

Results

The need to offer good communication on the issue of climate change and impacts on forests belongs to a correct strategy to increase awareness of society, an element that is not easily measurable, but which plays a central role in the future capacity of the adaptation society.

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Fo1 _ Potential of protective mountain forest fully used**

❖ Regional forest fire PLAN in Lombardy

1. Description of the Initiative

Field: Forest management and forest planning

The **Regional Forest Fire Fighting Plan (PAIB)**[80] of Lombardy region developed and published in 2019 has taken, for the first time, the climate change framework within which mountain forests are now growing as a **reference element**.

In this way, reference scenarios of climate change were adopted (increase in temperatures, drought periods, change in precipitation) to identify new risk forecasting methods in relation to which to **define the methods of intervention**.

In the same way, the scenarios have been used to identify new and more updated management methods of forest surfaces to reduce the risk of fire.

All the stakeholders who participated in the management of the plan were involved: local authorities, forest managers, volunteers, firefighters, etc. The plan is a guide line for a sustainable forest management aimed at managing the forest heritage so that it is **resilient to climate change**.
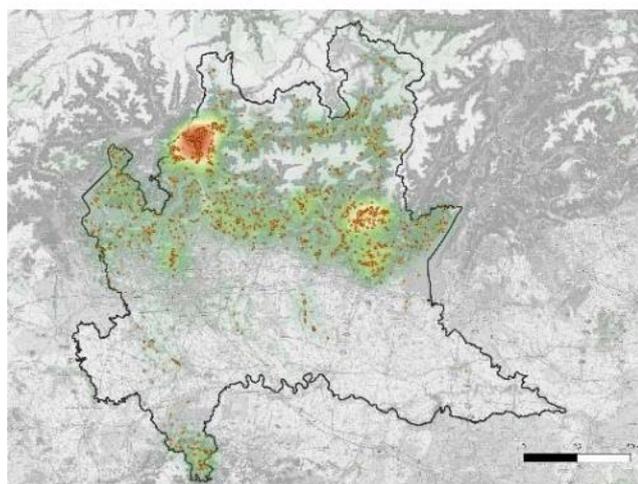
The Plan has been active since 2020 and the results will be seen in the future.

A permanent working group has been set up to follow, monitor and evaluate the application and results of the Plan. The activation of specific research and monitoring of indicators is envisaged.

Fig. *Fire distribution in Lombardy (2009 - 2018 period) - (PAIB)*

2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Fo1 _ Potential of protective mountain forest fully used**

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[80] https://www.regione.lombardia.it/wps/wcm/connect/9f683a35-b740-468a-bc2b-3a438ac04c66/dgr-2725-2019-piano-aib-antincendio-boschivo-2020-2022.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-9f683a35-b740-468a-bc2b-3a438ac04c66-m.Dtw6N

❖ **Improving forest HABITATS OF COMMUNITY INTEREST to also increase wildlife suitability**

1. Description of the Initiative

Field: Forest management and Biodiversity protection

Several forest mangaement interventions are carried out as part of the **LIFE14 IPE IT018 MANAGE 2020project**. Started in July 2018, after careful preparation of the executive projects involving a team of multidisciplinary experts (foresters, naturalists, ornithologists, entomologists), will end at the end of 2023.

The **projects (9 in all)** cover a total area of 100 hectares within the Natura 2000 Network of Lombardy Region, on land owned by THE region managed by ERSAF, in the provinces of Brescia, Como, Lecco and Sondrio.

*Fig. Cos'è LIFE IP Gestire 2020?*http://www.naturachevale.it/documenti/

The interventions of compositional, structural and wildlife-suitability are for Picea habitats (Nature Cod. 9410), beech forest (Nature Cod. 9110 and 91K0) and maple-lime (Nature Cod. 9180). The target species of the projects are the Picidae (black woodpecker Dryocopus martius, Ashwoodpecker Picus canus), the owls (boreal owl Aegolius funereus and owl dwarf Glaucidium passerinum) and the Cerambycidae Rosalia alpina.
Interventions include thinning cuts, conversion of artificial coniferous plants, clearings in the forest, creation of small wetlands, log pyramids and wood stacks for invertebrates.

The projects provide for **monitoring on habitats and pre-opera and post-work** species of interventions to test the effectiveness of the actions carried out.

<div style="color:green">**Stakeholder and aims**</div>

The planning and implementation of the interventions did not involve stakeholders, but experienced professionals able to put together the different skills and obtain a design that would become good practice for others (managers, forestry companies, planners).

<div style="color:green">**Mitigation and adaptation aspects**</div>

The initiative could be considered:

1)**Climate friendly**

In the previous Project LIFE+ GESTIRE was realized a study for assessing the possible effects of climate change on indicative species and implications for conservation. Climate change will most likely have a significant impact on the distribution of species of community interest, such as Eurasian Pygmy-owl and Boreal owl that have a strong and close connection with mountain forests in sufficiently cold climates (some studies define them as "glacial relicts" in the Alps). As a result, actions of the GESTIRE 2020 project were aimed on the habitats of these species.

2)**Resilient to climate change**

The main purpose of the interventions to improve the composition and structure of the forest is to strengthen the defences of the forest ecosystem as a whole and thus to increase resilience to climate change (eg. storms, pests attacks)

<div style="color:green">**Results**</div>

The initiative is not currently finished. Post-opera monitoring of the first completed forestry interventions is under way. Best practices will be ready at the end of 2023.

2. Alpine Climate Target System 2050

*W*hich objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Fo1 _ Potential of protective mountain forest fully used**

3. Insights

Further details on the initiative can be found on the official website.[81]

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[81] www.naturachevale.it

4. Communications and recommendations: potential role of the Alpine Convention

With reference to **all three Italian initiatives** could be useful:

1) the construction, through the Alpine Convention and his activities, of a database and a georeferenced Alpine platform to be built progressively for the creation of a network of good practices.

2) building a common protocol of focus on sustainable management for adaptation to c.c.c

3) Define common goals and result indicators

4) Include in the local agendas sustainable agricultural and forestry management criteria and commitments for adaptation to c.c.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Natural Hazards	Correct planning risk improves the ability to govern it
Tourism	**Initiative 1** – Raising awareness of forest tourists on the issues of c.c. Initiative 3 – improving forest biodiversity can become a tourist attraction
Ecosystems and Biodiversity	**Initiative 3** – Improving Forest Biodiversity Increases Ambiental Quality and Ecosystem Servies
Municipal Action	Local action, even at the municipal level, is always essential to apply the practices locally and thus spread the sustainable and effective management
Research and Development (R&D)	**Initiative 2/Initiative 3** – Fire planning and improving forest biodiversity require research and development to understand effectiveness, results, enhancements

SLOVENIA

❖ **LIFE ClimatePath2050- Slovenian Path Towards the Mid-Century Climate Target**

1. Description of the Initiative

Field: forest management, sustainable agriculture, climate change mitigation

Slovenia is a part of the international community with a mission to prevent negative consequences of climate changes and to hold the rise of average air temperature below 2°C. **»LIFE ClimatePath2050«** is designed to monitor the progress and plan **further climate actions to reduce greenhouse gasses (GHG) i**n building, traffic, industry, **agriculture**, waste and **forestry sector**.

The project builds on the development and improvement of the established system for climate projections and climate action monitoring. The goal of 4-year project is to contribute to climate changes mitigation by setting up a decision support system, which will enable **Slovenia to set up its own goal of reducing GHG emissions by 2050** and to contribute to the international goal to hold the temperature rise.

Stakeholder and aims

Working closely with policy makers, the project will ensure wider, easier and better usage of analytical data in the decision-making and climate policies planning, as well as monitoring and transferring results to the local level. Different scenarios for reducing GHG to achieve target goals will be developed, together with advanced climate action implementation and monitoring. **Three annual Climate plan** to be organized as the main national climate action-monitoring event packages will be prepared and will represent the main national climate action-monitoring event.

Mitigation and adaptation aspects

A local action scoreboard for municipalities will be set up to enable monitoring of climate actions at the local level. Chosen indicators will show progress and monitor measures. The application will help monitor climate policies and actions as well as share best practices and exchange ideas among municipalities.

Specific/operational project objectives:

- Preparation of long term GHG projections up to 2050 for different alternative scenarios with additional climate mitigation measures and to assess and compare their impact on the Mid-century climate strategy which has to be drafted by the state by 2020
- To transfer the results to the local level
- To upgrade the system for tracking the progress of climate changes mitigation actions: increase accessibility and usage of analytical data for measure improvements, to improve national and international reporting

Schematic presentation of the LIFE ClimatePath2050 implementation actions and their interaction with policy making
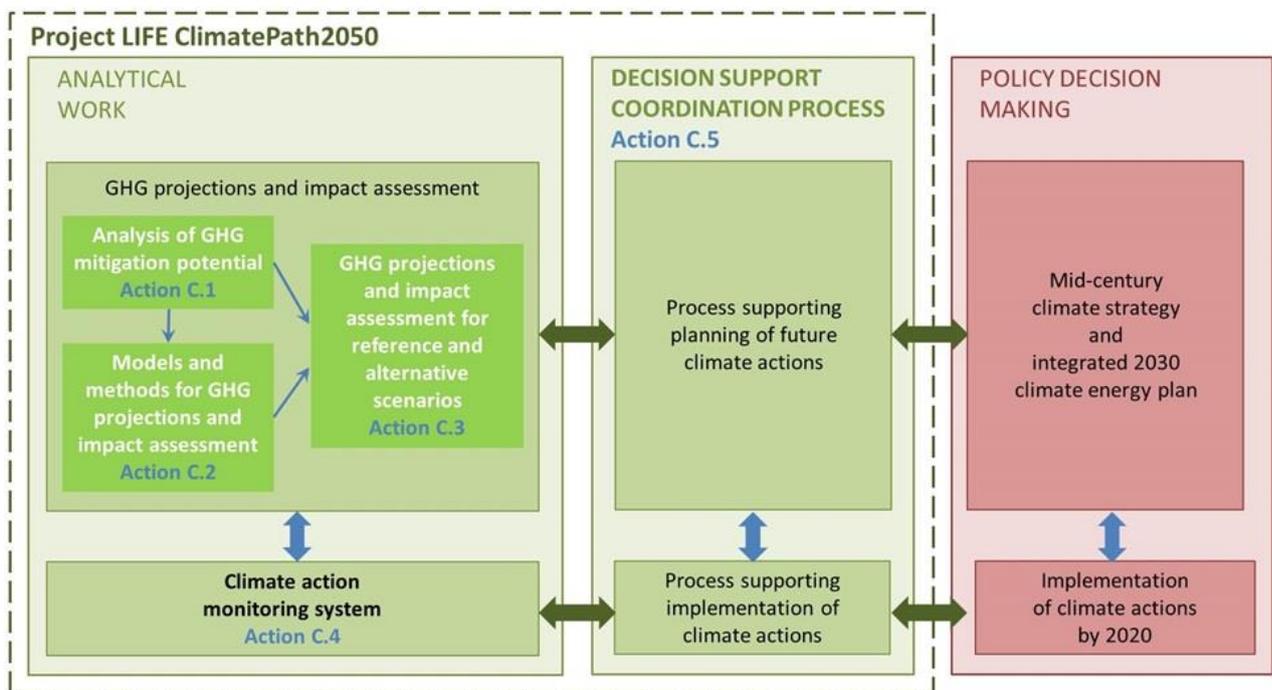
Fig. *Schematic presentation of the LIFE ClimatePath2050 implementation actions and their interaction with policy making*

Results

The project will enhance to use of quantitative GHG projections to support the development of the national mid-century climate strategy. It will carry out **multi-criteria assessment of the impacts of GHG mitigation scenarios,** including sectoral criteria and macroeconomic impact assessment. It will also support enhanced implementation of climate policies by improving monitoring of the implementation of, access to, and use of monitoring results the preparation of corrective measures.

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Fo1 _ Potential of protective mountain forest fully used**
❖ Goal **T_Fo2_ Mountain forests as carbon sink**

3. Insights

All information about the project are on the official website https://www.podnebnapot2050.si/

❖ LIFE NATURAVIVA

1. Description of the Initiative

Field: resilient biodiversity and sustainable agriculture

Biodiversity is a fantastic variety of life, one of the most valuable and most noble features of our planet. It is a key element of ecosystem services, on which we all depend of. **Slovenia possesses one of the highest biodiversity in Europe**, which is not sufficiently recognized and therefore not appreciated enough.

Stakeholder and aims

The National Institute of Biology of Slovenia prepared with nine partners 5-year communication LIFE project with a meaningful title LIFE NATURAVIVA. The overall goal of the project is to reveal the exceptional natural values of Slovenia and its significance and to

highlight the threats that biodiversity here faces. What are the consequences of losing a species? What are the benefits of rich biodiversity? The overall project of the LIFE NATURAVIVA is to **highlight the danger of biodiversity loss by informing and raising awareness among the different target groups** by anticipating impacts of climate change in mountain agriculture.

Most activities will take place in protected areas, therefore there are five Slovenian natural parks included as project partners. However, we will not forget about nature outside parks, since "nature is everywhere". Communication on the value of biodiversity must reach every corner of Slovenia. Therefore, we will connect messages on the value of biodiversity with cultural heritage and art, join events and concerts, and address an audience that does not expect this – looking for cultural and artistic events, and facing a message about the threat to nature. All events will be recorded and used as promotional short films for various media.

Results

The project's target is to educate various target groups and raise awareness of the need to conserve biodiversity, among various target groups, from kindergartens to students, from farmers to politicians, and therefore they use different approaches. We will participate in fairs, exhibitions and environmental days. We will prepare and publish a luxurious book on the biodiversity of Slovenia, record a film, prepare several outdoor and indoor exhibitions, informative leaflets etc, city posters, colouring book, summer school, workshops etc.

2. <u>Alpine Climate Target System 2050</u>

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Agr3 _ The Alps as model region for organic farming**
❖ Goal **T_Agr4_ Resilient and climate-friendly mountain agriculture**

3. <u>Insights</u>

All information about the project are on the official website https://www.naturaviva.si/

- ❖ **LIFE Conservation and Management of Dry Grasslands in Eastern Slovenia (LIFE TO GRASSLANDS – LIFE 14 NAT/SI/000005)**

1. <u>Description of the Initiative</u>

Field: resilient biodiversity and sustainable agriculture

LIFE TO GRASSLANDS project will contribute towards the implementation of **Natura 2000 Management programme (2015–2020)**.

Stakeholder and aims

The project is addressing conservation of biodiversity in agriculture landscape, targeting the conservation of extensive dry grasslands. One of the challenges is to find opportunities for the re-cultivation of abandoned agricultural land, and thus **"give life to grasslands"**. We want to show that the **production of quality agricultural products and protection of nature can be carried out hand in hand.**

The project runs from 1st of November 2015 to 31st of October 2020. The leading partner of the project is The Institute of the Republic of Slovenia for Nature Conservation. Project partners are Haloze Rural Development Centre, Agriculture and Forestry Institute Ptuj, Local Community Dobovec and Society Gorjanske košenice. The project is being carried out with the contribution of LIFE Nature and Biodiversity, the financial instrument of the European

Union. The project is co-financed by the Ministry of the Environment and Spatial Planning of the Republic of Slovenia.

The purpose of the project "**Conservation and Management of Dry Grasslands in Eastern Slovenia**" is to improve conservation status and ensure long-term management of species reach dry grasslands as well as plant and animal species connected to them in the following areas: Haloze, Pohorje, Kum and Gorjanci-Radoha. All four areas face problems of overgrowth and abandonment of agricultural use on one hand and the problem of unsuitable (intensive) agricultural use of land on the other.

Fig.: The habitat type, which the experts refer to as semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia), can be found in Haloze, Kum, and Gorjanci. These meadows are also rich with wild orchids. Such meadows can also be found in Goričko, Kozjansko, Bela Krajina

Results   The **project LIFE TO GRASSLANDS** established appropriate long-term use of grasslands over 680ha through purchase and free lease of equipment and machinery for pastures and mowing. Among other things over 3500 seedlings and protective equipment were purchased, through which 85 ha of traditional tall tree orchards were restored and planted. Farm management plans to improve the economical perspective of farms were prepared as well as an Expert Proposal for agricultural environmental measures for the conservation of *Semi-natural dry grasslands and scrubland faces on calcareous substrates (Festuco-Brometalia) important orchid sites* and *Species-rich Nardus grasslands, on siliceous substrates in mountain areas*, prepared programmes and teaching aids for schools, training for farmers, workshops with municipalities and local stakeholders.

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_ Agr**

3. Insights

More information about the concrete actions and possibilities of involvement in the project is available on www.travisca.si or www.lifetograsslands.si.

4. Communications and recommendations: potential role of the Alpine Convention

The **implementation of experiments and the linking of feedback** from these new practices throughout the Alpine region would be extremely profitable.

The establishment of communication supports and raising awareness are also important.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**
Natural Hazards	Fight against soil erosion, droughts, floods, forest fires, landslides and other extreme events
Ecosystems and Biodiversity	Living soils are the basis of biodiversity in the permanent crops- direct link
Water	In dry mountain areas, increasing the organic matter in the soil is essential to store more water
Soil/Land	Direct link
Research and Development (R&D)	Repository on innovative practices

SWITZERLAND

❖ 100% Bio Valposchiavo

1. Description of the Initiative

Field: Mountain agriculture and tourism

Fig.: Claim of the project "100% Organic ValPoschiavo"
Source: valposchiavo.ch

In the 2000s, Val Poschiavo, a small Italian-speaking valley in Graubünden with around 5,000 inhabitants nestled between the Engadine and Lombardy, started a process to **position the whole valley as the first 100% organic farming valley worldwide**. Since 2015, Val Poschiavo has branded itself as the **Smart Organic Valley** and in 2020 more than 90% of farmers have switched to organic and 60 local producers are participating in the radical organic project.

Stakeholder and aims

"100% Valposchiavo" builds upon the **cooperation between tourism organisations, farmers' associations**. The aim is to **strengthen the positive relationship between local food products and tourism** in the Valley. This increases local economic value added due and at the same time reduces substantially the ecological impact of agriculture, processing, transportation and consumption within the Valley.

Mitigation and adaptation aspects

The Project contributes **to GHG mitigation** firstly by the high (almost 100%) share of organic farming in the Valley. In **organic farming** net GHG emissions are substantially lower than in traditional agriculture. Second, GHG mitigation is supported by **closing economic**

cycles between production and consumption and the reduction of grey energy (transportation).

Results   In 2020 more than 90% of farmers produce organic and 60 local producers and touristic ventures are participating in the project.

2. Alpine Climate Target System 2050

Which objectives of the Alpine System's objectives for climate 2050 contributes and how
❖ Goal **T_Agr2 _ Alpine value chains for agricultural products** The common vision of "100% organic" fosters cooperation between tourism and agriculture within the Valley. ❖ Goal **T_Agr3 _ The Alps as model region for organic farming** The project 100% Bio Valposchiavo demonstrates that a share of >90% (state: 2020) organic farming at regional scale can be realized. The project may serve as role-model for other regions.

3. Communications and recommendations: potential role of the Alpine Convention

100% Bio Valposchiavo demonstrates that **agronomic conditions in the Alpine arc have a promising potential for increasing the share of organic farming**. As the case shows, regional "bottom-up" initiative and leadership as well as a favorable regional and national agricultural and regional policy frameworks are precondition to realize this potential. The project thus may serve as **role-model for similar processes in other regions in the Alpine arc**.

Furthermore, the project currently discusses **a certification as "organic Valley", i.e. a certification at the regional and not at the farm level**. Insights from this process may also give insights for similar initiatives in the Alpine arc.

Other sectors of activity of the Alpine Convention connected to the initiative	
Sector	**Reason/Comment**

Tourism	Reducing ecological footprint (gastronomy), diversification (summer tourism)
Transportation	Short transportation distances of agricultural and processed goods

4. **Insights**

Further information including publications and presentations can be retrieved on the project's website.[82]

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[82] https://www.valposchiavo.ch/en/experience/100-valposchiavo/the-project

5 Quick Overview on further initiatives from Alpine countries

AUSTRIA

❖ Klimafitter Bergwald Tirol - climate-fit mountain forest Tyrol

What

Forest trees respond rather slowly to changes in their environment. However, climate scientists predict increasing temperatures up to +4°C and extreme meteorological events within the Alpine area until the year 2100. Under these conditions especially spruce (Picea abies), which covers half of the Tyrolean forests at present, gets stressed below 1.000 m sea level. This makes our Alpine forests more vulnerable to damages and diseases (e.g. Vaia in Eastern Tyrol). The response has to be a climate-active forest management, which supports stable and healthy forests to meet these various challenges. This can be achieved by a climate-fit silviculture including afforestation of drought-tolerant tree species, tending practises and awareness of all forest related stakeholders. Forest professionals, forest owners as well as the broad public have to become sensitised to this complex topic. The Tyrolean authorities support this project with a government aid. It is the aim to induce forest owners to make their forests fit for climate change. Therefore, the forest functions, especially protection against natural hazards, in the Tyrolean Alps should remain also in the future.

Who

Department of Forest Planning, Forestry Support Office of the Tyrolean Regional Government, Bürgerstraße 36, 6020 Innsbruck; supported by the Federal Ministry Republic of Austria Agriculture, Regions and Tourism and the EU within LE 14-20

Aims
- to safeguard all of the various forest functions sustainably, especially protection against natural hazards
- to arrange a mix of climate-fit tree species, which support the regulatory mechanisms of forests also in the future

- to support forest owners in their sustainable management and tending, especially in young forest stands
- to raise awareness for climate change forest issues by intensive public relation and learning opportunities in educational establishments
- to strengthen the expertise of the regional and municipal forest professionals
- to improve cooperation with other nature stakeholders and partners on national and regional level

Where

Tyrol, Austria

Contact/WEB

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https://klimafitter.bergwald.tirol

Fig. Climate-fit afforestation on a forest site in Neustift im Stubaital

ITALY

❖ "100% Local" project

What

Consumers are increasingly interested in the "values" associated with agri-food products. These values may concern the local production of ingredients, the involvement of only

small and medium-sized farms or the use of environmentally friendly production practices. The project (August 2019- January 2021) focuses on the enhancement of the short Alpine agri-food value chain, here understood as the set of actors involved in the production, marketing and sale of products, that offer goods entirely produced and processed locally: an approach here called "100% Local".

Who

Eurac Research, Institute for Regional Development Lead Partner, members of EUSALP Action Group 3,6 and 1.

Aims

- To raise awareness about the 100% Local approach and its economic, environmental and social impacts
- To develop, on the basis of good practices in the Alps, a replicable and transferable 100% Local development model to facilitate its adoption by other territories.
- To provide the study areas with the tools to assess what are the essential aspects in the construction of a development model based on 100% Local and what are the gaps yet to be filled
- Once gaps and problems in the area are detected, facilitate the search for solutions and skills located outside the territory of the study areas with a virtual platform based on crowdsourcing.

Where

Case study areas: areas, preferably valleys or parks, located in the Alps and close to the state border, interested in enhancing the sustainable valorisation of their agri-food products and territory through the 100% Local approach.
Confirmed study areas: Parco delle Prealpi Giulie (IT); Obervinschgau (IT); Bohinj and Triglav National Park (SLO); Valsot, Unterengadin (CH); Pitztal (AT)

Contacts/WEB

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❖ Management of the risk of bark beetle outbreak associated with the Vaia storm in the south-eastern Alps

What

Vaia storm represented the strongest wind disturbance ever recorded in the southern Alps, blowing down about 8.5 million m3 of standing trees, mainly Norway spruce (Picea abies). The presence of a large mass of fallen spruce trees might drive the spruce bark beetle (Ips

typographus) populations to an exponential growth, thus potentially compromising the survival of the surrounding standing forest. The 2019 surveillance carried out with pheromone traps showed an increase in populations size between the 1st and the 2nd generation.

Who

The high outbreak risk predicted from 2020 prompted the creation, in December 2019, of a task force involving the University of Padova as coordinator (A. Battisti, M. Faccoli), the Edmund Mach Foundation (C. Salvadori), the forest services of Bolzano/Bozen (A. Andriolo), Friuli VG (I. Bernardinelli), Lombardia (A. Ducoli), Trento (M. Confalonieri) and Veneto (G. Zanini) districts, to foster cooperation and to launch a shared monitoring programme. Austrian forest services were promptly contacted to extend the cooperation.

Aims

Joint winter surveys were carried out to check the condition of windthrown sites, highlighting that Ips typographus populations were often present and infesting fallen trees. At the same time, a good availability of fresh phloem in the fallen trees was detected, which might drive populations to an exponential growth during the upcoming swarming season, ultimately affecting standing trees. The task force is now planning and coordinating the 2020 trapping programme, to monitor the outbreak development and to support decision-makers in adopting adequate control measures.

Where

Southern Alps

SLOVENIA

❖ Project - From Intelligent Land Use to Sustainable municipalities, acronym "IMPULSE4ACTION"

What

Impuls4Action aims to trigger actions to support sustainable development on all levels by providing appropriate tools, raising awareness and finding new models for sustainable soil protection in the Alps. Climate change increases the need for integrative activities and tailor-made instruments concerning the soil protection and Green Infrastructure (GI)

development. The establishment of the toolbox "LESS LAND TAKE" will merge relevant information, best practices, scientific expertise, integrate results of on-going projects and create cooperation starting from awareness raising events to involvement of all stakeholders concerned. Impuls4Action will increase the quality of life in the Alps for the current and future generations.

Who

Slovene Chamber of Agriculture and Forestry - Institute of Agriculture and Forestry Maribor, Slovenia (coordinator); - Edmund Mach Foundation - Research and Innovation Centre, San Michele all'Adige, Italy; - Environment Agency Austria, Wien; - Platform Land, Bozen, Italy; - University of Milan, Italy; - Foundation Pro Terra Engiadina, Zernez, Switzerland.
Members of EUSALP Action Group 6 and 7.

Aims

- To trigger actions to support sustainable development on all levels by providing appropriate tools, raising awareness and finding new models for sustainable soil protection in the Alps.

- To facilitate a dialogue between different stakeholders, target groups and policy makers on local and regional level in order to improve mutual understanding and harmonize interests.

- To provide three thematic pilot cases. 1. Water management in Alpine soils, 2. Inner Development and 3. Peatlands, with different impact paths on soils, to collect data in toolbox.

- To establish the toolbox "**LESS LAND TAKE".**

- To organise several awareness raising events in the pilot areas, regional, national, crossborder, EUSALP, EU level to contain land take through inner development e.g. re-use and regeneration of settlements, to promote water management specific to Alpine soils and to create preconditions for the restoration and maintenance of multi-functional peatlands.

Where

Case study areas:

1. Water management in Alpine soils:

Planica/ Pohorje, Slovenia   Lower Austria.

2. Inner Development: Autonomous Province of Bolzano, Italy

3. Peatlands: Tarasp Lai Nair, Switzerland

❖ Interreg Alpine Space – Project: Alpine Drought Observatory, acronym "ADO"

What
According to the Alpine Convention, water scarcity and related conflicts are becoming a worrying topic in Alpine regions. Moreover, lowland regions far beyond the Alps suffer from missing water from the Alps. Thus, countries are invited to act on this topic with common strategies. Building on findings from previously funded projects (e.g. AlpWaterScarce), project aim is to **set up an Alpine Drought Observatory (ADO)** and to **derive recommendations for improved risk preparedness and efficiency of drought management, specifically, for the Alpine territory.**
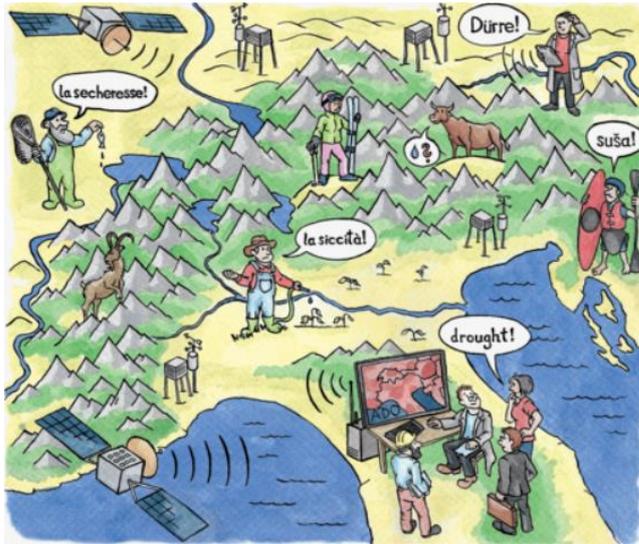
The ADO itself will be a transnational Alpine-wide operational system with a web-interface (e.g. WebGIS, periodic reports) to access data and specific impact-oriented indices for monitoring droughts and their impacts. It will provide optimized observations and forecasts for mountainous areas, which could be integrated in existing EU-level monitoring systems (e.g. European Drought Observatory). Monitoring will be based on a fusion of existing approaches (e.g. meteorological drought indices, hydrological drought indices), and newly available information (e.g. remote sensing of snow and soil moisture), to create new combined drought indices and a common drought classification. The ADO will be applied in six case studies in all alpine countries with local partners. The case studies represent different drought issues such as agricultural drought, hydrological drought or drought impact on ecosystems. Out of the case studies, guidelines for an improved drought risk management will be developed. Findings will be up scaled to recommendations for drought governance policies for the Alps.

Main beneficiaries of project findings are institutions with decision-making capacities in the field of water management, energy production, and agriculture. Many of them are directly involved in the project as partners, observers, or stakeholders.

Who
European Academy of Bozen - Bolzano (Eurac Research, ITA) - Lead partner.
Piedmont Region - Environment Department (ITA); National Association of Consortiums for the Management and Protection of the Territory and Irrigation Waters (ANBI, ITA).

Aims
Project ADO aims to create an online **drought-monitoring platform** and develop policy implementation guidelines for proactive drought management in the Alpine Space region, to improve:
- the understanding of drought impacts in the Alps,
- the current drought monitoring and forecasting capabilities,
- and the current drought management practices and drought preparedness.

The overall objective is to provide a platform for the monitoring and forecasting of drought with specialized products for the Alpine Space region, which will contribute to an improved drought preparedness. Furthermore, findings from the ADO may inform a better

implementation of policies for drought management, to create better coordinated governance instruments for a more efficient use of the resource water (e.g. solve conflicts of interest and protect sensitive ecosystems). Ultimately, the aim is to reduce the risks associated to drought. This will contribute to the conservation and protection of ecosystems affected by water scarcity.

The ADO will be applied in six (6) case studies in all alpine countries with local partners. Case studies represent different drought issues such as:

- Agricultural drought,
- Hydrological drought,
- Or drought impact on ecosystems.

Out of the case studies, guidelines for an improved drought risk management will be developed. Findings will be upscale to recommendations for drought governance policies for the Alps.

Where
Case studies:

- Austria: case study Upper Austria
- France: Vercors regional park
- Italy: Piedmont region, river Orco
- Slovenia: Podravska region
- Switzerland: Ticino, Lago Maggiore
- Switzerland-Germany: Thurgau, Lake Constance

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multimedia/detail/multi-annual-work-programme-of-the-alpine-conference-2017-2022-priorities/

❖ *Ballarin-Denti, A., et al. "Guidelines for climate change adaption at the local level in the Alps." Italian presidency of the Alpine Convention, 2014.*

❖ *CLIMATE CHANGE How it affects the Alps and what we can do Permanent Secretariat of the Alpine Convention, 2017*

❖ Climate-neutral and Climate-*resilient Alps 2050, Author: Permanent Secretariat of the* Alpine Convention

PART 2

Initiatives across the Alps consistent with the actions envisaged by the Green Economy Action Program

Activity of the mandate: Participate in the implementation of the Green Economy Action Program (GEAP) through the support to implementing actions in relevant fields for mountain farming and forestry, especially eco-innovation, regional development, valorizing ecosystems and biodiversity, living and working in a green economy

1. Green Economy in Alpine environment

1.1 Alpine green economy in focus sectors

The sixth report on the **State of the Alps (RSA6)** highlights the role of the green economy as the engine of local and regional development of a nation. This takes on greater significance in the Alpine region where natural and cultural capital is high. Today's goal is to ensure that, in these territories, innovative businesses and start-ups engage in promoting eco-innovation and the integration of the green approach into regional strategies and drawing up the green economy itself as a reason for competitiveness for the Alpine region.

The transition to the green economy is also an opportunity for the creation of green jobs supported by local policies, and the promotion of the right investments in this sense can certainly stimulate demand for local products, technologies and services. Last but not least, the sustainable innovation of the various sectors and the decrease in atmospheric emissions linked to this new type of economy are able to improve the well-being of mountain populations. It is precisely this plurality of applications that enhances the **transversality of the green economy** with respect to all the themes of the Alpine Convention, in particular to those of mountain agriculture and the management of alpine resources such as forests.

1.1.1 Green economy and mountain agriculture

The green economy, in its relations with agriculture, is influenced by the **management techniques of soil cultivation**, as well as the subsequent **transformation and marketing of products**.

As specifically regards the Alpine Region, just like other economic activities, it is affected by the difficulties related to the mountain territory (such as transport between the valleys and the ridges), the difficulty of supply for consumers, the availability of arable land and the possibility of mechanization. At the same time, it is precisely the peculiar characteristics of this territory that represent the singularity of alpine agriculture which, as such, must be enhanced through a new green-oriented economic approach.

Compared to RSA7 and the new Alpine Convention program, alpine countries aim to continue promoting green economy-oriented action in all Alpine territories also by virtue of the excellent results achieved with **projects** that have made it possible to highlight the potential of agriculture in the Alpine areas and offer some food for thought on agriculture in the mountains and in particular on that implemented with biological methods, or techniques aimed at obtaining zero residue products.

The goal of a "green" economy is in this case to give concrete answers to the ever growing need, by inhabited centres near the Alps, to implement support policies for the development of high quality mountain productions, in order to encourage not only local agriculture, but also the economies related to it (**agri-food, catering, tourism**).

In this context, the approach of the new platform of **"Mountain Agriculture and Mountain forestry"** is also to highlight the transition rings towards a greener economy advantaging not only environmental and climate protection, but also the economic well-being of inhabitants of the alpine areas.

1.1.2 Green economy and Alpine forests management

In the Alpine area, forests, as the second most important natural resource after water, represent a huge natural and economic capital capable of guaranteeing a significant amount of energy, low waste production and high renewability. It is now known that **sustainable forest management** can encourage the use of wood as an alternative renewable resource in the **construction sector** (especially in innovative and environmentally sustainable constructions) or as a completely

renewable energy source (e.g. biomass). All this is part of the innovative approach of the green economy.

Sustainable forest management can not only promote timber production based on the best and best use of wood, but is able to generate an improvement of other ecosystem services in terms of CO_2 sequestration, soil protection, protection from natural hazards, creation of places of recreation for the inhabitants, improvement of the landscape and protection of biodiversity; the harvest of no wood products like truffles and mushrooms could be increased too. At the same time it becomes a resource in terms of **green tourism**, capable of attracting visitors as a landscape and natural wealth of mountain resorts. Forests represent a huge basin for **alpine biodiversity**, a biodiversity that requires a greater protection effort by virtue of the numerous endemic species and specific alpine habitats. Consequently, the need to communicate how this biodiversity can generate economic benefits in terms of **services** (e.g. Wildlife tourism experiences) or **cost reduction benefits** (e.g. erosion damage thanks to the land cover of native trees and alpine grassland) increases as well as the contribution to the human well-being of the inhabitants and tourists who visit the Alps.

1.1.3 Energy and economic transition in agriculture and alpine forest management

The mountain environment, for its natural characteristics, such as the richness of forests and water, altitude difference, wind and sun exposure, can be facilitated, with the right tools, in the transition towards the use of **renewable energies to combat climate change**. The same farms located within the perimeter of the Alpine Convention can play the additional role of energy growers. The diversification of agricultural uses, with the simultaneous **production of energy** (eg through solar collectors or forest biomass), can also become a source of additional income for businesses.

At a regional level, in fact, decentralized **renewable energy production solutions** are often an opportunity for farms in mountain areas and a sustainable **use of biomass** as well as soil is able to create potential for generating additional economic as well as ecological and environmental added value. The efficiency of the use of resources, especially in the Alpine area, must therefore occur in the energy sector but also, and above all, in terms of the use of productive lands and the use of timber. This necessarily affects the integrity of ecosystems and the **protection of biodiversity** itself[83].

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[83] Biodiversity is a part of natural capital and contributes to ecosystem services as an economic factor. It cannot be protected only by creating protected areas (about 28% of the Alpine territory) although these represent a high value for mountain areas. Appropriate habitats and less intensively exploited areas are important structures for flora and fauna in agricultural areas. The High Nature Value Farmland is used as an agro-environmental indicator in the EUROSTAT system and is defined as the

Energy changes and, above all, climate change must therefore present themselves as challenges capable of triggering the eco-innovation that involves these sectors. Not to mention that it is precisely starting from the reduction of emissions and energy efficiency that the ideal objective of **"Climate-neutral Alps "** can be achieved.

BOX	The European Green Deal in focus sectors

The "Green Deal" is an ambitious rethinking of Europe's economy, transport and energy sectors aimed at turning the EU into a global leader on the clean technologies that will shape the coming decades. Overall, the Commission estimates that an extra in investments are needed per year to finance the switch to clean energy and reduced emissions.

The Green Deal is an integral part of this Commission's strategy to implement the United Nation's 2030 Agenda and the sustainable development goals. As part of the Green Deal, the Commission will refocus the European Semester process of macroeconomic coordination to integrate the United Nations' sustainable development goals, to put sustainability and the well-being of citizens at the centre of economic policy, and the sustainable development goals at the heart of the EU's policymaking and action.

The EU has the collective ability to transform its economy and society to put it on a more sustainable path. It can build on its strengths as a global leader on climate and environmental measures, consumer protection, and workers' rights. Delivering additional reductions in emissions is a challenge. It will require massive public investment and increased efforts to direct private capital towards climate and environmental action, while avoiding lock-in into unsustainable practices. The EU must be at the forefront of coordinating international efforts towards building a coherent financial system that supports sustainable solutions. This upfront investment is also an opportunity to put Europe firmly on a new path of sustainable and inclusive

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"percentage of area used in agriculture (UAA) that generates a high natural value (HNV)". Typical high-value areas are high altitude pastures and alpine meadows with high biodiversity. Conservation is an opportunity in economic terms as it facilitates the development of activities and projects that combine economic development with nature conservation and social inclusion and supports social innovation in rural areas. Biodiversity is also a source of tourism, becoming a strong point in regions, such as the Alpine ones, with a weak economy.

growth. The European Green Deal will accelerate and underpin the transition needed in all sectors. The environmental ambition of the Green Deal will not be achieved by Europe acting alone. The drivers of climate change and biodiversity loss are global and are not limited by national borders. The EU can use its influence, expertise and financial resources to mobilise its neighbours and partners to join it on a sustainable path.
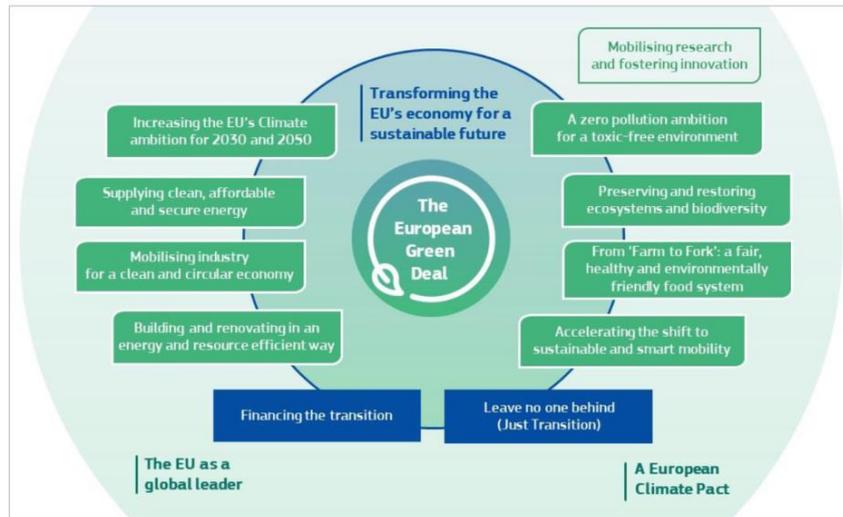
Some of the actions of the Green Deal, such as those listed below, are consistent with the objectives of the Alpine Green Economy for 2030.

Actions	Indicative Timetable[1]
Clean, affordable and secure energy	
Assessment of the final National Energy and Climate Plans	June 2020
Strategy for smart sector integration	2020
'Renovation wave' initiative for the building sector	2020
Evaluation and review of the Trans-European Network – Energy Regulation	2020
Strategy on offshore wind	2020
Industrial strategy for a clean and circular economy	
EU Industrial strategy	March 2020
Circular Economy Action Plan, including a sustainable products initiative and particular focus on resource intense sectors such as textiles, construction, electronics and plastics	March 2020

Initiatives to stimulate lead markets for climate neutral and circular products in energy intensive industrial sectors	From 2020
Proposal to support zero carbon steel-making processes by 2030	2020
Legislation on batteries in support of the Strategic Action Plan on Batteries and the circular economy	October 2020
Propose legislative waste reforms	From 2020

Greening the Common Agricultural Policy / 'Farm to Fork' Strategy	
Examination of the draft national strategic plans, with reference to the ambitions of the European Green Deal and the Farm to Fork Strategy	2020-2021
'Farm to Fork' Strategy	Spring 2020
Measures, including legislative, to significantly reduce the use and risk of chemical pesticides, as well as the use of fertilizers and antibiotics	2021
Preserving and protecting biodiversity	
EU Biodiversity Strategy for 2030	March 2020
Measures to address the main drivers of biodiversity loss	From 2021
New EU Forest Strategy	2020
Measures to support deforestation-free value chains	From 2020

Fig. Action Plan of EU Green Deal

https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1596443911913&uri=CELEX:52019DC0640#document2

1.2. Green Economy Action Program in Alpine Convention

1.2.1 From the objectives of the green economy to the aims of GEAP

The definition of **green economy** at the basis of RSA6 is the one used in the UNEP Green Economy Report, that reads *"one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" and in short "one which is low carbon, resource efficient and socially inclusive (…) whose growth in income and employment is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency and prevent the loss of biodiversity and ecosystem services"* (UNEP, 2011). The Sixth Report on the state of the Alps **(RSA6)** (Alpine Convention, 2017) focuses on the analysis of the case and transition possibilities to a **green economy at alpine level** which led to the **action program for a green economy in the Alpine region** (GEAP) approved by the Alpine Conference of Innsbruck on 4 April 2019.

According to RSA6, an alpine **green economy** considers the environmental limits of the Alpine area, takes into account global challenges such as climate change and limited natural resources, and supports the quality of life and well-being of residents in mountain areas. An alpine green economy also aims at a sustainable use of regional natural assets such as water, forests, timber and soil. The RSA6 conducted an in-depth analysis of data, policies and practices in all Alpine countries, identifying urgent challenges and providing recommendations on how to support a move towards a green economy in the Alps.

RSA6 analyses four dimensions of the alpine green economy that are the priority objectives for any regional transition, that inspire the action fields listed in the GEAP:

1. Energy efficient and low carbon
2. Resource efficient
3. Ecosystem and natural capital based
4. Supporting quality of life and well-being.

Each of them requires actions to be achieved.

Consistently, RSA6 recommended the adoption of a "global and ambitious green economy action program" for the Alps, aimed at further elaborating on the recommendations and identifying specific fields of action, stakeholders, and activities in support to such a transition.

The resulting program **(GEAP) aims to provide a feasible and widely supported set of actions that builds on existing results, responds to economic needs or generates economic impact, and pushes towards innovative initiatives through a transnational and common approach**. Actions refer to five action-fields that meet seven criteria:

1. Process-orientation

2. Greening effects (Local and regional impact)

3. Social benefits (People-orientation): they should put people in the centre of attention.

4. Economic benefits (Close-to-business): directly involve businesses in the process as stakeholders, including industrial organisations and investors

5. Start-from-the-well-known: novel processes based on well-known, familiar instruments

6. Realisable: processes are realisable within the competences and capacities of the Alpine Convention.

7. Communicable: through instruments and to target groups, in a comprehensible language

1.2.2 The structure of GEAP

All GEAP action fields are **manageable, realistic and impactful processes** that contribute to promoting the transition towards an alpine green economy by 2030.

The actions proposed represent possible processes, especially social ones, that fall within the spectrum of activities and competences of the Alpine Convention, including the activities of the Working Groups and Platforms, that target Alpine countries, Observers and stakeholders at the regional and local level. The **fields of action** may overlap, but represent different perspectives on the challenges to be faced (Fig. 1).
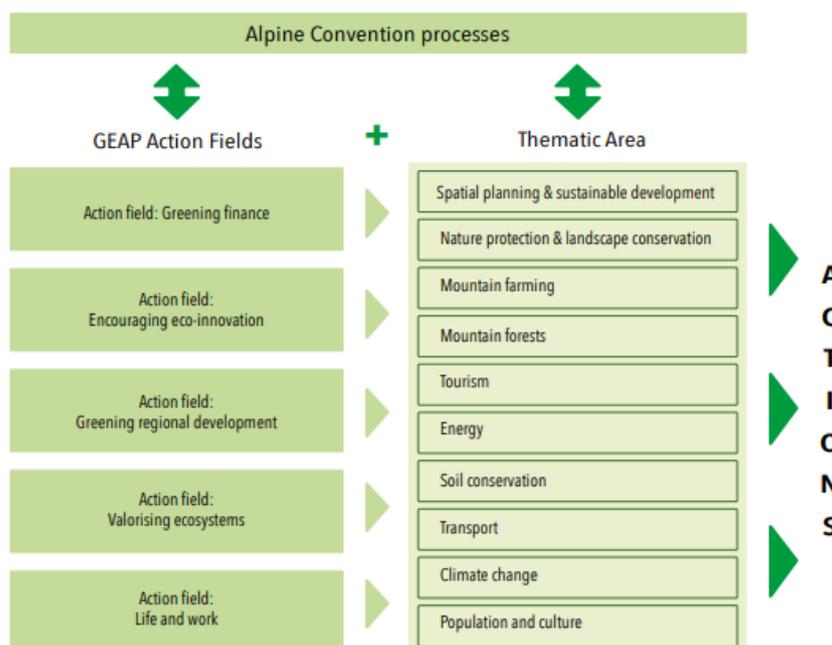
Fig. 1 : Illustration of interconnection between action fields and thematic areas under the umbrella of the Alpine Convention (GEAP)

Each field of action relates to **possible topics (thematic areas)**. Specific actions cover those topics, and represent **proposals** for future activities suitable to be implemented.

The **five action fields** listed in Fig. 1 on the right are aligned to the five **priority objectives** for a transition to a green economy in the Alps (2.1).
The **33 actions** listed in the GEAP cover all the fields. To guide the reader towards a better interpretation of the Program, it is worth noting that:

32	**ACTION PROGRAMME FOR A GREEN ECONOMY IN THE ALPINE REGION**

Action 2.3	**Support of green Alpine business & innovation clusters**
Description	An analysis of the existing green business clusters in the Alpine region should be carried out. Based on this, either a new Alpine-wide economic business cluster or a tactically- engineered network of existing clusters could be implemented. The Alpine Convention will be able to introduce knowledge and values into these clusters while being in direct contact with businesses.
	The clusters are envisaged to function as market places for innovations, bringing together relevant stake-holders/ partners and solving intellectual property right problems.
	The aim of the action is also to take into consideration the specific nature of disruptive ideas. While they are usually developed in a scattered way, they should be aggregated, pooled and brokered. In an open innovation approach, ideas should be collected on the local level and communicated to researchers and investors (see action field „greening finance"). Local inventors should participate in the further development of their ideas with additional skills and capacities from partners. The disruptive innovations can be oriented toward regional or even wider markets.
	A transformation/ evolution of existing clusters can also be a suitable option. Regions could help individual and grouped SMEs to go global (or beyond local boundaries at any rate).
Type of activity	Organisation and marketing of clusters; creation, maintenance and monitoring of platform
Expected role of Organs of the AC to be involved	Initiator and host of platform
Activity led by	Business institutions tbd
Suggested part of a future mandate?	Yes
Participants	Relevant thematic working bodies of the Alpine Convention, business actors, financing actors
Local / transnational	Transnational platform of innovations at all levels
Target group	Citizens, business
Expected results	Creation of networking and synergies for boosting innovation to realisation
Starting date	2020 (starting one year after the campaign to change mind-sets)
Duration	continuous
Recommended cooperation with	EUSALP AG 1, 2 and 5

Table 10: Action 2.3: Support of green Alpine business & innovation clusters.

1. the actions are designed in a broad way, in order to allow adaptation to thematic or territorial characteristics, framework conditions by country or available funding;
2. additional resources (e.g. financing projects) may need to be mobilized for implementing actions;
3. the integrated implementation and management of actions requires institutional arrangements through the Alpine Convention and its bodies;
4. the possible roles of key actors in this process (e.g. the bodies of the Alpine Convention) are defined as: *initiator, chair, promoter, host, implementer*.

Fig. *Example of proposed action in GEAP*

1.2.3 MAMF activity: aims and methodology for implementation of GEAP

INTRODUCTION & AIMS

The mandate of the MAMF WG requires the Parties to "participate in the implementation of the Green Economy Action Program (GEAP) through the support to implementing actions in relevant *fields* for mountain farming and forestry, especially:

- *eco-innovation*
- *regional development*
- *valorizing ecosystems and biodiversity*
- *living and working in a green economy*

In line with its mandate, the MAMF working group identified and collected Alpine initiatives in support to the GEAP implementation.

The following methodology aims at managing the collection of activities envisaged for the WG in full coherence to the GEAP in order to ease the assignment of each single initiative to a specific action field, sub-topic, and concrete actions as in the GEAP.

Moreover, for describing the initiatives collected in the MAMF WG we use here the same categories adopted for the actions in the GEAP aiming at achieving tables that can be directly compared, and inter-connected to the actions listed in the GEAP.

Such an approach aims to help demonstrate that the initiatives selected by MAMF WG are fit to implement the actions reported in the GEAP.

Additionally, this collection will provide more details on the single initiatives concerning the forest management and agricultural sectors, aiming at allowing for a better analysis of them, collecting more information on their degree of implementation, and delivering a thorough assessment of their feasibility and transferability across the scope of application of the Alpine Convention.

The present methodology intends to support a consistent research of initiatives performed in the Alpine countries and regions in the fields of mountain agriculture and forest management that develops in coherence to the actions of GEAP in the 4 action fields recalled by the mandate of the MAMF WG and directly participate in their implementation (as in **Table 2**).

Aim of the work is to show how and to what extent a sample of initiatives identified in the framework of the MAMF WG implement the Actions collected in the GEAP in the domains of agriculture and forest management in the Alps.

The methodology applied by the MAMF WG develops in full coherence to the methodology used to frame the GEAP.

The GEAP is based on a classification of action fields rooted in RSA6 that identifies four main action fields where a green economy can materialize in the Alps (**Table 1-2**). Moreover, GEAP identifies its actions for each action field as addressing a list of inspirational topics. The GEAP actually presents some possible actions aimed to achieve four priority objectives (GEAP, 14).

For the four action fields under investigation here, *26 actions* are listed in the GEAP. For the purposes of this investigation, those *26 actions* will be considered as targets that the initiatives we aim to collect should participate to achieve.

For each action listed in the GEAP under an action field, 12 categories are required (see the actions in the GEAP, from p. 22 on). Here we provide a focused re-working/organization of them that intends to collect relevant and context-specific information for each of the initiatives we wish to collect in the framework of MAMF WG.

The methodology adopted by MAMF WG for selecting relevant initiatives develops as follows:

1. **Provide an assessment of the consistency of an initiative to the macro action field as set by the GEAP;**
1.1. check if the initiative is consistent with the inspirational topics recalled by the GEAP for each macro action field and identify the action field (**Table 1**);

2. **Identify which action(s) of the GEAP the initiative participates to implement;**
2.1. check type of activity and the description of the GEAP's action to determine the relevance of the initiative in implementing the GEAP action, or a part of it (**Table 2**);

3. **provide a more detailed description of the activity you selected by supplying as much information as possible for each of the relevant fields, by filling in the attached template in all the listed categories[84].**

In summary, the process described above can be synthesized in a **tree diagram, as in the figure below.**

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[84] The attached template is based on a focused re-working/organization of the categories used for the Actions collected in the GEAP.
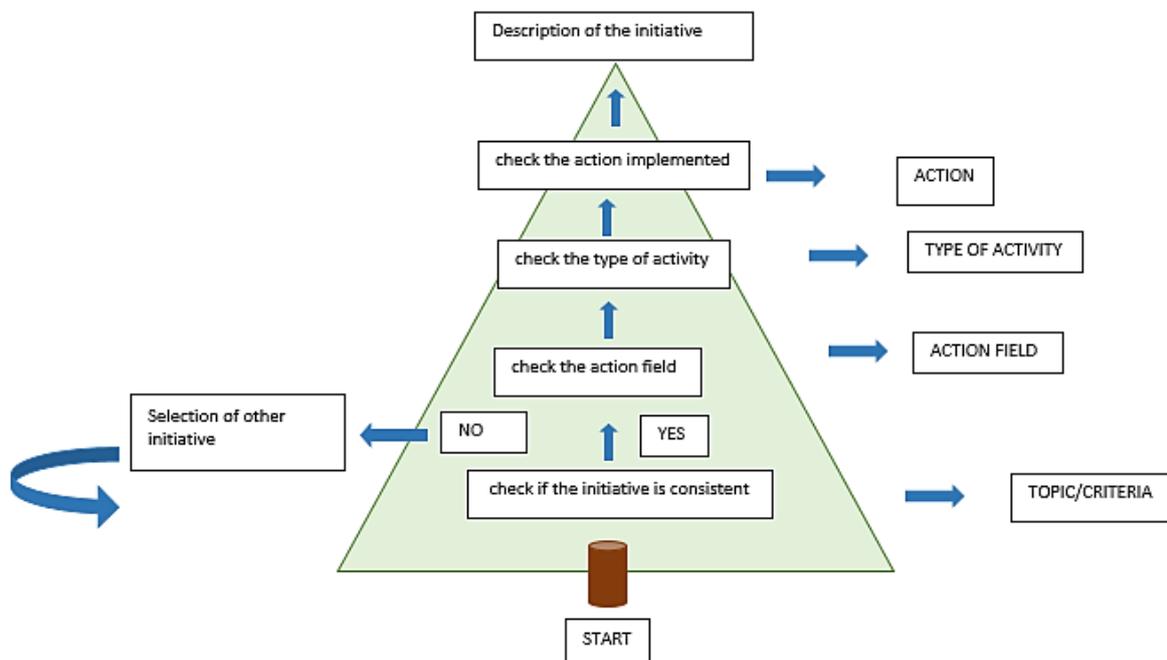
Fig. Tree Diagram by MAMF

STRUCTURE OF, AND INSTRUCTIONS FOR FILLING IN THE TEMPLATE

The template has been developed consistently with the one used for the GEAP actions.

It is organised in four sections, all referred to initiatives in the two macro-areas of mountain agriculture and forests:

1. Identification of the initiative;
2. Implementation of GEAP actions;
3. Focus on the initiative and in-depth description.
4. Identification of the role of AC in the development and transferability of initiative

Section 1 aims at identifying an initiative based on its coherence to GEAP action fields and sub-topics.

Section 2 aims at demonstrating how the initiative contributes to implementing a specific GEAP action.

Section 3 aims at providing the reader with more detailed information on the initiative, including on its transferability/replicability.

Section 4 aims at identify the role of AC in the development of the initiative, transferability of the initiative across the alpine region and checking its consistency with the EU regulations (particularly EU GD)

To fill in the template, it is necessary to refer to the "Action Program for a green economy in the alpine region" (pages 28-61)

(https://www.alpconv.org/en/home/news-publications/publications-multimedia/detail/action-programme-for-a-green-economy-in-the-alpine-region/)

In agreement with the mandate of MAMF WG, the initiatives should refer to the fields of actions of the GEAP recalled above. It is recommendable but not necessary to find an initiative for each of the fields of action recalled in the mandate. Each participant in the MAMF WG should deliver **no more than 4 initiatives**.

Try not to focus on a single field of action. As a general rule, **no more than 2 initiatives per field of action** for each participant will be accepted[85].

Since the collection of initiatives is strictly linked to the Alpine economy, try to clarify as precisely as possible the economic impacts that the initiative has or is expected to have on the territory and stakeholders. If possible, provide economic data (monetary values) or clarify the economic sectors, industries or domains that are affected by the initiative. Try to be punctual in providing the answer.

In the pages that follow, you will find a **template where each of the entries has been commented** aiming at providing a guidance for filling it in.

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[85]However, all the collected initiatives will be made available for readers through an accessible archive.

2. Alpine initiatives for implementation of GEAP actions

2.1 ECO-INNOVATION

Eco - innovation can be defined as the process of developing new products, processes or services which provide customer and business value but significantly decrease environmental impact." (Fussler and James, 1996). Actors involved in the process include firms, politicians, unions, associations, churches, private households (Klemmer et al., 1999, cited in Rennings, 2000)In Alpine countries it generally has a multilevel approach, since national and sub-national innovation strategies tend to coexist. Innovation does not refer only to technology, but may entail a more complex set of relationships.

Innovation requires a proper social and economic environment to flourish, where cooperation among stakeholders takes place (e.g. when value chains are involved): particularly the first mover (the inventor) may need support from different actors.

The actions presented refer to the local and regional levels. The word "encouraging" in the title of the action field thus stands for the creation of a positive and constructive environment for green, innovative processes and their diffusion within and beyond the Alpine region.

This field of action shows overlaps with other fields. Thus it is worth to clarify that:
- Innovation as a whole represents the entire procedural chain, from the first idea to market entry. The promotion of eco-innovation should include spurring the diffusion of innovation.
- Innovation occurs not only in relation to entrepreneurial products or services, but also in processes, business and organizational models as well as in social contexts.
- Disruptive and incremental innovations separately address distinct challenges in terms of the skills needed in their management.
- The success of innovation management relates to cooperative approaches between research, business and government.

The main objective of this field of action is to ensure the conditions necessary to push and implement successful innovations from the perspective of people who have a new idea or proposal.

AUSTRIA

GEAP ACTION 2.3

BIO vom BERG – Organic products from the mountains

BOX 1	
GEAP TOPIC	Joint approaches for a competitive Alpine region
TYPE OF ACTIVITY	Organisation and marketing of clusters; creation, maintenance and monitoring of platform
CONSISTENCY WITH GEAP FIELD	The main goal of "Bio vom Berg" is to support a viable small-scale agriculture under certified organic cultivation and production criteria in Tyrol. The approach includes economic, ecological and social aspects. The project aims not only to increase farmers' profits, but also to increase biodiversity conservation, provide healthy food in the region and raise awareness of sustainable mountain agriculture
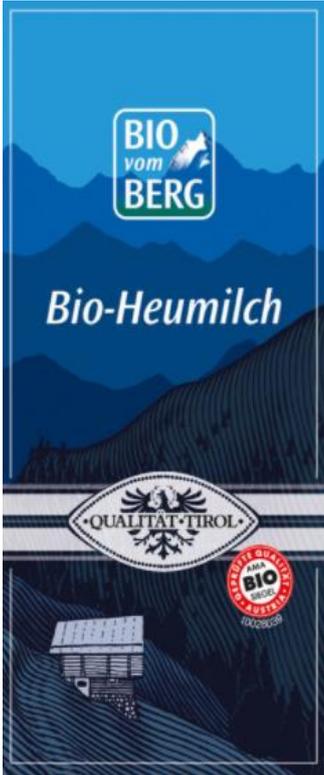
1. The initiative

"Bio vom Berg" is a producer-owned brand operated by the "BioAlpin" cooperative founded in 2002 and covers a full range of organic products, produced, processed and sold mainly in the region of Tyrol, Austria. Since then the cooperative has set an inspiring example of how organic products from a mountain region can be marketed successfully under a common brand.

The main objective of the cooperative "BioAlpin", is to sustain and facilitate organic and regional small-scale mountain farming by providing farmers with processing facilities and market access.

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STAKEHOLDER INVOLVED

"Bio vom Berg" is the product line for **organic agricultural products from the mountain area** in Tyrol with a focus to **market regional products**. The owner of the brand is the cooperative "Bioalpin", which currently has around 60 members and distributes over 160 different products from over 600 partner farms and producers. The primary trading partner is the Tyrol-based supermarket chain MPreis.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

The owner of the brand is the cooperative "Bioalpin", which currently has around 60 members and distributes over 160 different products from over **600 partner farms and producers**. The primary trading partner is the Tyrol-based supermarket chain MPreis.

The various supply chains involve about 600 farmers who produce mainly milk but also fruit and vegetables, eggs, meat or cereals. Additionally, in Tyrol, 10 small-scale dairy cooperatives for cheese, a big regional dairy, a bakery and a butcher are involved, plus a famous chocolatier in Styria as well as a grain miller and a dairy processor in South Tyrol.

The territorial level is mainly **local or regional** (mainly Tyrol) but there are also transnational relationships with South Tyrol and Germany.

The territorial unit involved is mainly Tyrol but products are also sold in MPreis stores in Salzburg, Vorarlberg, Carinthia and South Tyrol.

ALLOCATED FUNDS AND RETURNS

"Bio vom Berg" experienced tremendous growth over since its foundation. Starting with 40 members in 2002 and offering eight products in the first year (typical products from the region, such as cheese, yoghurt and ham). Dairy products were the most important products line in the portfolio. **The annual revenue at the time was roughly 700.000 euros**. At the time, a member share costed 2,000 Euros. Currently there are 160 products offered by Bio vom Berg. In 2018, the annual revenue accounted for 11.2 million Euros. Dairy products make no longer more than 50 percent of the overall product portfolio.

The turnover by product groups is:

-Dairy products (49 %)

 -Fruit and vegetables (21 %)

-Eggs (12 %)

-Eat/sausage (12 %)

- Others (6 %).

The premium price respect to other products is approximately 20%. Meat products could be priced even higher. Famers earn about 15 cents more per liter milk, which exceeds the additional costs of organic production in a regular setting.

Nevertheless, the cooperative is trying to diversify its distribution channels and seeks to enter new markets in order to reduce the dependency on their major retail partner (about 60% of the cooperatives' turnover is achieved via MPreis).

A rather recent venture is the focus on the tourism and hospitality sector (regional hotels, restaurants, catering) which, in a major tourist region like Tyrol, is seen as a sales channel with great potential. However, this market is very competitive and price oriented and challenging to approach. Most efforts to supply this segment with local high-quality products have only had limited success so far.

SOURCES OF FUNDING

In 2002, the cooperative was founded with **individual shares** of 2000 Euros and therefore with **private money**.

MPreis is a crucial actor in the business model of "Bio vom Berg". They are the biggest buyer and are involved in the development of new product lines as well as production plans. In practical terms, this means that the supply option of certain products is reviewed and price agreements

are made in advance to minimize any risks for investments. Public funds were received in the form of subsidies to promote marketing.

PROMOTERS / INITIATORS OF THE INITIATIVE

First thoughts about a project to support local organic farmers were made in 2001. Many famers in the region struggled with the conditions in the supply chain of big retailers. Farms in Tyrol are mostly not big enough to compete with large-scale farms from Eastern Austria, where production areas are much larger. As a result, many **rural producers** abandoned their farms or had to (and still are) taking part-time jobs. Farmers such as Heinz Gstir (chairman of the cooperative "Bioalpin", founder of the "Bio vom Berg" brand) therefore started to look for opportunities in order to create a better environment for small-scale mountain farming. The first feedback they got on their plans from regional government officials was rather negative. They were pushed towards creating a label for mountain farming, but finally insisted on establishing a cooperative to gain collective power, especially for negotiating prices and quantities between members, processing enterprises and retailers. Nevertheless, first contacts with retailers were devastating. They were willing to buy their products but wanted to sell them as private labels. The project almost failed when the contact to MPreis was already established and ready to integrate it as a brand into the product range. The cooperative "Bioalpin" has grown steadily since 2002 and the brand "Bio vom Berg" provides a broad variety of certified organic products from the region. The juridical form grants that cooperative members are the owners of the brand "Bio vom Berg", which can never be taken over by a competitor. At the same time, members cannot sell their share without permission from the board.

The cooperative is considered the biggest producer-owned distributer of organic products in Central Europe. The members elect the board, which is currently led by Heinz Gstir. Chief executive is Björn Rasmus.

2. GEAP action in practice

RESULTS OF THE INITIATIVE

The main objective of the cooperative "BioAlpin" is to **sustain and facilitate organic and regional small-scale mountain farming by providing farmers with processing facilities and market access**. In this respect, the cooperative acts as a kind of mediator between farmers, processors and retailers. It coordinates production, negotiates prices and quantities with the retailer partners and organizes logistics. To simplify processes the cooperative organizes and coordinates individual farmers within producer groups.

The creation of networking and synergies is an expected result.

COHERENCE WITH GEAP ACTION

Since its founding 2002, the cooperative "Bioalpin" strives to preserve the traditional agriculture and food industry in Tyrol. Under the brand "Bio vom Berg" the members produce and sell high-quality organic products. With strategic support of "Bio vom Berg" management, farmers and producers are constantly **working on the expansion of distribution networks and marketing channels**. The cooperative manages the administrative processing, warehouse, merchandise management and develops new products. Fairness, transparency and trust are considered as a principle for the common vision to preserve organic agriculture in Tyrol.

ECONOMIC IMPACT

The product range has increased from initially 8 products to approximately 160 today and turnover has risen from 672,000 euros in 2003 to 11 million euros in 2018.
So far known "Bio vom Berg" is the only producer-owned brand in Europe which offers a full range of organic products in a supermarket chain.
The premium price respect to other products is approximately 20%. Meat products could be priced even higher.

ECOLOGICAL and ENVIRONMENTAL IMPACTS

Highly profitable product groups like dairy products serve to support other product lines, which are still in the development stage or not as profitable but important to increase the brand's product portfolio. Specifically, this means, that the highly profitable cheese production subsidies the cultivation of grains and cereals, which are hardly profitable for farmers in Tyrol but important for the holistic ecological approach of the cooperative and have an impact on biodiversity. Today agriculture in Tyrol is mainly dominated by grassland whereas arable crops also used to be important for local food supply in past times.

SOCIAL IMPACT

The cooperative supports small, organic farms in creating a living and thus plays a crucial role in the efforts to preserve the small-scale agriculture of Tyrol. The brand creates new possibilities for small-scale farming traditions, which are very common in Tyrolean agriculture, to maintain their longstanding practices of sustainable production in mountain areas. This also raises awareness among customers for local farming activities.

3. Alpine Convention contribution for implementing green economy in the Alpine Region

	AS IN THE GEAP…
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	There is no link between the cooperative and the Alpine Convention and its bodies.
If yes, which AC bodies are involved with the initiative?	-
Which AC body could play a role in the initiative's transferability? How?	The model of the cooperative can be transferred from one location to other ones in the Alps as a best practice example. An analysis of the existing green business clusters like this in the Alpine region should be carried out. The Alpine Convention and its bodies lieke the MAMF working group could be able to introduce knowledge and values into these clusters while being in direct contact with businesses. The clusters are envisaged to function as market places for innovations, bringing together relevant stakeholders/partners. Ideas should be collected on the local level and communicated to researchers and investors. A transformation/ evolution of existing clusters can also be a suitable option. Regions could help individual and grouped SMEs to go global (or beyond local boundaries at any rate).
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	The basic approaches of "Bio vom Berg": • cooperative structure which helps managing the administrative processing, warehouse and merchandise management and development of new product. • support of a viable small-scale agriculture • certified organic cultivation and production criteria • fair partnership with trading partners, transparency and trust • regional value chains, diversity of products • biodiversity conservation, awareness raising of sustainable mountain agriculture • integration of economic, ecological and social aspects are worth being deepend and replicated because of their holistic approach especially by the MAMF working group of the Alpine Convention. This working group

concerns the step towards climate-friendly, sustainable mountain agriculture. The working group also aims to contribute to the co-operative and innovative solutions by highlighting best practice examples on sustainable economy models in the Alps.

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL

The philosophy of the cooperative is consistent with the Farm to Fork Strategy. This strategy is at the heart of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly.

Putting the food systems on a sustainable path also brings new opportunities for operators in the food value chain. Increasing public awareness and demand for sustainable food will benefit all stakeholders.

The Farm to Fork Strategy aims to accelerate the transition to a sustainable food system that should:

- have a neutral or positive environmental impact
- help to mitigate climate change and adapt to its impacts
- reverse the loss of biodiversity
- ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food
- preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade

2.2 GREENING REGIONAL DEVELOPMENT

Regional development relates to various sectors and is an object of study for several disciplines (e.g. geography, spatial planning, economics, and political science). In general, it strives to improve the socio-economic and environmental conditions of a defined territory.

Regional development touches on many aspects that are relevant for an Alpine green economy. Its complex nature requires cross-sectoral and cooperative approaches and adopting an integrated regional perspective. For instance, in the same region different drivers of development can exist together which open up opportunities for fostering connections and improving regional performance (e.g.. between urban and rural areas for providing an exchange of goods and services for the daily life of people living and working in the region).

Regional development involves several stakeholders and policy makers, especially municipal and regional governments. The GEAP focuses specifically on Alpine cities, rural villages and municipalities, and regional governments.

A successful greening of regional development may require strong cooperation, governance systems and networks involving decision makers, citizens and businesses. In this context, regional strategies can help coordinate the activities of cities and municipalities, create synergies, mediate conflicts and find mechanisms or incentives to balance advantages and disadvantages between municipalities or territories in the same region.

This field of action strongly overlaps with "Living and working in a green economy", however more emphasis goes here to empowering and encouraging the drivers of development and their ability to influence and shape regional strategies, rather than consumers' behaviour.

A few topics for action in the Alps addressing regional sectoral policies (e.g. transport, tourism and spatial planning) are listed below:

- Consider Alpine cities as drivers, hubs, networkers, exchange platforms and promoters of a green economy;
- Ensure accessibility for remote economic activities areas in natural environments;
- Better urban-rural relations for greener regional approaches;
- Meet the needs of rural or remote areas for goods services of daily life;
- Create attractive villages and sites for inhabitants and tourists.

FRANCE

GEAP ACTION 3.1 – 3.2 – 3.3

Pastoralism and Great Spaces Film Festival: Using film production to talk to different audiences about pastoralism

BOX 1	
GEAP TOPIC	-Better urban-rural relations for greener regional approaches
TYPE OF ACTIVITY	**A 3.1** Support the network of the Alpine cities, municipalities and local actors **A 3.2** Short desk research/ study; local events **A 3.3** Compact analysis and communication : online and print promotion, Optional : Symposium with "Market of Ideas"
CONSISTENCY **WITH GEAP FIELD**	The International Festival of "Film Pastoralisms and Great Spaces" is held annually in Grenoble in October, with the aim of educate the urban public to the issues of pastoralism, through film screenings on pastoralism in the Alps and elsewhere. On the sidelines of the festival, there are times of exchange-debate and discoveries of alpine products in the cafes and restaurants of the city, allowing exchanges between the urban and mountain populations and to evolve their representations.

1. The initiative

The **film festival "Pastoralisms and Great Spaces"** brings together films dealing with pastoral activities and pastoral spaces, presenting them to a jury and a varied audience, especially urban, informed or not. Since 2018, a website has been able to access works and a few services that allow, among other things, to relay these projection initiatives in other places and on other occasion, to the appreciation of project leaders (transhumance festivals, alpine days or open doors, fairs, thematic meetings...), thus strengthening the scope of this Festival on an alpine scale.

The International Film Festival "Pastoralisms and Great Spaces" is:

- Projections from all walks of life, all countries, to talk about mountain pastures and pastoral activities in all their diversity

- Debates and citizen meetings to exchange views on the issues facing these activities today

- A unique opportunity to cross agriculture and cinema

- Diversity, sharing, conviviality!

The films in competition must evoke and bring to life the central theme of pastoralism, through 4 essential hooks: the EARTH, the lives of MEN (breeders, pastoralists, shepherds and their families), their HERDS, in the LARGE SPACES of the five continents.

On the sidelines of the festival, there are times of **exchange-debate and discoveries of alpine products in cafes and restaurants in the city**, allowing exchanges between the urban and mountain worlds, research audiences, field, elected officials... and to evolve the representations of each.

The Film Festival Pastoralism and Great Spaces has been held every year since 1994. Initially in the mountains, it has relocated to the city, to Grenoble Alpes Metropole since 2017. The rebroadcast of the films in other festivals takes place every year as well.

STAKEHOLDER INVOLVED

The stakeholder involved are the organizer of the initiative: Federation of the Alpages of Isère (Contact Bruno Caraguel), in connection with local partners: the Cinema Le Club, the agropastoral meat association that supplies the lamb of alpine pasture, the editions Cardères.

Also partners for the deployment in other festivals participate at the initiative: Pastoral Services of the Northern Alps, the Suaci Montagn'Alpes and the Cerpam (Centre for Pastoral Studies and Achievements Alpes-Mediterranean), the French association of pastoralism, the home of the shepherd.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

The Grenoble Festival reachs an **urban audience of hundreds of people** each year, as do the festivals that follow in other venues. The festival of the transhumance de die can affect about 7000 people. A total audience of 10,000 people can be reached by these film events.

The target audience is varied and mainly concerns **urban, mountain users**: tourists, hikers, mountain riders, trail runners. The festival brought together a variety of audiences: breeders and shepherds, technicians, researchers, teachers, elected officials. from all over the world.

The initiative has a **LOCAL territorial level**: French Alps, with a search for deployment on the scale of the alpine region. The initiative is located in: **Grenoble Alpes Metropole, Department of Isère, Auvergne-Rhône-Alpes Region.**

ALLOCATED FUNDS AND RETURNS

The Grenoble Festival budget is about 50,000 euros.

SOURCES OF FUNDING

Funding for the Festival and similar festivals are **essentially public**. Indeed, seek funding by patronage also allowed to perpetuate these events.

Funding is from the Auvergne-Rhône-Alpes Region and local authorities: the Department of Isère, Grenoble Alpes Metropole, the city of Grenoble, the surrounding resorts (Les 7 Laux,Chamrousse, and Vaujany) for the Grenoble festival.

Other funders are: mutual Mutualia, and pastoral or environmental associations ASPIR and AGRI Nature.

PROMOTERS / INITIATORS OF THE INITIATIVE

The promoters of the initiative are the same stakeholder.

2. GEAP action in practice

RESULTS OF THE INITIATIVE

Among the results of the initiative, there is a closer more sustainable interconnection between urban and rural areas, raised awareness of mutual dependencies and potential sustainable benefits.

Raising awareness among the urban population of the challenges of pastoralism.

COHERENCE WITH GEAP ACTION

The films allow to communicate with an urban audience who are not well informed about pastoral activities, about practices considering environments, resources, working conditions and predation. The exchange of views allows each audience to progress towards a shared reality in accordance with the mountain environment.

ECONOMIC IMPACT

The Grenoble Festival reachs an urban audience of hundreds of people each year, as do the festivals that follow in other venues. The festival of the transhumance de die can affect about 7000 people. A total audience of 10,000 people can be apprehensive about these cinematic events.

The **direct economic impact** of these events can be measured by considering the accommodation and catering of these people.

An **indirect impact** must be considered regarding the consequences of the **promotion of pastoral farming and the consumption of pastoral products** induced: forms, lamb meat.

ECOLOGICAL and ENVIRONMENTAL IMPACTS

The ecological or environmental impact on the alpine environment relates to the **recognition of extensive pastoral activities** by the urban population, as well as the debates that take place between urban and herders, on floristic biodiversity, on faunistic, on climate change or on predation.

SOCIAL IMPACT

The expected social impact is a better recognition of the occupations of breeders and shepherds, and knowledge of their environment and working conditions, in order to facilitate the multi-use of pastoral spaces (e.g. between hikers and protection dogs).

3. Alpine Convention contribution for implementing green economy in the Alpine Region

AS IN THE GEAP…	
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	In 2020, as a part of the International Film Festival "Pastoralisms and Great Spaces", the French Presidency of the European Union Strategy for the Alpine Region (EUSALP), organizes Euro-Alpine Meeting of Pastoralism. At this event, the Permanent Secretariat of the Alpine Convention is invited to present its work in favour of pastoralism and to participate in the roundtable conclusion and perspectives with public decision-makers. • Intervention and Participation in a Round Table • Promoting a wider international and regional audience

If yes, which AC bodies are involved with the initiative?	WG MAMF is invited to participate and present climate change initiatives The Permanent Secretariat of the Alpine Convention is invited to present its work in support of pastoralism and to participate in the roundtable conclusion and perspectives with public decision-makers.
Which AC body could play a role in the initiative's transferability? How?	To allow the transfer of the initiative to other places in the Alps, the Alpine convention could become: Host of the film platform for a deployment of this type of event in the Alpine region.
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	MAMF working group or Permanent Secretariat

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL
A potential implementation of this project is possible through the Farm to Fork strategy 2020-2021 and the EU Biodiversity Strategy for 2030 (March 2020)	

2.3 VALORIZING ECOSYSTEM SERVICES AND BIODIVERSITY

The large amount of biodiversity and unspoiled nature in the Alps as well as the large recognition to the ecosystem services that derive from the region make the goal of enhancing regional natural capital and their services a priority. The socio-economic context in typical Alpine economic sectors (food and agriculture, recreation and tourism, health, energy and water supply, wood industry, natural risk prevention) relies on specific knowledge of "their" ecosystem services in order to consider them in their business models and value chains and convince stakeholders to value them. However, although the general principles are clear, more specific knowledge is still needed for stakeholders in different economic sectors.

This field of action intends to provide inputs to and improve the quality of actions in other fields. A close link exists to the action field "Greening finance and the financial support structures", where new ways of a more ESS-based financial assessment of value chains are discussed.

The actions gathered under this action field should be:

1) process-oriented aiming at clarifying how economic value can be created from natural capital and ESS,
2) focused on greening effects on the local level,
3) delivering societal benefits and incentivising action for stakeholders, and economic benefits for SMEs,
4) based on successful projects and experiences

The field of action focuses on bridging knowledge gap (especially on implementation at local and regional level) and developing, applying and communicating knowledge related to the practice. The following list offers a range of possible topics from which the proposed actions derive:

- Development and communication of specific knowledge for the regional economic sectors where implementation takes place at local and regional level (food and agriculture, recreation and tourism, health, energy and water supply, wood industry, prevention of natural hazards) ;

- Aggregate, pool and communicate existing knowledge at local and regional level;

- Support pilot projects in their interdisciplinary context;

- Identify stakeholders and offer stakeholder dialogues, participatory actions and common solutions, especially in those fields where biodiversity issues can become an economic threat, eg. with large carnivores or wetland management;

- Information and training of decision makers, entrepreneurs and consumers on the benefits of ecosystem services and biodiversity in economic sectors.

AUSTRIA

GEAP ACTION 4.1 – 4.3 (and other*)

Certified agricultural National Park products:
"You can taste the National Park" and holidays at
National Park partner companies – including
mountain farms

BOX 1	
GEAP TOPIC	Development and communication of specific knowledge for regional economic sectors where implementation takes place on the local and regional levels (food and agriculture, recreation and tourism, health, energy and water supply, wood industry, natural risk prevention)
TYPE **OF ACTIVITY (*)**	**A4.1** Pooling of knowledge, including also checking of existing knowledge promotion of pilot and communication activities **A4.3** Overview of upcoming events or dialogues, compact elaboration of and applicable training concept for different sectors, production of communication material **A2.3** Organization and marketing of clusters; creation, maintenance and monitoring of platform **A2.4** Campaign & set up & maintenance /moderation of IT-platform **A3.7** Networking and municipal pilot activities with Alpine wide model character
CONSISTENCY **WITH GEAP FIELD**	The word/picture trademark transfers the nature and biodiversity values of the National Park to the products, which are marked with the trademarked logo "Regionsprodukt Nationalpark Hohe Tauern". Agricultural tourism partners of the National Park offer holidays in a farmhouse. The hosts know the national park and inform the guests about its ecosystem and biodiversity values and possibilities to explore the nature. Furthermore they use many of its regional products.

1. The initiative

The **link between tourism and agriculture** as well as nature/environment is important and the **"National Park Hohe Tauern Regional Products"** are available in the National Park tourism partner companies. In 2020 13 mountain farmers in the National Park in Tyrol and Carinthia, produce about 50 food products, which have been certified as "National Park Hohe Tauern Regional Products". They meet the minimum requirements for production in East Tyrol/National Park region Carinthia as well as a minimum proportion of raw materials from the National Park region East Tyrol or Carinthia and carry the official National Park label. E.g.

- Alpine dairy Tauer - Gschlößtal, Matrei in East Tyrol: products Mountain cheese & butter

- Bödenlerhof – Nußdorf: alpine farm: product East Tyrolean high mountain egg

- Figerhof – Kals am Großglockner: Goat products

- Peischlerwirt – Unterpeischlach, Kals am Großglockner: alpine farm and farm shop: Cereals & meat products

- Kollnighof – Nußdorf: products sheep yoghurt & cheese

- Lenzingerhof / Schneeberger – Matrei i. O.: Meat products

- Organic farm Stemberger - St. Veit im Defereggental: products eggs, milk, butter, yoghurt, cheese

- Andrea Trager - Matrei in Osttirol: fruit jam

- Viktoria Trager - Matrei in Osttirol: honey

- Rieplerhof - Matrei in Osttirol: products milk, whey, yoghurt, cheese

- Farm shop Walter – Obervellach: beef and pork products

- Organic beekeeping "Glockner bee" Sebastian Bauernfeind - Kals am Großglockner: honey

The start of the initiative "National Park regional products" was in October 2018. The National Park partner companies East Tyrol have realigned themselves in 2019 with a focus on nature, sustainability and on the National Park (they cooperate already since more than 11 years).

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STAKEHOLDER INVOLVED

Stakeholders involved in the initiative are representatives from agriculture, National Park & tourism form the Producer-Product Commission, in particular:

- Representatives of the Hohe Tauern National Park Tyrol

- Representative of the Osttirol Tourist Office

- Representatives of direct marketing organisations from the East Tyrol National Park region (farm shops, regional markets, etc.)

- Entrepreneurs from a National Park community with agricultural and tourism background.

The national park partner companies for holidays in the National Park are 4**** and 3*** hotels, inns and holiday apartments, Pensions and farms.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

The target groups that have been involved and impacted by the initiative are **local population (agriculture and tourism sector as well as leisure seekers), visitors and guests of the holiday region National Park East Tyrol**.

The territorial level is local or regional (East Tyrol) but there are also transnational impacts due to tourism activities.

The project started 2019 in Tyrol. Soon also the Hohe Tauern Nationalpark Carinthia showed interest and certified together with the Tyrolean part of the National Park the first agricultural producer in Carinthia.

The administrative unit is located National Park Hohe Tauern Tyrol.

ALLOCATED FUNDS AND RETURNS

The budget for the project (2019 – 2020) was 25.000 Euro

SOURCES OF FUNDING

The funding is public, provided by the Hohe Tauern National Park (50%) & the local tourism organisation (50%).

PROMOTERS / INITIATORS OF THE INITIATIVE

Hohe Tauern Nationalpark Tyrol in cooperation with the local tourism organization developed the project. Local farmers were also involved in the developing process, but the two organisations where responsible for the financing.

2. GEAP action in practice

RESULTS OF THE INITIATIVE

Through this cooperation and the label, the National Park becomes tangible and enjoyable for the local population, visitors and guests of the holiday region East Tyrol.

Concrete results in 2019-2020 were:

- Joint producer excursion to Carinthia

- Producers' regulars' tables

- Press Conferences

- National Park "enjoyment station" in Kals am Grossglockner with National Park products to take away

- More than 50 products labelled
The National Park tourism partner companies commit themselves to a comprehensive orientation towards ecological sustainability and regional value creation.

COHERENCE WITH GEAP ACTION

Tourism partners – also mountain farmers - of the National Park raise awareness for nature and biodiversity in the National Park and thus they are multipliers for the concerns of the national park . They offer "National Park Hohe Tauern Regional Products". The producers of these stand for regionality and environmentally sound production processes in the agricultural and tourism sector.

ECONOMIC IMPACT

Labelled agricultural products and tourism activities are strongly linked to the National Park. In detail economic impacts at regional level are e.g.:
- Clear market positioning to differentiate the producers from other competitors

- The National Park is a well-known brand and as such offers an added value to the products
- Orientation & adding value for the end customer
- Price implementation through corresponding quality promises

The tourism partner farms of the National park offer holidays in a farmhouse; inform their guests on event tips of the Hohe Tauern National Park and the region, about equipment rental possibilities etc. and are therefore multipliers for the National Park economic activities.

ECOLOGICAL and ENVIRONMENTAL IMPACTS

The agricultural producers orientate themselves towards a contemporary ecological production method comparable to organic or similar quality labels.

The producer uses packaging materials that safe resources as far as possible.

The partner farms of the National Park offering holidays in a farmhouse make the guests feel and experience the uniqueness of the National Park Hohe Tauern. The information and awareness services of the accommodation establishments are e.g.:

- Information about ranger services/guided tours, i.e. Nature Watch hikes to observe wild animals and to explore the eternal ice of the glacier landscapes
- Information about hut/mountain guide service: Special hikes to various topics and a variety of theme paths.
- Hiking/Touring/Weather/Hut advice before and during the holiday
- Providing a National Park library
- Event tips for the Hohe Tauern National Park and the region

Fresh and homemade cuisine is one of the basic values of the National Park tourism partners. In the food compositions mainly seasonal food is used.

With the guest card (available free of charge in the partner establishments) one can use the extensive public transport network free of charge.

SOCIAL IMPACT

For the consumer, the label is an orientation and signpost to a rich and nature-conscious range of local products from the National Park region. The producers have dedicated themselves to the National Park brand in connection with their quality products. The consumer has the guarantee that only regional quality products are offered under the label. The producers participate in one producer day per year with a special National Park - programme. They are informed about the East Tyrol region, the National Park and the cooperation of the producers of the National Park Hohe Tauern Regions produkte, in order to be able to answer the questions of customers and guests appropriately. The producers are presented in the web on osttirol.com, nationalpark.osttirol.com and hohetauern.at.

3. Alpine Convention contribution for implementing green economy in the Alpine Region

	AS IN THE GEAP...
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	There is no link between the cooperative and the Alpine Convention and its bodies.
If yes, which AC bodies are involved with the initiative?	-
Which AC body could play a role in the initiative's transferability? How?	The National Park, tourism & agriculture cooperation could be transferred to other regions in the Alps. The Alpine Convention and its bodies like the MAMF working group could be able to introduce knowledge and values into these best practice examples and spread information.
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	The philosophy of the cooperation is consistent with the Farm to Fork Strategy. This strategy is at the heart of the European Green Deal aiming to make food systems sustainable, fair, healthy and environmentally-friendly. also the use of the extensive public transport network free of charge is in line with the Green Deal. accelerating the shift to sustainable and smart mobility.

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL
	The philosophy of the cooperation is consistent with the Farm to Fork Strategy. This strategy is at the heart of the European Green Deal aiming to make food systems sustainable, fair, healthy and environmentally-friendly. also the use of the extensive public transport network free of charge is in line with the Green Deal. accelerating the shift to sustainable and smart mobility.

FRANCE

GEAP ACTION 4.1 – 4.2 - 4.3

The "Agro-Ecological Practices on Pastures" Competition

BOX 1	
GEAP TOPIC	-Supporting pilot projects in their interdisciplinary context. -Informing and training of decision makers, entrepreneurs and consumers on the benefits of ecosystem services and biodiversity in economic sectors
TYPE OF ACTIVITY	**A4.1** Pooling of knowledge, including also checking of existing knowledge promotion of pilot and communication activities **A4.2** Workshop series on the local and/ or regional level **A4.3** Overview of upcoming events or dialogues, compact elaboration of and applicable training concept for different sectors, production of communication material
CONSISTENCY **WITH GEAP FIELD**	The Competition "Agro-Ecological Practices on Pastures" showcases the know-how of herders to enhance and renew the agronomic and ecological qualities of mowing or pasture meadows, unseeded and rich in species, in order to make the most of it in the feeding of herds. It therefore allows for an interdisciplinary approach and a synergy between food and the environment. It aims to structure and develop the dynamics of the territories, echoing the agro-environmental and climate measures, and to create links between its various players. The Competition "Agro-Ecological Practices on Pastures" is a wonderful way to create links between the stakeholders involved in the management of the territories, whether they are livestock specialists, botanists, ecologists, managers of regional and national parks or elected municipal and intercommunal officials. Through the cross-cutting of the skills it mobilizes, by its anchoring in the economy of the territories, by its responsible commitment, the livestock activity offers unparalleled support to share good practices and collectively improve the direct link between the quality of forages from the natural grasslands of mowing and grazing and, the quality of the animal products that are derived from them.

1. The initiative

The aim of the **Agro-Ecological Practices on Pastures** competition is to enhance the grasslands with the best agro-ecological balance. You have to be an active breeder to be able to participate in the competition.

The plots involved are useful agricultural areas that contribute to the foddering of farms. The assessment of agroecological balance is based on a simple vegetation observation method constructed with the National Institute of Agricultural Research.

The competition juries assess the coherence between the agroecological properties of the plot and its agricultural use. The method therefore requires skills in the following three areas: **agronomy – forage and ecology - botany and beekeeping - wildlife**.

The Flower Pastures Competition was created in 2010 on the initiative of the National Parks of France and the Regional Natural Parks of France. It joined the General Agricultural Competition in 2014 and is now expanding throughout the country, under the new name: The Competition "Agro-Ecological Practices on Pastures" since 2019.

The winners of the Competition are unveiled each year at the International Agricultural Fair in Paris in February-March.

STAKEHOLDER INVOLVED

The Chambers of Agriculture joined the project in 2013 to accompany the opening of the competition to the entire national territory. In 2014, the process takes a new step, integrating the large family of the General Agricultural Competition. Since then, the Chamber of Agriculture France (APCA) has been responsible for operational management in the **50 or so territories** concerned each year, alongside the organization of the General Agricultural Competition and in consultation with other national and local partners.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

Each year, the competition reaches about **50 participating territories, between 200 and 400 breeders**. Since its inception, about 3,000 breeders have competed. The organization of the competition in the field brings together agricultural professionals, beekeepers, ecologists, and with actors from other backgrounds: local elected officials, tourism actors, etc. and the general public.

The initiative is at **local and national level** (about 50 territories involved, and the finalists meet at the agricultural fair in Paris) and the administrative unite is on the ground, in the 50 territories and in Paris at the agricultural fair.

ALLOCATED FUNDS AND RETURNS

The budget by territory for the organization of a local competition is $4,000 in direct costs - 20 days of work on average.

SOURCES OF FUNDING

The initiative has a **mixed funding**.

About **public funding**, the project potentially falls within several types of programs depending on how the project is presented and carried locally: agro-environment, support for agriculture, management or awareness on biodiversity, territorial animation or communication.

As such, several public financiers can be called upon: the local authorities, the State (Natura 2000 credits...), the European Union (Feader) and the Water Agencies.

Other funding are from **Corporate partnerships**: like traditional agricultural competitions, companies can be solicited, either as partners for the general organization or as sponsorships, especially for expenses related to the awarding of prizes or the publishing of communication materials. It is possible to solicit local delegations from partner companies at the national level (RTE, GRTgaz), banks, etc. The positive image of the competition to constructively address environmental issues with farmers is a positive aspect of this type of partnership.

PROMOTERS / INITIATORS OF THE INITIATIVE

The Flower Pastures Competition was created in 2010 on the initiative of the National Parks of France and the Regional Natural Parks of France. The Chambers of Agriculture joined the project in 2013 to accompany the opening of the competition to the entire national territory. In 2014, the process takes a new step, integrating the large family of the General Agricultural Competition. Since then, the Chamber of Agriculture France (APCA) has been responsible for operational management in 50 territories concerned each year, alongside the organization of the General Agricultural Competition and in consultation with other national and local partners.

2. GEAP action in practice

RESULTS OF THE INITIATIVE

Among the initiative results, the increasing pool of applied knowledge and solutions on the local level and a increased synergies on realisation of ESS value chains

COHERENCE WITH GEAP ACTION

Creating a constructive dialogue around the importance of grasslands and their ecological quality for livestock, and the local economy is in line with GEAP actions above. The competition improves the knowledge of breeders and consumers about the link between products and prairie quality.

ECONOMIC IMPACT

Each year, the competition reaches about 50 participating territory, between 200 and 400 breeders. Since its inception, about 3,000 breeders have competed for the best agri-ecological balance of a plot of their farm.

The great floristic diversity of natural grasslands, a link between agricultural production and biodiversity, is combined with real effects on the farm economy: good yield, quality of forage appreciated animals and quality of production are effects regularly observed by participants.

Floristic diversity directly improves the appetite of forage by animals. It acts on the taste and nutritional characteristics of products (meat, cheese, honey,...). The competition celebrates the 'quality of grasslands/ quality of products' and thus contributes to quality agricultural production. It promotes the promotion and marketing of recognition products (AOP, IGP, Bio, Park brand...).

ECOLOGICAL and ENVIRONMENTAL IMPACTS

Floristic diversity has many positive effects on the environment: it contributes to the **quality of landscapes and the preservation of biodiversity**, promoting the presence of birds, reptiles, small mammals and insects, especially those that ensure pollination (honey bees, wild pollinators) and the natural protection of crops.

SOCIAL IMPACT

The competition promotes the **concept of public policy outcomes**.

The farms highlighted by the competition represent multi-performing agricultural systems that respond to current challenges (food security, production, biodiversity, water, landscapes...). The

competition aims to promote the recognition and consideration of existing practices that meet the agro-ecological objectives of public policy.

The organization of the competition in the field allows to **create contacts** between agricultural professionals, beekeepers, ecologists, and with actors from other backgrounds: local elected officials, tourism actors, etc. and the general public.

A constructive dialogue is being created between these actors around the importance of grasslands and their ecological quality for livestock, and the local economy. The competition allows for better recognition of quality products and improves the knowledge of breeders and consumers about the link between products and prairie quality.

3. Alpine Convention contribution for implementing green economy in the Alpine Region

AS IN THE GEAP...	
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	No link to the Alpine convention to date
If yes, which AC bodies are involved with the initiative?	-
Which AC body could play a role in the initiative's transferability? How?	To allow the initiative to be transferred to other locations in the Alps, the Alpine Convention could communicate on this initiative and offer support to deploy it.
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	MAMF working group

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL
A potential implementation of this project is possible through the Farm to Fork strategy 2020-2021 and the EU Biodiversity Strategy for 2030 (March 2020)	

ITALY

GEAP ACTION 4.4 – 4.5

Adoption of Guidelines for the application of Payments for Ecosystem Services in "Foreste di Lombardia" management

BOX 1	
GEAP TOPIC	Informing and training of decision makers, entrepreneurs and consumers on the benefits of ecosystem services and biodiversity in economic sectors.
TYPE OF ACTIVITY	Support ESS business pilots
CONSISTENCY WITH GEAP FIELD	The action is aimed at introducing attention to ecosystem services produced by regional forests in the management of the FdL and defining the methods and criteria for the sale of the SE.

1. The initiative

In July 2020 (with a period of implementation from **2020 to 2030**) the ERSAF Board approved a **Guidelines for the application of Payments for Ecosystem Services in "Foreste di Lombardia" management**, to give operational indications to the managers of regional properties regarding the adoption of the evaluation criteria of the SEs for forest management.

The Guidelines intend to achieve the following objectives:

I. Implement international and national processes;

II. Implement and develop the strategies indicated by the Regional Law 31/2008 and the Lombardy Forest Charter;

III. To give value and recognition to the SEs of the Lombardy Forests, adopting this awareness and enhancement approach in forest planning and in their operational management at a local scale;

IV. Experimenting in the concrete application of models and tools to promote their knowledge and use even outside the Lombardy Forests.

These addresses therefore provide concrete indications such as:

a. Confirmation and enhancement of existing PES:
- Supply of woody and non-woody forest products
- Pasture forage supplies
- Provision of cultural and recreational services

b. Development of new PES:
- New non-forest products
- Supply of drinking water
- Hydrogeological protection services
- Supply of cultural and recreational services for the equipped areas in Parks (Carpaneta, Tignale, etc.), and in the areas managed under forest contracts
- CO_2 regulation services

c. SE certification
- Complete the FSC certification process of ecosystem services offered by the Foreste di Lombardia for use services and biodiversity conservation.

d. Reuse of proceeds
- As required by commitment 7 of the Lombardy Forest Charter, the procedure for making the proceeds from the signing of PES available to forest management was approved by resolution of the Board of Directors

e. Monitoring
Activities aimed at maintaining the FSC certification acquired for ecosystem services, monitoring the application of PES and reinvesting the proceeds, also in relation to the territory falling within the Natura 2000 area.

f. Give information on the results:
- Submit to the Board of Directors an annual final report on the application of the PES and on the reinvestment of the proceeds earned for the purpose of providing ecosystem services (habitat quality improvement, environmental arrangements, forest and / or pasture improvements);
- Provide information on the ERSAF site, through the construction of a page dedicated to SEs;
- Give information to individual forests.

g. Partner involvement and information on the territory
- Provide as part of the Forest Contracts specific actions for the enhancement and joint adoption of the SEs of the Forests and the territory involved;
- Promote the approach to the enhancement of SEs and PESs in planning, management and participation in activities in the area.

To activate the application of the PES in the management of the Lombardy Forests, the following actions are envisaged to be introduced in the ERSAF tools and procedures:

A. Explain and make clearer and more transparent the value of the ecosystem services considered and the evaluation processes adopted in the notices and concession documents for mountain pastures, timber sales and other products;

B. Introduce the assessment of ecosystem services into the Lombardy Forest Settlement Plan and define ways in which management can conserve and increase them (also in light of conservation measures for habitats and species of community interest);

C. Adopt the certification of the main ecosystem services involved;

D. Include attention to the impact on ecosystem services in the preliminary assessment check list of projects, extending procedure 6 of the certification "Specific environmental impact assessment and related requirements" to all projects;

E. Define "standard contracts", which can be modulated on a case-by-case basis, for the application of PES in the realities of the Lombardy Forests;

F. Identify, through a public procedure, possible intermediaries able to manage the transactions and the valorisation of the SEs.

Finally, the Guidelines have adopted a Regulation for the enhancement and sale of SEs.

STAKEHOLDER INVOLVED

The actions and activities forseen in guidlines involved 38 municipalities, 35 farms, 50 local cultural and environmental tourist associations, 10 bodies managing protected areas.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

Target groups of guidelines are the same stakeholder and the level of application is **local/regional**. The administrative uniti s ERSAF Lombardy.

ALLOCATED FUNDS AND RETURNS

The guidelines provided for €. 20,000 for implementation, 0.4 day / p / y for coordination and 200% increase in the value of revenue from management.

SOURCES OF FUNDING

The Funding is from ERSAF - Regione Lombardia and Municipalities

PROMOTERS / INITIATORS OF THE INITIATIVE

The program was launched by the ERSAF Forestry Department as part of the development and innovation initiatives of the management of forests owned by the region, aimed at introducing

and experimenting new approaches and enhancement methods for a management that is more suited to the provision of services and more engaging and inclusive of local, administrative, economic, social realities.

2. GEAP action in practice

RESULTS OF THE INITIATIVE

The results that the implementation of the guidlines wants to achieve concern:
- Improvement of forest management both in the planning phase, as well as in operating methods and in monitoring the supply of SE by forests.
- Increase in the value of the ES disbursed.
- Activation of new PES in management
- Involvement of stakeholders in the application of the enhancement of the SEs and in their sale
- Procedural simplification for the sale of SE
- Extend the process of enhancement of the ES also to the forest management of large territories

COHERENCE WITH GEAP ACTION

The Guidelines for the application of Payments for Ecosystem Services in "Foreste di Lombardia" management adopted by ERSAF constitute a new product with a view to favoring the governance processes of the Forests of Lombardy (FdL), with particular regard to the issue of enhancing the Services Ecosystems and their economic recognition as a form of financial integration to the management of the FdL and the Natura 2000 areas that overlap them.

The Guidelines therefore intend to provide a unitary framework of information and guidelines aimed at introducing attention to ecosystem services produced by regional forests and to the methods of enhancement in the management of FdL. Its consistency with the GEAP action lies in identifying a key element in the SEs provided by the forests

of the enhancement of biodiversity as a generating heritage of wealth and health of ecosystems but also of economic value to be recognized.

ECONOMIC IMPACT

In the management of regional owned forests, the value of ecosystem services was estimated and the "willingness to pay" was assessed.
The current project estimates a possible theoretical yield of the PES around € .350.000 / year, equivalent to approximately 200% of the general revenues collected by the management.

ECOLOGICAL and ENVIRONMENTAL IMPACTS

The impact will affect the management of approximately 16,000 ha of 20 forest complexes, already certified both FSC and PEFC and FSC certified for the management of 4 ecosystem services. This management method together with the adoption and application of the Guidelines constitute a significant example for the sustainable management of forests in the region and for the expansion of forest certification.

SOCIAL IMPACT

The social impact is mainly related to the increase of awareness and knowledge, both locally and at the level of tourists of urban origin, on the correct forest management and improvement of the social consideration of some figures of operators involved such as mountain farmes.

3. Alpine Convention contribution for implementing green economy in the Alpine Region

AS IN THE GEAP...	
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	Actually there is no link between the initiative and the Alpine Convention and its bodies.
If yes, which AC bodies are involved with the initiative?	-
Which AC body could play a role in the initiative's transferability? How?	Relevant thematic working body of the MAMF WG
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	MAMF WG and ABB through a survey of similar initiatives in the various Alpine countries

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL
A potential implementation of this initiative is possible through the New EU Forest Strategy and the EU Biodiversity Strategy for 2030 (March 2020)	

2.4 LIVING AND WORKING IN A GREEN ECONOMY

The effects of unsustainable consumer decisions remain considerable and represent a real obstacle to accelerating the development of a global green economy.

The GEAP intends to provide valuable information on the benefits and opportunities of a green economy to the Alpine population.

A green economy does not cause consumers to buy only local products and services, but it rather **creates win-win situations by promoting regional goods and services**, thus strengthening local or regional demand.

To make a green economy a reality, civil society must take part. Therefore, this field of action offers a perspective from the "recipients' side": people seeking job opportunities, employees in companies or public or private institutions who are generally unaware of the relevance of consumer behaviour for business decisions and market orientation.

The actions gathered under this field of action strive to enable and encourage consumers and employees to "act green" and understand when and why an individual choice represents a sustainable decision. Some conditions are likely to drive an information based and consistent consumer behaviour, such as providing brands for sustainable products, running green economy education programmes at schools, easing the access to green products and services, providing a full information of pricing and internalisation of external costs, creating peer-pressure for desirable consumption choices.

The consumer perspective has great relevance for other fields. For example, the topic "health" is addressed in this field of action and in "eco-innovation" as it is mainly addressed to the side of suppliers.

Two examples can illustrate the consequences of sustainability in consumer decisions:

- The choice of food products (e.g. fruit and vegetables) from distant countries and out of season causes high external environmental costs from transport, cooling, packaging etc. Buying local or regional food items avoids most of these costs and helps generate local value chains.

- Consumers can help reduce the waste of practical resources, e.g. by deciding to buy loose or unpackaged goods.

FRANCE

GEAP ACTION 5.1 (and other*)

Territorial Food Projects

BOX 1	
GEAP TOPIC	Greening consumption by disseminating information and better connecting supply and demand at the local level
TYPE **OF ACTIVITY (*)**	**A5.2** Information campaign & study **A5.4** Survey and consultation phase **A5.5** Compact desk research, development of brochure **A5.7** Series of workshops, campaigns and brochure, organization of a special green prize
CONSISTENCY **WITH GEAP FIELD**	The Territorial Food Projects aim to bring producers, processors, distributors, local authorities and consumers closer together and to develop sustainable and quality agriculture and food for all. They pursue a goal of territorialization of a food policy in 4 environment areas of action: agricultural economy, health nutrition, social accessibility and environment

1. The initiative

The **Territorial Food Projects** are based primarily on a shared diagnosis of local agricultural and food production, the food need of the living basin and identifying the socio-economic and environmental assets and constraints of the territory. Developed in a concerted manner at the initiative of the actors of a territory, they aim to give a strategic and operational framework to partnership actions responding to social, environmental, economic and health issues. Food then becomes an integrative and structuring axis of the sectoral policies in this territory.

In economic terms, the major strategies invest little or no in the following sub-domains:

- The installation mainly in market gardening and the renewal of generations in Agriculture

- the supply of collective catering and more broadly the order
Public
- diversification and renewal of opportunities through the mobilization of digital tools (see platforms...)
- promoting products including local brands (including regional nature parks)
- The equipment (mainly vegetable) and logistics but to varying degrees, the digital site of connection to the renovation of the National Interest Markets
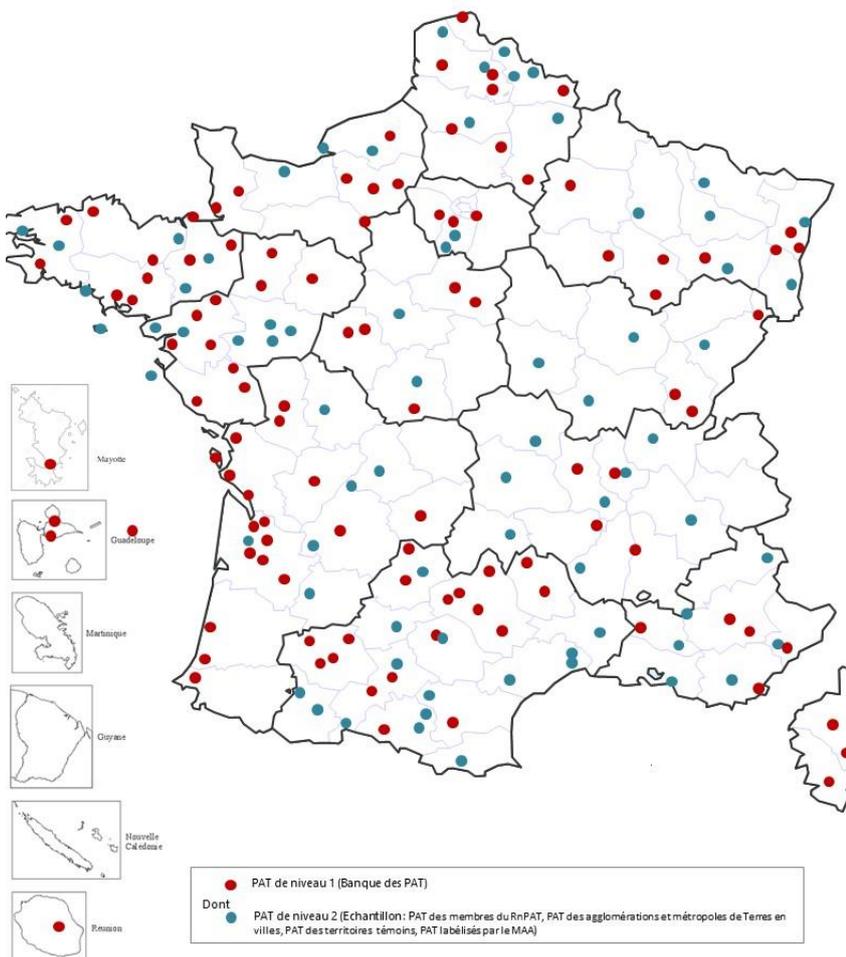
There are few actions on agricultural or agri-food employment, industrial processing, trade and contracting for better value-added sharing.

In the Alps, **the PAT des Baronnies** connects the territory's producers with voluntary primary schools to supply school food with local products and build a sustainable food plan for the school restaurant. Upstream/downstream trade shows are also organized to build lasting local economic relationships. The place of local products in traditional shops, such as supermarkets, is also studied to increase their place.

In terms of culture and gastronomy, mountain tourist territories are involved in the particular problem of seeking food autonomy. The actions are related to tourism promotion, gastronomy (operations with restaurateurs including that of the Federation of Regional Natural Parks "a Park, a restaurateur") and the enhancement of the food heritage often associated with the landscape. On the other hand, PAT and Cities of Gastronomy are still two separate worlds.

The cultural dimension takes into account the organisation of events (Market Made in MEL, catering of local products for festivals) and artistic creation (artist's residence, theatre...).

In the Alps the PAT des Baronnies connects local producers with tourism players, allowing tourists to offer baskets of local produce when they arrive at tourist lodges. An eductour has also been organised to introduce tourism professionals to the local agricultural food heritage in an educational format: visiting farms, cooking workshop, etc. A directory of producers for professionals has been updated.

Typical actions in the joint **areas of nutrition/health and social education** include food education (including collective catering) and actions aimed at specific audiences: children, young people, seniors, precarious public, low-mobile public.

The PAiT of the Greater Grenoble Region is developing actions to raise awareness among the inhabitants through the establishment ofa"month of food transition" aimed at involving them in the evolution of eating habits and supply practices. et des pratiques d'approvisionnement. Positive-food family challenges are in great interest, as are actions aimed at bringing organic or "quality" production to the poorest. Integration, the social and solidarity economy, gardens and urban agriculture are also at the forefront. And some rare PATOs highlight the role that consumers can play in making their responsibility play in the act of purchasing quality products, traceability and sourcing. Quality issues seem to be limited to agricultural practices and those of processors.

The Pat of royans Vercors, carried by the Community of Municipalities, develops a working axis on "Better eating to age better" and the accessibility of the elderly autonomous to local farm products. **In terms of the environment,** a well-represented field, the actions cover a wide range of activities: the promotion and support of organic and agro-ecological practices, the protection of water, resilience to climate change and the reduction of greenhouse gases (logistics), reducing waste especially in school catering. Early PATs mention animal welfare and player empowerment. The Pat of Royans Vercors is working on greening the nusicole sector.

To support the deployment of these projects on the territory by giving them more visibility, the Ministry of Agriculture has set up a recognition system by labeling The Territorial Food Projects (PAT) and is launching an annual AAP. A methodological framework has also been proposed to carry out the diagnostics and then to conduct the governance of the project. A national network of PATa promotes exchanges between project territories (labelled by the MAA or not) and the dissemination of feedback. Some regions run regional networks (including PACA in the Alps).

Territorial Food Projects have been developing in France since 2015(year of the first call for projects from the State under the National Food Programme) to 2017.
More info on: http://rnpat.fr/

https://agriculture.gouv.fr/telecharger/108904?token=0f9c39dc8b1cc5fe17c1829a38277f56

(Action 29 and 30 of the National Food Plan 2019-2023)

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STAKEHOLDER INVOLVED

Stakeholder involved are chambers of agriculture, farmers, cooperatives, downstream: processors (taste craftsmen, agri-food industries),distributors, logisticians, transporters, local authorities and consumers

In France, 84% of the project's communities and projects carry the projects.

The portage can be provided by another organization: associations, chambers of agriculture but also common by delegation or waiting for a portage by a community.

Piloting: State / Regions / Rural Network / Chambers of Agriculture

The chambers of agriculture, planning agencies and research organizations and above all consultants bring their expertise.

TARGETS, TERRITORIAL LEVELS and ENTITIES INVOLVED

Targets groups are consumers, farmers, processors, distributors, restaurateurs and local authorities, schools, school catering, tourist accommodations.

The local territorial level includes intercommunities, regional natural parks, metropolises, Department, while national level via includes the national RNPAT PAT network: http://rnpat.fr/les-projets-alimentaires-territoriaux-pat/

In the French Alps the administrative units are:
   - 5 Level 2 PAT: PAT of the greater Grenoble region (carried by Grenoble Alpes Metropole and comprising 7 territories), PAT of the Provençal Baronnies Regional Natural Park, PAT of Lubéron, PAT of The Briançonnais, Ecrins, Guillestrois and Queyras, PAT de Grasse
   - 2 Level 1 PAT (PAT Provence-Alpes/Dignes les bains and PAT Provence Alpes Verdon /Castellane)

The average population of a French PAT territory is about 185,000.

ALLOCATED FUNDS AND RETURNS

An example of allocated funds is: 80,000 euros for the first 3 years of the Pat of the Baronies

SOURCES OF FUNDING

Funding are mostly public but there are also some private financing: sponsorship, sponsorship, banks. Specifically, the financial dispositive for territorial food projects have been:

01 The National Food Program
02 The National Nutrition-Health Program
03 City policy and city contract
04 The National Health Environment Programme and its regional variation
05 The Environment and Energy Management Agency's aid
06 Water Agency aid
07 European Cohesion Policy and THE FEDER-FSE
08 European Territorial Cooperation Programmes
09 European Rural Development Policy and FEADER
10 The Leader Program
11 The aid of the Departmental Councils
12 Regional Council aid
13 The Local Investment Support Fund and Rural Territories Equipment Endowments
14 Patronage
15 Crowdfunding
16 Sponsorship
17 Financial institutions

PROMOTERS / INITIATORS OF THE INITIATIVE

The PAT was proposed by an amendment by the Europe Ecology Greens (EELV) group during the parliamentary review of the Future of Agriculture, Food and Forest Act. Taken over by the government and voted by both chambers, the PAT is defined by Article 39 of the Future Act for Agriculture, Food and Forestry and by the government's instruction of March 30, 2017.

In France:

Elected governance: 41% of PAT

Agri-food governance for 28.5% of PAT

Multi-stakeholder governance: 30.5% of PAT

In the Alps: In the Alps: The PAiT of the greater Grenoble region has the specificity of combining 7 territories of different levels (theCity ofGrenoble, Grenoble-Alpes Metropole, the Community of Agglomeration of the Country of Voironnais, the Communities of Municipalities of Grésivaudan

and Trièves,the PNR of Vercors and Chartreuse)and to associate with its governance the socio-professional actors (Houseof Agriculture) and civil society(Citizens Collective Food Autonomy and Association Inter Councils of Development).

Piloting: State / Regions / Rural Network / Chambers of Agriculture

2. GEAP action in practice

RESULTS OF THE INITIATIVE

The purpose of the initiative is to make green choices easier on the local level and improved consumption of green products through a better connection of offer and demand on the local level.

COHERENCE WITH GEAP ACTION

This initiative allows both

-Local economic development, with the consolidation of agriculture, agri-food companies, local food shops in the territory

-An incentive for environmentally friendly production methods

-Local consumption, therefore a logistics that emit little greenhouse gas emissions

-A systemic approach to food that allows to take into account the issues of production, processing and distribution of products within the framework of local sectors, but also to address issues of public health, waste limitation, local identity...

-Communication, promotion and promotion of local products in the territory

ECONOMIC IMPACT

In France 210 PAT has been registered in July 2020, including 7 in the Alps.
The early years of installation of the device suggested that territorial food was more a matter of urban and agglomeration. But since then, PATAs have spread to more rural areas: 23% of the PATa in the sample has a population of less than 50,000 and 49% have less than 100,000.
Number of farms affected: For example, the PAiT of the greater Grenoble region affects 3,200 farmers.

ECOLOGICAL and ENVIRONMENTAL IMPACTS

Economic strategies include:

- The development of quality territorialized food chains
- The development of short and long but proximity circuits
- The development of organic or low-environmental agriculture

So a logistics development that is low in greenhouse gas, and favours environmentally friendly production methods.

SOCIAL IMPACT

The Nutrition Health component and the Social Accessibility component provide for social impacts: reducing social inequalities in the face of access to quality food.

- Financial accessibility to quality local farm products (cooperative store, bulk grocery store, no packaging, etc.)
- Cultural accessibility to quality food: education on the nutritional needs of the human body, eating well, the challenges of agricultural and food transition, cooking knowledge, the value of a quality food farmer' product, etc.
- Geographical access to quality food
- Access to quality food for a disabled public (elderly people, no means of transport, etc.)

For example, in the South PACA Region, interPAT exchanges focused on: taking into account the precarious public in THE PAT beyond the

logic of action through "donation", the integration of short circuits in food aid, solidarity citizen brigades and other collectives created during the Covid crisis, gardens for all, access to land.

3. Alpine Convention contribution for implementing green economy in the Alpine Region

AS IN THE GEAP...	
Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative? • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair*	Actually there is no link between the initiative and the Alpine Convention and its bodies.

• *Promoter to a wider international and regional audience*	
If yes, which AC bodies are involved with the initiative?	-
Which AC body could play a role in the initiative's transferability? How?	In order to allow the transfer of the initiative to other places in the Alps, the Alpine Convention could disseminate and link alpine settlements that carry out similar projects. For example with the ARPAF (Alpine Region Preparatory Action Fund) Project : 100% Local And to end up on cooperation projects between alpine territories, via Alcotra for example
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	MAMF WG and Permanent Secretariat

BOX 2	POTENTIAL IMPLEMENTATION OF THE INITIATIVE THROUGH THE EU GREEN DEAL
A potential implementation of this project is possible through the Farm to Fork strategy 2020-2021 and the EU Biodiversity Strategy for 2030 (March 2020)	

3 References

- *Greening the Economy in the Alpine Region*

- *Action Programme for a Green Economy in the Alpine Region,*

  https://www.alpconv.org/fileadmin/user_upload/Publications/green-economy-action-

  programme_2019.pdf

- *https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en*

- *The Statement On the Value of Alpine Forests and the Alpine Convention's Protocol on*

  Mountain Forests in the framework of the international forestry policies beyond 2015

- *Sustainable rural development and innovation -Report on the state of the Alps*

AUSTRIA

BIO vom BERG – Organic products from the mountains

- *Hemetsberger, A.; Klingler, M.; Maass, C. (2019): Identification of best practices in the collective commercial valorisation of Alpine Food Intangible Cultural Heritage – Bio vom Berg [Contribution for Alpfoodway]. https://www.alpine-space.eu/projects/alpfoodway/project-results/wp2_o.t2.1_guidancepapertosuccessfullycommercializealpinefoodheritage.pdf*

- *Furtschegger, C.; Schermer, M. (2015): Case study report "Bio vom Berg" (Project HealthyGRowth). http://projects.au.dk/fileadmin/projects/healthygrowth/Case_Study_reports/Report_Austria_BiovomBerg.pdf*

- ❖ *"Bio vom Berg" portrait on web portal "option.news",*
  https://option.news/en/unternehmen/bio-vom-berg/

- ❖ *"Farm to Fork strategy" of the European Commission",*
  https://ec.europa.eu/food/farm2fork_en

Certified agricultural National Park products: "You can taste the National Park" and holidays at National Park partner companies – including mountain farms

- ❖ *Verein der Nationalpark-Partnerbetriebe Osttirol (2019): Nationalpark Partnerbetriebe Magazin. Natur erhalten, Natur erleben. Im Einklang. www.nationalpark-partnerbetriebe.at*

- ❖ *Nationalpark Hohe Tauern (2020): Tätigkeitsbericht 2019. Regionsprodukte: p. 51.*
    - o *https://hohetauern.at/de/taetigkeitsberichte.html*

PART 3

"Mountain forestry and mountain agriculture for enhancing biodiversity and tourism"

Virtual WORKSHOP
September 11th 2020

Activity of the mandate: Exchange on the relation between mountain agriculture, mountain forestry, tourism and biodiversity by highlighting initiatives and projects dealing with this relation

1. MAMF Workshop: background and proposal

In line with the decision of MAMF, the workshop took place as a **smart event** (half day virtual event) aiming to ease the involvement of experts under the COVID-19 emergency. Experts were given the possibility to participate with a **video-interview** before the workshop, to contribute with a video-clip and to collect and send in advance some texts to be used in the MAMF Report (e.g. short abstract or paper of their presentation). This organisational management allowed a wide participation in the workshop and made it a **highly sustainable event**.

The workshop has been the result of a joint effort of the whole MAMF WG that allowed to set up an agreed agenda addressing under different angles the relationship between mountain agriculture, mountain forestry, tourism and biodiversity – which has been analyzed by the speakers' contributions.

2. The results of the event

One of the main goals of the exchange on the relation between mountain agriculture, mountain forestry, tourism and biodiversity by highlighting initiatives and projects dealing with this relation

required by the mandate was to involve stakeholders and encourage them to take into account existing interdependencies between mountain forestry and agriculture, tourism and biodiversity.

On 11 September 2020, MAMF organized a "virtual workshop" from 9:30 am to 1:30 pm entitled "Mountain forestry and mountain agriculture for enhancing biodiversity and tourism" and aimed at providing a concrete and shared implementation to the MAMF mandate.

The Workshop took place online on the ZOOM platform with simultaneous Italian-English translation and vice versa.

The event was broadcasted live and hosted in ROOM B. Costantini at the **"Fair and Festival of the Forests" in Longarone Fiere** (11-13 September 2020, Longarone)[86] where in addition to a rich program of events and exhibitions, the fair dedicated a space to the Alpine Convention event.

Coherently to the mandate, the event included three sessions of thematic interventions moderated by experts from the various sectors:

- **SESSION 1**: Mountain food biodiversity & alpine tourism

- **SESSION 2**: Green economy and sustainable value-chains for mountain agriculture and forests

- **SESSION 3**: Alpine natural capital for green development of the farming and forestry sectors

The sessions included discussion and reflection aimed at creating new synergies and channels of interest and exchange in the forest, agriculture, tourism and biodiversity protection fields. Correlations between the two sectors of interest, tourism and the protection of agricultural and forest ecosystems as ecosystems with high natural capital, in terms of landscape value and of biodiversity have been discussed during the workshop.

The workshop aimed to involve start-ups, experts from Alpine countries, bodies operating in the Alpine and non-Alpine territory, research organizations, national and international institutions. A poster on the workshop was prepared by Longarone Fiere, that hosted a video-session of the event in a dedicated room. Longarone Fiere has also dedicated a youtube page to the MAMF workshop.[87]

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[86] https://www.longaronefiere.it/fiera-festival -forests

[87] https://www.youtube.com/watch?v=51z6MOm6cmA&feature=youtu.be

3. The Final Agenda

<table>
<tr><td colspan="2" align="center">**Opening SESSION**</td></tr>
<tr>
<td>9:30-10:00</td>
<td>

Login on Web Platform

Registration at the login

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<td>10:00-10:30</td>
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Work Opening

Morning greetings, presentation and adoption of the agenda

Paolo Angelini, Head Delegation of the Alpine Convention, Italian Ministry for the Environment, Land and Sea

Alenka Smerkolji, Permanent Secretariat of the Alpine Convention

Marco Onida, European Commission DG Environment - "A new EU approach to forests"

Marie Clotteau, Euromontana

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<tr><td colspan="2" align="center">**SESSION 1 :   Mountain food biodiversity and green tourism**

Moderator: Simonetta Mazzarino - Città del Bio / Università degli studi di Torino</td></tr>
<tr>
<td>10:30-10:40</td>
<td>

AlpFoodway: Alpine Food Heritage towards the inscription as UNESCO Intangible Cultural Heritage of Humanity

Cassiano Luminati - Director of Polo Poschiavo and Lead Partner of Alpine Space Project AlpFoodway

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<tr>
<td>10:40-10:50</td>
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10:50-11:00	**Nature park management to maintain cultural landscape and biodiversity in cooperation with tourism and farmers** *Florian Schublach - Naturpark Ötscher Tormäuer*
11:00- 11:15	**Identification mark of the 'mountain product' quality regime: application of the EU Directive in Italy** *Domenico Mastrogiovanni - Euromontana* *** **QUESTION TIME AND INTERACTIVE DISCUSSION**
11:15-11:35	**BREAK TIME**

SESSION 2: Circular economy and sustainable value-chains for mountain agriculture and forests

Moderator: Hans-Joachim Hermann - German Environment Agency - Chair of the former Green Economy Advisory Board of the Alpine Convention

11:35-11:45	**Business for sustainable value chains in the mountains: Start ups: Soplaya & ProjectMii** *Mauro Germani - CEO*
11:45-11:55	
11:55-12:05	**Giving more value to Mountain Forest's products: certification** *Francesco Dellagiacoma - PEFC vice President*

12:05-12:15	**FOODCHAIN** *Marco Vitale - CEO and Davide Costa - CDO*
12:15-12:25	**Sustainable forest management and wood supply chains** *Rinaldo Comino - AG2 EUSALP member Friuli Venezia Giulia Region, MAMF WG member, Forestry Corps FVG*
12:25-12:40	**LEGNO VIVO- international event: the enhancement and use of wood for the production of fine artisan musical instruments.** *Davide Dory Deriu Frasson - Presidente* *Davide Fregona - Direttore artistico* *Distretto culturale del pianoforte, Friuli - Venezia Giulia (Italia)* ** **QUESTION TIME AND INTERACTIVE DISCUSSION**
SESSION 3 : Alpine natural capital for green development of mountain agriculture and forests Moderator: Paolo Angelini, Italian Ministry of Environment, Land and Sea	
12:40-12:50	**Trentino Tree Agreement: a pact to increase forests and improve forest –human relationship** *Roberto Zoannetti - Department of Agriculture, Forests and Soil Defense of the Autonomous province of Trento*

12:50-13:00	**The value of biodiversity for mountain agriculture** *Alessandra Pesce – Research Director at the Council for Research in Agriculture and Agricultural Economics, CREA*
13:00-13:10	
13:10-13:25	**Cultural values of forests through a landscape perspective** *Riccardo Brugnoli , Maria Teresa Idone - Directorate - General for Archeology, Fine Arts and Landscape - Service V "Landscape protection" - MiBACT* ** **QUESTION TIME AND INTERACTIVE DISCUSSION**
	Closing SESSION
13:25-13:30	**Conclusions** *Italian Ministry for the Environment, Land and Sea*

4. Brief collection of references of the workshop contributions

❖ Work opening

Alenka Smerkolji, Permanent Secretariat of the Alpine Convention

Paolo Angelini, Head Delegation of the Alpine Convention, Italian Ministry for the Environment, Land and Sea

The Working Group Mountain Agriculture and Mountain Forestry was established by the XV Conference of the Alps in 2019. This Working Group was created to contribute to the concrete operation of the Alpine System of Climate Targets 2050 of the Alpine Convention to focus attention on climate-friendly mountain agriculture and sustainable management of mountain forests, but also on tourism and biodiversity; the group represented a support to the implementation of the Action Program for an Alpine Green Economy in the relevant fields and the event organized by it is configured as one of the activities carried out by it in order to find cooperative and innovative solutions for urban relations- rural areas, highlighting examples of good practice on promoting sustainable economic models in the Alps.

❖ The EU Approach to Forest
European Commission DG Environment - "A new EU approach to forests" **Marco Onida**

Forests enter some recent initiatives of the European Commission, particularly the EU Green Deal, the EU Biodiversity Strategy for 2030, and the New EU Forest Strategy still under preparation.

The EU Green Deal covers a plurality of topics linked to a move towards a greener and more sustainable approach in Europe but of special interest to forests is the reference it makes to "protecting nature".

EU policies aim to halt biodiversity loss that has become a major issue across whole Europe. Forest ecosystems are under increasing pressure, as a result of climate change. The EU's forested area needs to improve, both in quality and quantity, for the EU to reach climate neutrality and a healthy environment. Thus, sustainable re- and afforestation and the restoration of degraded forests can be a solution for increasing absorption of CO_2 while improving the resilience of forests and promoting the circular bio-economy.

Building on the 2030 EU Biodiversity Strategy the Commission will prepare a new EU Forest Strategy whose key objectives are: afforestation, forest preservation and restoration in Europe. The Strategy aims to help increase CO_2 absorption in Europe, reduce the incidence and extent of forest fires, promote the bio-economy in full respect for ecological principles favourable to biodiversity, incentivize forest managers to preserve grow and manage sustainably through the CAP, and promote the import of products that do not involve deforestation and forest degradation. The EU Biodiversity Strategy is made up of four elements, two of which of particular importance to the forest ecosystems: protecting nature, and restoring nature. The EU Biodiversity Strategy aims at protecting 30% of EU land and sea by means of a combination of Natura2000 sites and nationally designated areas, of integration of ecological corridors to build a coherent network of protected sites, and taking into account the specificities in different member states. A strict protection should then be applied to one third of the protected areas, by addressing areas of very high biodiversity value and important for mitigation and adaptation to climate

change – including all primary and old growth forest. The EU Biodiversity Strategy also aims at restoring nature in the EU. The EU restoration plan foresees a list of commitments to be undertaken by 2030 (see Table below). Of special interest to the forest sector is the target of planting 3 billion trees in line with ecological principles over the next 10 years, with a special focus on cities and the agroforestry sector. Afforestation will be promoted via the CAP strategic plans and the cohesion policy funds, supplemented by the new European Urban Greening Platform and the LIFE programme. The EU Commission is then committed to develop, in parallel with new EU forest strategy, some guidelines on biodiversity-friendly afforestation and reforestation.

EU Biodiversity Strategy commitments at 2030
Legally binding targets to be proposed in 2021
No deterioration of any protected habitats and species by 2030: trend to be positive for at least 30%
Agroecology: Organic farming >25%
Biodiverse landscape features >10%
Reduction by 50% the use & risk of chemical pesticides and reduce by 50% the use of more hazardous pesticides
Reduction of nutrient losses by at least 50%
Plant 3 billion additional trees respecting ecological principles

Forests are recalled in the framework of the EU Biodiversity Strategy under different points of view. First of all forests are expected to increase in quantity, quality and resilience, notably against fires, pests and other disturbances. The preservation of all forests in good health allows to retain their functions for biodiversity and climate, as well as to provide materials, products and services for the circular bio-economy. Additionally, the new EU Forest Strategy under preparation is expected to deliver a further development of the Forest Information System for Europe (FISE), linking all EU forest-data web-platforms. Forest management is also covered by the EU Biodiversity Strategy as a strategic tool. All managed public forests should be covered by management plans and an increased number of privately owned forests too should move to a regular management. The Strategy calls for a further development of forest management based on biodiversity-friendly practices such as closer-to-nature forestry. In this line, the Commission intends to develop, in parallel with the new EU Forest Strategy, guidelines on closer-to-nature forestry practices. Forests are seen in the EU Biodiversity Strategy also as a source for bioenergy. In line with the Renewable Energy Directive, the Strategy extends to all forms of bioenergy the shift to advanced biofuels based on residues and non-reusable and non-recyclable waste. As a consequence, the use of whole trees and food & feed crops for energy production, whether produced in the EU or imported, should be minimized.

An assessment of the EU and global biomass supply and demand should be ready by end 2020, to be used for the revision of relevant legislation in line with the European Green Deal, while an operational guidance on the new sustainability criteria on forest biomass for energy is expected in 2021.

New EU Forest Strategy is planned to be released in the first quarter of 2021. It will cover the whole forest cycle and promoting the many services that forests provide in line with the wider biodiversity and climate neutrality ambitions. It will address its key objectives for forests and strike the balance of multiple forest functions. It will promote healthy, resilient, restored, well-managed and preserved forests, to contribute to climate change and biodiversity goals, secure livelihoods, support the circular bio-economy, and sustainable development, addressing EU and global forests.

❖ **AlpFoodway**
Cassiano Luminati - Director of Polo Poschiavo and Lead Partner of Alpine Space Project AlpFoodway

Foodways are socioeconomic and cultural practices related to food production and consumption. Food heritage is a strong identity source for alpine populations. It goes beyond products to include productive landscapes and traditional knowledge on production techniques, consumption customs and rituals, and the transmission of ancient wisdom.

Alpfoodway wants to contribute to safeguarding the Alpine Food Heritage through its candidacy on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity. The Food Heritage of the Alps includes all the practices of production, processing and conservation of food, as well as the consumption rituals, knowledge, knowledge and landscapes that represent it. It has always been based on the ability of Alpine communities to exchange food and services, to manage common goods, to help each other, important elements for the future of the Alps, because:

- ❖ is a fundamental element of the cultural identity and way of life of the peoples of the Alps,
- ❖ contributes to the resilience of Alpine communities,
- ❖ preserves the quality of the landscapes and the biodiversity of the Alps,
- ❖ is essential for the sustainable development of the Alps,
- ❖ increases the attractiveness of the Alpine regions.

The Food Heritage Charter of the Alps is a participatory and shared document that mobilizes every citizen, association, society and institution to take responsibility for ensuring its protection and supporting its candidacy in the Representative List of the Intangible Cultural Heritage of Humanity UNESCO.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.alpfoodway.eu
https://www.youtube.com/watch?v=hVSvfzHAS28

❖ Nature park Ötscher Tormäuer
Florian Schublach - Naturpark Ötscher Tormäuer

The Ötscher-Tormäuer Nature Park experience in sustainable landscape management shows how cooperation with partners from agriculture and tourism can help to preserve and promote the cultural landscape and biodiversity. The park faces a local situation of sharp decrease of population over the past 15 years (up tp -21%), high proportion of people 65 years and above (20% -30%), high proportion of forest (71% -86%) and abandonment of agricultural and forestry farms (11% -16%).

Under the point of view of tourism, from approx. 210.000 overnight stays in 2000/2001, figures moved down to approx. 141.000

overnight stays in 2013/2014 to be back to 190.000 overnight stays in 2018/2019. Summer tourism and winter tourism are quite balanced with the trend orientating towards summer.

In such a condition, the park has launched two local development projects:

Project Ötscher Lamm Lackenhof am Ötscher dedicated to lambs breeding in the park, and Hochlagenobst dedicated to orchards farming. Both combine local product development with regional tourism initiatives and have been positively welcomed by regional visitors.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.naturpark-oetscher.at/

❖ Euromontana
Marie Clotteau and Domenico Mastrogiovanni

Implementation of the Optional Quality Term 'mountain product': application of the EU Directive in Italy

Rewarding 15 years of Euromontana commitment to the topic of mountain products, the use of the optional quality term (OQT) "mountain product" was protected in November 2012 by the European Union with the (EU) regulation No 1151/2012. Following that, the European Commission adopted the delegated act (EU) No 665/2014 in June 2014. Since then, several countries have moved forward with the implementation of the OQT at national level. The delegated act gave some room for manoeuvre to Member States (MS) in the implementation of the term.

Euromontana has monitored this process in seventeen countries so far to provide a state of play of the implementation of the OQT in the European Union. First published in 2016, and updated in 2017 and 2019, Euromontana's 2020 report analyses three different situations in:

- Countries that have implemented the EU regulation without specific national adaptation
- Countries that have adapted or are in the process of adapting the OQT regulation at national level
- Countries that have not yet implemented the OQT on their territory

Six years after the implementation of the OQT, around half of the Member States have facilitated its use by farmers at least by putting the legislative framework in place. Indeed, Member States play a key role in this implementation as they have to decide on maintaining (or not) the 30 km distance derogation for the processing of milk,

slaughtering and pressing olive oil; controls to respect the conditions set by the regulation (notably on how to measure feedstuff coming from mountain areas); the notification or authorisation procedure for farmers to be able to use the term. Finally, Member States can also develop a national logo to give more visibility to the scheme.

This Euromontana study takes into account the most recent developments, in particular in Bulgaria, Croatia and Romania, provides national statistics on the uptake of the term and showcases examples of brands or operators using the OQT "mountain product". If most of the Alpine States have implemented the EU legislation in their countries, only a few members such as France and Italy have really put in place good conditions for farmers to facilitate the uptake of the use of the OQT.

Italy as a case-study

Mountains cover 47.5% of the Italian territory. With 33.8% of its UAA in mountain areas and producing 30.8% of EU mountain food production, Italy is the biggest producer of EU mountain products (M€ 7 195). The production of mountain products in Italy represents 17.4% of the country's farming activity.

A decree "Regolamento communitario" has been adopted on 26 July 2017 (published to the Official Journal of 13 September 2017) to adapt the EU regulation for application at the national level. The Italian choice relies on the strong involvement of the regions in monitoring and controlling application of the use of the optional quality term. National guidelines on the controls have been adopted by the National Decree of 20 July 2018. A national logo has been adopted by a national decree on 2 August 2018.

After long discussion, Italy has finally chosen to apply a 10km derogation for the production of milk and milk products, thus reducing the 30km possibility given by the EU regulation: this measure helps maintaining the benefit to mountain areas. Indeed, in Italy the distance of 30 km means that large cities like Torino or Milan could have benefited from the scheme if the distance of processing was not reduced. The reduction of distance allows many small plants processing milk and dairy to benefit from the scheme and to keep the added value in mountain areas.

This reduction of the derogation does not apply for meat and olive oil for which the 30 km derogation is in place. If a plant needs derogation for processing, regional authorities must be further notified.

Farmers are entitled to use the term once they have notified the regional authorities about their intention to enter into the system and to label the product with the optional quality scheme. Farmers are thus entered in the regional database. Each regional authority has to communicate this list of producers once a year to the national Ministry of Agriculture.

Controls have been put in place at the market level meaning that producers would be controlled only after they have started to use the term. With the Italian legislation on traceability of food products, the competent control authorities would be able to trace back the products to the processing and production sites.

The total number of producers registered in the different regional databases is 615 at the beginning of 2020. In Piemonte, 214 producers were using the scheme, mainly for fresh and processed meat products, fruits, vegetables and unprocessed cereals but also milk and dairy products and, to a lesser extent, honey. In Basilica region, 106 producers were using the OQT: including 26 for milk and dairy products, 45 meat (animals and transformed)

products, olive oil, fruits and cereals, aromatic herbs. In Emilie Romagna, 88 producers were using the scheme: mainly for Parmigiano Reggiano cheese but also quite a lot of honey and even 6 producers of saffron.

The Italian choices have let to a very good uptake of the OQT by farmers. Even if this was facilitated by the existence of a national scheme before the EU OQT, the work done by national and regional authorities with farmers facilitated this uptake such as the choices to use a simple implementation for farmers (no preauthorisation, only a notification for instance). Even if more communication remains to be done to better inform about the OQT, a national logo already facilitates the visibility of the scheme.

For the Member States still lagging behind, Euromontana therefore calls them upon to accelerate the implementation of the optional quality term and to implement adequate control systems while launching large communication campaigns to inform farmers about this opportunity. Moreover, Euromontana encourages the European Commission to remind Member States about this OQT possibility and to do a follow-up of its implementation, including in the Farm to Fork Strategy to ensure the production of quality food in Europe [88]

| WEB REFERENCES and VIDEO CLIP FOR WS |
|---|
| https://www.euromontana.org/en/ |
| https://www.euromontana.org/en/working-themes/mountain-products/ |

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[88] More details on the implementation of the OQT "mountain products" can be found in the study: https://www.euromontana.org/wp-content/uploads/2020/06/2020-05-26-Implementation-of-the-OQT_EN.pdf

❖ Start up Soplaya
Mauro Germani – CEO

Soplaya is the tech and logistic platform to create a direct connection between producers and restaurants, hotels, bars, delicatessens, schools and agritourism: they deliver hundreds of fresh, genuine and seasonal ingredients every day, from fruit to cheese, from meat to vegetables . Soplaya is the digital marketplace where Chefs buy directly from the Producers, at the best possible price, without intermediaries, and receive the goods every morning at the restaurant. Soplaya provides "chefs" with a wider and cheaper selection of superior quality ingredients with which to create their dishes, making the supply easy and very fast. Moreover, Soplaya provides producers with a channel to sell at the right price and the tools to plan distribution and manage stocks even before the product is harvested. The company aims to revolutionize the supply chain by bringing transparency and simplicity to the sourcing phase, increasing order frequency, streamlining inventory and reducing food waste.
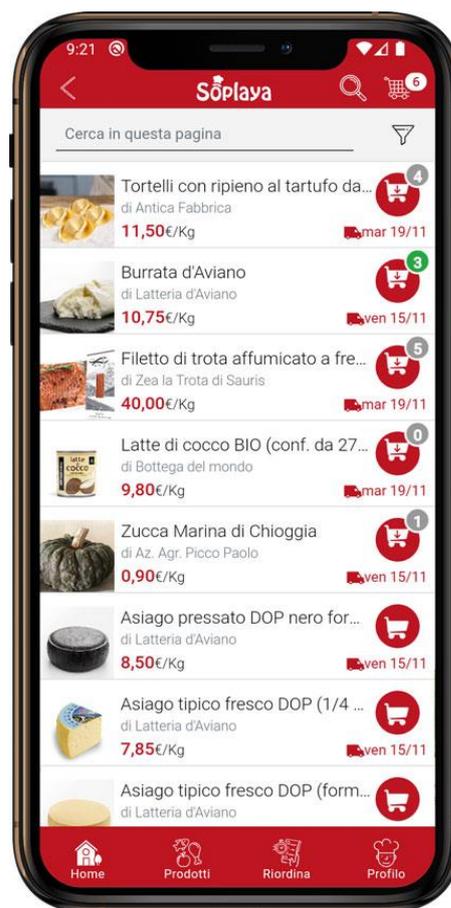
WEB REFERENCES and VIDEO CLIP FOR WS
https://soplaya.com/index.html
https://www.youtube.com/watch?v=pAasZAgq3dM
https://www.youtube.com/watch?v=On29-Otay5s

❖ Mountain Forest's products: certification
Francesco Dellagiacoma - PEFC vice President

Forests cover 46% of the Alpine Convention area and protect human infrastructures against natural disaster; absorb and stock carbon dioxide, mantain the water cycle, support important habitat and species, are an essential part of the landscape; offer opportunity for outdoor recreation.

They are highly appreciated by local and even more by the city's dwellers as a beautyful, healthy environment, correlated with well being thruogh physical (terpenes emitted by trees) and psycological factors.

Certification (45% of alpine forests) guarantees that forest's products and relevant services are mantained / improved through management and forest products are labeled through the process as coming from sustanainable practices.

PEFC is working on short, òocal supply chains, to communicate also local sourcing of products: connecting the positive image of alpine forests and products originating from them could be an important strategy to improve their value.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.pefc.org/

❖ FOODCHAIN
Marco Vitale - CEO and Davide Costa - CDO

Foodchain SpA aims to make transparency an essential asset for any supply chain actor to guarantee the origin, quality and value of the food, supporting producers and protecting consumers. Thanks to Quadrans blockchain, an open ecosystem has been created to track and trace materials and companies along supply chains. Blockchain is the bridging system that joins all supply chain flows, improving management efficiency and quality control.
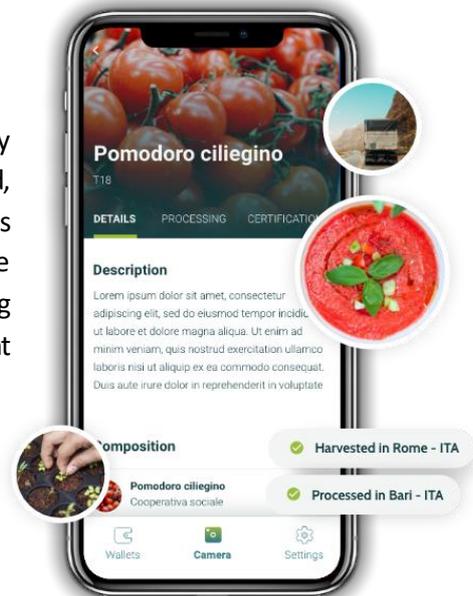
WEB REFERENCES and VIDEO CLIP FOR WS
https://food-chain.it/

❖ Sustainable forest management and wood supply chains
Rinaldo Comino - AG2 EUSALP member Friuli Venezia Giulia Region, MAMF WG member, Forestry Corps FVG

Forests have always been a topic of great interest. Sometimes they are the subject of discussions and opposing positions taken by those who believe they should only be protected with a hyper-conservationist vision and who see them as a wooden reservoir for industry and energy, or who maybe just to go hunting. In reality, forests must be protected to avoid the change of land use, except in special cases such as those of public interest with the right mitigations or the restoration of sustainable mountain farming practices. In this area of protection, however, they must be actively managed, certainly according to sustainability parameters, to ensure all the benefits they are able

to give and in this sense forest owners or their managers must be financially supported for the various services that forest management involves the benefit not only of the person concerned but of the community: it refers to the production of oxygen, to that of drinking water, to hydrogeological protection, to the possibility of slow tourism and refreshment, to forestry therapy for some diseases and so on and last but not least, indeed the first on the list, wood, both for its concrete economic value, fundamental and strategic in mountain areas, for its beauty, its renewability and for its environmental value as it is not it is only the forest that stores the carbon captured from the atmosphere, but also the wood products, with all the structures from houses to furniture etc. . The operators of the wood supply chain from forestry to processors can be among the main protagonists of the European Union's green new deal and users of the resources that will be made available with the 2021-2027 programming. For Italy and for the Region I come from, the Autonomous Region of Friuli Venezia Giulia remains central to the investments to make the forests accessible in a safe way, including those that for various reasons are in a state of neglect.

On all these issues the Alpine Convention through the working group agriculture and mountain forests and EUSALP with several action groups including the AG2 on strategic sectors and in particular wood work in cooperation.

❖ **LEGNO VIVO**
   Davide Dory Deriu Frasson - President
   Davide Fregona – Art Director
   Distretto culturale del pianoforte, Friuli Venezia Giulia

The cultural association "PIANOFVG", founded in 2006, has been officially formalized in 2013 to launch and organize the "Piano FVG competition", gathering the experience of the Pedemontana Music Institute of Aviano (Pordenone) since 1997 promoter of a Piano Competition established in memory of the great pianist and teacher from Trieste Luciano Gante that paved the way for brilliant careers for talented pianists from the best musical academies of many countries worldwide. Sacile was appointed as the "City of Music and Piano" both for its deep-rooted musical tradition and as the home of "Fazioli Pianoforti", world leader in the concert instrument sector. An articulated project was born around the new brand "PIANOFVG", a new legal entity that is the unique reference for the festival and all the linked events.

The International Piano Competition of Friuli Venezia Giulia PianoFVG is located in Sacile. It aims to highlight the new keyboard talents, coming from all over the world, within the limit of 32 years of age. Almost a hundred competitors arrive every two years in the city becoming a living stage for musicians, with concerts inside palaces, in cafes, shops and open air. The competition strengthens the mutual enhancement link with Sacile also through the Fazioli brand, which made the city famous all over the world of piano producers. The International Piano Festival brings the winner and the Award Winners to the fore with a large series of concerts in the Region, in Italy and abroad. Educational and training activities for young competitors, workshops such as the CEI Piano Forum, in collaboration with the CEI-InCE

Central European Initiative secretariat, "career coaching" seminars and promotion through new media such as cinema and social networks complete the offer for the young musicians involved.

The Piano Cultural District "Musicae" is a non-profit association that, by adapting to the new needs of the "music market" and the public, promotes and coordinates the events in Friuli Venezia Giulia region. Musicae aims to strengthen cultural organizations and entertainment companies and improve the use of cultural heritage, through the increase of forms of collaboration between the same subjects, also with the involvement of local reference bodies. The "Legno Vivo" event proposed by Musicae in collaboration with the FVG Region, the Municipality of Sacile, the Chamber of Commerce of Pordenone-Udine, the IPSIA Carniello Institute of Brugnera and numerous other partners, public and private bodies involved, gives substance to a closer synergy between these elements, to characterize the peculiarity of the territory and its offers in the artisan and intellectual field with ever greater effectiveness. This creates a specific model of "Cultural and Economic District" of which the Piano is an element of economic, cultural, artistic and social attraction and development.

Legno Vivo is an original project that combines in a circular way music, workshops, exhibitions of ancient musical instruments reworked in a modern key, exhibitions and initiatives that favour the cultural growth of the territory and the tourist promotion of the same. All these cultural expressions together, contribute to creating a single project, that of "Wood" linked to that of "Music", and from this union "harmonic wood" is born and formed. Legno Vivo concretely combines knowledge and enhancement of exemplary models of "cultural enterprise", of musical use and training, capable of involving the widest and most diversified audiences with concrete repercussions in economic terms- on the community. The trademark of the Piano Cultural District "Musicae" collects in a network of public and private partners the requests for cultural, entrepreneurial and social promotion of the territory, focusing in an innovative way on its artistic and craft excellence. In the contemporary world that always poses new challenges for a "harmonious" and sustainable progress through growth that focuses on the development of knowledge and innovation, but with "green" and inclusive strategies of social and territorial cohesion (principles also contained in the Europe Strategy 2020 and in the Creative Europe framework program), the Legno Vivo project combines these instances. The city of Sacile becomes the center of a national and international network of good practices that find visibility and space also to create new business ideas. Stakeholders involved include: the artisan traditions of the region - here confronted with Italian and foreign ones - schools (with the excellence of the IPSIA Carniello di Brugnera), professionals and users (musicians and public), economic actors, such as the Pordenone-Udine Chamber of Commerce, supporting the event since 2019, with a view to a concrete development of new opportunities between culture and business.

The exhibition foresees workshops and artisans, cultural firms in the wood sector especially but not limited to Friuli Venezia Giulia Region. All participants have an outstanding specialty in constructing / restoration of musical instruments. They gain visibility, promotion, contacts and sales proposals involving wood and high quality materials. A delegation of the FVG builders is foreseen to take part in two important trade exhibitions "Fair & Festival of the Forests of Longarone" and "Cremona Musica" to broaden the entrepreneurial and investment horizon for an economic development of the regional production area. The lab experience of IPSIA Carniello di Brugnera (a professional high school training specialists for the wood-furniture sector) encourages young people to consider a career or entrepreneurial decision in the music sector, thanks to training (through workshops, internships, etc.) in artisan workshops, made possible by Legno Vivo and the Chamber of Commerce of Pordenone-Udine.

Other developments in the international arena, to raise awareness of Italian and especially regional excellences in this area, may come from CEI / InCE for the Central-European and Balkan area, and the Alpine Convention in the alpine countries. Exchanges can be started within these regions getting increased visibility / economic development of this sector. Finally, the "green economy" and its potential for innovation in a sustainable way, can play a role for this sector as evidenced by the eco-sustainable sensitivity of the wooden structures created for the "room total

acoustics", the collaboration with Itlaian Delegations of the Alpine Convention and some new companies in the sector reported by the Chamber of Commerce.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.pianofvg.eu/en/

❖ Trentino Tree Agreement
Roberto Zoannetti - Department of Agriculture, Forests and Soil Defense of the Autonomous province of Trento

In the night of 29 October 2018, 4 million cubic meters of trees in Trentino were destroyed due to an anomalous wave of bad weather.

It was a difficult experience for our territory whose woodland and forest heritage is an integral part of our history and of the people who live here. Both the economy and culture of Trentino are in fact based on experiences and activities related to trees, woods, forests and their management.

Rebuilding this mountainous, difficult and beloved land is therefore necessary and urgent. With the awareness that nature is everyone's benefit and heritage. This is why today we feel the urgency to make our concrete contribution. Trentino Tree Agreement is the fundraising managed by the Autonomous Province of Trento to restore the woods that were destroyed following the anomalous wave of bad weather at the end of October 2018. The project also involves municipalities and individuals. Trentino Tree Agreement project wants to contribute to the reconstruction of the Trentino forests and become promoters of environmental sustainability practices.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.trentinotreeagreement.it/

❖ The value of biodiversity for mountain agriculture

Alessandra Pesce – Research Director at the Council for Research in Agriculture and Agricultural Economics, CREA

In Italy 17% of farms and livestock farms are in the mountains but suffer from a low percentage of utilized agricultural area due to the many wooded areas and abandoned land. At the same time, more and more areas are characterized by a high number of typical PDO and DPG products, as well as those that attract local tourism. The many processes of abandonment are therefore opposed to the strengthening of the agricultural system with numerous incentives for quality production. There is a need for strong action through current policy instruments (eg the European "Farm to Fork" strategy) to seize the opportunity to activate ecological transition procedures in these areas. In parallel, it would be appropriate to implement plans for a higher remuneration of farms in order to avoid the processes of abandonment and for a recognition of the market and ecosystem services that revolve around mountain agriculture itself. The improvement of the supply chain conditions and the introduction of tourism must be implemented in the same way as the recognition of the local community role and the involvement of civil society to ensure that pilot projects have greater attention. In the latter field, CREA is very active.

The importance of technological infrastructures and broadband are also at the heart of a new fundamental plan for the creation of an advanced commercial system and to provide services to the local population. The Broadband Committee is currently active on these services with the aim of strengthening businesses, supply chains and corporate channels in favor of local communities.

WEB REFERENCES and VIDEO CLIP FOR WS
https://www.crea.gov.it/en/home

❖ **Cultural values of forests through a landscape perspective**
   Riccardo Brugnoli , Maria Teresa Idone - Directorate - General for Archeology, Fine Arts and Landscape - Service V "Landscape protection" – MiBACT

From a landscape protection point of view, forests are an asset that brings with it a multiplicity of "values": its cultural and landscape value, and therefore its role in people's life contexts must necessarily be traced back to a plurality of aspects. The report represented the aspects to be considered, and their interrelationships, which allow to reconstruct the meanings and cultural values expressed by forests, according to a specific cut, that of the landscape, and even more specific because it is part of the Italian perspective of landscape protection. The latter, despite being inserted within the European notion and concept of landscape of the CEP (European Landscape Convention - Florence, 2000) has some interesting peculiarities, which are based on the history of the identity culture of the Italian country starting from the first years of the '900.

Reconstructing this reference framework for the "cultural values" of forests also has a concrete purpose: this framework can be referred to when defining sustainable forest management actions, which also adequately consider the social, cultural and landscape aspects that contribute to quality of life of people, thus integrating fully into a dimension of green economy.

ANNEXES[1]

MAMF REPORT 2019/2020

INDEX

1. Template of MAMF Activity 1

FORM/TEMPLATE FOR INITIATIVE COLLECTION

The form presented below is aimed at describing a single initiative / good practice. More initiatives can be described in more than one form. Indicatively it is desirable that each contracting party present at least 2-3 initiatives related to the agriculture and forest sectors, including both.

Country
Name and Last Name
Institution
Contacts

Section 1

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[1] **Interactive index**: press CTRL on the TITLES to reach the paragraph

Legal basis and general and sector planning tools
(this section must be completed for each country only once and must be updated to 2019)

- Indicate if there are strategies / initiatives / plans for climate change mitigation/adaptation in your own country / region (insert references and / or links to various documents).

- Indicate whether these strategies / etc. present an in-depth study or specific alpine section or related to more general mountain areas

- Indicate whether these strategies / etc. present specific sections for the forest and agriculture sectors

- Briefly describe the main impacts analyzed and the consequent relevant problems with reference to climate change in your own country and, in particular, in the Alpine / mountain areas

- If present, it specifies if they are related to forest management and / or all agriculture in mountain areas and how

Section 2

Initiative / Good practice for sustainable management of climate change in the forest and agriculture sectors

- Indicate the title of an initiative / good practice applied for a sustainable forest or agricultural management in the Alpine area that can contribute to the mitigation / adaptation to climate change (10-15 words)

- Specify the sector / field of application and the purposes:
- Forest management

-Sustainable agriculture

(for the chosen sector briefly describe in which sub-sector the initiative is applied. For example forest management: forest cutting / timber transport / biodiversity protection etc. For example sustainable agriculture: use of agricultural products / protection of local biodiversity - selected agricultural species, buffer strips - / soil protection, etc.)

- Description of the initiative
(start and / or end date, location, detailed description)

- Report which stakeholders are involved, at various levels, in this initiative and which, potentially, can implement it (*list and short descriptive text that motivates the selection of stakeholders*)

🟩 In the case of sustainable agriculture, indicate how the initiative is
1) Climate friendly
2) Resilient to climate change
(*Fill in one or both fields*)

🟩 In the case of sustainable forest management, indicate how the initiative is
1) Climate friendly
2) Resilient to climate change (*eg. forests fires, increased spread and intensity of pests[2]*)
(*Fill in one or both fields*)

🟩   Indicate whether this initiative / good practice has already determined some type of detectable / quantifiable result and whether it can be replicable. If possible, provide a reference / link to source in which to find detailed data relating to the initiative itself.
(*eg reduction of trucks transporting timber and therefore reduction of CO2 emitted in the area*)

Section 3

🟩   Indicate to which objectives of the Alpine System's objectives for climate 2050 contributes and how, taking into account in particular those relating to these sectors *(refer in particular to page 10 of Alpine Climate Target System 2050)*

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[2] See other examples at http://www.manfredproject.eu/

		Mountain Forests Targets (_Fo)	
T_Fo1	Potential of protective mountain forests fully used	The protective function of mountain forests is maintained, restored and enhanced (including adaptation of forest ecosystems to climate change through sustainable adaptive forest management).
T_Fo2	Mountain forests as carbon sink	Mountain forests are adapted to climate change with the aim to maintain their positive role for the local climate and protect or, if possible, further strengthen their carbon sink role.
T_Fo3	Accelerated forest conversion	Conversion of forest ecosystems to close-to-nature forests is achieved, using endemic forest species adapted to climate change.
T_Fo4	Alpine-wide sustainable forest management	A prioritized forest management is fully implemented to balance different regional uses under changing climate conditions (wood as basis for wood products, biomass, non-wood forest products such as resins etc.), supported by an effective system for monitoring the health condition of mountain forests. Priority is given to the production of long-lived wood products.
		Mountain Agriculture Targets (_Agr)	
T_Agr1	Energy self-sufficiency of Alpine farms	Through the development of sustainable and site-suitable renewable energy systems, Alpine agriculture is able to cover its energy consumption in a self-sufficient way.
T_Agr2	Alpine value chains for agricultural products	Regional value chains/circular economy are established to reduce transport emissions ("food miles", "product carbon footprint").
T_Agr3	The Alps as model region for organic farming	Mountain agriculture takes on a model role for a shift towards organic farming. The predominant share of Alpine farms is managed on the basis of the principles of organic farming and is certified by relevant labels (incl. aspects of artificial fertilisation, import of fodder, etc.).
T_Agr4	Resilient and climate-friendly mountain agriculture	To cope with climate change impacts, mountain agriculture is based on diversified species and crops which suit local conditions, promoting the conservation of traditional crop varieties and animal breeds in regard of a broad pool for adaptation.

Indicate how the Alpine Convention can contribute to further dissemination, promotion, or refinement of the initiative / good practice on a pan-alpine scale

Indicate which (other) sectors of activity of the Alpine Convention are connected to the initiative, reporting a list of correspondences with sectors other than agriculture and forests, among those referred to by the ACB or in other useful locations (*see the Table below*)

Sector	Yes/ No	Reason/Comment
Spatial planning		
Energy		
Transport		
Natural Hazards		
Tourism		
Ecosystems and Biodiversity		
Water		
Soil/Land		
Municipal Action		
Research and Development (R&D)		

Further comments on possible recommendations, and additional notes

(Respondents are invited to provide recommendations on promoting and widening the scope of application of the practice described across the whole Alpine Convention area) *(refer in particular to pages 14-15 of Alpine Climat Target System 2050)*

Please provide some pictures (e.g. before/after) and/or project maps.

2. Template of MAMF Activity 3

Section 1: Identification of the initiative		
The first section is aimed at identifying the initiative, its action field and its characteristics as a potential GEAP implementation tool on the basis of the **TOPICS (T)** and **CRITERIA (C)** required in the compilation, excluding initiatives that do not respond to them.		
Title of the initiative	Add a brief, catchy title for the initiative (Maybe you can find a better title after having filled in the whole form)	
Stakeholders involved (C)	The initiative **has to** identify stakeholders. It is preferable to identify an initiative that is large-scale, that is, a program or project that involves a large number of stakeholders. Identify both the public and private stakeholders involved. This section also allows the identification of the stakeholders capable of providing information on the initiative itself.[3]	
GEAP Field of action –Topic (T)	Mention the topic closer to the initiative out of the ones recalled under each of the GEAP Fields of Action (see ANNEX **Table 1**)[4].	
GEAP Field of action (C)	Choose one out of the 4 Fields of Actions identified by the GEAP (see ANNEX **Table 1**: eco-innovation; greening regional development; valorizing ecosystems and biodiversity; living & working in a green economy)	
Motivation for the inclusion under the GEAP Field of action (& Topic)	Explain why the initiative is consistent to the GEAP Field of Action (and possibly the topic) you have chosen above.	
Economic impact (C)	The initiative **has to** identify an economic impact. Mention the direct or indirect economic impact that the initiative provides. If no monetary or strict economic impacts (and figures) are available, mention the impact of the initiative on the local/regional/national/international economic system (e.g. an investment in infrastructures can have an impact on one or more industries operating in an economy). A narrative description preferably including some monetary figures is required.	
Positive impact: ecological /environmental	Mention the ecologic or environmental impact of the initiative on the Alpine environment. Provide figures and information if available (e.g. planting of trees in towns: how many trees? How many ha?)	
Positive impact: social	Mention the achieved or expected social impact of the initiative. Provide figures and information if available (e.g. promotion of entrepreneurship in the farming sector creating 100 new green jobs in the region).	

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[3] Once the stakeholders have been identified, you can decide whether to continue the investigation and compilation yourself or contact them directly to find the right initiative. To do this you can interview them by following the same guiding questions below. In any case it is important that the stakeholders involved in the initiative are mentioned in the corresponding item.

[4] The topic is only useful to facilitate the identification of the action field of the identified initiative

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Section 2: Implementation of GEAP actions through the initiative

The section aims to analyze the type of activity of initiative and highlight/identify the potential overlap of the initiative with a GEAP action and how it is able to implement the action itself.

Type of activity	It should be referred to the GEAP types of activity item of the individual actions in the field of action previously identified and associate a brief description. If the initiative embraces "Type of activity" of different actions, insert all the coherent ones. (See ANNEX **Table 2**)	
GEAP action of reference	Mention the GEAP action which the initiative contributes to implement. If the initiative embraces "Type of activity" of different actions, select the most coherent action based on the other description items of the same action within the GEAP. (See ANNEX **Table 2**)	
Results of the initiative	Mention the achieved or expected results of the initiative. A narrative description preferably including a list and some details on the implementation of results is required. Refer to the "Expected results" item of the identified GEAP action.	
Motivation for the coherence of the results to the GEAP action of reference	Provide, in short, a logical justification for the coherence of the results of the initiative to the GEAP action.	

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Section 3: Focus on the initiative

The initiative is deepened and described in more detail in its qualitative aspects.

Description of the initiative	Describe the initiative in detail, by adding as much information as possible and making the text easily understandable for the reader.	
Period of implementation (start-end date)	Add at least the YEAR when the initiative has started (and finished or it is expected it will)	
Target groups impacted by the initiative	Mention the target groups that have been/will be involved and impacted by the initiative, trying to be as punctual as possible. If figures are available on # of people, municipalities, etc. try to add them too.	
Territorial level and outreach of the initiative	Choose between a territorial level between LOCAL and TRANSNATIONAL/INTERNATIONAL. Refer to the examples reported in the individual GEAP actions under the heading "Local / Transnational"	

Localisation of the initiative and municipalities or territorial entities involved	Name the administrative unit(s) where the initiative has taken/will take place.	
Allocated funding and returns	Provide a figure if available, also in rough terms. We expect an amount of money that has been allocated on the initiative and/or that the initiative has generated after its implementation (e.g. incentives paid to 150 farmers in the region for organic farming of € 450.000,00; after 2 years: +20% in sales of organic products). Try to identify some useful information even though no punctual economic data are available.	
Sources schemes of funding (public, private, mixed)	Tell if the funding is *public, private or mixed.* Provide as much detail as possible on the funding scheme or method used to mobilize the funds. (e.g. public incentives consisting in local property tax breaks of 25% for farmers with more than 45% of their land cultivated with organic farming methods).	
Sources of funding (specifications)	Mention the institutions specifically involved in the financing phase of the initiative (private or public) (e.g. Bank XYZ, Chamber of Commerce of XYZ, Department for the Environment of the Government of Region/ Country/ District/ etc.	
Promoters / initiators of the initiative	Name the organization, institution, group, or any other subject that has proposed the initiative. If possible tell something on the role they played in launching the initiative or supporting it. (e.g. the program has been launched by the National Federation of Farmers of Country X in co-operation with the Ministry of Agriculture and the Regional Government of Region Y)	

<p align="center">***********</p>

Section 4: Alpine and EU outreach

The possible role of the Alpine Convention in the promotion of the initiative is taken into consideration.

Have the AC and its bodies any role in the definition, implementation, or promotion of the initiative?	Tell if there is any link between the initiative and the Alpine Convention and its bodies and how they have participated in any phase of the initiative. Some possible roles that the AC could play in this context are (see GEAP): • *Initiator* • *Charing institution* • *Host of platform* • *Implementer* • *Chair of the initiative* • *Host* • *Chair* • *Promoter to a wider international and regional audience*	
If yes, which AC bodies are involved with the initiative?	Name the bodies actually involved (e.g. WGs, Boards, Permanent Committee, etc.)	

Which AC body could play a role in the initiative's transferability? How?	Try to imagine if the AC and its bodies might be playing some role in the promotion and transfer of the initiative from one location to other ones in the Alps. Make a consistent proposal. Refer to the "Activity led by" item of the GEAP actions	
Can the initiative become part of a future mandate of an AC body? Which one? Why? If possible explain how.	If the initiative is worth being deepened or its reach widened or replicated, try to indicate which of the Boards or WGs of the AC could take care of it in the future.	
Can the initiative be supported or promoted for a wider implementation coherently with the EU Green Deal?	If possible, reply by taking into account the table in the ANNEX **Table 3**	

TABLE 1

TOPIC	ACTION FIELD
Greening profiles of regional innovation frameworks	ECO-INNOVATION
Instruments to foster disruptive innovations and their diffusion	
Instruments to foster incremental innovations and their diffusion	
Creating supportive framework conditions for innovators and cultivating innovative mind sets	
Developing a supportive framework on the local and regional level	
Joint approaches for a competitive Alpine region	
Cooperative approaches for innovative synergies (cross-border or interdisciplinary)	
Alpine cities as drivers, hubs, networkers, exchange platforms and promoters of a green economy	GREENING REGIONAL DEVELOPMENT
Ensuring accessibility for economic activities for remote areas in natural environments	
Better urban-rural relationships for greener regional approaches	
Meeting the needs of rural or remote areas for goods and services of daily life	
Creating attractive villages and sites for inhabitants and for tourists	
Development and communication of specific knowledge for regional economic sectors where implementation takes place on the local and regional levels (food and agriculture, recreation and tourism, health, energy and water supply, wood industry, natural risk prevention)	VALORIZING ECOSYSTEMS AND BIODIVERSITY
Aggregating, pooling and communicating existing knowledge on the local and regional levels	
Supporting pilot projects in their interdisciplinary context	
Identifying stakeholders and offering stakeholder dialogues, participative action and joint solutions, especially in those fields where biodiversity issues can become an economic threat, e.g. with large carnivores or wetland management	
Informing and training of decision makers, entrepreneurs and consumers on the benefits of ecosystem services and biodiversity in economic sectors	
Greening private consumption by information and a better connection of offer and demand on the local level	LIVING AND WORKING IN A GREEN ECONOMY
The promotion of green job profiles by Information campaign	
Exploring the consumer view investigating Expectations of consumers and identification with a possible "Alpine trademark"	
Promotion of green products	

TABLE 2

ACTION FIELD	TYPE OF ACTIVITY	ACTION GEAP
ECO-INNOVATION	Communication, campaigning in waves	2.1*
	Setting up and monitoring of platform, annual call for ideas	2.2*
	Organisation and marketing of clusters; creation, maintenance and monitoring of platform	2.3
	Campaign and setup & maintenance/ moderation of IT-platform	2.4
	Explorative study, stakeholder workshops, subcontract, exemplary pilot actions	2.5*
	Co-ordinated and exemplary implementation of an innovation for many rural farms.	2.6*
GREENING REGIONAL DEVELOPMENT	Support the network of the Alpine cities, municipalities and local actors	3.1
	Short desk research/ study; local events	3.2*
	Compact analysis and communication: online and print promotion, Optional: Symposium with "Market of Ideas"	3.3*
	Expert meetings, stakeholder dialogues, feasibility study	3.4
	Expert meetings, event, match-making	3.5
	Competition and award ceremonies based on analysis of the results of the first year may establish the basis for the award criteria. The activity is also closely connected to further useful modalities such as trainings, networking and/ or promotion.	3.6*
	Networking and municipal pilot activities with Alpine wide model character	3.7*
VALORIZING ECOSYSTEMS AND BIODIVERSITY	Pooling of knowledge, including also checking of existing knowledge promotion of pilot and communication activities	4.1*
	Workshop series on the local and/ or regional level	4.2
	Overview of upcoming events or dialogues, compact elaboration of and applicable training concept for different sectors, production of communication material	4.3
	Support ESS business pilots	4.4 – 4.5*
	Development and assessment of concrete scenarios	4.6*
LIVING AND WORKING IN A GREEN ECONOMY	Information campaign	5.1
	Information campaign & study	5.2*
	Aggregating and promoting green job profiles	5.3*
	Survey and consultation phase	5.4
	Compact desk research, development of brochure	5.5
	Series of workshops and brochure	5.6

Series of workshops, campaigns and brochure, organisation of a special green prize	5.7*

🌲 *Main actions to refer to in the sectors of mountain agriculture and forestry

TABLE 3

Actions	Indicative Timetable[1]
Clean, affordable and secure energy	
Assessment of the final National Energy and Climate Plans	June 2020
Strategy for smart sector integration	2020
'Renovation wave' initiative for the building sector	2020
Evaluation and review of the Trans-European Network – Energy Regulation	2020
Strategy on offshore wind	2020
Industrial strategy for a clean and circular economy	
EU Industrial strategy	March 2020
Circular Economy Action Plan, including a sustainable products initiative and particular focus on resource intense sectors such as textiles, construction, electronics and plastics	March 2020
Initiatives to stimulate lead markets for climate neutral and circular products in energy intensive industrial sectors	From 2020
Proposal to support zero carbon steel-making processes by 2030	2020
Legislation on batteries in support of the Strategic Action Plan on Batteries and the circular economy	October 2020
Propose legislative waste reforms	From 2020
Greening the Common Agricultural Policy / 'Farm to Fork' Strategy	
Examination of the draft national strategic plans, with reference to the ambitions of the European Green Deal and the Farm to Fork Strategy	2020-2021
'Farm to Fork' Strategy	Spring 2020
Measures, including legislative, to significantly reduce the use and risk of chemical pesticides, as well as the use of fertilizers and antibiotics	2021
Preserving and protecting biodiversity	
EU Biodiversity Strategy for 2030	March 2020
Measures to address the main drivers of biodiversity loss	From 2021
New EU Forest Strategy	2020
Measures to support deforestation-free value chains	From 2020

3. Proposal Form of MAMF Activity 2

PROPOSAL FORM
for the Workshop Organization

ACTIVITY 2 of the MANDATE

Exchange on the relation between mountain agriculture, mountain forestry, tourism and biodiversity by highlighting initiatives and projects dealing with this relation (WORKSHOP)

EXPECTED OUTPUT

Involve stakeholders and encourage them to take into account existing interdependencies

WORKSHOP MODE

The workshop will be organised, as agreed at the last MAMF meeting, as an online short event. This should facilitate the involvement of experts, who can make a video of their speech before the workshop and allow for the collection and storage of the workshop materials to be used in the Final MAMF Report. Additionally, the video workshop is a highly sustainable event.

AIMS OF THE PROPOSAL FORM

This form helps MAMF to identify:

STEP 1

- The topics on which the participants will deliver their contribution and their link to the requirements of the mandate of the MAMF WG
- The relation between mountain agriculture, mountain forestry, tourism and biodiversity analysed in the contribution

STEP 2

the way in which the contributions will be delivered (e.g. video interview with an expert, report by an expert at the workshsop, presentation of good practices)

STEP 3
possible stakeholders / experts / bodies and organization potentially involved

STEP 4
Possible channels to stream the event and promote the workshop contents and results.

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PROPOSAL FORM

Country:

Name and Last Name:

Institution:

Contacts:

STEP 1: PROPOSAL OF TOPICS/THEMES, CORRELATIONS AND TITLE

1) Taking into consideration the contents of the mandate, which topics will your contribution deepen?

It is possible to choose from the following topics or propose a coherent one that emphasizes the interdependence between mountain forestry and agriculture, tourism and biodiversity.

☐ *Promotion of local mountain products (sustainable agriculture) and promotion of local tourism (restaurant, agri tourism, shops, certified products and process...)*

☐ *Climate friendly and resilient policies in forestry and mountain agriculture for protection of biodiversity and promotion of local tourism*

☐ *Green economy in mountain agriculture and forest sectors for climate and environment protection, but also for social and economic (tourism, ecosystem services ecc) well-being of the Alpine Region*

☐ *Optimization of the forests (and agriculture) management, in particular for the improvement of ecosystems services and protection of biodiversity (good practices, certifications of sustainable management ecc)*

☐ *Promotion of the "green tourism" in relation to a sustainable landscape and forest management and promotion of mountain biodiversity*

☐ *Promotion of the circular economy in the interest sectors, i.e. by energetic improvement with the goal of "Neutral Climate Alps": examples of circular economy in forest and mountain agriculture with a correlation with tourism, local economy or biodiversity protection sectors*

Other topics and any notes

[ ]

2) What relationships will the contribution analyse?

Specify in short which correlations between the themes of forestry, mountain agriculture, tourism and biodiversity will be highlighted and, if possible, give an idea of how / in which area etc.

[ ]

3) If possible, propose a temporary title for your contribution[5]

[ ]

4) In which way among the following will the contribution be delivered?

[ ]   ***Direct involvement of the expert during the thematic session of the workshop***

The expert will make a presentation on the chosen topic (The speech should be no longer than 10-15' with the possibility to ask questions for some further 5'). The presentation should preferably be accompanied by a written report on the topic and contents presented.

[ ]   ***Video interview or short documentary to be uploaded on a chosen web platform accessible to all.***

The video can be shown during a video WS session. (The video should not exceed 10' and a format to be specified at a later stage)

[ ]   ***Presentation of good practices***

The presentation should preferably be accompanied by a written document presenting the good practice. Any video should not exceed 3-5' per good practice.

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[5] The title will be used in the provisional agenda of the event

5) Indicate the stakeholders, experts, bodies or organizations you plan to involve to elaborate your contribution[6]

STEP 4: PROPOSAL FOR TECHNICAL ASPECTS

6) Suggest any additional web channels (including institutional ones) that can be used for uploading streaming contents in addition to Youtube[7]

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[6] If possible, you can also indicate the name of the body / organization / expert

[7] To upload the video contributions in streaming, a youtube channel will be opened for the WG MAMF

FORESTE
FIERA & FESTIVAL

ALPENKONVENTION
CONVENTION ALPINE
ALPSKA KONVENCIJA
CONVENZIONE DELLE ALPI

Italian delegation
alpine convention

MINISTERO DELL'AMBIENTE
E DELLA TUTELA DEL TERRITORIO E DEL MARE

Working Group Mountain Agriculture and Forests of the Alpine Convention (MAMF)

Mountain forestry and mountain agriculture for enhancing biodiversity and tourism

Opening Session

9:30 – 10:00   **Login on Web Platform**
Registration at the login

10:00 – 10:30   **Work Opening**
Morning greetings, presentation and adoption of the agenda

Paolo Angelini, Head Delegation of the Alpine Convention, Italian Ministry for the Environment, Land and Sea
Alenka Smerkolji – Permanent Secretariat of the Alpine Convention
Marco Onida, European Commission DG Environment - "A new EU approach to forests"
Marie Clotteau - Euromontana

Venerdì 11 settembre · h. 9:30
Sala PIAVE

Virtual WORKSHOP

LONGARONE FIERE DOLOMITI

SESSION 1 : Mountain food biodiversity and green tourism
Moderator: Simonetta Mazzarino - Città del Bio/Università degli studi di Torino

10:30 - 10:40   **AlpFoodway: Alpine Food Heritage towards the inscription as UNESCO Intangible Cultural Heritage of Humanity**
Cassiano Luminati - Director of Polo Poschiavo and Lead Partner of Alpine Space Project AlpFoodway

10:40 - 10:50   **Nature park management to maintain cultural landscape and biodiversity in cooperation with tourism and farmers**
Florian Schublach - Naturpark Ötscher Tormäuer

10:50 - 11:00   **Identification mark of the 'mountain product' quality regime: application of the EU Directive in Italy**
Domenico Mastrogiovanni, Euromontana

11:00 - 11:15   ***QUESTION TIME AND INTERACTIVE DISCUSSION***

SESSION 2 : Circular economy and sustainable value-chains for mountain agriculture and forests
Moderator: Hans-Joachim Hermann - German Environment Agency - Chair of the former Green Economy Advisory Board of the Alpine Convention

11:45 - 11:55   **Business for sustainable value chains in the mountains: Start ups: Soplaya & ProjectMii**
Mauro Germani - CEO

11:55 - 12:05   **FOODCHAIN**
Marco Vitale - CEO and Davide Costa - CDO

12:05 - 12:15   **Sustainable forest management and wood supply chains**
Rinaldo Comino - AG2 EUSALP member Friuli Venezia Giulia Region, MAMF WG member, Forestry Corps FVG

12:15 - 12:30   **LEGNO VIVO- international event: the enhancement and use of wood for the production of fine artisan musical instruments.**
Davide Dory Deriu Frasson - Presidente
Davide Fregona - Direttore artistico
Distretto culturale del pianoforte, Friuli - Venezia Giulia (Italia)

12:30 - 12:40   ***QUESTION TIME AND INTERACTIVE DISCUSSION***

SESSION 3 :   Alpine natural capital for green development of mountain agriculture and forests

Moderator: Paolo Angelini, Italian Ministry of Environment, Land and Sea

12:40 – 12:50   **Trentino Tree Agreement: a pact to increase forests and improve forest –human relationship**
Roberto Zoannetti - Department of Agriculture, Forests and Soil Defense of the Autonomous province of Trento

12:50 – 13:00   **The value of biodiversity for mountain agriculture**
Alessandra Pesce – Research Director at the Council for Research in Agriculture and Agricultural Economics, CREA

13:0 – 13:10   **Cultural values of forests through a landscape perspective**
Riccardo Brugnoli , Maria Teresa Idone - Directorate - General for Archeology, Fine Arts and Landscape - Service V "Landscape protection" - MiBACT

13:10 – 13:20   ***QUESTION TIME AND INTERACTIVE DISCUSSION***

Closing SESSION

13:20 – 13:30   **Conclusions**
Italian Ministry for the Environment, Land and Sea

For a better organization of the event, please also confirm your presence at the following registration link:
https://docs.google.com/forms/d/e/1FAIpQLSeAu0kVNISOUs5JRX_xq9plBjg2CmCjke9L
ffiwi_wZEQRhaA/viewform?usp=sf_link
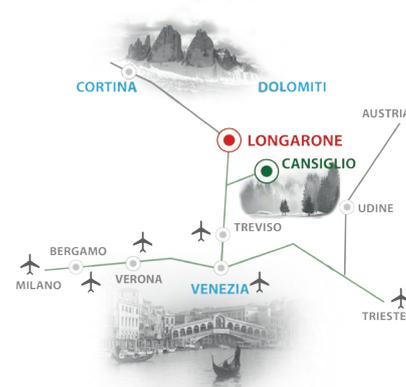
con la partecipazione di

con il patrocinio