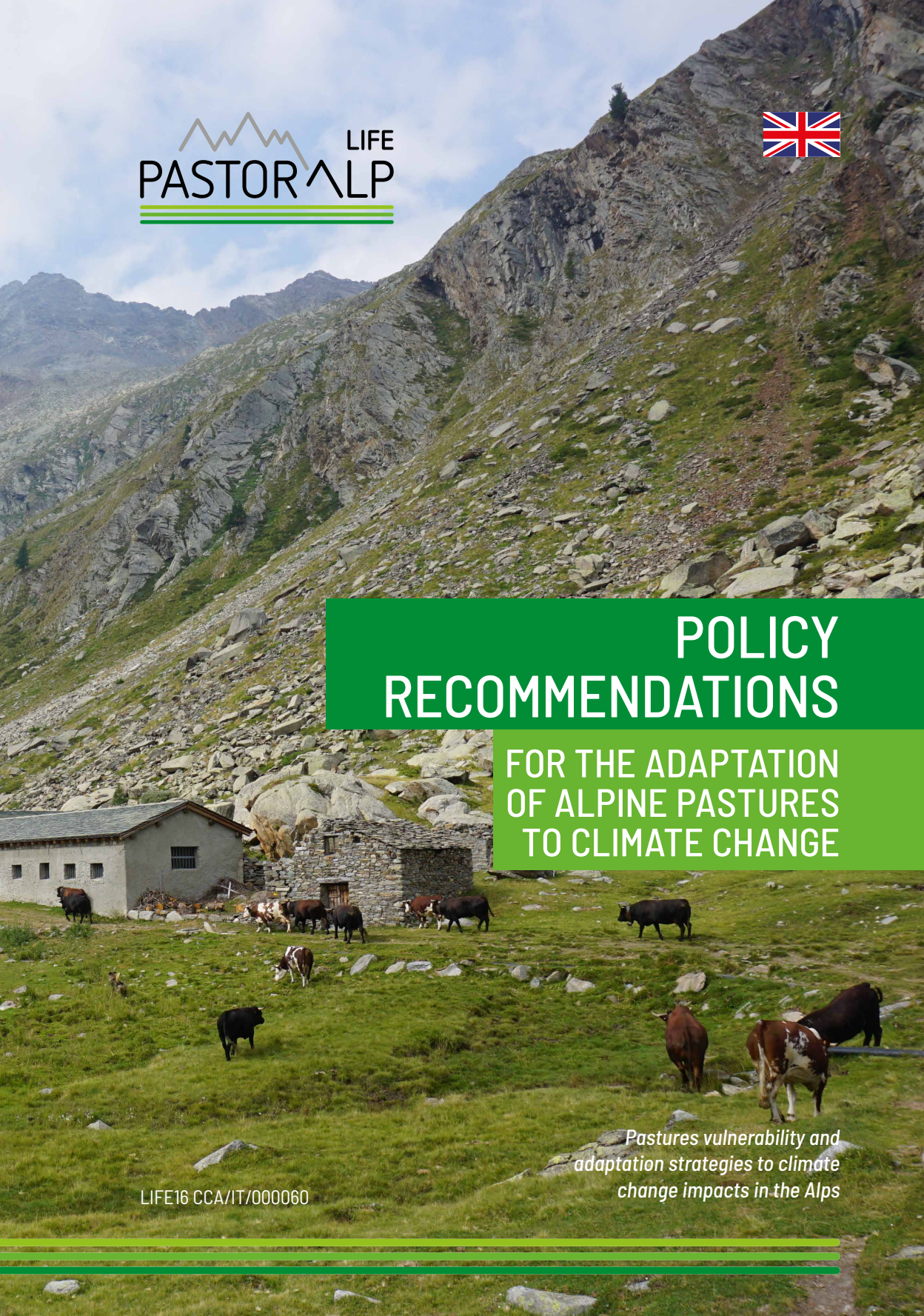
LIFE PASTORALP



POLICY RECOMMENDATIONS

FOR THE ADAPTATION OF ALPINE PASTURES TO CLIMATE CHANGE

Pastures vulnerability and adaptation strategies to climate change impacts in the Alps

LIFE16 CCA/IT/000060

THE PROJECT IN BRIEF

PASTORALP (2017-2023) is a project co-financed by the LIFE program aimed at reducing the impacts of climate change on alpine pastures, increasing their resilience and decreasing their vulnerability.

The project relies on a solid science-based knowledge of baseline conditions of Alpine pastoral communities and projected impacts of future climate changes on these communities, with focus on two national parks representative of West's Alpine environments: Parc National des Ecrins (France) and Parco Nazionale Gran Paradiso (Italy). Stakeholder consultation and engagement will be a core element of the project work plan.

The PASTORALP platform on the project website was created to support pastoral communities and, in particular, to promote effective and feasible adaptation strategies to cope with socio-economic and climate change. Technical adaptation measures, defined according to specific climatic hazards, have been identified to maintain forage production, improve water use, optimise animal management in summer alpine pastures and protect alpine biodiversity. The policy recommendations propose actions at different levels of governance to improve the efficiency of decision-making in pasture management.

POLICIES RECOMMENDATIONS

Recommendations on the key project deliverables for decision-makers and politicians at every level – local, regional, national, and transnational – based upon identified adaptation strategies have been developed with the objective of promoting alpine pasture socio-ecological systems that are more resilient and fully implementable.

The objective of the political recommendations is to develop and improve the adaptation of the pastoral system to climate change, including the different segments composing the system: summer mountain pasture management; water management; biodiversity preservation; multifunctionality and pastoralism/tourism coexistence; cooperation and training.

SUMMER MOUNTAIN PASTURE MANAGEMENT

In a scenario of climate change and more frequent extreme weather events, the objective is to promote sustainable grazing management that preserves the quality and quantity of the fodder resource, taking into account its biodiversity.

Increase flexibility in the exploitation of summer mountain pastures

Supporting or not blocking specific adaptations that do not damage the environment and guarantee the feeding of the herds, such as:

- changes in the grazing calendar
- changes in the number of animals
- annual, marginal exchanges of pastures between neighbouring summer mountain pastures
- movements of animals to other areas

Prioritize an approach based on expected results

Encourage the implementation of result-oriented agri-environmental and climatic-environmental measures rather than restrictions and predetermined tasks, such as the number of animals, that make the system too rigid.

Provide management tools – such as pasture management plans – that take into account the specificities of each summer mountain pasture. Promote measures based on the summer mountain pasture management unit and not only based on the surface criteria.

Promote an eco-pastoral approach of the territory

Include the mountain summer pastures in the wider strategies of land management. Encourage collective approaches (pastoral groups, land improvement consortia, collective ownership, associations, etc.) with a wider impact on the territory, promoting the creation of networks and supporting the owners in the mountain summer pastures management. Create a regulatory body for summer mountain pastures and regulatory tools to prevent and face the distorting effects on the market for summer mountain pasture leases.

Improve the exploitation of all grazing areas of the alpine pasture

Provide summer mountain pastures with equipment (e.g. construction and renovation of buildings, drinking facilities for the animals) to better distribute the number of animals on the mountain pastures. Give technical assistance to owners and/or lessees to improve buildings, infrastructures, and equipment. Improve access to summer mountain pastures and grazing land to be assessed on a case-by-case basis (renovation and/or construction of driveways, footpaths, helicopters, gondolas, monorails, etc.).

Extend the grazing areas of alpine pastures or the valley floor farms

Have procedures and tools to deal with land parceling (plots with multiple or unknown users, unused plots). Promote the use of buffer zones and the recovery of pastoral areas covered by shrubs and trees.

Apply an integrated silvopastoral management to promote pasture in suitable forests, through the implementation of laws and plans of forest management. Create an obligation of consultation for the elaboration of the pans of forest management that take into account that pastoral activity.

Support adaptation

Develop and improve the tool analyzing climatic vulnerability in the summer mountain pastures. Have technical tools and human resources to support breeders (e.g. training, consultancy) in order to consider for them the recommendations on habitat management and conservation of the species. Encourage information transfer and creation of work groups (visits at the end of the season) between herders and other stakeholders of the territory. Facilitate the creation and the realization of projects through organized assistance. Strengthen technical support structures for pastoralism (research centers, associations).

POINTS OF ATTENTION AND PECULIARITIES OF THE PILOT SITES

[PNE - PNGP] *The territories are characterized by significant land parceling and frequent co-ownership of plots, which make the management of contracts difficult.*

[PNGP VdA] *The dissociation between mountain pastures ownership and management negatively affects the investments on mountain pastures structures.*

[PNGP] *The mechanisms of attribution of financial measures linked to the areas create distortive effects on the market of mountain pastures rentals.*

ALESSANDRO ROTA

Managing Authority of the Regional Complement of Rural Development of the CAP Strategic Plan 23/27 for Aosta Valley

Our action to implement the CAP in Valle d'Aosta between 2023-2027 is in line with the direction traced by these recommendations. Thanks to the participation and the discussion established with the PASTORALP project since 2019, we are planning to implement different tools shifting us from a transversal application of agro-climate-environmental measures to "tailor-made" solutions, designed to consider context specificities and promote goal-oriented reasoning. Specifically, we are working to introduce two tools for proper pasture management: the territorial Plan and the grazing Plans.

The first, thanks to a preliminary deliberation, will be the planning tool for meadow-pastures in the whole Region, will define the general framework, notwithstanding the national regulations, starting from the clear and unambiguous definition of "meadow" and "pasture", thus establishing the concepts of grazing turns, grazing period, type of animals, with the definition of the potential stocking rate by pastoral categories and the provision of guidelines for drafting the grazing Plans. Based upon this "macro" territorial planning framework, the grazing Plans will include at the "micro" level aspects such as: grazing areas actually used by the herds; tramuti half-way pastures (i.e. farmhouses and pastures used for a short period of time before going up to the actual pasture) and grazing areas; eligible areas; areas of interest that are not immediately usable; improvements to be implemented; species and categories of grazed livestock; optimal theoretical stocking rate resulting from the analysis of the potential productivity of the different areas; simulations and evolutionary scenarios, also adaptable to extreme weather events and ongoing climate changes.

This new approach is the result of the capitalization of the methodology for the main types of mountain pastures classification and mapping tested by the PASTORALP project in the Gran Paradiso National Park pilot area.

The extension of this methodology over the entire regional area, thanks to a dedicated agreement with ARPA VdA, is leading to the definition of the pasture Register, which provides data, with reference to altitude, slope, vegetation cover indexes, dry matter productivity, average annual stocking rate expressed in Uba, in a territorial grid of 20 meters by 20 meters.

This is a fundamental tool that, made available to everyone, constitutes the starting point for the definition of plans, reducing their complexity and processing costs. For us as a regional administration, this is an important milestone because it allows us to regain possession of our territorial reading and classifying tools, after years in which this classification was carried out and updated at a national level, with tools and methods which we could shape only marginally.

We are aware that this is a radical change: from area subsidies calculated automatically with transversal algorithms, we are moving towards measures planned on a case-by-case basis, aimed at preserving, recovering or improving production potential while respecting biodiversity and landscape and allowing a flexibility and adaptation that are today essential in the wake of increasingly extreme weather events and rapidly changing climate scenarios.

In order to make this transition effective, we are aware that we must provide adequate support, in terms of training (of farmers and experts) and back up; we are working in this direction with the new knowledge and innovation system in agriculture "AKIS - Agricultural Knowledge and Innovation System", promoted by the CAP for 2023 - 2027.

This challenge must be tackled together, in a continuous exchange between administration, farmers' representatives, field experts and scientific research.

www.regione.vda.it/agricoltura/nuova_pac_2023_2027_i.aspx

WATER MANAGEMENT

Climate change (more frequent droughts, reduction of snow coverage) has an impact on the availability of water resources and causes more tensions due to the limited access to water and the necessity to withstand different uses (drinking water, agriculture, hydropower, industrial, - artificial snowmaking). In this context the objective is to optimize the management of water resources in order to guarantee the mountain pastures production capacity.

Reinforce the knowledge on availability, needs and use of the water resources

Quantify the available resource and evaluate the real irrigation needs of the land. Develop systems to monitor the consumption. Promote research, studies and creation of databases in order to have the necessary knowledge to preemptively evaluate infrastructural interventions. Develop tools to calibrate infrastructural works and restrict their impact on biodiversity and landscape.

Promote infrastructural improvements to ensure storage, reduce consumption and improve water supply

Assess water storage on mountain pastures on a case-by-case basis according to the specific conditions, adjusting the interventions to restrict the impact on biodiversity and landscape. Create sprinkler irrigation systems to increase the production of pastures. Improve the water distribution network for watering animals in the different grazing areas. Maintain a network of channels sufficient to ensure water runoff during heavy rainfall and the ecological corridor function.

Pursue a comprehensive and reasoned management of water in order to reduce and prevent conflicts

Promote a shared approach based on the solidarity principle between stakeholders.

Pursue a comprehensive and reasoned water management (drinking water, agricultural water, hydropower, industrial tourism and ski resort) by involving the various stakeholders at the river basin level. Provide technical support and consultation between stakeholders, develop decisional tools to define priorities for water management.

POINTS OF ATTENTION AND PECULIARITIES OF THE PILOT SITES

[PNGP VdA] *The Aosta Valley region is characterized by a historical canal network widespread for irrigation use (rûs).*

ANDREA MAMMOLITI MOCHET

Head of water, reclamation, and waste section of the Regional Environmental Protection Agency of Aosta Valley

As a preliminary remark, it should be emphasized that, in our territory, water has not been considered a limited and limiting resource, at least until now... Admittedly, even before 2022 there have been years with prolonged drought periods, such as in 2003, but society didn't change its approach to the management of water resources. Nowadays, it is objective and plain for all to see that the resource is decreasing, regardless – I would say – of what people believe to be the causes of the phenomenon.

I agree with the first recommendation on the necessity to begin by monitoring it: if you don't measure the resource, you can't manage it. Measuring is not only possible, but also necessary; it can be done through accurate assessment where it's impossible to actually quantify it, but it must be a shared starting point. Having measurements is the only way to overcome the logic of power relations (such as pre-existing rights of use) and the privileged positions of those upstream intercepting the resource first.

In this perspective, it is essential to recreate the map of the stakeholders who intervene in the different decision-making and operational processes for water management in various fields: from human usage to agriculture, from energy production to industry. We are faced with an extremely articulated and complex system; let's think for instance about the heritage of knowledge and procedures preserved by the irrigation consortia that operate on the individual water branches, as well as the many actors appointed by the Municipalities who manage the water networks, the drinking water and wastewater treatment plants and the companies using the resource to generate hydroelectric power. This context, in which the resource's environmental value is too often underrepresented, is extremely complex and conveys different points of view. These different perspectives must result from sharing data and knowledge that, today, are fragmented and unsystematic: a common framework that foreshadows changes that, in order to be effective, need to be systemic. Of course, specific actions, such as the mentioned reservoirs or the multifunctional use of existing basins, can be possible and useful under certain conditions, but the challenge awaiting us today is a radical change in perspective: the "software" of water usage in our society needs to be updated. It can be useful to check out other communities that have always faced water shortage, in order to influence our behaviors and management. In this direction, the projects addressing the issue from all angles, considering not only environmental and economic aspects, but also the anthropological and social ones, seem the most promising to lead us in this transition that can't be delayed anymore.

BIODIVERSITY AND AGRO-ECOLOGY

A correct pastoral management ensures the protection of the flora and fauna biodiversity in the pastures, with a positive impact on the aesthetic value of the landscape.

Promote agriculture and agri-ecological practices related to High Nature Value agricultural areas

Have preliminary studies, technical, financial and monitoring tools for the application of agri-ecological practices that ensure the biodiversity conservation. Improve the transfer of knowledge to farmers. Promote payments for the ecosystem services for adaptation measures in pastoral activities.

Develop eco-pastoral management for some target species or endangered habitats

Enhance eco-pastoral management plans. Activate specific agri-climate-environment measures for some target species or habitats.

Promote the preservation of biodiversity hotspots and agroecological infrastructures in mountain pastures protected area and ecological corridors

Evaluate the role of mountain pastures on a regional and supra-regional scale on the strategies of the protection of biodiversity. Take into account the needs related to the creation and management of agri-ecological infrastructures (humid zones, peat bogs, green linear structures, etc.) that can also have a role of ecological corridor in all the interventions on mountain pastures.

Promote the cohabitation between wildlife and pastoral activities

Promote scientific research, training of the workers in the sector, divulgation and communication to the public. Have technical tools and human resources to guide breeders towards the correct cohabitation. Finance nonproductive investments (e.g. defense nets, guard dogs, surveillance systems, added personnel, etc.). Provide compensations for damages caused by wildlife.

DANIELE STELLIN

Director of the
Mont Avic Natural Park
Aosta Valley

Regarding the issue of biodiversity, as a Park we have a privileged position for several reasons: firstly, the deep knowledge of our territory, the binding nature of management tools and, finally, the available surveillance personnel dedicated to the implementation and monitoring of conservation measures.

Given its founding purpose, the Park inevitably focuses its action on conservation objectives, consequently allowing human activities, such as livestock farming, only if they are compatible with the maintenance of the protected environmental and landscape values. This entails a great degree of protection of the territory, which is shared with all Italian natural parks while it does not find immediate correspondence with the situations in other European countries, where natural parks have objectives and protection levels that are often quite different from each other.

Having said this, notwithstanding the high level of protection distinguishing us, we don't embrace an approach based on an "absolute ban" of anthropic activities, which in some cases can actually promote nature conservation objectives. For instance, we know that many habitats and species can be fostered by pastoralism if properly supervised and managed with suitable criteria. Above all, the experience in the Alpe di Prà Oursie, in the Chalamy stream valley, witnesses a collaboration between mountain pasture management and the Park, that results in good management practice, where agricultural activity and tourism add value to the territory in a way that is compatible with the conservation requirements.

More complex situations can be found Instead in the Champorcher valley, an area of vast grazing surfaces, where the delimitation and respect of the perimeters of areas prohibited to domestic grazing is not always easy.

With regard to the management of pastures, having established that an absolute ban is not the solution, it is necessary, however, to specifically differentiate areas where grazing is allowed from areas where grazing is restricted, as well as identify the best measures to adopt in order to make management compatible with conservation aims. We therefore strongly support "tailor-made" tools that can be adapted to the specific needs of species and/or habitats. This is why we welcome the implementation of territorial plans and grazing plans in the region: an important step for the whole territory as well as essential and strategic for the protected areas. Thus, in this experimental phase, the Park, with its wealth of knowledge and human resources, can be an added value. Looking ahead, a system of this kind could also lead in the Park area to the prospect of organic certification of pastures, with obvious advantages for breeders. Essentially, regulations and constraints are largely already in compliance with organic rules; the further step to be taken concerns certifications and verifications, that could be concretely endorsed by our organization, as well as granting the use of the quality label of the Park that is already available.

MULTIFUNCTIONALITY AND PASTORALISM/TOURISM COEXISTENCE

There are many challenges tied to the summer mountain pastures areas: the pasture is an important factor for the rentability and economic sustainability of the animal husbandry farms; these have an ecological, environmental and cultural value; they also have an important role for the recreational activities and tourism and, in wider terms, for the development of the local mountain economy.

Promote a systemic approach to mountain areas

Raise awareness on environmental, economic and social peculiarities of mountain areas. Increase the interactions and prerogatives of each user in order to improve the cohabitation between inhabitants, farmers and tourists. Develop a shared user code of the mountain. Have mediators for agriculture, create sensibilization tools and education in schools.

Improve living and working conditions in summer mountain pastures

Reduce isolation and bring workers closer to services at the bottom of the valley. Ensure digital accessibility (GSM network, internet connection, TV, etc.). Improve well-being and working conditions.

Enhance summer mountain pasture production

Support and promote the creation or the subscription to quality brands. Support the supply chain agreements. Promote new marketing tools thanks to new possibilities offered by informatization.

Supplement income through diversification of activities (transformation, direct sales of products, agrotourism, tourism and social activities, etc.)

Promote regulatory frameworks tailored to the peculiarities of summer mountain pastures, with derogations and/or simplifications in order to enhance integration with other activities (welcome, offers for spare time, etc.). Technical and financial support to develop multifunctionality in summer mountain pastures.

POINTS OF ATTENTION AND PECULIARITIES OF THE PILOT SITES

[PNGP VdA] *In Aosta Valley, farmers have highlighted the restrictions resulting from regional legislation on agritourism activities.*

MARTA ANELLO

Aosta Valley
GAL Coordinator

The Aosta Valley Local Action Group has focused its local development strategy on rural tourism. Towards this, within the framework of the Call 16.3.1 - Cooperation among small operators to organize joint work processes and share facilities and resources, we approved a project, presented by a network of producers, for the exploitation of Fontina cheese from mountain pasture, its dissemination and promotion on a national and international scale as a product of the highest quality, and an example of ethical and sustainable production.

In a mountain region like Valle d'Aosta, we believe it is crucial to enhance the value of mountain pasture products, recounting not only their properties and specificities linked to the grass and high-altitude water, but above all the commitment and effort that stand behind them.

The purpose implied by GAL local development strategy is precisely to strengthen synergies between tourism and agriculture; to raise awareness and promote the territory and its products in order to get a fair economic return for the farmers so that they can continue to work and take care of these areas, thus protecting the territory.

As GAL, we have noticed that those who visit our valleys show a keen interest in traditional mountain pasture products: promotional events in the area are always a great public success, but it needs to be consistent. In this regard, we stumble across the said difficulties in working in such particular high-altitude contexts, with regulations that are poorly adapted to the specific conditions and that in fact curb promotional activities such as tastings, direct sales, etc.

For less organized realities, it is also difficult to envisage that all phases can be guaranteed: animal care, processing, and marketing; thus, it could be useful to better promote synergies with other figures operating in mountain areas such as hiking and nature guides. These alliances could improve the knowledge and the awareness of the specific dimension of mountain pasture and its productions, without having an excessive impact on farmers' work.

COOPERATION AND TRAINING

The objective is to reinforce the competences of breeders and farmers to better manage the pastures, with particular attention to conservation of biodiversity and climate adaptation, make the job more appealing mostly to young people in order to encourage the creation of new businesses and the generational change.

Promote training courses for breeders and farmers

Strengthen the training: basic training at educational centers; field training through internship and shadowing expert professionals; training on specific topics (biodiversity, agri-environment, animal care, etc.). Guarantee the training of foreign personnel through internships and agreements with agricultural schools abroad.

Provide technical support, create a network between users

Build skills and competences in local communities. Introduce technical personnel specific to agriculture, forestry and nature conservation in local administrations (e.g. unions of municipalities) and in protected areas/parks in order to promote the collaboration and the flow of information between institutions, farmers, farmers and citizens. Promote the creation of public services with dedicated personnel to animate and create networks of farmers and other stakeholders.

POINTS OF ATTENTION AND PECULIARITIES OF THE PILOT SITES

[PNE] *Clarification of the status of apprentice or assistant shepherd needed. Difficulties in offering non-contractual training to shepherds (in France, training is provided for employees, but during the contract period, the shepherd cannot be absent for training due to animal husbandry commitments).*

[PNGP VDA] *The mountain pastures staff is mainly foreign*

FRÉDÉRIC LAURENT

Training center of Merle - Salon de Provence
France

The training of transhumant shepherds offered by our center assigns a qualification and a diploma and is focused on the production cycle of transhumant sheep in the Southern Provence-Alpes-Côte d'Azur Region and the Alpine arc. This is a one-year professional training course, free of charge, being financed by the SUD Region. The trainees are of all ages and backgrounds. They will learn how to drive a flock, animal husbandry, pastoralism, how to train herding and guardian dogs, how to protect a flock against predatory animals, how to manage a flock in summer pastures... and they will do 3 training courses on lambing, guarding in the pastoral environment in mid-season and guarding in summer pastures. There are 18 places available each year.

As for the training of experienced shepherds, we are aware that there is this complex and targeted need. Employed shepherds could qualify for training with their specific training fund, but while they are working, they will find it difficult to leave their jobs. And when they are no longer employed, it is impossible for them to find funding opportunities. As it emerges, there are specific subventions from the SUD Region for training courses that do not fall into any framework, but this option needs to be looked into.

The other difficulty in training shepherds will be to find the right time to offer the courses. During the PASTORALP project workshops, some shepherds mentioned the idea of tutoring between experienced and novice shepherds, a system that doesn't exist today but it is indeed a great idea! I envisage asking my former trainees to take on some trainees when they have gained some experience.

Currently, the status of assistant shepherd can't meet this kind of demand: it is quite "dubious" since the assistant shepherd is not supposed to guard a flock alone. With a tutoring system, sometimes the trainee shepherd could, after spending some time with his tutor, guard the flock on his own in order to get used to it. Today, farmers and shepherds often ask to be two shepherds on a summer pasture rather than a shepherd/assistant-shepherd duo. For instance, there are more and more trainees from the Training center of Merle who propose to their employers to guard a summer pasture in pairs.

www.institut-agro-montpellier.fr/domaine-du-merle

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