

LIFE PASTORALP



LIFE16 CCA/IT/000060

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

E.1

Project leaflets and
newsletters

March, 2023



Acknowledgements

This report was produced under co-finance of the EC LIFE program for the Environment and Climate Action (2014-2020), in the framework of Action E.1 “Information and awareness to general public and stakeholders” of the project LIFE PASTORALP (LIFE16 CCA/IT/000060) “Pastures vulnerability and adaptation strategies to climate change impacts in the Alps”.

The project is being implemented by the following beneficiaries:

	University of Florence - UNIFI
	Agenzia Regionale Protezione Ambiente - Valle d'Aosta - ARPA VDA
	Centre National de la Recherche Scientifique - CNRS
	Institut Agricole Régional - IAR
	Institut National de Recherche pour l'Agriculture l'alimentation et l'Environnement - INRAE
	Parc National des Ecrins - PNE
	Ente Parco Nazionale Gran Paradiso - PNGP

Contents

1	Aim of the Action	1
2	Executive summary	2
3	Project leaflets	3
3.1	First leaflet: Project information	3
3.2	Second leaflet: First achievements	4
3.3	Third leaflet	5
4	Infosheet	7
5	Infoboards and rollups	8
6	Infoboard at studysites	12
7	Newsletters	13

Annexes in pdf format (all leaflets, Infosheets, newsletters)

1 Aim of the Action

The aim of the action is the dissemination of the project's objectives and results to a different stakeholders and to a general public.

Different kind of dissemination materials were chosen to reach an audience as wide as possible.

2 Executive summary

Materials were realized in three languages of the project (English, Italian, French).

The deliverable contain the dissemination materials achieved for stakeholders and general public (digital, paper format, infoboard and rollup). The material was distributed during launching events, consultation and validation workshops, demonstration events, final project conference as well as to any other relevant event that the project team may attend (networking, scientific conferences, meetings, etc.). Infoboards were installed at the partner offices and study areas (PNE e PNGP).

Moreover digital contents were uploaded on the website or platform of the project.

3 Project leaflets

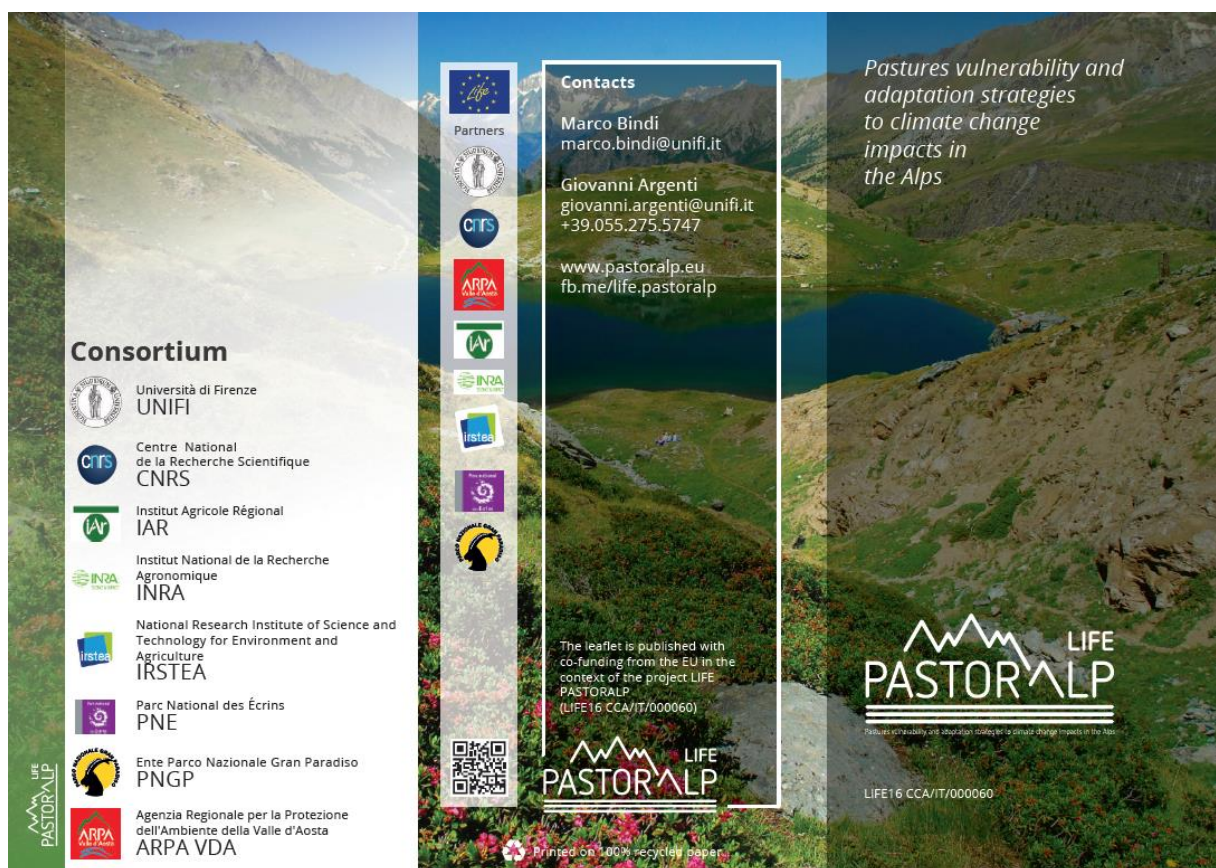
In order to inform stakeholders and general public about the LIFE PASTORALP project, three different set of leaflets were produced: the first leaflet provide information on project objectives, partnerships, logo and contacts; the second leaflet include also first achievements of the project; the third leaflet summarize final results.

Leaflets were distributed to the audience of participatory events (launching events, consultation and validation workshops), demonstration events, final project conference as well as to any other relevant event that the project team may attend (networking, scientific conferences, meetings, etc.).

All materials were realized in three languages of the project: English, Italian and French.

The leaflets in the three languages in pdf format are attached in the Annex section.

3.1 First leaflet: Project information



What is LIFE PASTORALP	METHODOLOGY	EXPECTED RESULTS
<p>LIFE PASTORALP aims at reducing the vulnerability and increasing the resilience of alpine farming systems by assessing and testing adaptation measures, promoting capacity building and developing improved management strategies for climate change adaptation.</p>  <p>Project info: LIFE Ref. No: LIFE16 CCA/IT/000060 Area of implementation: Parc National des Ecrins (FR) and Parco Nazionale del Gran Paradiso (IT) Duration: 54 months (1 October 2017 - 30 March 2022) Project Budget: 2,314,400 € (60% EC funding)</p> <p>Where is implemented: The effectiveness of proposed adaptation measures will be tested and demonstrated in two permanent pilot areas located inside the two National Parks of the Western Alps: Parco Nazionale Gran Paradiso (IT) and Parc National des Ecrins (FR)</p>	<p>Key cross-sectoral issues will be addressed considering both rural socio-economy and biodiversity, and by identifying and promoting ecosystem-based adaptation solutions, evaluated against environmental, technical, economic and social criteria. In particular:</p> <ul style="list-style-type: none"> Characterization and mapping of pastoral resources across the two parks Cross-disciplinary investigation on alpine pastures vulnerabilities under changing climate Integration of field surveys, modelling, remote sensing, socio-economic and biodiversity analysis Deployment of web-based PASTORALP platform tools Development of an Integrated adaptation strategy plan and a Replication and transfer plan Stakeholders involvement throughout the project (multi-actor approach) Promotion of proofing policies and practices into CAP policies and RDP plans. 	<ul style="list-style-type: none"> Reduction of the Alpine pastures vulnerability to the impacts of climate and socio-economical changes. Improved adaptation measures for pasture management in accordance with stakeholders. Viable technical and socio-economic management plans for the selected pilot areas. Web-based platform (PASTORALP platform tools) facilitating the adoption of improved adaptation strategies. Increased capacity building of pastoral communities for coping with climate change impacts and adaptation on pastures. 

3.2 Second leaflet: First achievements

The project in brief

PASTORALP 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 main specific objectives are:

- identify and test adaptation strategies;
- increase the awareness of local pastoral communities on climate change issues (capacity building);
- promote efficient and sustainable management strategies for alpine pastures, taking in account also socio-economic issues.

Partners

Contacts

Marco Bindi
marco.bindi@unifi.it

Giovanni Argenti
giovanni.argenti@unifi.it
+39.055.275.5747

Camilla Dibari
camilla.dibari@unifi.it
+39.055.275.5703

Social channels

pastoralp.eu
life.pastoralp
life_pastoralp
lifepastoralp
life-pastoralp

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

November 2020
mid-term update





This brochure has been realized with the contribute of European Union in the framework of LIFE PASTORALP project (LIFE16 CCA/IT/000060)



Printed on 100% recycled paper

EARLY RESULTS

Conservation and safeguard of alpine ecosystems

Two pastoral areas have been purchased by the Gran Paradiso National Park in the framework of this project. These lands will be used as project demonstration areas in which management strategies against climate change will be tested and adopted. These territories entail different habitats listed in the Habitat 92/43/CEE directive, making this places an important site also for biodiversity safeguarding and monitoring.



Biodiversity Monitoring

Sensors and diagnostic devices have been installed in the National Park of Ecrins for a real-time monitoring of pasture vegetation under different climatic regimes and management.

Permanent monitoring transects have been settled in pastoral areas of Gran Paradiso National Park, where different adaptation management strategies are tested and adopted to tackle climate change (i.e. grazing with donkeys, grazing in wooded areas). Dynamics of insects of particular interest for pastoral biodiversity (*Bombus patronum*), butterflies (*Parnassius apollo*), grasshoppers and crickets are also regularly monitored along these transects.

Mapping pastoral resources

About 7000 hectares of alpine grasslands have been mapped and classified in the Gran Paradiso National Park using ground surveys and remotely data (Sentinel 2). On the basis of these maps, crop simulation models will be used to assess the impacts of future climate.



Identification of adaptation strategies by participatory approaches

Two consultation workshops (one in each Park) have been organized with local stakeholders, in order to discuss the main critical issues (both climatic and socio-economic) affecting alpine pasture management. Participatory approaches were used to identify common feasible adaptation strategies to be adopted to overcome these issues, as well as to increase capacity building among the local community.



NEXT STEPS

- Analysis and calibration of DayCent and PaSim models, for analyzing impacts of the projected future climate on pastoral resources and defining the best adaptation strategies;
- Vulnerability analysis of alpine pastures on the basis of environmental and socio-economic indicators;
- Implementation of a Platform tool (PASTORALP platform tool) for supporting decision making and the management of alpine pasture under climate change scenarios;
- Definition of a strategic adaptation plan for alpine pastoral resources and recommendations for counteracting climate change impacts;
- Seminars and workshops;
- Demonstration events.

Both strategies and tools developed under this project will be easily and successfully applied in other pastoral areas of the Alps.



3.3 Third leaflet

March 2023

the PASTORALP consortium

LIFE PASTORALP

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

5

LIFE PASTORALP



The PASTORALP project (2017-2023) aims to reduce the impacts of current and future climate on alpine pastoral systems in two case-studies: Gran Paradiso National Park and National Parc des Ecrins. The project seeks to increase the resilience of these systems and reduce their vulnerability by adopting a multidisciplinary and participatory science-based approach.



LIFE PASTORALP

MAIN RESULTS ACHIEVED



MAPPING PASTORAL RESOURCES

Development and validation of an **innovative method** (based on remote sensing, expeditive field surveys, and modeling) for mapping mountain pastoral resources. This methodology will allow for rapid updates, **replication** in other alpine contexts as a basis for the drafting of **pastoral plans**, and **monitoring of payments** from the Agriculture Payments Agency.



VULNERABILITY ANALYSIS

The **vulnerability analysis** considered bio-geophysical, socio-economic, and naturalistic aspects using modeling, participatory approaches, and test areas. The **bio-geophysical analysis** focused on low-, medium-, and high-altitude pastoral systems, seeking to quantify future variations in terms of biomass peak, productivity, phenology, and carbon storage, taking into account some adaptation measures. The **socio-economic analysis** involved interviews, questionnaires, targeted workshops, and modeling; the **naturalistic analysis** involved setting up monitoring sites in the two study areas, where the impacts of adaptive management on local fauna and flora were analyzed.





CLIMATE CHANGE ADAPTATION STRATEGIES

The **technical measures**, defined according to specific climate risks, aim to maintain **forage production**, improve **water resource** use, optimize the management of **animals** in mountain pastures, and protect alpine **biodiversity**, assessing the need to adopt medium- and long-term interventions. **Policy recommendations** propose actions at different governance levels in relation to various areas (pasture management, silvo-pastoral system, water, multifunctionality, cooperation and training, biodiversity).





THE PASTORALP PLATFORM

The platform serves as a **decision-making support tool**. It has a **web interface** for wider dissemination of the achieved results. There is a **webgis** section with climate, pastoral and vegetation maps. Finally, it contains the **pastoral and diagnostic plans** specifically produced for the permanent demonstration areas created in the two national parks.



REPLICABILITY AND AFTER-LIFE

Some of the **adaptation strategies** have been included in **regional and national policies**. PASTORALP has collaborated in the programming of the CAP 2021-2027; two agreements have been signed with regional authorities, and some strategies have been included in regional adaptation plans. PASTORALP has been included in the **national platform** on climate change adaptation created by ISPRA (Italian Institute for Environmental Protection and Research) and the Ministry of Ecological Transition.



4 Infosheet



LIFE PASTORALP

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

For more information, visit our website:
<https://www.pastoralp.eu/homepage/>

LIFE Pastoralp
life_pastoralp
camilla.dibari@unifi.it

THIS BROCHURE WAS PRODUCED WITH CO-FINANCING FROM THE EUROPEAN UNION UNDER THE LIFE PROGRAM, PROJECT LIFE PASTORALP LIFE16 CCA/IT/000060



PASTORALP PLATFORM

The online platform was created as a result of the LIFE PASTORALP project (LIFE16 CCA/IT/000060) and is designed as a support tool for pastoral communities, policy makers and other stakeholders (people working in the field, scientists, citizens, etc.) to receive useful information on coping with climate change in alpine pastures. The PASTORALP platform is a repository, a viewer of the main results from the LIFE PASTORALP project and aims to generate greater stakeholder awareness on the vulnerability of mountain pasture systems, expected impacts and adaptation measures. It allows for an integrated view of future climate projections in the two Alpine study areas (Parc National des Ecrins and Gran Paradiso National Park), the impacts of climate change, and the vulnerability of mountain pasture resources, offering feasible adaptation strategies to be adopted and promoted. The open access mode of the platform and its user-friendliness allow the dissemination of the results obtained from the LIFE PASTORALP project to all stakeholders and potential new users, thanks to a set of suggestions that can be easily replicated in other mountain pasture areas.

CONTENTS

The PASTORALP PLATFORM contains up-to-date cartography of major mountain pastoral types at a functional scale for pastoral management. Data from cameras and sensors placed in the two study areas are available in real time, which are useful for monitoring temperature and air moisture, phenology, and productivity of mountain pastures. User-friendly interactive maps provide information regarding current and future climate data (2011-2040 and 2041-2070) according to the Intergovernmental Panel on Climate Change (IPCC) «Representative Concentration Pathways» (RCP) 4.5 and 8.5 scenarios. In addition, the platform contains a set of adaptation measures identified through stakeholder consultations and modeling tools, considering their applicability, impacts on biodiversity, and success factors. Vulnerability is analyzed through biophysical, biodiversity and socioeconomic indicators. Finally, interactive maps produced during the project are available in a WebGIS environment that can be used by GIS (Geographical Information Systems) software expert users.

HOW TO ACCESS

The LIFE PASTORALP online platform is available at:
<https://www.pastoralp.eu/tools/>

PLATFORM

QUESTIONNAIRE

CONTACT FOR INFO
Data obtained from the project and maps are available to users. Please request data at this email address:
camilla.dibari@unifi.it

THE PLATFORM
Help us improve the platform by filling out the questionnaire!

5 Infoboards and rollups

- ARPA



- CNRS



- IAR



- INRAe



- PNE



- PNGP



10



6 Infoboard at studysites

Gran Paradiso National Park, Drès study site, Ceresole reale (TO), Orco valley.



Gran Paradiso National Park, Noaschetta study site, Noasca (TO), Orco valley.





7 Newsletters

The coordinating beneficiary provided a set of newsletters containing information about the project progress, its findings, the next steps as well as announcements about events, and final conference.

Also the newsletters were produced in three languages of the project (English, Italian and French) and sent via email to target groups and stakeholders and potentially interested people, and newsletter subscribers.

We sent a total of 10 newsletters from the beginning to the end of the project and reached 633 people. 413 of them sign up to receive updates about the project.

All the newsletters are attached on pdf format to this Deliverable.