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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

42nd meeting
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**REPORT
OF THE VISIT OF THE INDEPENDENT EXPERT
TO THE VANOISE NATIONAL PARK
(France)**

16-17 September 2021

-Combined visit also covering Gran Paradiso National Park-

*Document prepared by
Mr Pierre Galland (Switzerland)*



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1. INTRODUCTION

The European Diploma, awarded in 1976 to the Vanoise National Park (hereinafter “the Vanoise”), has been renewed regularly and the last time in 2012. The Vanoise is closely associated with the Gran Paradiso National Park (hereinafter “Gran Paradiso”), which has held the European Diploma since 2006.

This on-site appraisal was carried out on 16 and 17 September 2021, immediately after the one at Gran Paradiso, with a view to the upcoming renewal of the respective diplomas. A joint afternoon meeting in Modane enabled the parks to reactivate their co-operation and opened up prospects for future joint initiatives.

The visit, which was perfectly organised, took place under the leadership of Ms Julie Anne Jorant, who is the head of the Park’s information and management department, and Mr Samuel Cado, the acting director and head of the promotion and communication department. Two park wardens, who are heads of sector, also made significant contributions to the discussions.

The consultant would like to thank these people most sincerely, along with the Director of Gran Paradiso, who was at the meeting in Modane, for making themselves available and accompanying him on visits to the park offices, to the refuge and on the ground.

2. SITUATION AND VALUE OF THE PARK

The Vanoise National Park was established as France’s first national park in 1963 and straddles the upper Tarentaise and Maurienne valleys, in Savoy. It protects high mountain habitats ranging between altitudes of 1,280 and 3,855 metres. Its Europe-wide importance is indisputable and widely recognised. It has a 14-km-long common boundary with the Italian Gran Paradiso National Park. The two parks, together with several adjacent nature reserves, which they also manage, make up the largest set of protected areas in the Alps, covering highly varied biogeographical, geological and climate zones. The size and diversity of the areas covered contribute greatly to the European interest of the two parks.

The Vanoise is at a geological, ecological and climate crossroads, giving it a diverse range of ecological, edaphological and landscape conditions conducive to high biodiversity and a large variety of landscapes.

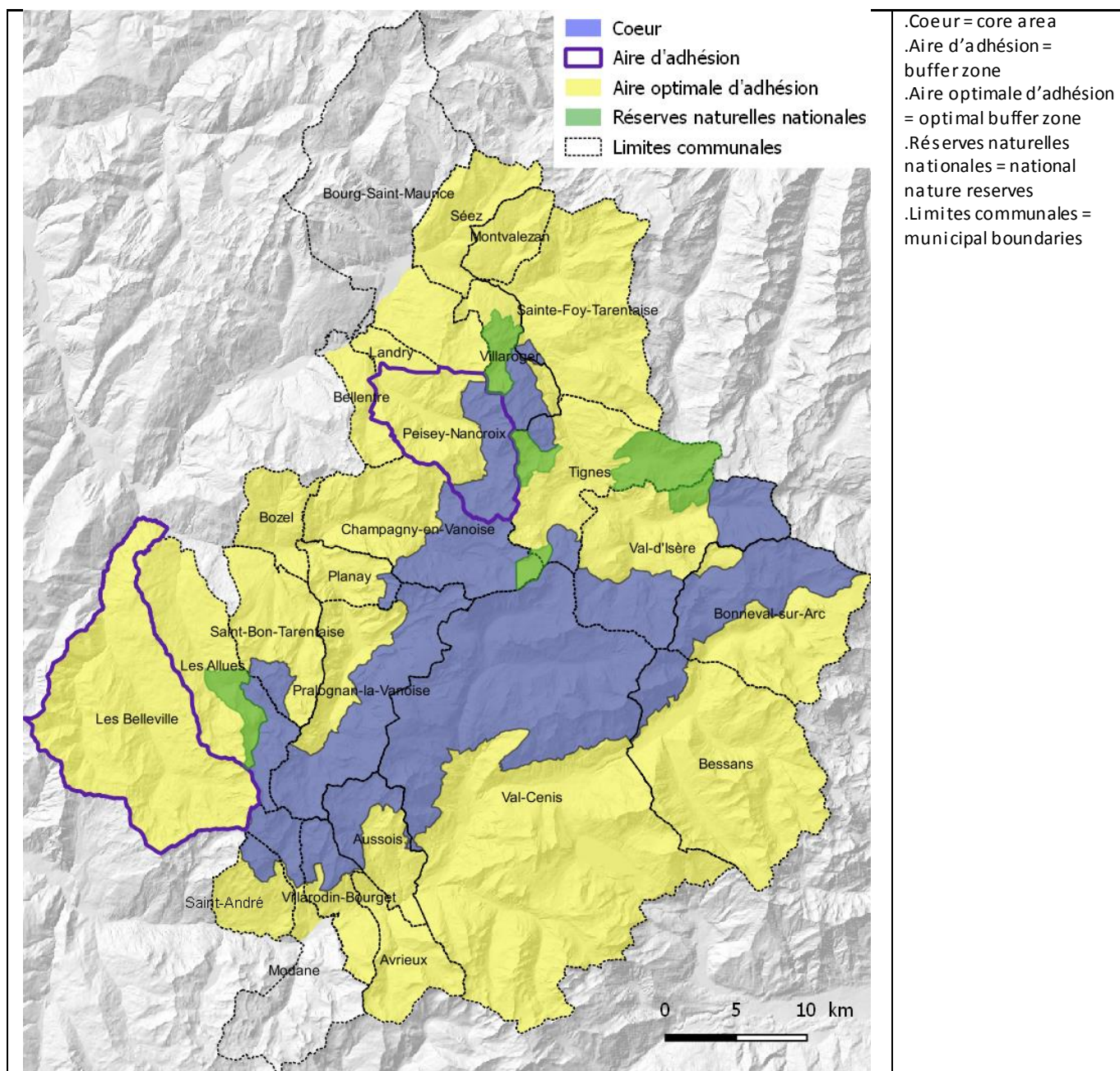
In 2006, France’s Law on National Parks was amended, transforming the central zone into a core area and the peripheral zone into an optimal buffer zone, constituting an area in which the municipalities are all invited to commit to a regional project in the form of a charter. The core area is officially established by central government, under the auspices of the Ministry of Ecological Transition; its surface area has not changed in relation to the former central zone, established when the Park was founded in 1963. This is the area to which the European Diploma was awarded in 1976.

From 2006 to 2015 a Park Charter was drawn up in co-operation with local stakeholders with a view to setting out the region’s objectives over the following 15 years. The Charter comprises restrictive objectives for the core area and more qualitative goals for the buffer zone, combined with a land use map.

The core area (formerly the central zone) covers 53,500 hectares while the optimal buffer zone (formerly the peripheral zone) covers 148,500 hectares. The optimal buffer zone is “made up of those municipalities or parts of municipalities which undertake to be part of the process described in the Charter of the National Park” (Charter of the Vanoise National Park, 2015).

In 2015, when the Charter was adopted, only 2 of 29 municipalities agreed to make such an undertaking (in the buffer zone). However, the situation may be changing; a window of opportunity was opened for municipalities to join in 2018 but was unsuccessful. A further one is currently open again (2021) and while some municipalities have already refused, others have not yet answered.

The map shows the various zones and areas, the municipalities and the adjacent nature reserves managed by the Park.

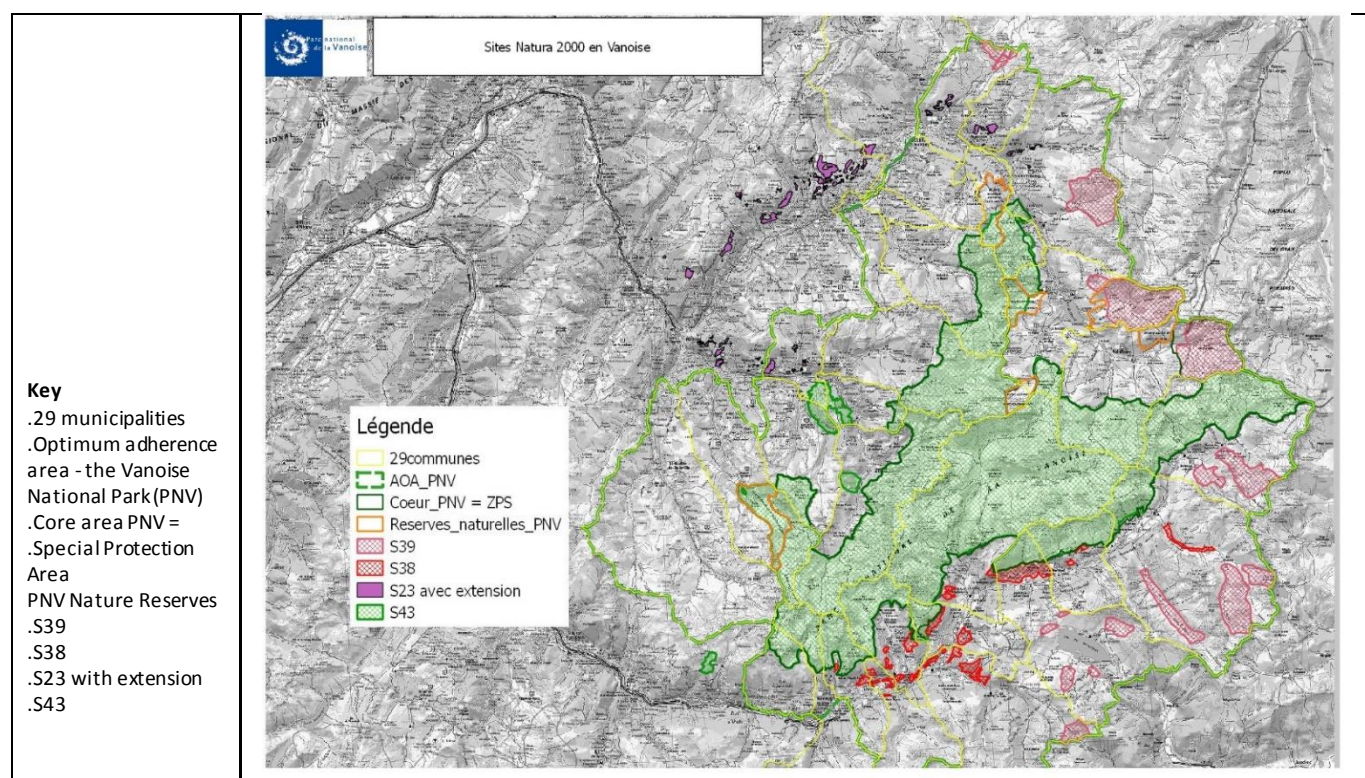


National nature reserves managed by the Vanoise

Management agreements were renewed for 5 years, and the possibility was considered of incorporating some reserves into the core area of the Park.

	Establishment	Area (in hectares)	Altitude (in metres)	Management plans
Bailletaz (Val d'Isère)	Decree of 03/12/2000, compensating for the delisting of the Iseran Nature Reserve	495.23	2,050 – 3,602	2004 – 2010 (finalised 2006) the Vanoise Park (PNV)/ECODIR 2014 – 2023
Plan de Tuéda (Les Allues)	Decree No.90-629 of 12 July 1990	1,112.70	1,650 – 3,153	1996 – 2001 [PNV] 2003 – 2012 [PNV] 2016 – 2026 [PNV]
Grande Sassièrè (Tignes)	Decree of 10/08/1973 compensating for the partial delisting of Tignes-Champagny National Nature Reserve	2,230.00	1,798 – 3,747	2005 – 2010 2014 – 2023
Tignes-Champagny (Tignes, Champagny en Vanoise)	Decree of 24/07/1963 listing the sectors of the Sache (Tignes) and the Iséran (Val d'Isère) September 1973 – partial delisting of some parcels of land in Tignes	1,321.00	2,150 – 3,855	None

As this map of Natura 2000 Sites in the Vanoise shows, the Park is completely covered but there are numerous smaller sites in neighbouring areas.



Following municipal mergers, the Vanoise National Park now covers 25 municipalities, 17 of which are partly located in the core area of the Park. The municipalities are the main landowners in the park core (49,110 hectares) while 3,718 hectares are privately owned and 11 hectares belong to the state. It is clear that the presence of very large tourist resorts near the centre of the Park, both in winter and in summer, with their networks of ski lifts and cable cars, have a major influence on the desire of municipalities to sign up to the Charter.

3. THE CHARTER AND THE AIMS OF THE PARK

The Charter was drawn up by the National Park Governing Board in regular consultation with the region's main stakeholders, particularly the municipalities invited to accede to it. This was "a consultation process on a regional project linking the core area of the National Park with its buffer zone; agreements on the application

of the Charter or regularly renewed partnership agreements will flesh out the practical measures and processes for the implementation of the Charter over time”.

It emerged from the discussions with the municipalities that their refusal to accede stemmed mainly from distrust of an agreement with the French state and less from poor relations with the Park itself.

The Governing Board, whose membership was amended by the Law of 2006, is the driving force behind the governance of the National Park. Interaction between each partners' technical teams is also a key component of the work to translate the aims set by the Charter into action.

For this purpose, the Park's public service bodies were reorganised in early 2014 to provide more means of listening and responding to partners and supporting local initiatives and regional projects.

On the ground, the Park is divided into three sectors:

- Haute Maurienne
- Haute Tarentaise
- Pralognan la Vanoise

Each sector comprises a group of specialised technicians (police, natural heritage, events, agriculture, etc.) and a team of versatile park wardens and instructors.

The Charter is based on a strategic diagnosis which identifies the Park's protection and sustainable development issues through its strengths and weaknesses. It is based in particular on the following features (Charter of the Vanoise National Park – the main issues 2015):

A wide variety of natural habitats

The geological diversity, the great range in the height of the mountains and the contrasting exposures of their south and north-facing slopes are conducive to a wide variety of natural habitats. Dry grasslands are on the decline because of changes in agricultural practices resulting in a risk of overgrazing or the elimination of habitats following the abandonment of agricultural activities and landscapes and a loss of biodiversity. *For natural habitats to be preserved, there needs to be increased attention and consultation when devising spatial planning and management policies.*

Outstanding plant biodiversity

The wide range of natural habitats results in a high diversity of plants – 1,200 species, of which about a hundred are protected nationally. The region has a special responsibility where it comes to protecting some species which, in 2013, were found in France only in the Vanoise.

Knowledge about the effects of livestock grazing and forestry on flora and fauna is very scant and should be improved to provide better support for these activities.

A responsibility vis-à-vis certain emblematic endangered species

Among the reasons for the creation of the Vanoise National Park was a desire to protect the Alpine Ibex. This aim has largely been achieved and the increase in the Ibex population in the Vanoise has made it possible to reintroduce them in several other parts of the Alps. The National Park has identified 306 species of vertebrates, 279 of which are nationally protected. The Park is highly involved in monitoring certain heritage species along with its partners including Chamois, Bearded Vulture, Golden Eagle, other vultures and mountain Galliformes. *Controlling disturbances of wildlife by human activities (flights, off-piste skiing and via ferratas) is a prerequisite for the conservation of species which are particularly sensitive during breeding or wintering periods.*

Highly coveted water resources and ecological continuums to be re-established on watercourses

There is a need to control new uses of water and give priority to local needs so as to limit conflicts of use and preserve the proper functioning of natural habitats both within the core area of the Park and the optimal buffer zone. *The challenge with water resources is to foster responsible use and organise sharing while safeguarding the integrity of habitats and their functional features.*

A tangible and intangible cultural heritage reflecting a mountain setting historically frequented and lived in by humans

The variety of cultural heritage in these regions stems from the fact that the mountain and its valleys have been frequented and lived in by humans since Neolithic times. The archaeological heritage of the mountains is of considerable interest. Their military and fortified heritage is also highly significant because it is linked to the history of Savoy. The challenge is to preserve and promote both the tangible and intangible cultural heritage. *This heritage is a key feature of the National Park's character. Its development meets a strong desire on the part of visitors and provides opportunities for economic enhancement, particularly in the agricultural sector.*

A highly embedded yet fragile agricultural and livestock grazing tradition, which makes a major contribution to the diversity of landscapes

Agriculture is almost exclusively oriented towards animal products, i.e. milk to make cheese, and meat. The occupation of the land is marked by the seasonal nature of activities, which take place in the valleys in the winter and in the Alpine pastures in the summer. Agricultural and grazing activities form an integral part of the Park's landscape and heritage diversity.

The first challenge is to support professionals to help them preserve these activities of such high cultural and heritage value – and so well attuned to the environmental issues – by encouraging favourable practices. The second is to rehabilitate neglected landscapes and areas, particularly at intermediate altitudes.

A mountain forestry industry located mainly in the optimal buffer zone

There is a strong contrast between the forest in the core area, which covers only a very small area but has a high heritage value, and that in the optimal buffer zone, where it is expanding as a result of the abandonment of farmland. Forests offer a high level of protection against natural hazards.

The challenge is to support the entire industry so as to take advantage of its economic and social potential while catering for forest biodiversity, other environmental aspects and climate change.

A tourist economy heavily oriented towards the winter season and the potential for summer tourism to be promoted

Tourism plays a prominent role in the economy of the Vanoise, providing the inhabitants with their main source of income. Downhill skiing is the main tourist activity in the high valleys. The optimal buffer zone is a world-class winter tourist destination with very highly reputed ski resorts and facilities. Summer tourism is much less highly developed and summer visitor numbers are dropping despite the region's genuine potential.

The first challenge is to try to strike a better balance between visitor numbers in the winter and the summer by focusing on the National Park's unique image and standing. Another is to reconcile tourist development with the preservation of the region's heritage assets.

Measures to promote sustainable development

Moving towards sustainable tourism is a major challenge for the region of the Vanoise, whose carbon footprint is estimated to be the equivalent of that of 200,000 people.

Passenger transport accounts for three quarters of the emissions from tourist activities and half of the region's carbon footprint. In addition to the production of national hydroelectricity using large dams, the region has been taking steps to diversify local forms of renewable energy. In 2006, the National Park authorities drew up a charter for the environmental management of refuges and since then, it has promoted research into autonomous energy supplies. Autonomous supply is also an issue for farm buildings. At the beginning of the 1990s the National Park launched a policy to provide access for disadvantaged population groups. *The challenge is to help the region reduce its carbon footprint, promote new energy production solutions, and continue work to make sites and buildings more accessible to disadvantaged groups.*

Local government structures defined by the valleys

The Vanoise massif is a natural linking feature and the vehicle for an image shared by the Haute Tarentaise and the Haute Maurienne. However, the constraints of the local topography and separate historic and cultural features have prompted each valley to adopt its own local government structures.

In view of their responsibilities and powers, the authorities and intermunicipal bodies which raise their own taxes are the National Park authorities' main partners where it comes to thinking about strategy, regional

cohesion, town planning, programming and commissioning operations, and carrying out intermunicipal activities or activities that affect the entire valley.

Note: It should be said that achieving these aims can give rise to conflicts such as that between the conservation of large predators and the preservation of livestock grazing. In addition, economic issues and expectations in the tourist sector or the use of energy resources come into direct conflict with some of these aims. These potentially conflictual relationships will be addressed in the analysis of the implementation of the recommendations below.

4. THE OBJECTIVES FOR THE CORE AREA OF THE NATIONAL PARK

The Charter identifies 12 objectives for the core area of the National Park divided into 4 strategic areas. It will be recalled that the core area is the area to which the diploma was awarded.

A table setting out the measures to be taken to achieve the expected results accompanies each objective. As the Charter applies for 15 years, this list cannot be exhaustive. It will be possible to flesh out these measures with others over time as new opportunities, ideas and resources emerge.

4.1 Preserve an outstanding natural, cultural and landscape heritage

It is a challenge to preserve the high level of naturalness and quality of habitats while fostering harmonious co-existence. The core area of the National Park is at the head of the water basins. In the context of climate change, water resources are another collective challenge, along with the quality of aquatic habitats and their ecological continuum.

Agriculture is an ancestral activity and it is one of the specific aims of the National Park that it should continue to be conducted on grazing lands, using practices in keeping with the protection of landscapes and fauna and flora.

4.2 Promote harmony between humans and nature

The core area of the Vanoise National Park is a meeting place between humans and natural heritage. Its landscapes and flora and the distribution of its fauna are influenced by this coexistence with humans including livestock farmers, mountaineers and hikers. The sole aim of the rules is to protect heritage items while enabling authorised human activities to be conducted in socially and economically acceptable conditions.

The human activities carried out in the core area require special buildings, equipment and facilities. The aim is to foster innovation in the technical, operational and environmental field and minimise the impact of works.

4.3 Anticipate change and manage its impact on heritage

In fifty years the Park authorities and their partners have done much to increase knowledge about heritage. There is much still to learn, however, about the interaction between human activities and natural systems. Because of its continuing preservation and the presence of a governing body, the core area of the Park is conducive to research, scientific activities and long-term observation. It also provides an opportunity to set up testing grounds to compare changes with those in locations where human activities are permitted and to gauge the effects of climate change. The goal is to promote knowledge, monitoring and applied scientific research, to measure trends and to strengthen ties with research laboratories.

4.4 Develop a sustainable visitor policy in protected area

The core area of the Park holds the promise of a mountain environment in which nature is preserved. Sharing in these riches and the renown of the protected area are a fair return for the public and inhabitants for their efforts. There is a substantial network of reception, hiking and accommodation infrastructure, which is being progressively modernised. The goal is to interweave and improve the links between the hiking provision in the core area of the Park and that of the buffer zone, to improve reception and

accommodation facilities and to diversify target groups and improve access for all, depending on the refuges concerned.

5. PARK GOVERNANCE AND MANAGEMENT

The new approach to the governance of the Park, which was introduced by the new law and the Charter, is reflected in the following bodies:

- **a Governing Board**, chaired by Alain Emprin (1st Vice-Chair: Alain Emprin; 2nd Vice-Chair: Christophe Rouler);
- **a Scientific Council** chaired by Bernard Delay;
- **an Economic, Social and Cultural Council**.

The Governing Board is made up of 42 members with a 10-member Bureau and meets three times a year.

The Scientific Council is made up of 21 members with a 6-member Bureau and also meets three times a year.

DIRECTOR'S OFFICE

Director – vacant

Acting Director – Head of the Promotion and Communication Department, Samuel Cado
Project Director responsible for state policies and restructuring support, Philippe Lheureux

GENERAL SECRETARIAT

Secretary General, Laurent Charnay

Budget and Accounting Team

- Sandra Clavières
- Élodie Demailly
- Laurence Verna
- Harmonie Audibert

Public procurement and logistics

- Anne-Marie Dos Santos

Financial engineering

- Camille Séon
- Ingrid Le Ru

HR Team

- Élise Giaconia
- Catherine Thomas
- Camille Lasne

Secretariat

- Corinne Dupraz (60%)
- Brigitte Gaillard
- Sylvie Pilet

KNOWLEDGE AND MANAGEMENT DEPARTMENT

Head of Department, Laurent Charnay (1 January 2022)

Fauna Team

- Jérôme Cavailhes
- Justine Colombier

Flora and Vegetation

- Thierry Delahaye

Natural Sciences and Habitats

- Vincent Augé

Agriculture and environment

- Maëlle Robert

PROMOTION AND COMMUNICATION DEPARTMENT

Head of Department, Samuel Cado

Technical Team

- Stéphane Martin
- Marc Sarton
- Mathilde Dassonville

Planning and Works

- Fabien Pousset

Tourism

Awareness-raising

- Orane Giannuzzi

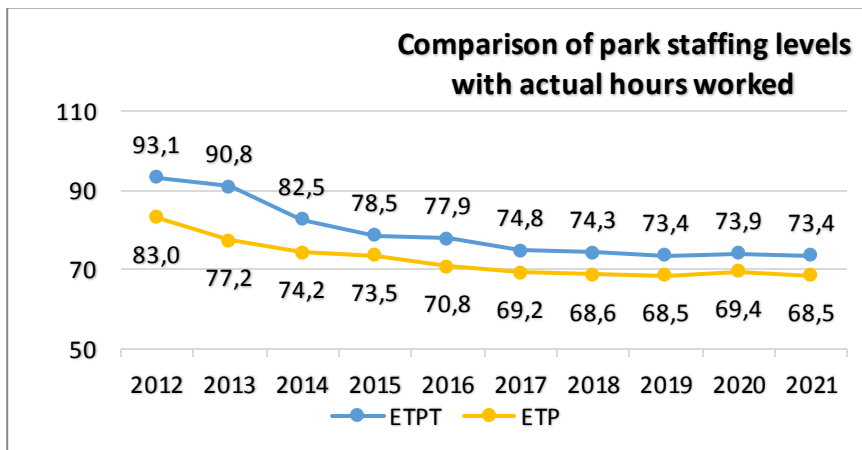
Communication Team
 Communication Officer and Deputy to the Head of
 Department - Elisabeth Berlioz
 - Virginie Rochette

Web, social networks, shop - Chloé Tardivet
 Photo and video - Patrick Follet
 Heritage promotion - Benoit Martineau

INFORMATION SYSTEMS

Head of Department, Chrisophe Chillet

Geographic Information System (SIG) and Databases
 - Claire Lagaye (1 August 2022)
 - Cléa Slimani
 - Blaise Picinbono (Geotrek)
 - Cyprien Levallois



ETP (FTE) = full-time
equivalent posts on 31
December (= permanent posts)

ETPT = full-time
equivalent worked
(number of man-
months in the year).

Current frame work documents for the activities of the Park:

- The Charter: 27/04/2015 – 27/04/2030
 - Implementing Agreement with the Municipalities of Peisey-Nancroix and Les Belleville : 2021-2025
- Scientific strategy: 2016 - 2029
 - Roadmap currently being renewed 2022 - 2025
- Tourist strategy: 2022 - 2024
- Communication plan: 2022 - 2024
- Criminal policy protocol: 2021 – 2024

Potential areas of co-operation between the Vanoise and Gran Paradiso

Points mentioned at the joint meeting of the parks in Modane on 16 September 2021:

- a joint meeting of the scientific advisers each year, with one side inviting the other;
- scientific validation of joint projects and studies; ensuring common methodology. To take one example, differing methods are used to count Alpine Ibex at present; would it be possible to coordinate the timing and reconcile the findings?
- taking advantage of the appointment of new scientific managers for the two parks to resume deployment of common techniques;
- continuing the "grand count exercises" on both sides, which previously provided opportunities to meet up and exchange, one possibility being to mark the anniversaries of the parks
- Ptarmigan: if possible, a single common method (auditory survey?), with swapping of findings;

- biodiversity transects, which could be complementary;
- more exchanges on grazing area use: there is now less pastureland in Piedmont (invasion by trees and bushes) but higher demand in France.

6. INTERNATIONAL CO-OPERATION

Objective 3.11 of the Charter is to “Increase awareness of the National Park from local through to international level”. It should be remembered that the Vanoise has been twinned with Gran Paradiso since 1972 and that the renewal of their respective European Diplomas has been synchronised since 2006. The diplomas were jointly renewed in a 2011 resolution (**Resolution CM/ResDip(2011)3**).

Some milestones in the co-operation between the Vanoise and Gran Paradiso:

08/07/1972: official twinning in Noutra Dama de Réma, Aosta Valley

1999: signature of a "neighbourhood charter" aimed at bringing together the people, institutions and management techniques on both sides and promoting high-quality tourism

2007 – 2014: increased co-operation following the appointment by the Vanoise of an international relations officer.

A convention between the two parks (appended) has been in existence since 2013 and includes the following objectives and activities:

Objective 1: Bringing together people and institutions

Reciprocal participation in meetings of institutional bodies (governing board, scientific council, economic, social and cultural council) and technical bodies (thematic working groups) on common issues	Summer session of the Vanoise Scientific Council at Valsavarenche, on 23 and 24/06 2014
Vote in each governing board on questions of common concern following the alignment of national legislation	
Encourage staff mobility	Annual Danilo Re Memorial, regular appointment of a joint Gran Paradiso/Vanoise team
Encourage exchanges between schools	2015: twinning of the Locana and Modane lower secondary schools (trips by third year classes to discover the other country's protected valleys and local examples of their natural and cultural heritages)
Encourage meetings between elected representatives and business entities in the two spheres of influence (identifying themes for co-operation and joint projects)	2015, First transfrontier wildflower meadow competition (in association with the Tarentaise-Vanoise Intermunicipal Assembly and the Aosta Valley Regional Agricultural Institute)

Objective 2: Fostering convergence of management techniques

Set priorities for research	
Suggest improvements to build coherency between the scientific projects of the two parks	
Propose initiatives on matters of international interest	2014: joint discussions on the preparation of Interreg / Alcotra / POIA projects on the built heritage 2 transfrontier programmes begun during this period involving the two parks – ALCOTRA (2016) Ibex and PITEM Biodiv'ALP (2019)
Propose a joint protocol laying down a methodology for counting populations and for monitoring migration while establishing and updating the list of species concerned	PITEM Biodiv'ALP PS2 and PS3: work on lists of common habitats and species of fauna and flora with a view to launching transfrontier knowledge and management activities, where appropriate with joint protocols
Foster co-ordinated scientific communication	In the context of European programmes (e.g. film production) 2014: contribution by the Vanoise Park to the Platform on Large Carnivores, Wild Ungulates and the Society of the Alpine Convention and, under the auspices of Gran Paradiso Park, a summary of data

Objective 3: Promoting high-quality nature tourism

Provide information at each information point on the features of the other park	Joint photo exhibition " <i>Senza confini, per natura / Pas de frontière pour la nature</i> " (No Borders for Nature) staged to celebrate the 90 th anniversary of Gran Paradiso in 2012 and the 50 th anniversary of the Vanoise in 2013 and subsequently repeated Joint organisation of the annual international photo competition <i>Fotografare il Parco</i> Free access for each park to the other's photo library
Draw up specific information on the regulatory aspects	
Devise a joint strategic plan for visitor facilities	Summer 2020: reconnaissance by two teams of a new transfrontier hiking route

Objective 4: Management and supervision

Set up a steering committee (made up of the chairs of governing boards or appointed administrators, one administrator for each board and the directors or their representatives)	
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As can be seen, many joint activities took place in the two to three years following the establishment of the convention. Subsequently, as a result of political changes and changes in both parks' management teams (see above for the Vanoise), activities were reduced. However, the current managers are very keen to strengthen co-operation. The Vanoise has proposed the following themes:

Future goals?

- Human and financial context in each national park.
100-year anniversary of Gran Paradiso in 2022, 60-year anniversary of the Vanoise in 2023.
- A less ambitious convention, focusing on practical activities and more regular exchanges.
- Knowledge and management: more discussion on monitoring activities (particularly long-term agreements such as that on the mountain bird survey, the STOM), sharing of data and protocols (providing an opportunity to renew the Vanoise's scientific roadmap).
- Proposed themes: interaction between wildlife and domestic animals; impact of livestock grazing on insects and plants; dark sky reserve.
- Tourism, communication: major issues connected to climate change.

Following a recommendation made in 2012, it was attempted to produce a joint report for the two parks for the year 2018 but it emerged that the concerns and management aspects regarded as priorities for one park were not for the other; that much was also clear from the different recommendations put forward by the experts.

Finally, there were also administrative problems in synchronising the reports. Keeping the reports separate seemed to be a more effective approach while recommending that one section covering transfrontier cooperation be drafted jointly and appear in both reports.

7. SPECIFIC POINTS CONCERNING MANAGEMENT DISCUSSED DURING THE VISIT

A number of specific points were discussed in-depth during the meeting in Modane and on the ground. Interestingly, nearly all of them are relevant to both parks, even though the issues and the local context are sometimes different. It is quite clear that more dialogue on these points could be a source of mutual enrichment, even though differing local solutions are often required.

7.1 Grazing and predator management

The management of grazing, which is closely linked with the return of major predators, is one of the park managers' major concerns. It should be noted that this is also a concern for the managers of Gran Paradiso, although the situation there is quite different.

In the Vanoise, there is no real zoning of grazing land with fixed livestock levels. The rental of mountain pastures is a matter for the municipalities, over which the Park has little influence. It seems that currently, all the available land has been rented; this shows that demand is quite high, which possibly has to do with European subsidies.

Because of the large number of wolves in the Park, it is absolutely essential to keep watch on flocks and keep them in supervised pens at night. Where such arrangements have been made, predation has been reduced to a few individual animals per season. Some sheep which were "forgotten" in the evening have not survived, and their corpses have been very quickly cleaned by various predators, including vultures, eagles and bearded vultures.

It would be a good idea to map grazing land and include information on types of livestock and grazing densities so that this can be monitored in the long term. Problems with erosion and water supply cannot be ruled out in the near future, in connection with climate change, and such data would make it possible to set up remedial measures where necessary. The question of subsidies and their environmental impact is worth looking into, although the Park's room for manoeuvre here is probably somewhat limited.

The Park is also involved in the implementation of the national wolf programme and support for livestock farmers facing losses, including monitoring of the species, drafting of reports on attacks, provision of emergency shelters, provision of comfortable mountain huts (called Tatous) and flying in of equipment by helicopter. The prototype of the Tatou mountain hut was installed on the high mountain pasture in July 2018 for a one-year test period. Shepherds were able to keep watch over their flocks, and as a result, all predation on the pasture was eliminated. In 2020, new emergency shelters were installed, contracts were drawn up for the construction of 3 comfortable huts on the Alpine pasture and a brigade of mobile shepherds was made available to livestock farmers to help the shepherds on the ground in crisis situations.

7.2 Hydrology and hydroelectric plants

There are important local and regional issues at stake with regard to watercourses and their hydroelectric potential. The entire Park is criss-crossed by pipes delivering water to the large hydroelectric dams situated outside the protected area. There is however quite a high demand for small additional plants. In addition, steps were taken recently to eliminate a high voltage overhead electrical line in the core area. The situation therefore seems to be under control, but increased vigilance is required.

The Park has launched programmes to protect, monitor or renaturalise its lakes and watercourses which are relatively well protected (Sentinel Lakes, Sentinel Pastures). Glacier melt and the overall effect of global warming are closely monitored.

7.3 Tourism – management of visitors and sports activities

Tourist demand is high, as in all natural mountain areas. Because of the unusual situation over the last two years, it is difficult to gauge whether the increases recorded will be a long-term trend or are linked to the Covid-19 epidemic. In any case, major efforts are being made to welcome visitors and inform them about the protection of the Park and its challenges. The mountain refuges follow a communication programme which was set up by the Park.

Access to high mountain areas by a growing number of vehicles is one of the managers' current concerns. Various ideas are being contemplated to reduce traffic and above all, the occupation of large areas of pasture land by car parks. A system of shuttles has been tested, departing from car parks lower down in the valleys. This would make it possible among other things to reduce the number of vehicles remaining high up in the mountains for several days. This would also allow for more mobility and hiking routes which do not necessarily return to their departure point. It should be noted that similar problems have arisen in Gran Paradiso, where temporary bans and duties are being considered.

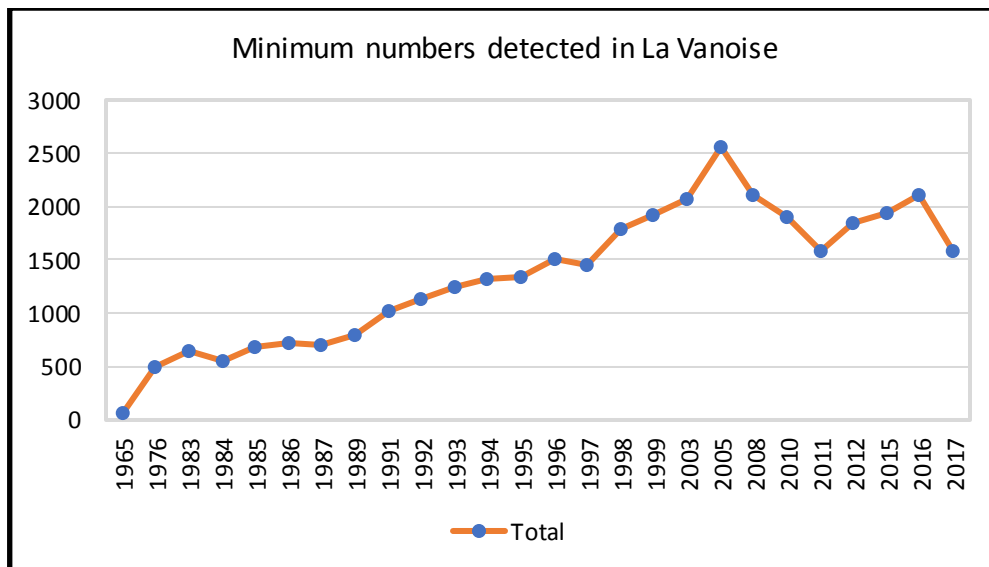
The question of the Park's various sports activities is raised quite frequently. The sports practised in high mountain areas change quite rapidly and it is important to anticipate change and react very promptly before bad habits become entrenched. Increasing interest in hang gliding and the arrival of electric mountain bikes should be a particular focus of discussion.

7.4 Scientific research, fauna monitoring and databases

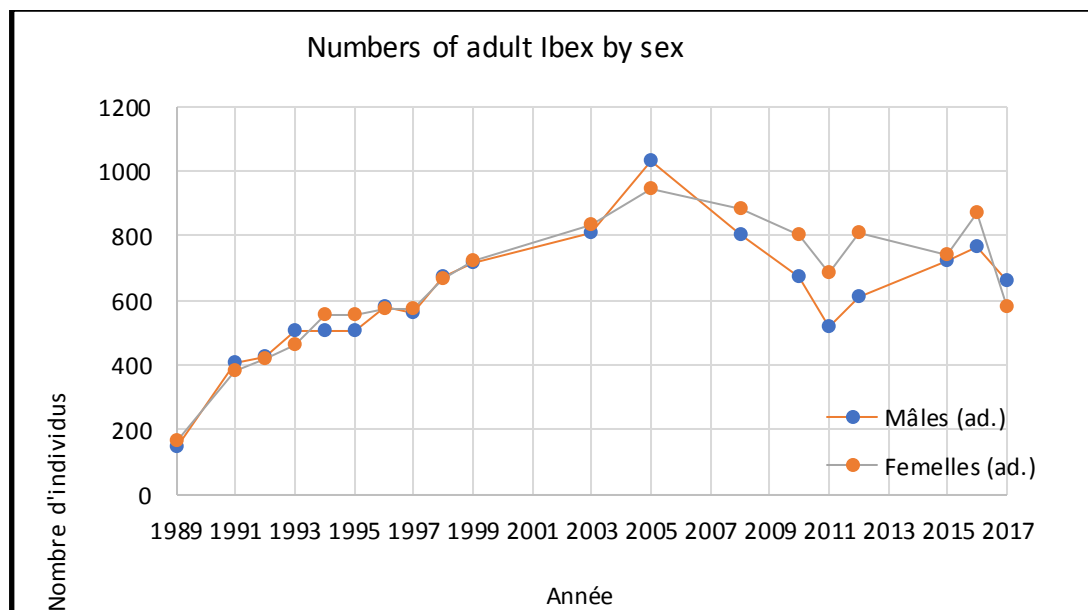
Scientific research under the auspices of the Park's Scientific Council, has always been and will remain one of its strong points. The list of projects carried out or under way is impressively long (see appendix). The study and management of ungulate populations, particularly of Alpine Ibex, is a core activity. In recent years captures and exchanges with other parks (especially Mercantour) have been carried out with a view to diversifying the Ibex's genetic heritage. The populations of Chamois are also closely monitored. The return of the Wolf has been followed with great attention, along with that of Bearded Vultures and other vultures. The reproduction of large birds of prey (Golden Eagle, Bearded Vulture) and Galliformes (Ptarmigan, Black Grouse) is also well documented. The Park has implemented an action plan devised in co-operation with the ski resorts to create and improve the necessary safeguards for the preservation of the Black Grouse and the Ptarmigan.

Alpine Ibex (*Capra ibex*)

“The Alpine Ibex is the emblematic species of the Vanoise National Park in France and the Gran Paradiso in Italy. Even today the Vanoise National Park is still a reference point for the study of Ibex populations. This stems from the Park's history – the Ibex was one of the reasons for its creation – the presence of France's last populations, monitoring activities which date back over 40 years and the many studies conducted in the Park. This means that it is still a magnet for research work providing a great range of data, a pool of marked animals and strong observational capacities among its officers.



The current state of the population is relatively satisfying but it is necessary to keep monitoring the population and the health of the species so as to be able to react and follow its recovery after certain diseases have spread through it. Between 2007 and 2012 there was a significant drop in numbers which was probably the result of an epizootic of bronchopneumonia. Today it would seem that we are in a stabilisation phase with the total number of individual animals fluctuating between 1,500 and 2,000 (results of the most recent flash count conducted in 2017). As this counting method is not suited to the density-dependent demographic context of the Vanoise because it is insufficiently robust and reliable to reveal demographic trends, the so-called “indicators of ecological change” method (measuring abundance and ecological performance) has now been adopted and is being prepared for implementation.”



Work has begun on drawing up an inventory of research findings in the Park, including the digitisation of some old documents. There is still a need, however, to establish or consolidate a systematic database, which would provide easier access to existing data. It should be noted that a similar recommendation has been made concerning Gran Paradiso; it would of course be desirable to set up a system enabling mutual exchange.

Sections 6 to 9 of the annual report contain an exhaustive and impressive presentation of the main research work under way or completed recently. A summary list of projects is set out in the appendices.



The head of the Knowledge and Management Department in front of the Plan du Lac Refuge

8. MEASURES TAKEN TO COMPLY WITH THE CONDITIONS SET AND RECOMMENDATIONS MADE WHEN THE DIPLOMA WAS RENEWED IN 2012

By way of a preamble, we should describe some of the developments in the Park since the last appraisal in 2011:

- 2015-2017: period of political chaos linked to the Charter and the election of a new chair, and the departure from the Governing Board of the mayors' representatives
- The refocusing of knowledge and management activities on the core area of the Park and the maintenance of environmental education provision in the optimal buffer zone;
- 2017: process of reconstruction, elections for the post of president and change of president (*département* of Savoie), audit and mediation resulting in the protocol "living together harmoniously in the Vanoise"
- 2018 and 2021: municipalities are given the possibility of acceding to the Charter without a new request
- 2020-2021: appraisal of the results of the protocol and preparation of a new roadmap for the new Governing Board
- 2021: appointment of a new director and a new head of the Knowledge and Management Department

The park managers commented in detail on the implementation of measures to comply with the conditions and recommendations in their annual reports to the secretariat. In addition, some topics have already been addressed in the sections above. This section includes a brief summary of the situation at the time of the visit, based primarily on the 2020 report.

Condition

Define a buffer zone consistent with the conservation of natural assets, particularly those located in the core area of the park.

The decree enacting the Charter of the Vanoise National Park was signed by the Minister of Ecology on behalf of the Prime Minister on 27 April 2015. The regional prefect referred details of the optimal buffer zone to the 29 municipalities for them to deliberate on whether they would accede. 27 of the 29 refused, the exceptions being the municipalities of Peisey-Nancroix and Saint-Martin-de-Belleville. In 2018, the municipalities were

invited again to accede to the Charter but none decided to do so. As a result the area of the National Park is now constituted by the core area of the National Park, plus the parts of the two aforementioned municipalities located outside the core area.

Following an unprecedented crisis in 2015, a mediation process entitled “Living together harmoniously in the Vanoise” resulted, after three years, in renewed dialogue, the return of elected representatives to the Governing Board and the successful completion of collective projects. In 2020, the Governing Board began reviewing the protocol with a view to drawing up a roadmap to run for three years beginning with the renewal of the Governing Board in November 2021.

The Park has very little room for manoeuvre under the current law on National Parks. This means that its influence on the potential buffer zone is very limited.

Recommendations

1) pay close attention to natural and landscape issues when development projects are carried out on the periphery of the park and avoid any direct or indirect impact on the core area

Works in the core area of the Park are subject to authorisation. Since 2018, a consultant architect has been available to applicants to assist them from the planning stage of projects up to their completion. In 2020, all projects in the core area were provided with support and were successfully completed.

Prior to the municipal Charter accession stage, the park authorities got involved in the implementation of planning procedures so as to identify in advance what the environmental and landscape issues were throughout the optimal buffer zone. Since the establishment of the buffer zone in autumn 2015 and its confirmation at the end of 2018, the park authorities' powers have been limited to the zone to which municipalities have actually adhered.

However, the authorities do continue their work to preserve the core area and on the influence of the buffer zone. In this connection, the Park is systematically consulted and has given opinions on the entire range of regional planning documents (local urban development plans (PLUs), local and regional cohesion strategies (SCOTs) and now the regional planning document, the SRADDET).

The National Park has also implemented several partnership agreements with economic partners in ski resorts (electricity suppliers, skilift companies) to reduce the risks of bird collision. Several hundreds of kilometres of cable have now been equipped with markers or moved underground.

2) co-ordinate park objectives with those of the green and blue infrastructure

In France, “the green and blue infrastructure” (the terrestrial and aquatic ecological network) is reflected at regional level in a framework document called the “regional ecological coherence strategy” (SRCE), which the Vanoise National Park was involved in from the drafting stage on. Section 3.5.1 of the Charter of the Vanoise National Park describes its supporting role vis-à-vis the local authorities in this area. Several of the provisions of the Charter support the idea of the recognition of ecological corridors. The Park ensured that this issue was incorporated into the two SCOTs in the area (Tarentaise and Maurienne). For instance it gave its support for the Haute Maurienne SCOT on the condition that account was taken of the need to reconcile the strategy with the practices in the municipality of Aussois following the installation of a new skilift which was likely to lead to more visitors in a small valley in the core area of the Park. It also contributed to the drafting of the SRADDET at regional level because this now also includes the SRCE.

It has also launched an ALCOTRA Ibex programme, whose aim is to assess the state of conservation of this species and organise movements of population between massifs (because of ecological discontinuity and the highly sedentary behaviour of the species, these very rarely occur) in order to foster the genetic diversification of the species and hence strengthen its resilience. A translocation of Ibex was supposed therefore to have taken place from the Vanoise to Mercantour in April 2020 so as to genetically diversify the population. Because of the health crisis it had to be postponed but it did take place in April 2021.

3) ensure that nature and landscape protection interests are fully taken into account when making decisions concerning water resources and the renewal of hydropower concessions

The Vanoise National Park has not been approached in recent years for opinions on potential projects linked to water resources or hydro-electric concessions. It does, however, keep a close track on any projects in the buffer zone.

In July 2019 work began on making the Plan du Lac Refuge self-sufficient in energy. It was able to cancel its contract with EDF and the high-voltage power line crossing the Park (which was a blot on the landscape and a collision risk for the pair of bearded vultures nearby) was dismantled as scheduled in September 2020.

4) actively pursue diagnostic and management measures ensuring that the park's agricultural uses mesh harmoniously with, and are in synergy with, protection of its natural assets

Following the two contractualisation campaigns in 2015 and 2016, 22 livestock farms entered into a five-year undertaking to adjust their practices to take more account of environmental issues. Grazing management plans were finalised and implemented for these farms. At the same time, the Park continued to work with Belleville municipality to set up rural leases with environmental clauses for communal pasture land. It also got involved in the Sentinel Pastures programme, which was designed to help farmers adapt their practices in response to climate change.

The Park is also involved in the implementation of the national wolf programme and support for farmers who have sustained damage. In 2020, new emergency shelters were installed, contracts were drawn up for the construction of 3 comfortable huts on the Alpine pasture and a brigade of mobile shepherds was made available to livestock farmers to help the shepherds on the ground in crisis situations.

As part of the agreements on the application of the Charter, the Park is also involved in several agricultural projects in the member municipalities: in Peisey-Nancroix this concerns a project to restore several wetland areas and in Belleville, support for the European Dark Bee conservatory (genetic analyses) and the setting up and opening to the public, since December 2019, of a bee and nature centre.

5) continue to strike a balance between the reception and service functions of refuges and gate refuges on the one hand, and their information and awareness-raising functions on the other hand, by pursuing the development of facilities for categories of visitors who require special attention, such as people with disabilities

The Vanoise National Park owns 16 refuges in the central area of the Park whose purpose is to receive the public and raise their awareness. Many activities are organised at these refuges. In the valleys staff propose various awareness-raising events. The Vanoise visitor centres are open for the whole summer season and are sources of information for everyone. Exhibitions are open to the public and documentation is freely available. The Visitor Centre in Pralognan la Vanoise received over 15 000 visitors in 2020 despite the health crisis (outside activities, small groups, etc.). Nature activity leaders were recruited to welcome and inform visitors near car parks and provide services for persons with low mobility. The Prariond Refuge in Val d'Isère was totally restored and opened to the public at the beginning of July 2020, with the aim of incorporating education on the environment into its fixtures and fittings.

The Park was also awarded the "Tourism and Disability" label in 2017 for the Plan du Lac Refuge's facilities for four types of impairment (motor, visual, hearing and mental). This was renewed in 2020 for all the gate refuges. All the buildings, sites and walks accessible to persons with various types of disability are described in a leaflet on accessibility, which is amended and updated regularly.

6) supervise and strictly regulate air sports so as to reduce their adverse impact on fauna

The core area of the Park is subject to special regulations strictly controlling flights over it by any means. The Park Charter and its implementing rules concerning the core area reiterate these protective measures except in a few very specific areas where paragliding is authorised so that the harmonious growth of this activity can be

allowed. Helicopter flights are prohibited unless expressly authorised and remain rare, being reserved mainly for mountain rescue missions and the provisioning of refuges at the beginning of the season.

9. CONCLUSIONS AND RECOMMENDATIONS

As a conclusion to the short mission carried out, it can confidently be stated that the European value of the Vanoise National Park is confirmed and the appropriate management of the Park is a guarantee of the conservation of the natural and landscape assets present. The only negative is the refusal of practically all the municipalities to join the optimal buffer zone provided for by the legislation. The Park has very little room for manoeuvre where it comes to influencing the municipalities to move in this direction.

Transfrontier cooperation with the Gran Paradiso Park has declined somewhat but there is a real desire from both parks to give it fresh impetus.

Consequently, we recommend that the European Diploma for the Vanoise National Park be renewed for a further 10-year period, with the following recommendations attached:

1. keep up dialogue with the municipalities of the optimal buffer zone to try to persuade them to join the Park;
2. closely monitor the management of grazing land in close coordination with the other competent bodies (municipality etc); establish mapping and a database for the medium-and long-term monitoring of pastureland use and livestock grazing densities;
3. closely monitor projects connected with renewable energy (hydroelectricity, wind power) in the Park and in the optimal buffer zone;
4. continue monitoring sports activities such as mountaineering, hang-gliding and mountain biking and take the necessary measures to limit their impact on nature and the landscape;
5. plan, with the relevant authorities, the necessary measures to reduce motor traffic on the roads providing access to the core area of the Park and to reduce the impact of high-altitude car parks;
6. continue scientific research and biological monitoring; ensure that new counting methods can be reconciled with older results and group scientific research findings in a database that is accessible to researchers and park managers;
7. pursue and step up transfrontier co-operation with the adjacent Gran Paradiso National Park. Take advantage of the forthcoming anniversaries (100 years of the Gran Paradiso in 2022, 60 years of the Vanoise in 2023) to publicise the achievements of that co-operation;
8. stop the erosion of park staff and, if possible, take on new workers where necessary;
9. ensure that the National Park's research programme and activities take account of the effects of climate change on the ecological processes linked to the long-term conservation of the diploma-holding area's European interest. Research efforts should be coordinated with those of the Gran Paradiso and the findings incorporated in the respective management plans;
10. publicise the European Diploma, make wider use of its logo and promote dialogue between the diploma-holding parks.

Appendices

- Co-operation agreement Vanoise - Gran Paradiso
- List of research programmes

Appendix 1:

translation of the partnership between the two National Parks - http://www.pngp.it/sites/default/files/convenzione_partenariato_pnv.pdf

Partnership agreement between the Vanoise and Gran Paradiso National Parks

Preamble

- Considering the geographical, historical, natural and human links that unite the Vanoise and Gran Paradiso massifs,
- Considering the international dimension taken on by the Vanoise and Gran Paradiso national parks, notably their major contribution to the preservation of the Alpine Ibex,
- Considering that the two parks, twinned since 8 July 1972, are resolutely focusing their action on sustainable development and long-term protection and that the area concerned forms one of the most extensive protected areas in the western Alps,
- Considering the shared objective of ultimately creating one vast European Park,
- Considering that the joint renewal of the European Diploma awarded to the two parks was granted by the Committee of Ministers of Council of Europe on 6 July 2011,

Undertakings

The Vanoise and Gran Paradiso national parks

- affirm their ambition to constitute an area of preserved nature that is exemplary in Europe,
- affirm their shared commitment to the principles of a policy of protecting landscape, habitats, biotopes and species in keeping with international law,
- affirm their desire to share with the local authorities of their respective territories their ambition to protect and promote the "Vanoise – Gran Paradiso" alpine at the heart of the network of European nature parks,
- affirm in particular their determination to develop exchanges between their partners, local authorities, socio-professional groups and administrations, with a view to fostering the emergence of joint projects in the social, economic and cultural spheres contributing to the sustainable development of their territories,
- affirm their desire to jointly manage the European Diploma of protected areas as they have been invited to do by the Council of Europe

and agree, to that end, to work together to develop a programme geared to meeting the following three main objectives:

- bringing together people and institutions,
- fostering convergence of management techniques,
- promoting high-quality nature tourism.

1. Bringing together people and institutions

The four strategies working towards this objective have been identified as follows:

1.1.- Closer ties between the management bodies of the parks through reciprocal participation in meetings of institutional bodies (governing board, economic, social and cultural panels, scientific council) and technical bodies (thematic working groups etc), particularly where common issues are concerned, including regulations, scientific monitoring, information and educational activity.

Ultimately, the administrators of each park could, once the necessary amendments have been made to national legislations, participate in voting by the other park's governing board on matters of common interest.

Every year, the governing boards shall vote on a provisional programme of joint actions, and their activity reports shall include an assessment of those actions.

1.2.- The two parks shall encourage mobility of their staff, project managers and field staff, under arrangements agreed jointly by the directors.

1.3.- The two parks shall foster exchanges between the schools located on their territory and devise common educational tools. In addition to the educational and linguistic aspects, these exchanges will provide an opportunity to directly involve children from local communities in the work of the parks and promote the idea of action on a European scale. The parks agree to devote significant human, technical and financial resources to developing that action each year.

1.4.- The parks shall take initiatives aimed at the local authorities and socio-professional groups to encourage twinning, study visits and exchanges of experience.

Encounters between elected representatives and business entities within the spheres of influence of the two parks (particularly those active in the spheres of tourism and agriculture) shall be encouraged, with a view to identifying themes for cooperation and joint development projects that are in the interest of local communities and compatible with environmental protection.

2. Fostering convergence of management techniques

The preservation of the natural environment is the largest common denominator of the two parks. The conservation of exemplary natural habitats and their management require expertise, methods and technologies developed as part of a network.

Within their respective area of influence, the two parks shall support a sustainable approach and, in particular, take useful initiatives to provide support for agriculture and livestock grazing geared to practices that are compatible with the preservation of sensitive natural environments.

The two parks have decided to implement the following two strategies in particular to attain this objective:

2.1.- A scientific unit common to the two parks shall be set up. The scientific unit shall comprise the directors, the chair of the scientific council of the Vanoise National Park, the head of research of the Gran Paradiso National Park and, as necessary, project managers and experts in relevant spheres.

The scientific units may set priorities for research, suggest improvements to build coherency between the scientific projects of the two parks (research, application, management) and propose initiatives on matters of international interest (European or world programmes).

A joint protocol laying down a methodology for counting populations and for monitoring migration shall be proposed by the unit, which shall establish and update the list of species concerned.

2.2.- The two parks undertake to foster coordinated scientific communication, in particular:

- during reintroduction operations,
- during international seminars,
- to produce joint responses to calls for tender,
- to jointly identify needs in terms of research on a European scale.

2.3.- The two parks shall concert their efforts to prepare and transmit to the Council of Europe the joint annual report in respect of the joint renewal of the European Diploma of protected areas of 6 July 2011.

3. Promoting high-quality nature tourism

Aware of the necessity of sharing ideas on protecting and building greater public awareness of the landscape, natural and cultural heritage of the two massifs, the Vanoise and Gran Paradiso national parks agreed to improve visitor information and reception. Three strategies for attaining this objective have been identified:

3.1.- Each visitor centre and information point must be able to provide visitors with information on the features of either park.

A core of activities linked to nature tourism could be envisaged as part of the annual events programmes.

3.2.- Specific information on the regulatory aspects shall be drawn up and adapted for publication in various forms.

The two parks shall seek to harmonise their rules and consider a bilingual shared code of conduct.

The directors of the two parks may take any initiative to propose joint communication and to study possible means of aligning legislation.

3.3.- The two parks approve the principle of an initiative to devise a joint strategic plan for visitor facilities.

In particular, they shall seek, in conjunction with the local authorities and local tourism structures, to network their visitor centres, their information points, their thematic exhibitions and their discovery trails. They shall work together to develop communication hinging on the unity of the protected area and bilingual common documents.

Management and supervision

A steering committee shall be set up with the task of monitoring implementation of the present convention and shall meet at least once a year.

It shall comprise the chairs of the executive boards or administrators designated for this purpose, one administrator of each board and the directors or their representatives. They may coopt thematic project managers as and when necessary and any individual deemed capable of providing useful input.

This committee, to be chaired on an alternating basis by representatives of one or the other park, shall carry out the following tasks in particular:

- act as the secretariat for the agreement,
- determine the actions to be undertaken each year under a pluriannual programme based *inter alia* on preparatory work carried out by the managers of the initiatives concerned,
- prepare the execution of decisions,
- have matters of common interest, presented in the same terms, raised before the executive boards of the two parks.

Each year, the parks shall present, in the same form, a report assessing the actions carried out, a provisional programme of actions to be undertaken and the budget proposed for them. The annual report assessing the actions carried out shall be used as a basis for drawing up the joint annual report for the Council of Europe.

A plenary meeting of project managers shall be held at least once a year so that they can jointly present the results of their shared activities and, where applicable, propose that activities be continued, redeployed or discontinued the following year.

The material produced within the framework of the present agreement shall comply with the rules governing graphics and signage and be subject to the copyright of each establishment.

The present agreement is established for a period of one year and subject to tacit annual renewal until terminated by one of the parties by letter sent to the other party, with such termination taking effect on 31 December of the current exercise.

The directors of each park shall be responsible for the implementation of the agreement and may take any useful measures to amicably resolve disputes that may arise, including via arbitration.

Signed in on

President of the Gran Paradiso National Park

President of the Vanoise National Park

Director of the Gran Paradiso National Park

Director of the Vanoise National Park

Appendix 2:**List of long-term and one-off research programmes over the last decade****Long-term monitoring programmes:**

Institute concerned	Subject	Vanoise Park (PNV) support	Period
Geolab-CNRS (French National Scientific Research Centre)	Monitoring of Alpine Sea Holly in Pralognan	- logistical support - financial support €1,267	< 1994
Glaciology and Environmental Geophysics Laboratory (LGGE), Grenoble	Monitoring of the mass balance of the Gébroulaz glacier	- occasional logistical support - financial support €1,000	Since 2003
Biometry and Evolutionary Biology Laboratory (LBBE), Lyon	Sociality and population dynamics in the Alpine Marmot in the context of global changes	Logistical support in the context of framework and occupation agreements with the Santel chalet	Since 1990

One-off programmes:

NB: Programmes which called only for authorisation for the collection of specimens or samples without the logistical or financial support of the park are not presented here.

Institute concerned	Subject	Support requested	Dates
Fishing federation - Fédération de Pêche 73	Thesis by Bertrand Loheac “Peuplements piscicoles des lacs d'altitude: Expression d'une naturalisation et implications pour les écosystèmes lacustres et leurs structures trophiques” (Fish populations in mountain lakes: a reflection of naturalisation and implications for lake ecosystems and their trophic structures) - part of the multi-partner Sentinel Lakes programme	- Logistical support and partnership	2013 – completed in 2018
IRSTEA (French National Institute of Research on Science and Technology for the Environment and Agriculture)	AlpGrain INTERREG project on the establishment of a local seed production chain to promote diversification of agricultural income	- project partner; on-site testing	2013
Carrel (Alpine Centre for Research on Trophic Networks and Limnic Ecosystems)	Thesis by Julie TOURY “Impact du changement global sur le fonctionnement écologique et les communautés végétales, dans les lacs de montagne” (Impact of global change on ecological functioning and plant communities in mountain lakes)	- Logistical and financial support	2013-2016
MNHN (French National Natural History Museum)	Assessment of the state of conservation of populations of <i>Linnaea borealis</i> (Twinflower) in the Vanoise National Park	- Logistical and financial support	2015
EDYTEM (Mountain Environment, Dynamics and Territories Laboratory)	Knowledge about the history of the built heritage in the park core: the contribution of tree-ring dating.	- Logistical and financial support	2015
LECA (Alpine Ecology Laboratory)	Thesis by Monica Cecilia Corona Lozada on the application of remote sensing to the study of the impact of climate and pastoral management on plant phenology and the productivity of Sentinel Pastures in the Vanoise National Park		2015-2018
EDYTEM	The glaciers of the Vanoise – geological heritage under threat?	- Logistical and financial support	2016

Institute concerned	Subject	Support requested	Dates
Irstea	Thesis by Etienne Boncourt “Quantifier la perméabilité des domaines skiables pour la Grenouille rousse (<i>Rana temporaria</i>): une approche combinant suivi GPS et génétique du paysage” (Quantifying the permeability of ski areas for the Common Frog (<i>Rana temporaria</i>): an approach combining GPS tracking and landscape genetics)	- Logistical and financial support	2016-2019
PACTE (social sciences research centre), Grenoble	“Trajectories” project (https://trajectories.univ-grenoble-alpes.fr/)	- PNV contribution	2016-2021
HEPIA (College of Landscape, Engineering and Architecture, Geneva)	Characterisation of the riparian forest of the Tarentaise	- Logistical and financial support	2016
CEFE (Functional and Evolutionary Ecology Centre, University of Montpellier)	Thesis by William Perrin “Influence de la pression pastorale sur l'écologie des communautés de coléoptères coprophages et leurs rôles fonctionnels associés. Implications pour la gestion des espaces naturels” (Influence of grazing pressure on the ecology of coprophagic beetles and their related functional roles. Implications for the management of natural habitats)	- logistical support PNV	2015-2019
CBNA (Alpine National Botanical Conservatory)	ROCVEG Programme	- logistical support PNV	2018-2021
LECA	Thesis by Camille Martinez-Almoyna “Structure, dynamic and functioning of multi-trophic meta-communities – spatial and environmental effects”	Logistical support for the collection of arthropods on the Orchamp transect	Since 2018
EDYTEM	Description of the soils of the Vanoise's Orchamp transect	- logistical support - financial support €1,680 (additional Zone Atelier Alpes (ZAA) funding)	2018
Irstea Grenoble	Establishment of transect sampling lines on the Saut Mountain as part of the Sentinel Pastures programme	- logistical support, participation in collection, supply of markers ZAA funding	2019
INRAE (formerly Irstea)	Thesis by Simon Meynier “Evaluer la santé des écosystèmes à l'heure des modifications du climat : apports d'une modélisation des relations sol-plante (réseau des éboulis froids de la Zone Atelier Alpes)” (Assessing the health of ecosystems during a time of climate change: contribution of modelling soil and plant interactions (cold scree slope networks of the Zone Atelier Alpes))	Financial support	Since 2017
Irstea	Thesis by Juliette Becquet “Impact de l'altération hydrologique sur les écosystèmes aquatiques de montagne dans les Alpes françaises” (Impact of hydrological changes on aquatic ecosystems in the French Alps)	Logistical support	Since 2019
Carrtel	Rapid diagnosis of the ecological state of mountain lakes (DEELA)	- logistical support - financial support €1,000, in addition to Savoie Mont Blanc University funding	Since 2019
Carrtel	Study of the soil on a mountain ridge site above the Plan du Cheval (Sassièr Nature Reserve)	- logistical support - financial support €580	2019-2020
LCME (Molecular Chemistry and Environment Laboratory) and	“Plastilac 2”: Microplastics and mountain lakes Coupled with the thesis by Julia Dusaucy “Transferts et Impacts des Microplastiques dans les lacs alpins” (Transfer and impact of microplastics in mountain lakes)	- logistical support and financial support €1,278 Joint funding from the ZAA + Caisse d'Epargne	Since 2020

Institute concerned	Subject	Support requested	Dates
AQUALTI		bank foundation Authorisation to collect samples and specimens	
Irstea Grenoble	Thesis by Sylvain Mollier “Connaissance et conservation de la biodiversité des forêts anciennes dans les espaces protégés de montagne” (Knowledge about and preservation of the biodiversity of ancient forests in protected mountain areas)	Contribution by the project manager	Since 2019
CESBIO (Centre for Space Studies on the Biosphere, Toulouse) + EVS-ISTHME (Environment, Town and Society, St.-Étienne) and CBNA	Probabilistic mapping of the wild mountain habitats in the Vanoise National Park (CarHAB Programme)	- financial support €1,320 - supply of data, logistical support, assistance	Since 2019
CEFE	Contribution of the study on coprophagic beetles to the assessment of the state of preservation of Alpine pasture habitats (inter-park project funded by the French Biodiversity Agency, AFB)	Logistical support: choice of sites, setting of traps, collection of insects	Since 2019
CEFE CNRS	Genetic monitoring of the Mountain Hare on a large spatial and temporal scale (presence/absence)	Part of the AFB-CEFE agreement to provide methodological and statistical support for national parks	Since 2019
Vulture Conservation Foundation (VCF) – CEFE CNRS	Satellite monitoring of the Bearded Vulture in the Vanoise	Partnership between park managers and university academics	Since 2019
CEFE CNRS	Adaptive monitoring of the Golden Eagle in French national parks	Part of the CEMEB call for projects in 2017	Since 2018
CEFE CNRS	GDR_ECOSTAT	Financial support €500	2020
EDYTEM	Recreational pursuits in protected areas (national park core and nature reserves) and interaction with mountain wildlife: training course in sociology including ethnographic immersion and continuation of Léna Gruas's thesis	- choice of the area for joint study - logistical support - participation in Léna Gruas's thesis committee	Since 2019
EDYTEM	MEMOMINES: Records of mines and mining heritage – mining districts of Peisey - Nancroix and La Plagne (Savoie), coupled with Floriane Guillevic's thesis	Letter of support 2019 and 2020	Since 2019
LECA	“Trajectoires et fonctionnalités Pastorales des milieux ouverts d'altitude” (TOP) (Pastoral trajectories and functionalities in open mountain areas)	Letter of support in 2019	Since 2020
University of Texas at Austin	Thesis on “Alpine ecosystems and deglaciation in the Tropical Andes and French Alps”	Logistical support and authorisation to take samples and specimens Letter of support when the project was submitted	Since 2019
University Grenoble-Alpes (UGA)	Study on charcoal kilns in the Orgère forest	Logistical support	2020-2021
GEOLAB LECA	Recent geomorphological changes in Alpine habitats occupied by <i>Trifolium saxatile</i>	Logistical support for the thesis currently being prepared	Since 2020

Scientific publications

In the context of efforts to improve knowledge about less-studied groups, it is worth noting the publication of articles describing the discovery of species of bryophyte in the Vanoise National Park:

BONTE F., BOUDIER P. & DELAHAYE T., 2017 – Additions and complements to the bryoflora of the Vanoise massif (Savoie, France) – *Botanique*, n° 2 – pp. 3-12.

BONTE F., BOUDIER P. & DELAHAYE T., 2019 – Contribution to the bryoflora of the French Alps – *Botanique*, n° 5 – pp. 109-126.

BONTE F., BOUDIER P. & DELAHAYE T., 2020 – Discovery in France of *Scapania carinthépatiqueiaca*, a liverwort included in the lists of the European Directive on habitats, flora and fauna; discovery in the Alps of *Tritomaria laxa* and further observations of *Encalypta spathulata*, *Fuscocephaloziopsis leucantha*, *Gymnomitrion adustum* and *Marsupella boeckii* – *Bulletin de la Société Botanique du Centre-Ouest*, new series, volume 51 – pp. 62-71.