



# TOWARDS SUSTAINABLE TOURISM

AVORIAZ REMAINS COMMITTED TO  
SUSTAINABLE DEVELOPMENT ON A DAILY  
BASIS.

DISCOVER ALL ITS ACTIONS

# SUMMARY

## SUSTAINABLE REGIONAL DEVELOPMENT

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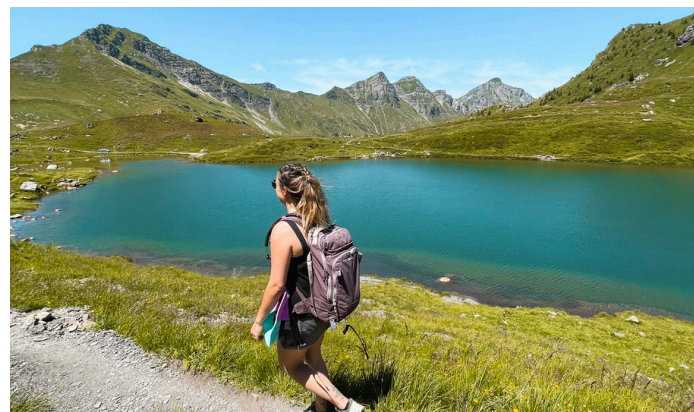
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# SUSTAINABLE REGIONAL DEVELOPMENT

## ECO-RESPONSIBLE HOUSING

**THE RESORT'S ENTIRE ARCHITECTURE HAS BEEN ECO-DESIGNED FROM THE OUTSET**

Situated on a plateau, Avoriaz has the advantage of being exposed to the sun rather than buried in a valley. The architects therefore built on this advantage.

To avoid over-consumption of energy, 95% of apartments are south-facing, with curvilinear windows facing north, depending on the sun. Shutters are forbidden, so that solar gain heats the apartments naturally, even when they are unoccupied.

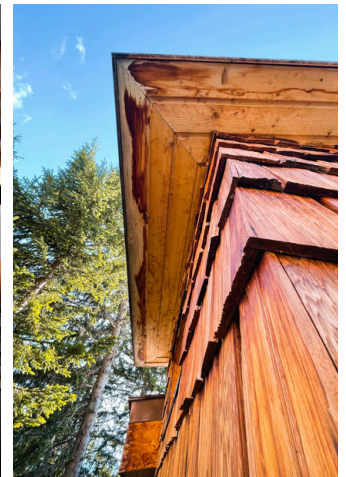
→ Double roofs, also known as "insulating snow doors", improve building insulation. Balconies are uncoupled to avoid thermal bridges and external insulation.

→ All our residences are built with untreated red cedar and larch. These natural, chemical-free species allow the wood to change color according to its exposure to sunlight and humidity. The residences will therefore take on different tones to blend in with their surroundings.

→ The buildings, unique in their silhouette and massing, are set in the curves and volumes of the natural relief.



*Avoriaz's architecture is mimetic and organic*



## SUSTAINABLE DEVELOPMENT

The new buildings comply with HQE (high environmental quality) standards, while the old ones have been renovated to make them more energy-efficient (radiators, door frames, etc.). Energy-efficient lighting has been installed in all buildings. All Avoriaz buildings are clad in untreated wood, which is recycled by the resort's boiler room during renovations.

→ An eco-responsible architecture charter has been set up and must be respected for all renovations and constructions.

→ Pierre&Vacances has 2 districts of tourist residences that are fully BBC (Bâtiment Basse Consommation - Effinergie) certified, with a consumption level of around 70 kwh/m2/year, i.e. 44% below the requirements of thermal regulations.

3 residences (Atria - Crozats - Electra) have also held the Clef verte label since 2016, the leading international label for environmentally-friendly tourist accommodation.

ATTENTION  
AUX CHEVRES



## BIODIVERSITY / NATURAL AREAS

### ENHANCING BIODIVERSITY

The region has been awarded the UNESCO World Geopark label (protected geological site).

- ➔ It also boasts a Natura 2000 area and several wetlands.  
The identity of the Chablais has been shaped over thousands of years. This exceptional geological, cultural and human heritage has earned the region UNESCO recognition as a Global Geopark.
- ➔ Each territory bearing the UNESCO World Geopark label is committed to sustainable development in favor of local populations.
- ➔ Promote the Séraussaix farm and the Ardoisières goat farm (located on the Gouilles rouge mountain pasture in summer) through the guidebook.
- ➔ The resort's ski lifts have been fitted with cable "visualizers", and electrical cables are buried to protect wildlife, particularly birds. The various works are carried out according to the nesting periods of rare or protected species.

### BIODIVERSITY PROTECTION

- ➔ Agricultural areas: traditional pastoral activity is actively preserved (less harmful, less polluting and more sustainable) with a grazing plan that enables shepherds to optimize grazing areas and respect available grassland resources and the preservation of avifauna. Several herds of cows, goats and sheep graze on the estate from June to October.

Documentation is available at the tourist office, and signs have been put up in various areas to explain the benefits of pastoralism and the steps to take.

- ➔ Area protection of Black Grouse :  
3 nesting areas on the resort. Black Grouse nesting areas and forest replanting zones are marked on our piste maps and on site, to warn skiers and hikers of the dangers.

15 hectares of the ski area are closed to skiers and reserved for the protection of Black Grouse.

- ➔ Preservation of natural areas and rehabilitation of wetlands: 14 forest replanting zones on the estate  
46 tree protection devices installed in the Stash snowpark
- ➔ Environmental impact studies are carried out in consultation with the Office National des Forêts, the Fédération Française de Chasse and mountain pasture associations.
- ➔ All earthworks and runways are reseeded with seeds adapted to local conditions.
- ➔ Since 2018, Serma (the ski lift company) has set up a fauna and flora observatory to:
  - > Survey and monitor species
  - > Identify sectors at risk
  - > Draw up action plans accordingly.

# USER AWARENESS

## ECO-GESTURE AWARENESS

### GO MORZINE AVORIAZ APP

Since its conception 60 years ago, the resort has been 100% pedestrian. Horse-drawn sleighs provide the local cab service. Mobility is therefore a particularly important issue. Avoriaz is constantly working to preserve this particularity and is looking for gentler solutions.

But it's not enough to be virtuous in the resort.

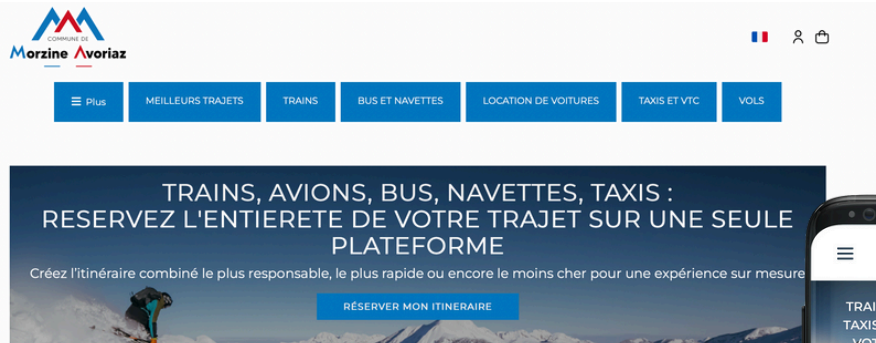
Half of our vacationers come from all over France, and the other half from part of Europe. So it's important to extend our thinking on mobility to include access to our destination, bearing in mind that more than 50% of the carbon emissions of a mountain holiday are due to the journey.

On the Go-Morzine-Avoriaz platform, travelers can visualize the different ways of getting to the resort: the fastest, the cheapest and the least carbon-intensive.

To encourage our guests to choose the most environmentally-friendly version, we have introduced discounts for those who make this choice: aqua park, activities, etc.

We're working on extending these price advantages to ski passes, equipment rental, etc., to create a strong incentive with a complete network of partners.

The other objective of this solution is to facilitate access to our destination. Holidaymakers will be able to plan, book and pay for their trip in one go from anywhere in the world, and choose the least carbon-intensive solution.



**THE CARBON FOOTPRINT  
OF A DAY ON THE SLOPES**

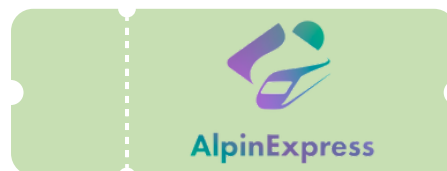
## ALPINE EXPRESS PASS

Launched in 2022, the aim of this initiative is to reduce the carbon emissions of holidaymakers in Avoriaz. The initiative is spearheaded by the Montagne Verte association, based in Morzine.

Several players in the resort are joining forces to offer discounts to visitors who come to the Alps by train.

Discounted activities :

Aquariaz / Climbing bouldering room / Squash / Trampolines / Bouncy castle / Golf practice + Golf (course) / Mini golf / Tennis + padel



In 2023, Morzine and Avoriaz won a green award for the implementation of the AlpinExpress pass by the Mindshake agency.



## ECO-RESPONSIBLE CHARTER

Implementation of an eco-responsible charter for all events (Ecocup / local and seasonal caterer / 0 confetti / ...).

Example: Avoriaz and Morzine co-organize the Trail des Hauts Forts. Every year, this mountain race linking Morzine to Avoriaz seeks to reduce its environmental impact:

- > refreshments are made from local produce
- > they work mainly with service providers and suppliers from the Haute-Savoie department
- > they respect the environment with reusable signage

## PARTNERSHIP WITH TREE BOX

As part of an eco-design approach, Tree Box, a company based in Haute-Savoie, has designed and manufactured a whole range of 100% recyclable cardboard boxes, made 100% in France and "locally". The aim of these boxes is to give waste a second life.

Thanks to a lump-sum system, waste collection boxes are set up in the workplace, facilitating recycling and avoiding incineration.

This waste becomes a raw material that can be used in industry, construction and agriculture.

Avoriaz uses this system at the Tourist Office and at its events.

We would like to extend this approach to the recycling of coffee grounds in restaurants.



## OTHER ACTIONS

### → Blog articles

Articles have been written to raise awareness and show holidaymakers how to do the right thing.

### → Avoriaz undertakes to measure air quality and publish it on the website => transparent customer information

### → The Tourist Office has set up an EFFICEO satisfaction survey and passes on visitors' requests to economic players.

### → The Tourist Office is committed to responsible purchasing, eco-designed and of French origin.

### → Waste sorting awareness day: every year in June, the resort organizes a waste collection event open to all. It's an opportunity to exchange and share ideas through awareness-raising workshops.



@YAMBI\_CLEANING

### → Setting up a shared library and free coworking space in the Tourist Office

### → Stop leaving cigarette butts on the ground: washable, reusable and recyclable pocket ashtrays are available for smokers to use at the lift ticket offices, free of charge, so that cigarette butts and other small items of garbage are no longer strewn across our natural spaces.

### → Ski recycling operation: set up with the resort's sports stores and Morzine town hall. Skis and snowboards were recycled for the resort's signage.



→ SERMA donates €1 per hands-free card sold to fund social and environmental projects. Submit ideas that meet one of the priorities we have set for our territory:

- Preserving our natural resources
- Reducing our impact
- Promoting mountain life

If your idea is approved by our selection committee, we'll put it into practice. Find out more about how to take part and the projects funded on the website [www.skipass-avoriaz.com/RSE](http://www.skipass-avoriaz.com/RSE)

→ In order to raise awareness among visitors about the ski area, the ski lift company has taken the initiative to remove trash bins from its slopes and educate its customers through a campaign called "No Waste on Our Slopes."

"→ Because we believe that the same backpack that carried your picnic or the pocket that held your snack can also hold your wrappers until you return home or to the resort (where we have our recycling bins).

→ Because we also think that trash bins in the middle of the mountains are a bit unnatural.

→ And to help smokers properly dispose of their cigarette butts, we offer pocket ashtrays upon request at the ticket counter."

For a responsible communication approach, this campaign was executed using FSC-certified wood through direct printing (sourced locally) using water-based latex ink. The execution was carried out in collaboration with their partner, Imprim' Vert (a green printing certification).

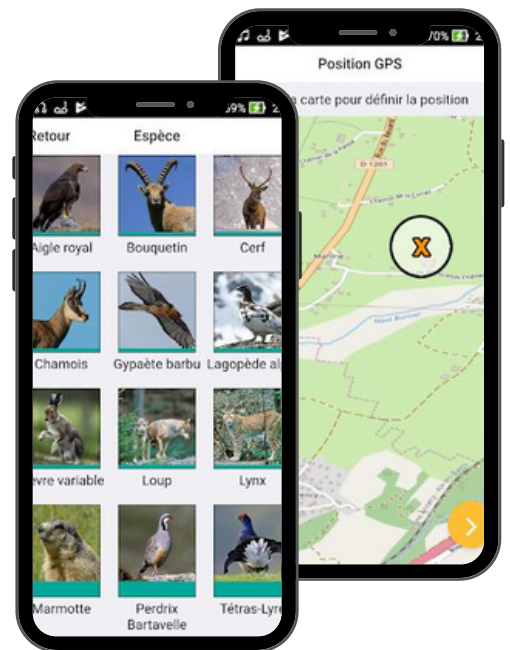
This campaign has been well-received and implemented by our clients.



➔ Development of a mobile application: Locafaune, to enable everyone to take a census of local wildlife.

➔ Winter 2022/2023: hosting the Energy Observer trade show. The aim of this event was to highlight as many low-carbon applications as possible in the mountain world, to put in place concrete solutions for the energy transition and to discover the clean mobility of tomorrow thanks to hydrogen. The show welcomed 5,000 visitors.

Available on Google Play and App Store



# TOURIST ACTIVITIES

## RESPONSIBLE PURCHASING

### TOURIST OFFICE

#### → Aquariaz

Insulation of all piping = thermal insulation = 15 K€ energy savings per year

10 K€ wastewater heat recovery = heating = 10 K€ savings

15 to 20 K€ heat recovery recycling renewal

Reduced set point when Aquariaz is closed = 5 months / year at 15°C instead of 25°C before, vs 30°C in operation = costing to come = choice of plants adapted to these new constraints

Discontinuation of UV lighting at night and transfer of lighting to daytime. Plants therefore have a "natural" day/night cycle. and -35% division of lighting periods

Switch to LEDs for all Aquariaz lighting = savings

Total savings in 1 year: around 1/3 less electricity bill.

### SKI AREA

The SERMA (Société d'Exploitation des Remontées Mécaniques d'Avoriaz) has been working for many years to preserve the DNA of the resort, a pioneer in environmental protection.

#### → Ski lifts have invested in photovoltaic panels to make their infrastructure more self-sufficient.

> 15 to 30% of a chairlift's annual consumption is saved

#### → To reduce their energy consumption, they are investing in more energy-efficient appliances.

#### → 70% of suppliers are based in Haute-Savoie or in the Limotrophe département, and 85% in France.

### STATION-WIDE

#### → The renewal of snowmobiles must be electric: today we have 15 electric snowmobiles compared with 0 in 2017 for a total of 60 snowmobiles.

#### → Reasonable use of salt on the roads in winter (efficient weather service to forecast salting periods) and no herbicides or pesticides are used to maintain flowers and flowerbeds.

## CULTURAL OFFERING

### CULTURAL HERITAGE

#### → Open-air museum - MAD

The station offers walkers an application recounting the history of the station and its architecture.

The tour will include 6 points of interest.  
Panels can be flashed in any order. Two tour options are available when the application opens: an adult tour and a more fun family tour with riddles and games. The routes are available in French and English.

➔ Cinema

For the past 2 years, the Avoriaz cinema has been offering 500 seats for children under 12.

ACCESSIBLE TOURISM

HANDITOURISM

➔ 3 ski sleds for people with reduced mobility were purchased in 2022.  
Adaptable to all types of 4-wheel manual wheelchairs. Free sled rentals.

Available on Google Play and App Store



ADAPTED SPORTS ACTIVITIES

➔ Info on this page :  
<https://www.avoriaz.com/sejourner/infos-pratiques/tourisme-et-handicap/>



## WINTER MOBILITY

Since its conception 60 years ago, the resort has been 100% pedestrian.

→ Horse-drawn sledges provide the local cab service.

Mobility is therefore a particularly important issue. Avoriaz is constantly working to preserve this particularity.

The use of snowmobiles by resort professionals is strictly controlled. Their number is strictly limited, and all new snowmobiles will be required to be electric by 2020.

→ The tourist office is also focusing on soft mobility with 2 electric snowmobiles for daily activities in Avoriaz in winter. Mountain e-park and the Swiss brand Quantya are the only developers of these electric snowmobiles and are testing them at Avoriaz.

The resort has 8 charging stations for electric cars (in the covered parking lot, at the resort reception).

→ The commune of Morzine-Avoriaz has chosen to rely on bus transport to limit the impact of private cars in the valley. This free network not only provides access to the various ski areas (Morzine, Avoriaz, Montriond...), but also enables year-round residents to get around easily.

→ Use of electric vehicles at the Tourist Office: 2 winter snowmobiles + company car



## SUMMER MOBILITY

The resort is also pedestrianized during the summer season.

→ The resort has replaced the little train with 2 horse-drawn carriages, each with 10 seats and electric assistance.



## ENVIRONMENT

# RESOURCES

### ENERGY

#### DUAL-ENERGY NETWORK

Since 2011, a centralized dual-energy wood/electricity boiler room has been supplying a heating network to provide heating and domestic hot water for 11 new residences and the Aquariaz, a 4,000-bed resort.

Located at an altitude of 1,820 meters, the 2,000 kW wood-fired boiler is fuelled by wood pellets, with electricity providing back-up power during periods of intense cold.

#### PHOTOVOLTAIC PANELS

- ➔ Since 2020, the Avoriaz ski lift company (SERMA) has invested annually in photovoltaics, with the installation of 42m<sup>2</sup> of panels on the Proclou chairlift station and a solar tracker in 2020, followed by the installation of 16 panels on the Chaux-Fleurie chairlift station in 2020
- ➔ In 2023, SERMA will increase its renewable energy production capacity by a factor of 5, with the installation of 191 photovoltaic modules on roofs and facades, for an additional surface area of 360m<sup>2</sup> to the office ! The estimated production of 63,600 kWh/year will be used to meet the building's energy needs, saving 36T CO<sub>2</sub> equivalent.



100% of the electricity produced is consumed either directly by the chairlifts, if they are in operation, or by another installation connected to the same distribution substation.

Production is much lower than required for the operation of the equipment, but no chairlift to date can be self-sufficient with rooftop photovoltaic production.

Annual production of around 6,000 kWh per unit.

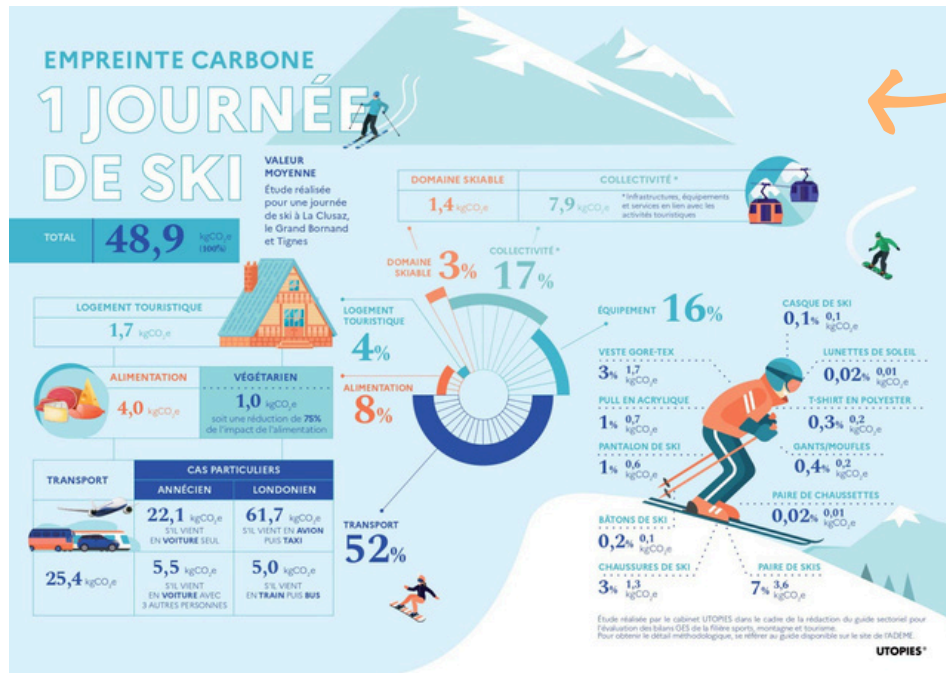
## ➔ Project 2023-2024:

- > SERMA's new offices will be equipped with solar panels to cover the building's energy needs.
- > Carry out a carbon assessment of the resort with UTOPIES.

UTOPIES' work aims to establish the destination's carbon footprint, and to implement a mitigation strategy to reduce emissions and achieve a positive trajectory, in line with the legal framework for general decarbonization defined by the State.

The second phase of the study would focus on prospective work, to define the necessary adaptations to our destinations in order to remain attractive and viable. We have asked them to work on an optional and complementary offer along these lines.

## THE CARBON FOOTPRINT OF A DAY ON THE SLOPES



## WATER

### WATER MANAGEMENT

#### ➔ Aquariaz recycles its water:

Regulations for public pools require a minimum of 30 liters of fresh water per swimmer per day. This mandatory daily water renewal forces us to drain and dispose of clean and warm water to replace it with cold water from the drinking water supply network. Since 2022, Aquariaz has generally been draining 25m<sup>3</sup> of water per day. Instead of releasing this water into the sewage system, Aquariaz stores this water for a few hours in tanks to allow the chlorine to evaporate. The water will be perfectly clean for reuse. The aquatic center has also installed a heat recovery machine. This machine preheats the fresh water using the drained water. This innovative eco-responsible initiative helps preserve the water resource and prevent its wastage, while ensuring the proper functioning of the station's services. The water is collected and recycled for:

- > watering the golf course tees and greens. At Avoriaz, none of the fairways are watered, representing 85% of the golf course's total surface area.
- > watering the resort's green spaces and flower beds
- > Feeding the bike park's mountain bike washing stations, which record over 700,000 passages per year (Europe's No. 1 bike park).
- > Use of the ventriglisse (water slide).

Please note: the ventriglisse runs in a closed circuit, and the water required for its operation is also stored so that it doesn't have to be replenished every day.



Signs have been installed around the resort to inform and raise awareness among holidaymakers.

### ➔ Rainwater harvesting :

- > Aquariaz has installed tanks to recover 2,000 liters of water.
  - > the golf course has installed tanks to recover 4,000 liters of water
  - > resort services have installed tanks to recover 3000 liters of water.
- Total 10 k m2

### ➔ Other actions at the aquatic center:

- > storage of grey water (foot bath) from the pool in an 80m3 tank in the basement for filter cleaning and heat recovery

### ➔ From the ski area

How do they manage snow to save water?

- > Preserving as much natural snow as possible to produce the right amount of artificial snow,
- > Grassing the slopes to make the terrain more favorable for minimum snow cover,
- > Installing wooden snow fences to hold back the snow against the wind,
- > Using new technologies to measure the snowpack, better distribute snow volumes and rationalize the production of artificial snow.

**Objective: produce the right snow**

## WASTE

### ➔ Selective sorting: the commune, its residents and employees practice selective sorting thanks to a large-scale installation of 25 semi-underground containers. This is part of a new sorting policy designed to optimize waste recovery (waste can be a resource when it is properly sorted and then recovered).

All waste is sorted and processed through the appropriate channels.

The entire ski area is equipped with sorting garbage cans. The resort also has an on-site waste disposal center.

### ➔ Horse droppings are recycled and used to create a good fertilizer and improve summer seedlings on lawns, flower beds and ski slopes.

### ➔ Dematerialization of paper documents at the Tourist Office and ski lifts (no more production of paper brochures).

# SKI AREA

## LA SERMA

The ski area's operating company has ISO 9001 certification, and is committed to a continuous improvement process that includes compliance with environmental, safety and quality standards.

### → Reducing our carbon footprint:

- > All our snow groomer drivers have received eco-driving training, and all our snow groomers are equipped with "snowsat" software. This software enables the drivers to optimize their passage over the slopes (grooming plan) and thus reduce fuel consumption, and also gives the slope managers an accurate picture of the snowpack, so they know better where and how much snow to produce artificially.
- > Computerized monitoring of fuel consumption
- > Participation in alternative energy research project

### → Renewal of snowmobiles must be electric

### → Today, all ski lifts are equipped with a disengageable system that allows them to adapt their speed according to the number of passengers. This saves energy and reduces CO2 emissions.

### → In 2007, the ski resort was awarded ISO 14 001 certification, an international standard for sites that have implemented an environmental management system. As such, Avoriaz has distinguished itself for a number of innovative initiatives, and continues to do so.

### → In 2008, the resort created two ecological snowparks, the only ones of their kind in France: The Stash and Lil'Stash. Perched huts, gas barbecues, suspended walkways, slides, ropes, sculptures, games and a succession of snow and wood modules for all levels in the heart of the Proclou and Lindarets forests. All the modules have been made from wood salvaged during the clean-up of local forests by a local sculptor. These 2 areas are 100% natural and unique in France.

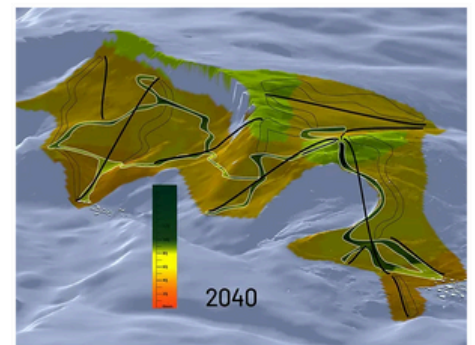
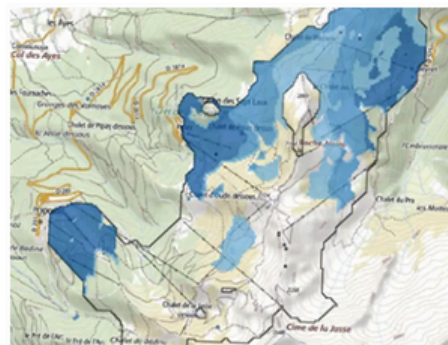
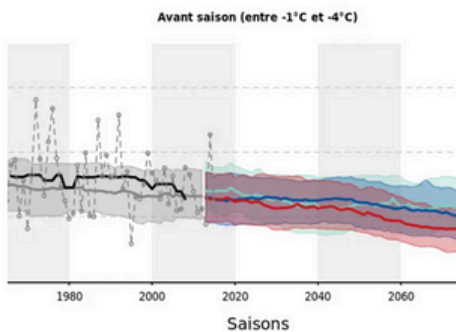
### → In April 2013, Avoriaz inaugurated a tri-cable gondola system: detachable gondolas that can be easily adapted to the number of passengers and the current level of traffic, thus reducing CO2 emissions.

### → 20% discount on winter day passes and reserved spaces for skiers with electric cars/ Blablacar

### → Energy optimization:

- > the downstream station of the Prodains cable car: installation of home automation to manage heating in the ticket office and customer waiting room. Allows temperature profiles to be programmed and setpoints to be managed remotely (thus eliminating night-time heating when the premises are unoccupied).
- > investment in more energy-efficient appliances
- > Reducing the speed of our lifts according to the number of visitors, with precise monitoring of our consumption.
- > Hiring of a work-study student to continue the work of reducing our consumption: our current work-study student has joined our team of electricians, and his successor will join us at the beginning of September to continue the work.
- > Heating the G1 staff quarters at TSD Cases: recovery of waste heat from the TSD motorization to heat the premises (to be implemented in April 2022, impact to be measured for next season).

- ➔ The Mairie has commissioned Clim Snow to carry out a study of the effects of climate change on snow conditions in 2022-2023. CLIMSNOW makes it possible to quantify, at various timescales, the reliability of snowmaking (natural groomed snow, with/without artificial snow), its variability and the capacity of each resort to maintain its operations, with what efforts and under what conditions. Using the information provided by CLIMSNOW, it is therefore possible to take account of the impact of climate change in forward-looking reflections on the development and transitions of mountain areas.



- Définition de nouvelles stratégies d'adaptation touristique et de diversification basées sur les projections nivo-météorologiques
- Le cas échéant, identification des choix d'investissement pertinents pour chaque secteur du domaine skiable
- Détermination de la rentabilité de nouveaux investissements (remontées mécaniques, réseau de neige de culture, etc.)

# LABELS

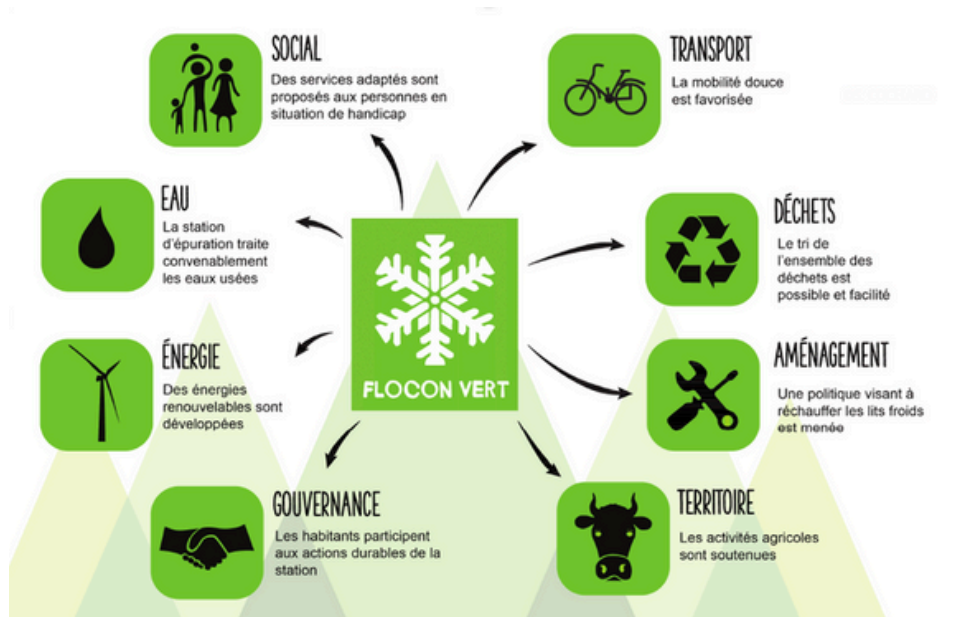
➔ Avoriaz wins the award for the most innovative ski resort in terms of sustainable development at the World Snow Awards, London 2012

➔ 2021: The Flocon Vert label is awarded to the resort, rewarding its good deeds and those to come. Flocon Vert is the label that guarantees the sustainable commitment of mountain tourist destinations through 21 criteria on 4 major themes: Governance & Destination; Local Economy; Social & Cultural; Natural Resources & Ecology.

While Avoriaz meets the mandatory criteria, the resort is aware that this process implies continuity and has identified areas for improvement.

Nevertheless, this label rewards the committed and shared efforts of all those working for a more sustainable world.

For further information, visit the Flocon Vert website.



➔ Pierre & Vacances has identified 2 quarters within their tourist residences that have received the BBC (Bâtiment Basse Consommation - Effinergie) label. These residences boast a consumption level of approximately 70 kWh/m<sup>2</sup>/year, which is 44% lower than the requirements set by thermal regulations.

Additionally, 3 residences (Atria - Crozats - Electra) have been awarded the Green Key label since 2016, the first international label for environmentally friendly tourist accommodations.