

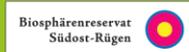
CEETO - D.T2.2.3 - ACTION PLAN

Output O.T2.1

Sustainable Tourism Action Plan

Naturpark Söltkäler (PP04)

Version 2
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1. Description of the Naturpark Sölk­täler

1.1. General information

Naturpark Sölk­täler is situated in the Lower Tauern massif. The whole park covers 28.800 ha and stretches out from 694 in valley Ennstal up to 2747 meters above sea level. Most of the mountains are extremely steep and not easy to cultivate. The forest line lays about approximately 1800 - 1900 m height. Lots of alpine meadows lower than this line bring a mosaic of different habitats in small spaces. These regions have the highest abundance of species. There are different rock materials, being the reason why there is so much biodiversity of vegetation. Through mainly old rocks a band of marble extends across the two valleys and enriches the vegetation. Distinguishing of the Naturpark Sölk­täler is the swampy landscape and the numerous lakes in the different altitudes.

There are two main parallel valleys. The eastern one has the pass, which leads to the southern regions of Tauern and the valley of Mur. The street is closed in winter; in summer lots of tourists use this possibility to cross the Alps. The former known "Säumerweg" was used to transport and exchange salt, wine and grain. The Sölkpass is one of the main reasons for the publicity of the Sölk valleys. The tourists are passing, see the beautiful landscape and the historic huts and stay for some hours.

Sölk is an Austrian municipality in the district of Liezen in Styria, which was created by the merger of the formerly independent municipalities Großsölk, Kleinsölk and Sankt Nikolai in the Sölk­tal valley within the framework of the Styrian structural reform of the municipality in 2015. The municipality Sölk is situated in the nature park Sölk­täler, which belongs to the five Styrian nature parks.

The Sölk­täler Nature Park is a special type of landscape within the diverse landscape forms of Styria. The confluence of the Großer and Kleiner Sölkbach streams in the "Strub" gorge south of Stein forms the northern end of the nature park. Over a wooded mountain ridge, the border stretches in a southeaster direction up to the 2226 m high Gumpeneck and from there over the ridges and peaks to the Sölkpass. This cut in the Tauern main ridge at 1788 m above sea level has connected the Ennstal with the Murtal since Roman times. The border runs then in western direction up to the Deichsel-Spitze, with 2684 m the highest summit of the nature park, and follows on about 8 km length the border to the federal state Salzburg. The western border is at the same time the municipal border of Kleinsölk with the 2575 m high Schareck and leads under the Hochwildstelle in northeaster direction over the Spateck to the Kochofen.

Largely surrounded by natural boundaries, this area is one of the most attractive parts of the Schladminger Tauern. Large parts are forested, extensive alpine pastures extend over higher regions, and the summit corridors begin at 1800 m. The area is covered by a large number of woods. Only the valleys are permanently inhabited. Numerous lakes and waterfalls are scattered all over the area and emphasize the unmistakable alpine character of the nature park.

Water is a formative landscape element of the Sölk­täler Nature Park. Schwarzensee is the largest of the 300 mountain lakes in the Schladminger Tauern. Starting from humid biotopes, from wet and mossy areas to dry, barren mats and summit corridors, there is also a diversity of flora and fauna. The wildlife richness makes the Sölk­täler a valuable hunting area. Roe deer and red deer are just as frequently represented as chamois; the alpine ibex was naturalized again. Black grouse and capercaillie can be found here and it is not unusual for the golden eagle to circle over the rugged ridges.

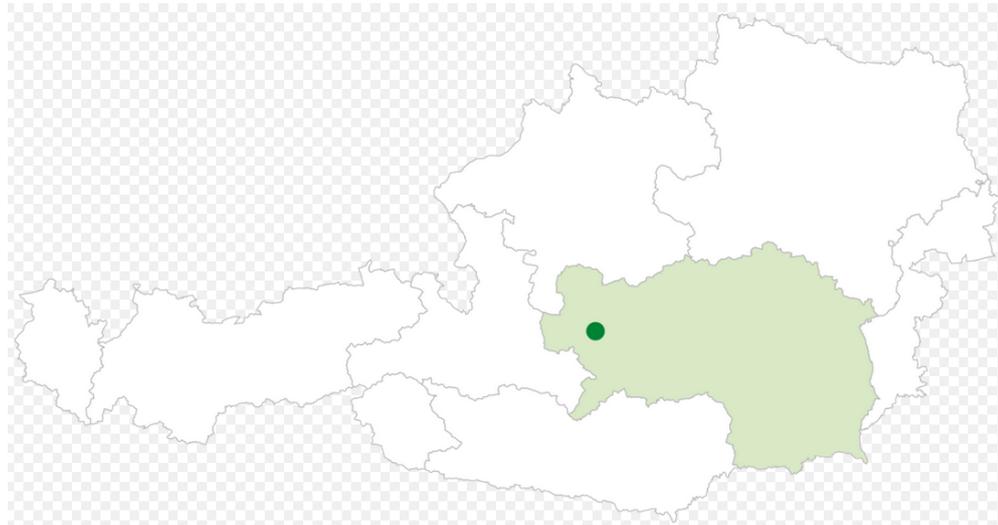


Figure 1: Map of Austria with marked Naturpark Sölktaier

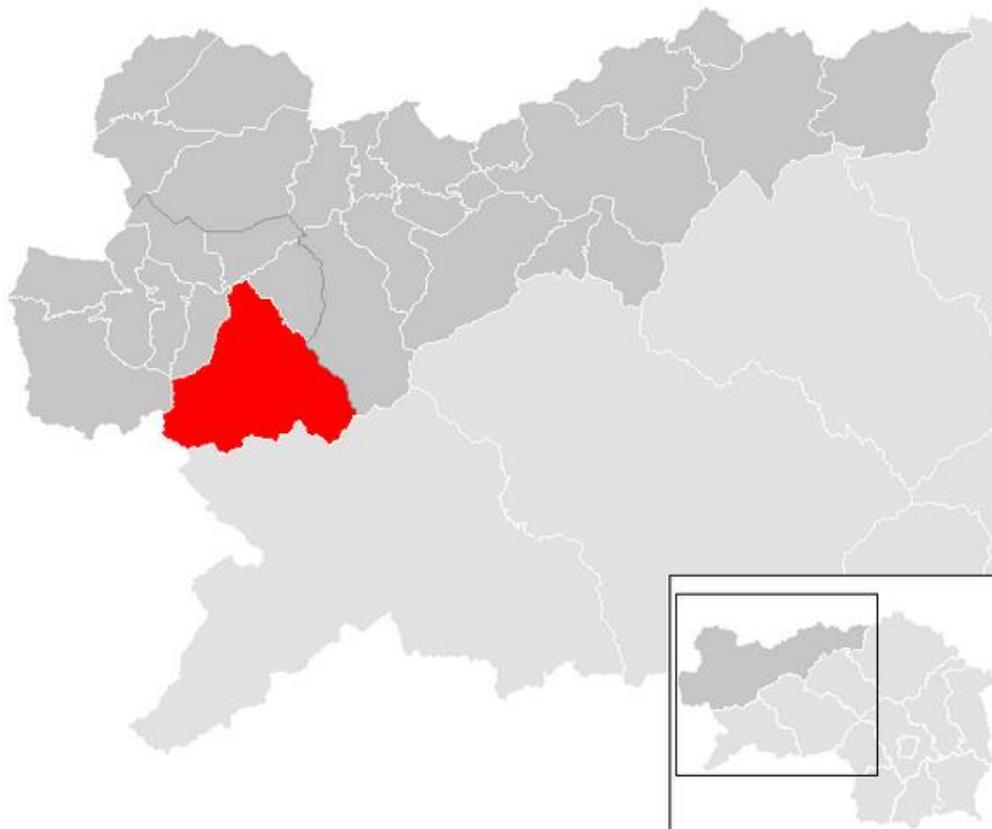


Figure 2: area of Naturpark Sölktaier (coloured in red) within the district Liezen



Sölkpass is the highest pass in the province of Styria with 1788m. Through the pass road the area around the Sölkpass is easily accessible. A specialty of this area is that you pass all habitats from farm houses, meadows and forests in the lower parts; up to alpine meadows and high alpine area on the top of the pass. The attractive landscape with mountain lakes, a wonderful plant world, special wildlife and great hiking destinations has a high attractiveness for hikers in summer. In winter this area offers several very nice backcountry skiing tours.

Because of the rough climate the farmers only manage their woods and have cattle and mostly sheep, which stay on the alpine meadows during summer. In the valleys there are no fields, only meadows. Most of them are merely harvested two times. The alpine meadows are reserved for cattle feeding. The current trend is that the alpine pastures are being abandoned. This is a result of rising costs of maintaining and connected measures. This trend is increased by climate change and rising timber line. The goal should be that the pastures do not become overgrown; otherwise the old cultural landscapes and its heritage are lost. In addition to this the return of the wolf faces another problem.

1.2 Flora and fauna

The Sölk­täler valleys offer largely untouched, natural landscape experiences. On the basis of natural history contributions, visitors to the Sölk­täler Nature Park will gain insights into the diversity of its flora and fauna.

The current distribution and appearance of alpine plant communities is, among other things, the result of almost twenty thousand years of varied development since the last glaciation. The bedrock is the source material for the composition of the soils and the plant species that thrive on them. The main difference in soil formation is between lime and silicate. Most of the northern part of Styria (north of the Ennsfurche of Enns-, Palten-Liesingtal and Mur-Mürz) belongs to the Northern Limestone Alps, which are also called "Steinberge" because of the shallowness of the soils and the mighty rock faces. The Central Alps, on the other hand, are mainly made up of silicate rocks, with deep soil formation and rather rounded summit shapes, and are contrasted by "Grasberge" - as here in the Sölk­täler Nature Park.

In the Central European mountain ranges, different vegetation zones adapted to the respective sea level can be identified. The most striking form of vegetation structuring is closely interlinked with the change in climatic conditions that occurs at elevated altitudes. With increasing altitude, the climate exerts increasing stress on the organisms, the living conditions become rougher. The temperature decreases with increasing sea level (by almost 1 °C per 100 m), the temperature contrasts also decrease; the amount of precipitation as well as the duration of the snow cover and the ground frost increase. The low air density and the associated absolute increase in direct radiation (especially short-wave UV radiation) is also associated with a change in light.

All this leads to a shortening of the vegetation period and a reduction of the growth force, which primarily affects the upright woody plants. Even within the forest stage, the deciduous trees are gradually replaced by evergreen conifers - they need more time to unfold their leaves -, then the growth heights decrease in the subalpine shrub stage and finally the disappearance of upright woody plants in the alpine lawn stage. In addition to the general shortening of the vegetation period, wind and frost dryness play an additional role in exposed areas. A rough overview of the vegetation levels in the nature park area is given in the altitude level scheme and the following explanations.

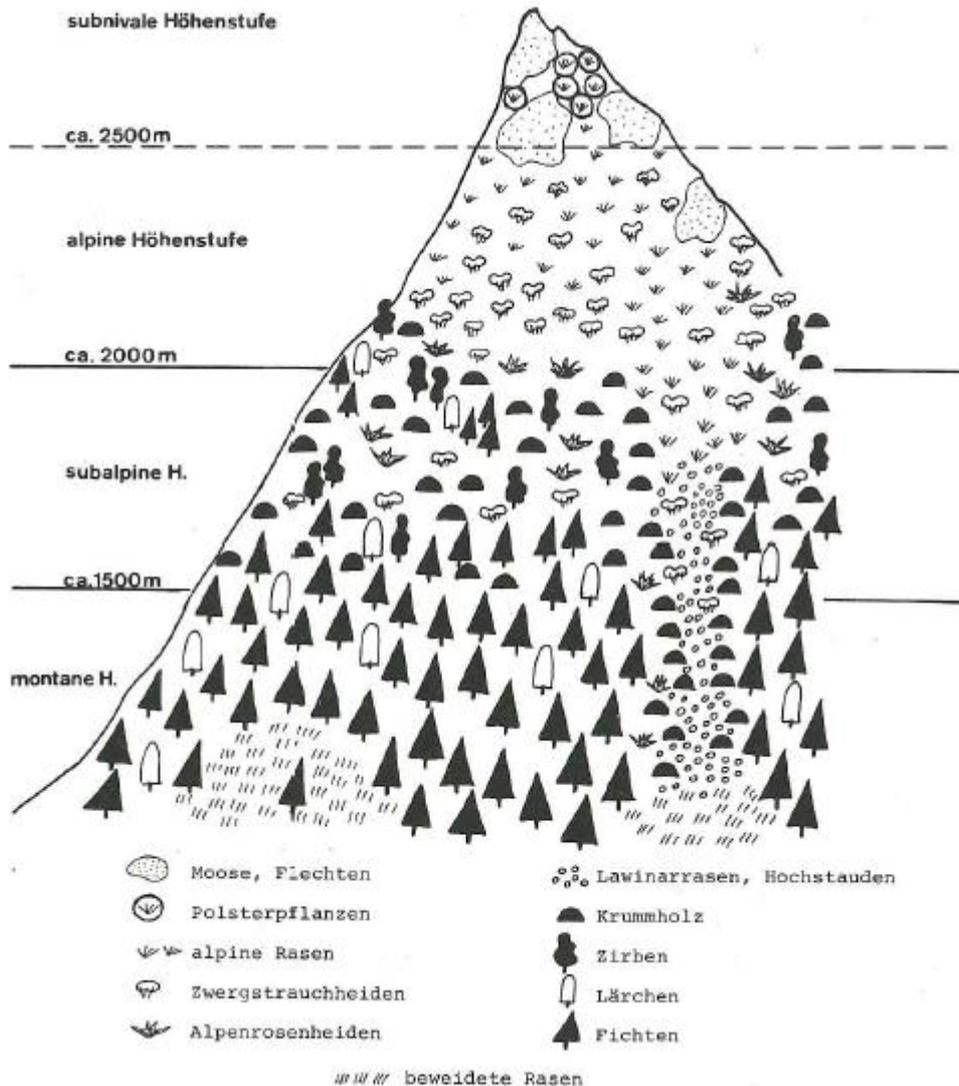


Figure 3: vegetation levels in the Naturpark Söltkäler/ altitude level scheme

The **montane altitude level** (mountain forest level, approx. 600 - 1500 m) is dominated by spruce forests, which are typical for the dry Central Alps. The bottom of the valley and the lower mountain slopes have been cleared in historical times, on the one hand for timber production and on the other hand for the creation of grassland for agricultural use. The remaining spruce forests are - as far as the terrain allows - used for forestry.

In the **subalpine altitudinal stage** (Kampfwald and crooked wood stage, approx. 1500 - 2000 m), loosened spruce forest dominates with more or less abundantly mixed larch and Swiss stone pine up to the boundary of the closed forest at approx. 1800 - 1900 m. The forest is covered by a forest of pine and spruce. Between the outposts of larch and Swiss stone pine groups - and in favourable snow conditions even above them - crooked wood settles from Legföhren (mountain pines) and Grünerlen (a kind of alders). Today's forest line is almost completely depressed by clearing for pasture (alpine pasture farming); in the nature park area this was only possible in a few places due to the steep



terrain. The transition from the forest stage to the treeless alpine region takes place on the deeper and therefore fully overgrown soils of the silicate Central Alps. However, the treeless alpine rose stands are not all naturally tree-free. At wind-exposed locations of the subalpine crooked wood stage, but also in the alpine lawn stage, the characteristic Gemsheide mats occur. On the other hand, snow valleys (hollows with very long snow cover and correspondingly special mossy plant cover) mediate to the alpine stage.

The **alpine altitudinal level** (dwarf shrub and grass heath level, about 2000 - 2500 m) is naturally treeless; closed lowland dwarf shrub heath is replaced by adjoining grass heath (alpine lawns), in which densely growing herbaceous plants (sweet and sour grasses; "Krummseggenrasen") predominate.

Above an altitude of 2500 m above sea level, over which only a few peaks in the nature park area rise, the lawns begin to increasingly dissolve. Bare rock faces and vegetation-hostile scree slopes appear. In this **subnival altitude step** (pioneer step, from approximately 2500 - 3000 m) cushion and trellis-forming plants appear, the vegetation cover is dissolved in single spots.

Since the substrate, which is very shallow at higher altitudes, is essentially hostile to colonisation, each plant individual is fighting a hard battle for survival. Nevertheless, these plants protect the already very sparse soil crumb from complete erosion.

These upper regions will be massively influenced by change of climate. The timber line and the natural vegetation levels will rise. A study about climate change in the whole region of Tauern shows that the alpine habitats will shrink in the next 20 years massively.

1.3 Geology

In the geological profile shown (see figure 4), an attempt is made to trace the rocks on the surface of the terrain to their depth (about 1500 - 2000 m), along a vertical cut at the Süßleiteck via the Große Knallstein to the Ennstal near Stein. The geological structure is particularly visible here: the deepest granitic rocks in the south, surrounded by gneisses, which themselves are overlaid by the hornblende-bearing rocks. Then follows the mighty package of mica schist, which contains two layers of marble north of the Kleinsölkthal. The Kleinsölk marble mine lies in the higher marble train. The Ennstal phyllite with its green schist interlayers clearly shows the steepness of the schist surfaces in the direction of Ennstal.

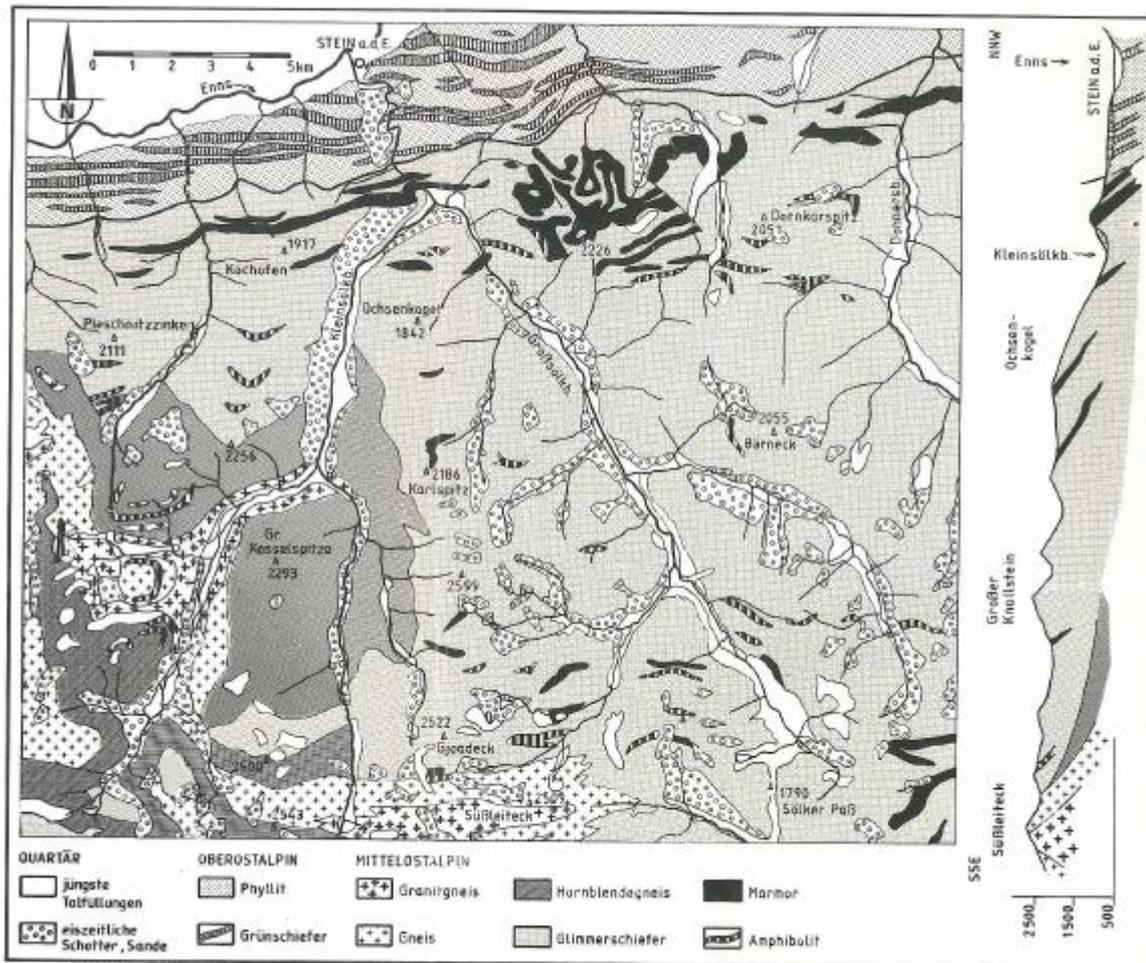


Figure 4: geological profile of Naturpark Söltkäler

The rocks of the Söltkäler and the adjacent ridge areas can look back on half a billion years of history. As far as the current use of mineral raw materials is concerned, only the Kleinsölk marble mine is to be mentioned in the hinterland of the Söltkäler. From the Sölker area only a few and very sparse ore deposits are to be mentioned, such as those from the Schwarzensee and Sagschneider in the rear Kleinsölkthal. Oxide iron ore was once mined in the upper Großsölkthal, near the Hansenalme close to St. Nikolai. Further iron ores were described from the area Großsölk and east of it, from the Sommereck.

1.4 Animal world of Naturpark Söltkäler

Numerous **red deer** (*Cervus elaphus*) live today in the Söltkäler, around the turn of the century, however, they were still extremely rare. At that time, the red deer stayed during the winter in the riparian forests of the Ennstal, where they could feed. Today, this is no longer possible due to the dense population. In winter, the large population has to be fed with hay, silage, potatoes and



concentrated feed. In summer the deer rise far above the forest line, where they find protein-rich food and are less tormented by flies and horseflies. During the rutting season, which begins in September, males join the packs of females and young animals.

In contrast to the stag, which was pushed into the forests by humans from the open steppe landscape, the **roe deer** (*Capreolus capreolus*) is at home in forest and bush. It lives in mother families and feeds selectively on herbs, buds and fruits. In spring and autumn, as well as in summer when the weather is bad, the shy deer leave the meadows for grazing, especially in the mornings and evenings. The rutting season already begins in July. Roebucks throw their antlers in October or November, the stag carries its however until February.

While red deer and roe deer retreat into the Alpine valleys, chamois and ibex are real mountain animals. The **ibex** (*Capra ibex*) had already disappeared from the Eastern Alps in the Middle Ages. Hunters and poachers particularly pursued it, since one produced remedies from many parts of its body. The **chamois** (*Rupicapra rupicapra*) lives on the alpine altitude level. Females, fawns and yearlings join together sociably to herds, and since the animals are day-active, the hiker sees them relatively frequently, especially since they know very well to distinguish the harmless vacation-guest from the hunter. In the winter, the skillful climbers and jumpers still find enough food on the blown-off ridges, only with particularly bad and stormy weather; they come down into the fight-zone of the forest. In the area of the nature park there are about 10% Kohlgams, a dark variety, which lacks the light stripes at the body.

Four types of grouse can be found in the nature park. The name derives from the feathered feet. They are predominantly ground-birds, who like to put back also wide distances on foot. With danger, however, also the heavy **capercaillie** (*Tetrao urogallus*) starts fast under loud rattling of the wings - the flight doesn't last long, though. This flying technique allows him to escape the enemy, but is only possible in light trees. These forests offer little food due to the sparse undergrowth; in the winter the capercaillie lives from needles, the chicks live from insects, however. The stock of capercaillie, a well-known grouse in the montane region, declined drastically in the last century, and even around 1920 hundreds of metallic-black-green feathered grouse were still on the slopes of the Söltkäl as far as Ennstal. In the following decades, however, the forests have changed so much that the capercaillie can only live in the protective forests of the alpine region. If we find the capercaillie in the northern part of the Söltkäl in the woods up to the forest line, the **black grouse** (*Lyrurus tetrix*) inhabits the "Kampfzone" of the forest. The hens of both types are very similar. Crossings, the so-called "Rakelhühner", were also observed in the area of the nature park. The **grouse** (*Lagopus mutus*) can be found above the forest line up to the summit region. Its feathers are snow-white in winter. In summer its black and brown feathers are completely adapted to the stony environment. Only the wings remain white; however, these remain hidden if the animal runs or rests. Finally, in the lower part of the forests, where the meadows are bordered by alders and hazel bushes, we find the brown-grey spotted **hazel grouse** (*Tetrastes bonasia*). At 36 cm, it is as tall as the ptarmigan and lives in pairs.

All four species are cited in the European Birds Directive (79/409/EEC) as endangered birds. In the natura 2000 area "Niedere Tauern", which includes all areas in the nature parc higher than 1.400 m, these birds have a status as special protected species. Because of their special requests to habitats they can be seen as umbrella species for these habitats (as old forests, alpine meadows with good structures and alpine rocky habitats). Therefore the Nature Parc has to preserve these old cultivated and natural landscapes and prevent them from intense overtourism.

1.5 Inhabitants and Tourist flows

The municipal boundaries of the Sölk are identical with the boundaries of the nature park, which is very sparsely populated. Approximately 1.500 inhabitants live in an area of 28.800 ha, which corresponds to a population density of 5.2%. Naturpark Söltkäler does not have much tourism, more daily tourism for hiking in summer (alpine pastures and huts, which often can be reached by car) and a little group of ski tour - tourists in winter. Additionally there is the castle “Großsölk”, the house of the Nature Park with a permanent herbage garden exhibition and another temporary exhibition. The castle is closed in winter. There are approximately 20.000 overnight stays during the whole year in the entire valley. This number is increasing lightly.

Sensitive use of the nature reserve area is therefore of great importance. With regard to visitor guidance, the hunting and landowner interests must be taken into account. In addition to the Sölkpass, the Schwarzensee in the Kleinsölk Valley is one of the tourist hotspots of the Söltkäler Nature Park in summer. Naturally responsible visitor guidance is also important here.

The big goal of the Naturpark Söltkäler is to increasingly focus on quality rather than quantity. Together with the inhabitants the special habitat, flora and fauna should be presented. The awareness of nature should be awaked and increased.



Figure 5:
Sölkpass

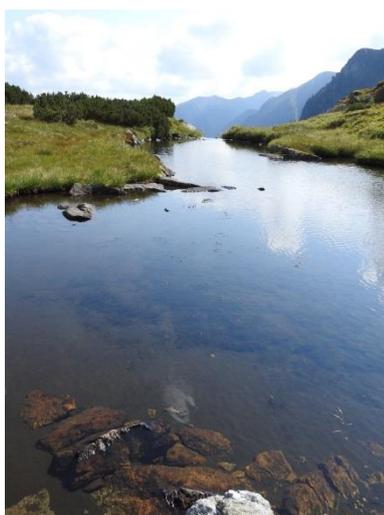


Figure 6:
Karlkirchen



Figure 7:
Eckkar

2. Strategy

The Naturpark Söltkäler has never implemented a tourism development strategy; the INTERREG CEETO project represents a general opportunity for the Park authority to meet with local operators to define the main objectives and actions.

The elaboration of the strategy and the action plan inevitably focuses, at this moment, on the implementation of the pilot actions foreseen in the CEETO project with the aim of continuing over



time the involvement of operators and tourists for the development of other actions aimed at the sustainable tourism development of the Naturpark Sölktaier.

The objectives and actions described in the following chapters have been developed within the CEETO project, though a participatory process in summer 2018 with several meetings in Großsölk and Kleinsölk with local stakeholders, directly on the field to share ideas, the main driver of the project actions and set a focus on what should be done the reach a sustainable tourism in the Naturpark Sölktaier.

There are three main goals set which are reducing the impacts of humans while traveling, in particular with visitor stream management measurements, the raising awareness and maintaining the alpine pastures. Since the alpine pastures have a very important tourist role and are therefore an economic factor, it is important that they are in good and well-maintained condition. After all, they are the flagship and tourist attraction of a region. The maintenance and management of the pastures are necessary for this. The figure below shows the main axes of the strategy. The Naturpark Sölktaier needs to develop tools to make the preservation more attractive for the locals. Nevertheless, it is important that the current population of wildlife and their special habitats is preserved. That is to say, newly developed areas within the Naturpark Sölktaier must be marked prior to the publication with resting areas of the animals and their special habitats, as well with routes for tourists and hikers.



Figure 8: main axes of the strategy of Naturpark Sölktaier



The strategy of the next five years will pursue a qualitative increase in tourism. This leads to an intensification of regional development, conservation of biodiversity as well as the planning and guidance of tourist streams. With assistance of visitor management these goals can be achieved. This includes zones for the tourist purpose and undisturbed habitats of wildlife.

In order to unite these parallel movements pilot actions take place in the Naturpark Sölktäler. The pilot actions explained in the following chapters help to create and maintain an awareness of nature as well as wildlife and habitats for the locals and guests. Often no consideration is given to the fact that, for example, quiet zones are an important place of retreat for the animals and that this, including a certain buffer zone, is granted to the animals and should therefore be avoided. However, the two movements are not mutually incompatible. In other words, the aim is to create a common ground between tourism and wildlife. The pilot actions are used to determine the status quo and will be evaluated at the end of the five years and also in between as short term measures. The status quo can be used as base of a target-performance comparison. As short-term goals, small measures can be set that allow better control of tourists. Put differently, the ski tour folder, which was redesigned in winter 2018/2019 (described in more detail in the pilot action of raising awareness), is already a result of the previous status quo analysis and contains as a result already changes of the routes and extensions of the rest zones as well as informative contents about the habitats of the animals on site.

Short-term measures also include ongoing monitoring of the impact of people/tourists on the environment. This includes on-site inspections in summer as well as in winter, using on the one hand the Swarovski spotting scope and on the other hand the avalanche equipment, in order to be able to determine the effects on a very large area on the one hand, and on the other hand to be equipped with the dangers of winter in the form of avalanches, which very often occur in this region. The affected areas are usually very exposed and therefore the weather influences should not be underestimated. Part of the status quo is to determine the current chicken population in order to exclude negative developments.

The nature park Sölktäler has the task to unite the different purposes of the Austrian nature parks, over Natura 2000 areas, up to those of CEETO and to compile from it an own strategy for the nature park.

Grouse, golden eagle or the water pipit/mountain pipit are only mentioned as representative of all animal species which are endangered and protected according to European directives. These creatures are native to Austrian nature parks. The list of rare and protected plant and animal species as well as habitats in the Austrian nature parks can be continued for a long time to come. The core of every nature park is always a protected part of the landscape, which has taken on its present form through the traditional management of people over centuries. In the nature park, this cultural landscape is made accessible to visitors through special facilities and as a recreational area, with special aesthetic appeal. The protection and promotion of biological diversity is also a special concern of nature parks.

Austria's nature parks represent a variety of characteristic landscapes, including the Sölktäler Nature Park, which are characterised by their unspoiled nature, their natural and cultural highlights and a wide range of possibilities for experiencing and understanding nature.

Under the motto "Experience nature - comprehend nature", visitors to the nature park are motivated to consciously perceive their environment and, as a result, to treat it in an environmentally friendly manner. Experience-oriented forms of knowledge transfer play a special role here. Visitors can



experience and grasp the connection between landscape and culture in a playful way on various nature trails, through theme trails, at information points or as part of adventure tours. In accordance with the motto of the Sölk­täler Nature Park "Endlich Ruhe", visitors will find untouched nature and endless peace in the Sölk­täler, as already mentioned in Chapter 1/1.1.

The legal objective of nature parks is to protect a landscape in connection with its use. The aim is to protect and develop particularly valuable, characteristic landscape areas from destruction.

The awarding of the title "Nature Park" to a rural region is carried out by the respective state government and presents the region with the following challenges:

- Protection and further development of the landscape
- Creation of recreational opportunities
- Ecological and cultural educational opportunities
- Promotion of sustainable regional development through job creation and part-time employment in tourism and agriculture.

Furthermore, the objectives of the Natura 2000 sites must be integrated into the strategy to the same extent. The basic principle of Natura 2000 sites is the conservation of migrant and resident birds, and their conservation status must not be impaired. A reduction of the habitats, for example of black grouse or snow grouse, which are native to the Sölk­täler Nature Park, due to too intensive visitor burdens must not occur. In addition, old cultural landscapes must not be lost as special habitats (alpine pastures). Alpine pastures have lowered the natural forest line for centuries. The so-called combat forest zone (described in Chapter 1/1.2, zone between closed forest and tree line) represents the natural habitat for birch deer (striped habitat). This habitat strip was enlarged by the alpine pasture management. The abandonment of the alpine pastures and the increasing shrubbery as well as forestation cause this habitat to shrink. The aim is therefore to preserve these alpine pastures.

The main objective of the CEETO project is to protect and improve the natural heritage of protected areas and the Natura 2000 network by promoting an innovative model for sustainable tourism planning, reducing use conflicts, strengthening social and territorial cohesion, improving the quality of life of local communities and encouraging the tourism industry to contribute concretely to nature conservation.

In connection with the Interreg CEETO project, the objectives of the nature park and the objectives of Natura 2000 will be linked to sustainable tourism. The aim is to create a symbiosis that offers both locals and guests economic, ecological and informative added value. Finally, it is necessary to find out in which areas overlaps exist or each one has to be worked out individually in order to be able to generate the best possible output within the strategy.

In the following chapter, the actions developed in this context in order to explain the biodiversity and species diversity of the Sölk­täler Nature Park in more detail will be presented, as well as the first results.

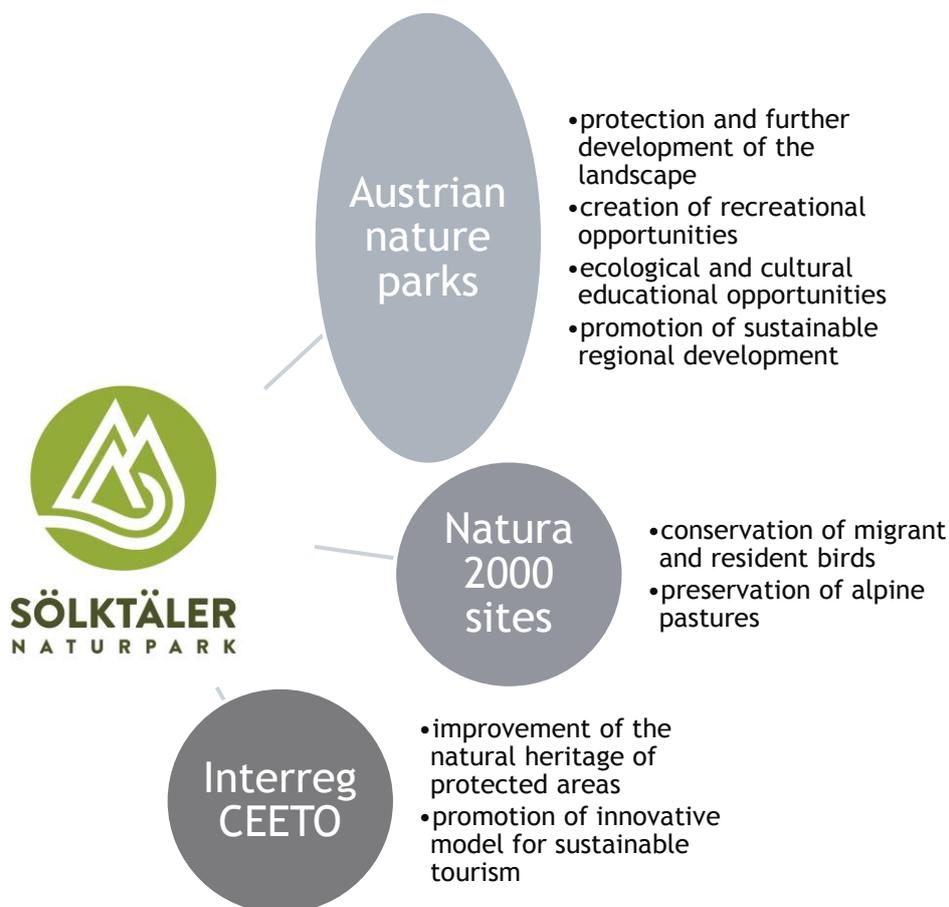


Figure 9: consolidation of the various strategies

3. Sustainable Tourism Action Plan

Naturpark Sölk­täler is part of the Schladming-Dachstein tourism region. In the touristic hotspots (Schladming/Planai, Ramsau/Dachstein) tourism already comes to its limits. Therefore it is needed to reserve a place in the cable car of the glacier to come up there. It is obvious that tourism will increase in the random parts like Naturpark Sölk­täler during the next years intensively. So concept and management plans are urgently needed to canalize these visitor flows and arrange them with the needs of the nature.

Based on the strategy, vision and 5-year goals which are defined in the previous chapter Naturpark Sölk­täler identified management and monitoring tools for tourists, skiers, bird population for achieving the goals of sustainable tourism in the protected area with the main aim to keep and steer them in the right trails and routes. The monitoring results are used to assess whether the defined objectives have been achieved or whether any necessary corrective action needs to be taken. From now on until March 2020 five to seven local stakeholders (e.g. huts, landowners) will be involved in the implantation of the project (pilot actions) using questionnaires and meetings.



In the Naturpark Söltkäler are currently two pilot actions to gain data and information regarding monitoring and raising awareness. Both actions are independently from each other because of a different goal setting. The pilot actions are explicitly explained below. However, it can be said in advance that the main objective of the pilot actions is to reduce the impact of human activity on wildlife, their habitats and the environment. In general, the results of the entire data (quantitative from visitor countings, bird population; qualitative from questionnaires) are interpreted and serve as basis for the target-performance comparison of the five year strategy. The quantitative data are analysed with assistance of Excel. In addition, the future dialogue held in April 2019 is based on qualitative data gained via questionnaires shown in figure 9 and 10.

3.1 Pilot action

3.1.1 Monitoring and management of visitor streams

The monitoring program should evaluate the human impact on valleys and leading species of several sensitive habitats (div. grouse species) and find the relative frequency in the different valleys using counting visitors as a method. Additionally the abundance of the wildlife should be verified and constantly reviewed, even the different impacts on different species. For this, there were four light barriers installed at different places which are common destinations for day trips and hikes (e.g. St. Nikolai, Mössnakar, Deneck). Additional to the light barriers was a counting station established with local youth counting the people and cars in St. Nikolai during the summer holidays (August and September). This was also arranged at the tollbooth to Schwarzensee (only for one month). The counting will continue in winter 2018, spring/summer/fall/winter 2019 and spring 2020. The counting serves as a basis for an annual comparison as well as a numerical comparison with the visitor counting of the valleys within the Naturpark and with the numbers of Schladming-Dachstein, which is the holding tourism organization in this area. The used instruments to get information for this pilot action are counting mechanical and manual, entries in the summit register of Deneck.

In addition, booklets serve as information material with general information about the Naturpark Söltkäler and recommended hiking and ski routes. The routes are labelled as supporting measures with signs and markings.



Figure 10: counting station St. Nikolai



Figure 11: light barrier



The used instruments provide quantitative data, which are further processed in Excel. Graphics should submit visual support and allow easy comparisons of numbers throughout the years, even more complex ones. Likewise, abundance distributions make it possible to identify particularly intense days and differences between the four main valleys and mountain destination inside the Naturpark and to show trends for further development.

3.1.2 Raising awareness of ecotourism

This pilot action wants to raise awareness from locals and tourists about nature and human impacts on nature within Naturpark Sölkktäler. Therefore the future dialogue was initiated (for more details about the future dialogue see Chapter 3.3). The first part of the future dialogue is with the youth (age 11 to 25) to get information what's important in their opinion for the region, what matters the most and what would they need to stay or come back in this area. The collected answers can be clustered afterwards and is the basis for the second part of the dialogue which is with the important stakeholders of the Naturpark Sölkktäler. Here, too, information is collected to the same themes/points and discuss the topics which turn out to be important to both groups - youth and stakeholders. Following, the relevant topics of both get-togethers are discussed with the managing director and the project manager to implement and financially integrate the important points in the Naturpark Sölkktäler. The future dialogue started in September/October 2018 with the youth and the final discussion will be in April 2019. The findings of the dialogue will be included in the five year management plan (see Chapter 3.3). The future dialogue also serves the general, regional development of the nature park. The previous survey of young people provides inspiration for further thinking in order to find and develop key points and new ideas. The aim is to implement concepts that are geared to the needs of young people and ensure that they remain in the region and thus maintain economic value creation. As a result of the future dialogue, ideas for further strategy development are collected, which has been implemented in the overall strategy of the park. After the future dialogue, it becomes clear which strategies will be developed and implemented, and finally it is important to find out which are achievable and which are not.

Another part of raising awareness is different workshops called "Gemeinsam drüberschaun". These are for and with the locals about themes connected with the traditional cultivation of landscape and to raise their appreciation (see Chapter 3.5). The workshops will be all just one-day events starting November 2018 until August 2019. The topics of the workshops come from a former CEETO questionnaire with the goal to bring knowledge to the natives and incorporate them.

The used instruments to get information for this pilot action are questionnaires (figure 9), workshops and guided tours with the goal of ecological knowledge transfer. These instruments are used to determine qualitative and quantitative data. The questionnaires used as placemats are evaluated by a frequency distribution in Excel. The results of this survey shows which motives tourists emphasize more or less in the Naturpark and what the popular reasons are for staying in the nature park.



Bitte mach mit!
Zutreffendes bitte markieren

Von wo kommst Du?
 Ennstal
 Steiermark
 Graz
 Wien
 Deutschland
 Italien
 Slowenien
 Ungarn
 sonstiges

Dein Alter?
 < 16
 17 – 25
 26 – 35
 36 – 50
 51 – 65
 > 66

Wie viele Tage bist Du hier?
 nur heute
 eine Nacht
 zwei Nächte
 eine Woche

Wähle bitte das für dich passende Wörterpaar aus der Liste.
 Adrenalin und Aktivitäten
 Erholung und Entspannung
 Ruhe und Einsamkeit
 Natur und Landschaft
 Essen und Tradition
 Geselligkeit und Freunde

Mit wem bist Du hier?
 Partner
 Familie
 Allein
 Gruppe
 Freunde
 andere

Was machst Du bei uns?
 Wandern
 Radfahren
 Bergsteigen
 Entspannen
 Tiere beobachten
 sonstiges

Vorschläge zur Verbesserung des Angebots im Naturpark Sölk-täler? (max. 2 - 3)
 Erreichbarkeit
 Mobilität
 Information
 Infrastruktur
 Übernachtungsmöglichkeiten
 Parkplätze
 Service / Verleihstationen (Ausrüstung z.B. Klettern, Fischen)
 geführte Touren

**Schon
gewusst?**

... dass bei uns Schafe ohne weitere Behrllung auch in die obersten Gipfelregionen wandern dürfen? Hunde sind daher gut zu buaufsichtigen!

... dass wir in den Sölk-tälern auf kristallinem Gestein und sogar auf einem besonderen Marmor stehen?

... dass die Erhaltung der Almen viel Arbeitsaufwand bedeutet? Seit vielen Jahren helfen Freiwillige des Alpenvereins in einem Bergwaldprojekt, die Almen und damit deren besondere Artenvielfalt zu erhalten.

... dass ein weggeworfener Kaugummi 5 Jahre zum Verrotten braucht, Plastikflaschen sogar 100 – 5000 Jahre?

... dass die Meikerwurz, die „Meikerin aller Heilwurzten“ bei uns in den alpinen Bereichen wächst, eine ganz besondere Heilpflanze ist?

**SÖLKTÄLER
NATURPARK**

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 Erstellt 2018

Figure 12: placemat (questionnaire)

Bitte mach mit!
Hilf uns für eine gemeinsame Zukunft in der Sölk

Dein Alter? (Bitte markieren)
 < 15
 16-17
 18-20
 21-22
 23-25
 > 25

Wo siehst Du Dich in 10 Jahren? (Bitte markieren)
 Sölk
 Gröbming
 Graz
 Salzburg
 Amerika
 Woanders: _____

Wie siehst Du die Entwicklung der Bevölkerung der Gemeinde Sölk?

Was braucht es in der Sölk, damit Du Deine Zukunft hier siehst?

Wer oder was ist für Dich wichtig in deiner Region?

Worauf bist Du stolz, dass du von der Kleinsölk, Großsölk, St. Nikolai oder von Stein kommst?

**SÖLKTÄLER
NATURPARK**
Erstellt 2018

Figure 13: questionnaire for future dialogue



3. Management/Actions:

The strategy of the Naturpark Sölktaier is based on the principles of all Styrian nature parks. These are education, recreation and regional development on the basis of nature protection, which must be satisfied. Derived from this, there is a strategy plan for each pilot action, which can be implemented in the overall strategy and can then be aligned. As a general goal it is stated that the locals are encouraged to support and to preserve traditional forms of cultivated landscape, ecotourism, sustainability and the needs of wildlife for the future, more particularly the next five years.

In general, the results of the entire data are interpreted and serve as basis for the target-performance comparison of the five year strategy. The quantitative data are analysed with assistance of Excel. In addition, the future dialogue held in April 2019 is based on the qualitative data.

3.1 Outcome raising awareness:

According to the pilot action the goal is to raise awareness of local and tourists on different levels with not only collecting information but also give information. This could be cultivating the historical landscape connected to the support of living here as well as finishing the cultivation of landscape. The regional development should slow down and at best prevent emigration. Several factors come together here, which all interact with each other and cannot work independently without having an influence on another partial strategy. It is even important to show the human impact on wildlife. For this purpose certain measurement methods are used (see monitoring) in order to clarify the impacts and gain a positive added value for nature. One of the main goals is to conserve habitats for protected wildlife by going on cultivating them. Visitors and even locals must know the common environment of the protected animals for the do's and don'ts. Ecotourism is used as a measurement to support income and interest in going on cultivating the alpine meadows, huts, etc. The future dialogue should help to adjust the infrastructure and the touristic offer in the valleys.

Questionnaires for raising awareness	
Description	see details above
Period	Sep - Oct 2018; May - Oct 2019
Costs	Approx. 1.000 €
Involvement	Tourists, Naturpark Sölktaier

Ski Tour Folder and signs for raising awareness	
Description	see details above
Period	Winter 2019 ongoing
Costs	Approx. 6.500 €
Involvement	Ski tourists, locals, Naturpark Sölktaier



3.2 Outcome monitoring and management plans:

The main goal of the monitoring pilot action is to gather qualitative data via visitor counting and distributing questionnaires (see above also timeline) to measure and improve the visitor streams (e.g. with inferential statistics: rarely frequented and frequented days). First results were gained 2018.

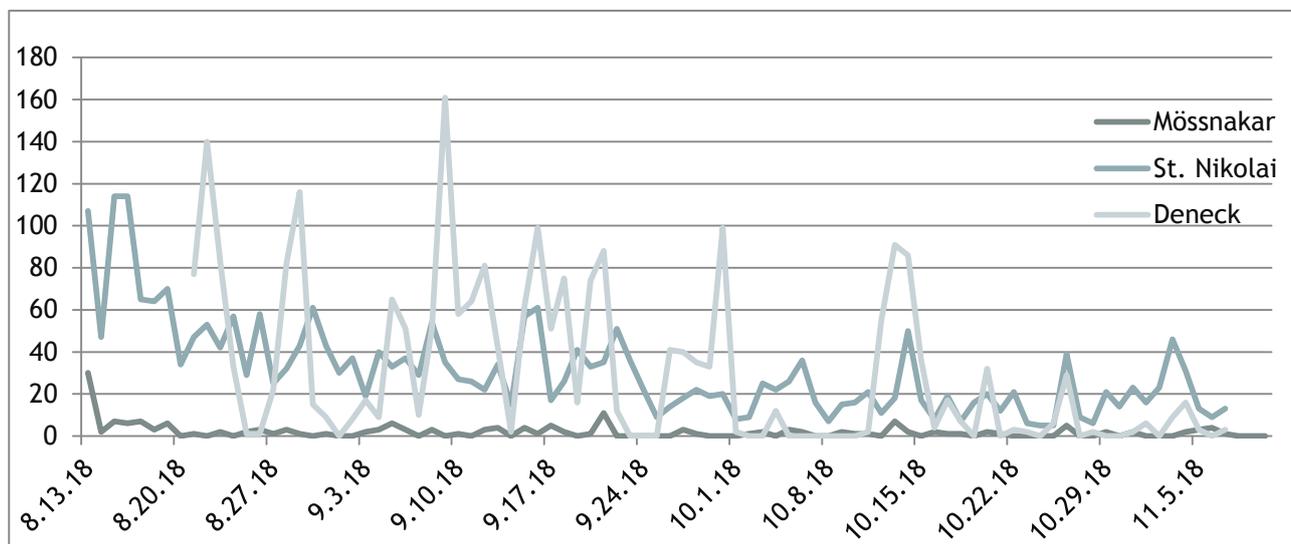


Figure 14: overview light barriers August - November 2018

The Naturpark Söltkäler works with local stakeholders to define (winter) tourism areas and recreation zones for wildlife. Plans and ideas as an output of the monitoring program are compared with different human use of landscape. Due to wrong marked paths in the winter-folder for ski tours, this was corrected as a first measure. The goal is zoning of wildlife habitats. Preferable were separated in priority areas and tour possibilities for summer and winter throughout the entire Naturpark.

2018 a first folder for winter ski tourism with basic information and furthermore information about human impact on wildlife in winter was made. It is necessary to evaluate the status quo (where do the routes currently go? where are the habitats?). Following, we started to identify the ski tours with signs. The results of the ongoing monitoring of wildlife and tourists can evaluate and adapt over the next years these outcomes. The ongoing monitoring and evaluation of the visitor stream management takes place now and will be repeated five years later (2023). The repeated monitoring will show whether adjustments are necessary and these can be taken accordingly. Furthermore it is important to define valleys for winter tourism and others which should remain without a lot of winter tourism. It will be important to provide recreation areas for wildlife in suitable space, even before tourism is growing and the number of ski tour tourists is rising.

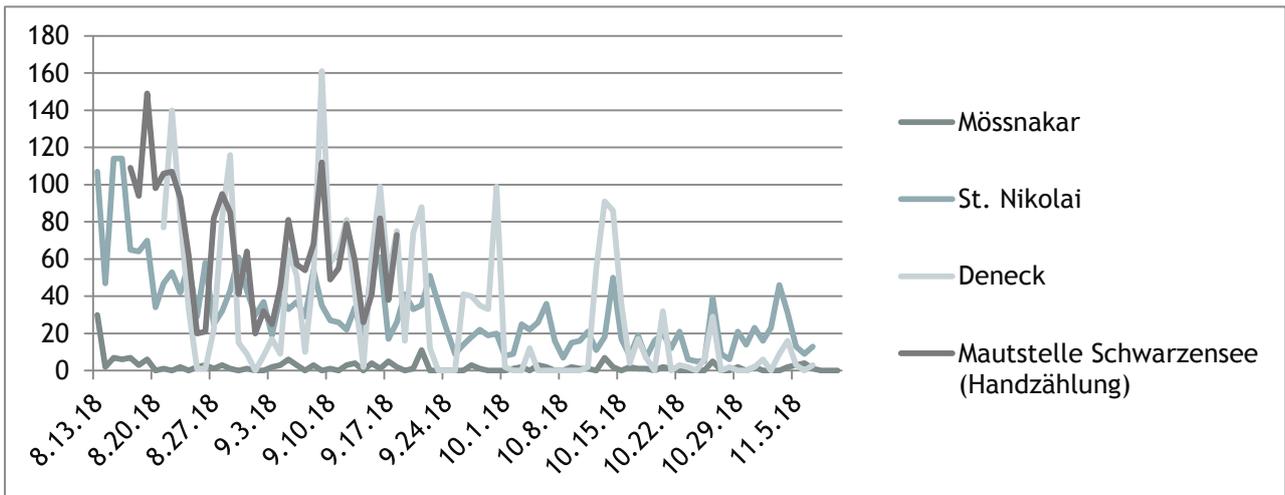


Figure 15: overview light barriers and counting station tollbooth August - November 2018

Naturpark Sölktäler has the chance to start with visitor stream management even before tourism is growing and spreading throughout the valleys. It is important to start now because it will be more accepted by the tourists and locals if there are already existing rules and marked trails. Therefore the official maps are permanent revised due to changes of the trails to provide only the right marked ones in good conditions.

A regular five year evaluation is essential to monitor the increasement of tourists in the Sölktäler and adjust the measures if it is necessary. As an overall result, visitors are consistently concentrated on marked trails. This is to ensure the quiet zones, recreation areas and to protect young forests and sensible habitats in summer.

Monitoring	
Description	see details above
Period	Aug - Nov 2018; Apr - Nov 2019
Costs	Approx. 12.000 €
Involvement	Naturpark Sölktäler



In the last years lots of essays arose to these topics.¹ To have good results it is important to manage ski tours and summer tourism in the landscape before land using get bigger dimensions².

3.3 Future dialogue on 12.04.2019

Personally invited were local stakeholder (see stakeholder list) of the community and persons, who worked for the community in the last years. Additionally the whole community was invited (announcement in local shops, restaurant, in the local newspaper).

The workshop took place on April 12th in Stein/Enns, 16 persons came.

The workshop was moderated by the Institute E.C.O, specialized (among others) on management plans in protected areas. Inputs about the use of management plans were given. In small groups three topics were discussed more detailed with the goal to gain more information what is expected the reach within the topic:

- Traffic, mobility and housing
- Tourism - ecotourism
- Landowners: farmers and big landowners' problems and possibilities.

The workshop was the initial meeting for planning a five year management plan for the nature park (deliverable of CEETO and new legal standard for Styrian nature parks). Ideas and problems were collected to be able to work out general goals in future. The mood in the future dialogue was very constructive. Each participant took a good look at the situation and the discussion. The participants discussed the three topics from different perspectives (young, old, landlord, alpine farmer, etc.) on a valuable and informative basis. The results, which were compiled in this evening, were summarized and presented afterwards.

The results of the three main topics are stated below:

Traffic and mobility: The inhabitants report that in the Sölk-täler there is only one bus per day (in the morning) during the school year, which is considered to be public transport. A return trip would only

¹ Coppes J., Ehlacher J., Suchant R. and Braunisch V. (2017): Outdoor recreation causes effective habitat reduction in capercaillie *Tetrao urogallus*: a major threat for geographically restricted populations. *Journal of Avian Biology* 48: 001–012, 2017.

Coppes J, Burghardt F, Hagen R, Suchant R, Braunisch V (2017) Human recreation affects spatio-temporal habitat use patterns in red deer (*Cervus elaphus*). *PLoS ONE* 12(5): e0175134.

<https://doi.org/10.1371/journal.pone.0175134>

² See for example the german project: „sustainable ski tours tourism” in the Bavarian alps. The project started 1994, before ski tours tourism raised as a trend sport for millions of germans and others. This concept was adopted in other visitor stream management projects, for example in winter tourism concept in “Triebener Tauern”.



be possible for pupils and not for adults. One of the great wishes of those present was to install a cycle path and a footpath along the entire Sölketal state street, as driving and walking on the road would involve a high risk. With regard to cycling, it is also proposed to set up an e-bike rental service, as well as several e-bike and e-car charging stations. It is also reported that there would be a "valleybus" during the summer holidays. In the process, the population and holidaymakers should be made more aware of this means of public transport and hiking taxi in order to avoid unnecessary car journeys and lack of parking space. In general, the participants confirmed that traffic issues are rather a problem for tourists, who are used to a good traffic and infrastructure network in cities. Mayor Werner Schwab explained with reference to this topic that the expansion of public transport is currently simply not affordable, even the school and kindergarten traffic alone cost over 120,000 € per year. Schwab also argues that the improvement of the transport network is already underway, however, as the rehabilitation of the state road would begin as early as summer 2019. One idea of the participants was to install even more surveys on traffic use in order to evaluate precise frequencies.

Housing: At the moment, there are a number of housing estates in the nature park as well as a number of empty buildings that could be converted into residential buildings - there are already projects on this point, according to Mayor Schwab. There would also be plenty of building land available. A proposal of the mayor would be to provide starter apartments for young adults in the future, which would have an area of approximately 40 to 44 m². Schwab also argues that the dedication of the building plots would depend on the number of inhabitants. In general, the participants confirmed that both the influx and the outflow are constant. The problem is not the lack of residential buildings and land, but the lack of jobs.

Tourism: The tourist facilities in Stein an der Enns were perceived as "actually quite good (shops, baker, doctor, vet, restaurant etc.)". In the valleys these are rather badly represented, there is little to no infrastructure (no shopping possibilities, yet there are landlords mostly only seasonally open). There are also huts with overnight accommodations (camp & beds) but these are not equipped for larger groups.

In summer there is the valley bus, which brings and collects the hikers at certain times during the week. If you are well informed, you can also combine this bus with public transport, otherwise tourists are dependent on a car.

There is a lot of hiking tourism, but no cycle tourism (possibly aim for 2025). This is desired, but unfortunately there is no possibility (the development is very expensive and the municipality cannot cope with it). The alpine pastures are not open for cyclists because the farmers and hunters do not want to and cannot take over the liability. The problem is that there are already apps in which the paths are marked (but these are not public and it is usually forbidden to cycle there) - but this information spreads very quickly. There are similar problems with hiking trails.

Great strength of the region: The guests are rather down-to-earth, they want the peace and quiet, there are "mobile phone free" zones (since there is no reception) sometimes causes annoyance for the tourists, but at the same time is also perceived as restful. Some landlords deliberately decide not to provide W-Lan for their guests. This could also be used for active advertising: recreation without a mobile phone (possibly until 2025).

Large **landowners** cover 2/3 of the nature park area and are therefore essential contact partners for the Sölkätaler Nature Park, including visitor management, tourism, measures in Natura 2000 areas, cycle paths, etc.

It is also important to consider their pain threshold when developing tourism infrastructure (pain threshold not yet reached at present). The participants were also not uninterested in new branches that tourism could open up, such as the marketing of deer meat.

The results will now be combined into a management plan and in the context of this, measures will be developed how tourism in the Sölk­täler can be canalized, how the youth will be persuaded to stay here and not migrate, as well as which requirements have to be taken, what has to be done in order to maintain the alpine pastures. The main goal must be a traffic solution (rehabilitation of the road, extension of a hiking trail from Stein to St. Nikolai) as well as the control of the increasing number of mountain bikers. At the moment, a manageable number of these are still on their way in the nature park, but at least one path must now be created so that they do not cross-country ride wildly on the land of the large landowners.

The costs of these works are part of the external experts in next period.



Figure 16: opening of the future dialogue by Lisa Wolf



Figure 17: discussion in small group - landowners



Figure 18: discussion in small group - tourism



3.4 Other actions within the Naturpark Söltkäler

The information about the special features of this preferential landscape and the bringing closer of nature-spatial connections are important tasks of the nature park carrier. With this in mind, a number of offers have been created to contribute to the nature park's educational task:

- Water showpaths on Lake Schwarzensee and from St. Nikolai to the Bräualm illustrate water as a landscape-forming element and habitat for animals and plants.
- Forest nature trails in Kleinsölk and Mössna give an impression of the diversity of native trees and shrubs, geolocial and glacial showpathes on Gumpeneck and near Sölkpass give ideas to understand the development of the valleys. .

The recreational offer in the nature park Söltkäler concentrates on the hiking tourists. The abundance of offers ranges from easy hiking trails to mountain hikes and difficult tours. Ski touring and cross-country skiing, ice shooting and tobogganing complete the range of recreational activities during the winter season.

In order to promote the sustainable tourism offer of the park and to sensitize tourists to a conscious visit, the following ideas/activities of “communication and awareness” are foreseen and will be discussed with stakeholder for the final implementation.

Sustainable and near natural tourism offers and a corresponding information needs to be prepared, communicated and easily accessible. Information materials have to contain not only events and guided tours and special features of the region, but also information about the appropriate behavior in nature. Topics like visitor steering and a holistic experience as well as the sustainable management if issues, related to tourism and leisure time (trash, transport, overnight stays, etc.) need to be considered within the information materials.

Improvement of website	
Description	To inform locals and guests about sustainable tourism, sustainable offers, to improve the knowloedge and raise the awareness for our special living space an up-to-date is necessary. Therefore, the structure of the webpage will be revised/updated and important information as well as content of sustainable tourism and leisure time will be produced and uploaded.
Period	2018 - 2023
Costs	staff costs, print costs
Involvement	Naturpark Söltkäler



Sustainable tourism events for locals and visitors	
Description	Thematic events to discover the park and its natural resources. Local and regional participants are invited to bring their ideas and take part in discussing touristic offers.
Period	2019 - 2023 (2 per years)
Costs	external (approx. 2.000 € per event) and ongoing staff costs
Involvement	stakeholder of the Naturpark Sölktaier, Naturpark Sölktaier

Creating new information materials	
Description	The preparation of specific brochures could be considered (example: experiencing in nature and culture; guided tours, etc.)
Period	2019 - 2023
Costs	staff costs, print costs
Involvement	Naturpark Sölktaier

Water showpaths	
Description	illustrate water as a landscape-forming element and habitat for animals and plants
Period	start of Naturpark Sölktaier
Costs	approx. 4.000 €
Involvement	Naturpark Sölktaier

Forest nature trails	
Description	give an impression of the diversity of native trees and shrubs
Period	start of Naturpark Sölktaier
Costs	approx. 4.000 €
Involvement	Naturpark Sölktaier



3.5 Overview of costs of actions already occurred

Monitoring and management measures	
costs:	approx. 12.000 €
involvement:	Naturpark Sölktäler
timeline	Aug - Nov 2018; Apr - Nov 2019

questionnaires	
costs:	approx. 1.000 €
involvement:	tourists, Naturpark Sölktäler
timeline	Sep - Oct 2018; May - Oct 2019

ski tour folder and signs	
costs:	approx. 6.500 €
involvement:	ski tourists, locals, Naturpark Sölktäler
timeline	Winter 2019 ongoing

future dialogue, management plan and other workshops	
costs:	approx. 15.000€
involvement:	locals, youth, stakeholders (see stakeholder list), external expert, Naturpark Sölktäler
timeline	Sep 2018; Apr 2019, till Dec. 2019

3.5 Planned workshops

The workshops have themes that give locals as well as interested tourists an insight into the diversity of the Sölktäler Nature Park. For this reason, individual topics were discussed in consultation with those who were particularly interested in them. A further aspect for the selection of the topics was that these should bring an added value and make new input possible into the past doing. The workshops should also serve to ensure that sustainability in tourism is guaranteed and that each individual can make a contribution to more sustainable tourism, especially in the mountains and in nature.

The workshops range from topics such as pasture management and ideas for dealing with new challenges, to future dialogue, to topics such as a nutritious landscape. More detailed descriptions can be found in the table below.



Topic	Referee	Date	Location	Notes
alpine and pastoral agriculture and new ideas to recultivate	Thomas Schranz	Nov 9th 2018	Kultursaal St. Nikolai	general lecture and podium discussion, new ideas how to support farmers for ongoing cultivation of alpine pastures
property ownership conference	Naturpark Sölktaier	Nov 14th	Sölkstube	information and discussion light barriers
nutritive landscape	Michael Machatschek	June 22nd 2019	Sölkstube	presentation of different forms of land use
traditional european medicine - theory and experience	Angelika Prentner			one day course
future dialogue	ECO Institute	Apr 12th 2019	Restaurant Hubertus	presentation and evaluation, developement of future measurements and strategies

Topic	Referee	Date	Location	Notes
shrew in alpine pastures - small wildlife	Resch/Apodemus			half day event, understanding and presenting of small wildlife
how to present hunting topics	Monika Pfeiffer, Veronika Grünschachner- Berger			



Figure 19: first workshop by Thomas Schranz



4. 5 years workplan / time schedule

Main Goals	Title of Action	Period	Involvement	Costs/Funding
Monitoring and management plan	monitoring	2018 - 2019	Naturpark Sölktaier	approx. 5.000 €
Raising awareness of ecotourism	questionnaires	2018 - 2019	Tourists, Naturpark Sölktaier	approx. 1.000 €
	ski tour folder	2019	Ski tourists, locals, Naturpark Sölktaier	approx. 6.000 €
Stakeholder participation process	workshop	2018 - 2019	locals, youth, stakeholders, external experts, Naturpark Sölktaier	
Bank of Ideas	improvement of website	2018 - 2023	Naturpark Sölktaier	internal staff costs
	creating new information materials	2019 - 2023	Naturpark Sölktaier	internal staff costs, printing costs
	sustainable tourism events for locals and visitors	2019 - 2023	stakeholder, Naturpark Sölktaier	external (approx. 2.000 € per event) and ongoing staff costs



5. Action Plan Overview

Tasks	2018		2019			
	3/4	4/4	1/4	2/4	3/4	4/4
1 Monitoring and Management Plan (pilote action)						
1.1. Preparation of visitor survey						
1.2. Conduction out of visitor survey (light barriers and human resources, ev. booklets of mountain tops)						
1.3. Data analysis and evaluation						
1.4. Rock Ptarmigan and ski tourism - Data Charging						
1.5. Data analysis and evaluation						
1.6. Questionnaire - Alpine huts and landlords						
1.7. Data analysis and evaluation						
1.8. Ski tour tourism booklet and establish locally status quo						
2 Raising Awareness - locals and tourists (pilote action)						
2.1. Future dialogue I youth						
2.2. Future dialogue II stakeholder						
2.3. 10 Workshops "gemeinsam drüberschauen"						
2.4. Approval of the action plan						
2.5. Data analysis and evaluation						
3 Sustainable Tourism Action Plan						
3.1. Workshop on the spot						
3.3. Data analysis and evaluation						
3.4. Formal approval of the Action Plan						