

O.T2.3

STRATEGIES FOR VISITOR MANAGEMENT AND KNOWLEDGE TRANSFER IN BUFFER ZONES OF WH BEECH FORESTS PAS

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1. Introduction

The thematic Work Package 2 - Creation of a Sustainable Model for Buffer Zone Management around World Heritage Beech Forests targets pilot areas in Slovenia and Slovakia, where high potential for conflicts between different interest groups exists. The work package produces a number of outputs targeting better active involvement of stakeholders, conflict management, visitor management, as well as sustainable forestry practices. Several activities on this work package are being implemented with participatory approaches.

Visitor management and knowledge transfer in buffer zones of World Heritage (WH) beech forests protected areas (PAs) is one of the very important challenges that site managers and other site's responsible persons are facing. The Strategy is designed in a way that can be incorporated into the management plans of the component parts of the WH site "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe".

The Output itself is based on Activity A.T2.2 and deliverables completed within Work Package 2 as well as a number of different activities within all project's work packages (mainly 2, but also 1 and 3) which contributed to the successfully completed deliverables. The Strategy was reviewed by the project consortium and the project advisory board. All comments were considered and integrated to ensure the greatest possible applicability of the Strategy.

Tourism is one of the fastest growing sectors and tourism activities are attracting more and more visitors every year. Exploration of nature, its processes and discovering the "unknown" is gaining on popularity among tourists. The trends in types of visitors who are trying to escape from massive tourism crowds and exploring the largely unknown areas is increasing with every year. World Heritage sites, especially, parks, forests and similar sites where visitors do not come for one specific phenomena, but for the whole experience, are gaining importance. Buffer zones and component parts of "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe" are therefore one of the main attractions for these groups of visitors, where they have several trails, routes or directions to take. These largely untouched (or not highly) visited areas therefore face the demands of visitors and their needs that has to be managed in a way to protect the outstanding Universal Value (OUV) and ecosystem integrity of the site, while still offering visitors a worthy experience.

Tourism and visitor use in protected areas, if managed sustainably, can be a positive agent for nature conservation and, where appropriate, community and regional development. By applying best practices, sustainable tourism can also help realise a wide range of natural and social values that contribute both to the conservation mission of the protected area and, where possible, to benefits for local communities (Leung et al., 2018).

Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the environmental, economic and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability (UNWTO, 2021).

Thus, sustainable tourism should (UNWTO, 2021):

- 1.) Make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to conserve natural heritage and biodiversity.
- 2.) Respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.



- 3.) Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Site managers therefore face a true challenge in order to keep up with all the requirements from different stakeholders, such as:

- Governmental institutions and NGOs: To keep protecting the site, ecosystem integrity and OUV.
- Local and regional government: To make and increase profit out of UNESCO brand and increase the number of visitors.
- Tourism sector, local guides, and tourism stakeholders: To increase the number of visitors, tours and profit. Develop special products about experiencing the site.
- Forestry sector, (private) forest owners: To keep the buffer zone economically profitable.
- Visitors: No entry fee, open-access to the whole site, experience the site through different infrastructure.
- Etc...

One important element of this Strategy is also a knowledge transfer on several levels:

- From site manager to the visitor.
- From site manager to other site managers.

Knowledge transfer addresses the field of education as well as protection. More efficiently the knowledge is transferred to the visitors, better they understand the importance of protection of the site and transfer this knowledge forward.

UNESCO WH beech forests component parts are facing different challenges due to different characteristics of site, location and embedment into the region, management systems and legislation, history of development, structure of visitors and level of tackling with this situation in past. Knowledge transfer between the sites is therefore crucial in order to protect this transnational designation on regional, national as well as European level.

2. Analysis of the status of existing strategies and visitor infrastructure in buffer zones of participating PAs

This framework includes the existing status of strategies and activities for visitor management, and facilitates direct comparisons between all project pilot areas.

Based on the overview of pilot areas, a gap analysis was made and recommendations prepared. These recommendations serve as a basis for preparing Output O.T2.3 (Strategies for visitor management and knowledge transfer in buffer zones of WH beech forests PAs).



2.1. Grumsin (Germany)

Nr. of visitors annually: 15.000

The Biosphere Reserve Schorfheide-Chorin is the official managing authority of the WH component part. Visitor management is planned and coordinated with other stakeholders. The City of Angermünde thus manages the hiking trails on its territory, while the Biosphere Reserve is responsible for the information boards.

The Tourism Association of Angermünde is responsible for the management of the guided tours into the core zone and the training of the nature and landscape guides. Annual meetings between key stakeholders are established.

There is currently no specific management plan for the WH component part, except visitor guidance as part of Natura 2000 management.

Public transport is available to reach the vicinity of the WH component part. Visitor monitoring is done at three entrances with automatic counters. Ranger service is also provided. Once a week a limited guided tour can enter the WH core zone.

There are three visitor centres of the Biosphere Reserve in the vicinity, one focused on WH beech forests. These also provide toilet facilities and parking. A number of hiking trails go around the WH core zone, while cycling trails exist from the train stations to the vicinity of the core zone and around the core zone. Bike rentals are not developed.

Planned upgrades include a bigger gastronomic offer for visitor, decreasing car traffic by promoting visits with public transport, updates of exhibitions and information along with signage in the field, and developing an educational programme for school visits.

GAP ANALYSIS

- Preference of visitors to park outside of official parking lots, and reliance on personal vehicles and little on public transport. Public transport is limited.
- Vandalism of trail markings.
- No bike rentals possible.
- Lack of gastronomic offer.
- Lack of offers for guided tours, free guided tours for locals and environmental education programme.
- Little information available on visitor numbers and their impact.

2.2. Kalkalpen (Austria)

Nr. of visitors annually: 370.000

Kalkalpen National Park is the official manager of the national park which includes also the WH component part. Since the national park is also a recreational area for people, visitor management is an integral part



of the park's management. The visitor guidance ensures 90% of visitors stay in 10% of the park's area. There is no promotion of wilderness areas.

Motorised traffic is regulated by tolled car parks and closures of forest roads. Public transport is organised for hikers on Sundays and holidays during the summer months. Main entrances and visitor centres have automatic counters in place. Park rangers provide guidance, education and control in the field. An educational programme is developed, with a focus on World Heritage.

There are two visitor and one information centres. Other facilities include a Wilderness camp, a lodge and an alpine hut serving as an info station. Toilets are provided at the larger parking places. There are many hiking trails, equipped with signage and information boards. About 20 boards focus on ancient beech forests. Many trails are thematic, focusing on different topics. Exhibitions are set up at visitor centres.

Planned upgrades include updating trails, info boards and exhibitions, establishing automatic visitor counting in the field and visitor surveys, developing special WH programmes for visitors, renovating a hut into an info station, further develop training for rangers, tourist guides and other regional stakeholders.

GAP ANALYSIS

- Public transport should be improved.
- Additional monitoring counters are needed around the component part.
- Control over bikers should be strengthened.
- More cooperation with schools in the region needed.
- Potential for more international cooperation with other component parts.

2.3. Snežnik (Slovenia)

Nr. of visitors annually: 10.000

There is currently no official manager for the component part Snežnik. Slovenia Forest Service (SFS) is the de facto manager as it prepares management plans for all forests. There is no specific visitor management strategy or tourism development goals. The Regional Development Strategy of the relevant municipalities focuses on other areas in the region. There is no outright promotion of the component part.

Infrastructure is basic. Four existing hiking trails are maintained by the mountaineering society. SFS maintains some infrastructure through different projects (e.g. BEECH POWER). Two forest educational trails and one walking trail outside the component part are available, as well as an exhibition at Forest House Mašun, where visitors can also arrange for guided tours. These activities are mainly ad hoc and do not follow any organised plans or measures. The Forest House acts as the main visitor centre. Other informal visitor and information point are mountaineering huts Svičaki and Drago Karolin (at the Snežnik summit). Toilets are provided there. Parking is available at points of entry for hikers. Automatic counters are also in place at two main illegal hiking trails to monitor visitor numbers in order to assess the numbers and respond appropriately to reduce illegal trespassing. These activities are mainly ad hoc and do not follow any organised plans or measures.

There are few specifically elaborated plans for future development of visitor management. The overall strategy remains one of limited exposure and as little promotion as possible, both in domestic and international spheres.



GAP ANALYSIS

- Additional information on WH should be provided at key points.
- Visitor monitoring and territorial protection need to be increased and improved.
- Toilets alongside main parking areas need to be provided.
- Educational programmes for schools need to be developed.
- A management authority needs to be defined by legislation.

2.4. Krokar (Slovenia)

Nr. of visitors annually: 700

There is currently no official manager for the component part Krokar. Slovenia Forest Service is the de facto manager as it prepares management plans for all forests. There is no specific visitor management strategy or tourism development goals. Institute Kočevsko as the main tourism provider wishes to increase the promotion of the WH Site, but has so far diligently avoided promoting the virgin forest, and when they do feature it, it is quite consistently alongside the information that entry into the reserve is prohibited in order to maintain the natural functioning of the ecosystem.

There are two Forest Educational Trails maintained by SFS in the vicinity of the component part. These provide information to visitors and guide them outside the component part, while still offering views inside the virgin forest. Borders of the component part are marked with warning signs, informing visitors not to enter. Automatic counters and cameras are set up at the main entry points to count illegal entries into the component part (unlike other component parts, there is no entry allowed for visitors in component part Krokar). Limited parking is provided at entry point of the Forest Trails. Toilet facilities are available only at distant visitor centres, there are no visitor centres in the vicinity of the component part.

There are few elaborated plans for future visitor management development. Informational boards on one forest trail (Borovška Nature Trail) need to be updated. A visitor centre in nearby village Kočevska Reka is planned through different EU funded projects. The strategy follows the guidance that no entry in virgin forest Krokar neither in buffer zone (forest reserve Borovec) is allowed, except on trails in buffer zone (regulation on protective forests and special purpose forests). All potential tourists and recreational activities related to WH should be redirected to the surrounding multipurpose forests.

GAP ANALYSIS

- Info boards on one trail need to be redesigned and focus more on World Heritage.
- Visitor monitoring and territorial protection need to be increased and improved (more counters, better control).
- Clear visitor material have to be developed and communicated with key actors.
- A visitor centre focusing on beech forests and UNESCO needs to be established.
- Set-up of toilets along main parking areas.
- Educational programmes for schools need to be developed.



- Implementation of additional awareness raising activities, as visitors are often unaware of the rules within the protected area.
- A management authority needs to be defined by legislation.
- More professional cooperation with other component parts (knowledge and experience exchange).

2.5. Paklenica (Croatia)

Nr. of visitors annually: N/A

Public Institution Paklenica National Park is the area manager. Visitor Management Plan is part of the larger management plan for the National Park.

It is based on adaptive managing and participatory planning. The main aim of the Visitor Management Plan is to improve existing management of visiting and visitor's infrastructure, increase visitor satisfaction and their experience of the Park, contribute to better involvement of local population and other users in the visiting system. Managing the World Heritage components, in the context of visiting, refers to planning activities focused on limited visits, monitoring the impact of visits on the preservation of outstanding universal value, education, and increasing of visitors' awareness. The visitation is only allowed on the trails in the National Park and therefore in the component parts and the buffer zone as well.

Six action plans were focused on visitor management in the previous management plan: infrastructure for persons with special need, visitor management of cave Manita peć, management of climbers and climbing activities, environmentally friendly technologies, development of interpretation system, and revitalisation of cultural heritage.

Current infrastructure includes two main entrances into the National Park, where visitors can purchase entry tickets. Parking lots are located at the entry points, further access is possible only on foot. Monitoring of visitors also takes place there. There are also 14 sporadic entrances with only trail signage.

590 climbing routes are present in the park, with Mountain Rescue Service present during the summer. There is one main visitor centre. There are several educational trails. Other infrastructure includes a mountain hut, mountain shelters, and a foresters' house. Toilets are provided at entry points, forester's house, and visitor centre.

The Visitor Management Plan is finished but NP Paklenica are still finalizing the National Park Management Plan which will have the Visitor Management Plan integrated. Future plans include new management facilities, expanding entrances and establishing official entrances at the one or two sporadic entry points, maintenance of existing trails, developing educational programmes, and increasing monitoring of visitors' impact on natural values.

GAP ANALYSIS

- There is a lack of organised visitor transport.
- During the peak season, the visitor pressure can sometimes overwhelm the existing infrastructure.
- Additional awareness raising activities should be implemented, as visitors are often unaware of the rules within the protected area.
- Environmentally friendly wastewater management needs to be improved.



- Improve visitor management in certain locations.
- More interpretational activities, particularly related to WH, should be added.

2.6. Poloniny (Slovakia)

Nr. of visitors annually: N/A

Poloniny National Park is managed by Poloniny National Park administration and there is a Poloniny National Park Care programme 2017-2026 and Management Plan in place. Visitor management is part of this programme. This part of the Management Plan aims to increase the visitor attractiveness of the area and improve awareness of it, as well as it defines the location of individual facilities, their importance, and need for funds.

Current status (February 2022): The Integrated Care Program for the UNESCO site 2023-2042 has been developed and submitted for comments. The NP administrator expects to be approved in the second half of 2022. This integrated care program defines the possibilities of visitor movement and infrastructure development in the individual zones of the site and the national park, as well as defines prohibited activities. It also lists future educational activities for visitors. On the state level, there is also a process of transferring the administration of state property in national parks from the Ministry of Agriculture to the Ministry of the Environment, so the NP administrators will have greater responsibility and opportunities in the future.

Rangers and other staff are ensuring territorial protection by being in the field on a daily basis. Guide service is provided by the administration of the Poloniny National Park in the Information Centre in the Nová Sedlica village. Guided educational programmes (day trips) are also provided and programmes for schools. Gastronomic offer is provided by a number of private businesses. Parking is possible at entrances to marked trails and in nearby villages. A few camping grounds are established. Panoramic towers are provided outside the park. There are a number of educational trails and some cycling trails.

On the one hand, there is a need to improve nature protection, and on the other hand increase the attractiveness for visitors. It is expected to build four campsites with the possibility of sleeping in case of bad weather, seven rest areas with a shelter, five low-capacity cottages, the construction of seven new panoramic towers, and the reconstruction and addition of tourist and educational trails. The NP administrator is also preparing the printing of brochures and the production of nine short films about nature reserves, fauna and flora, including UNESCO.

GAP ANALYSIS

- Lack of tourist infrastructure and rest areas.
- Information materials need to be developed and updated, with a focus on UNESCO and WH.
- More cooperation with other UNESCO WH Sites in the region.
- The area needs better and more positive media publicity, with a focus on positive opportunities that WH can offer.
- Improved cooperation between self-government, municipalities, tourism sector, and the administration of the protected area is needed. As it is, there is currently little incentive for local communities to develop any services or products, as the only thing on offer is simply hiking.



2.7. Vihorlat (Slovakia)

Nr. of visitors annually: 60.000¹

The managing authority is the Vihorlat Protected Landscape Area Administration. The “real” management of the area is carried out by private owners and state forestry organizations. The area does not have its own visitor management plan, but that is governed by the general rules arising from the Nature Conservation Act.

Visitor counting system is established at the entrance to the Morské oko area in the southern part of the component part. Ranger service and other staff visit the area on a daily basis. The area has a well-established education programme and good cooperation with Poloniny National Park.

Parking is established near the entrance to Morské oko and town of Snina. Two camping places are established. Information boards inform visitor of the UNESCO Site. A number of educational and hiking trails are present in the area, alongside 70 km of marked hiking trails, some of which pass through the WH component part. Approximately 40 km of cycling trails are established in the vicinity of Morské oko, with some passing through the Vihorlat component too.

The Vihorlat PLA Care Program has been developed and submitted for comments. The NP administrator expects to be approved in the second half of 2022. And as in Poloniny NP, the Integrated Care Program for the UNESCO site will apply here. On the state level, there is also a process of transferring the administration of state property in national parks from the Ministry of Agriculture to the Ministry of the Environment, so the NP administrators will have greater responsibility and opportunities in the future.

GAP ANALYSIS

- Car parks should be further supplemented with provision of toilets and information boards.
- Information materials need to be developed and updated, with a focus on UNESCO and WH.
- More cooperation with other UNESCO sites in the region.
- The area needs better and more positive media publicity, with a focus on positive opportunities that WH can offer.
- Improved cooperation between self-government, municipalities, tourism sector, and the administration of the protected area is needed. As it is, there is currently little incentive for local communities to develop any services or products, as the only thing on offer is simply hiking.

2.8. Recomendations

One end of the spectrum is represented by National Parks Kalkalpen and Paklenica. Both protected areas have well-established management authorities and noteworthy financing at their disposal. Both areas also receive large numbers of visitors and have very pronounced peak seasons. A common characteristic is also

¹ At the entrance point Morské oko Nature Reserve (B2 zone of the WH site), where the visitor counter is installed, there are about 28,000 visitors in the summer season in 2016-2019 and up to about 45,000 visitors throughout the year. By 2020, it was almost 45,000 during the summer season and almost 70,000 for the whole year. In 2021 it was almost 36,000 during the summer season and 65,000 per year.

The core zone is directly connected to the Morské oko locality, and it is possible to move along marked nature trails here, but the number of visitors is lower.



that majority of visitors of the two protected areas do not primarily come to experience ancient or primeval beech forests, but rather go climbing, hiking or biking in the parks and their vicinity. Thus, the general awareness of the UNESCO listed beech forests within their boundaries is low and both parks would like to increase it and engage in various awareness raising activities.

The middle of the spectrum is occupied by Grumsin and, to an extent, also Poloniny National Park and Vihorlat. All of these pilot areas have already established management authorities, which are responsible for extensive protected areas, but are not the only institution with responsibilities or competencies within their boundaries, which makes their work more complex. They are generally also less well-funded and thus have to prioritise their tasks. As a general rule, they are also receiving less visitors annually, than Kalkalpen or Paklenica. Consequently, there is less visitor infrastructure present. Specific visitor management strategies have not been developed yet and the additional visitor and education programmes are largely missing or are not being implemented.

The other end of the spectrum is occupied by the Slovenian components of Snežnik and Krokar, where the management and perhaps even more importantly the financing situations remain unresolved, which presents a large impediment to any kind of the development or protection of the components. Increased visitor pressure is often observed, which the current infrastructure can still handle, but further development is necessary or the number of visitors should remain constant. Territorial protection is largely absent, both areas are also faced with the pressure from trespassers.

Generally, all the WH component parts are remote and as such the handicapped access is most often impossible. The gastronomic offer within the protected areas and in their vicinity is still lacking. Partnerships between PA managers and local stakeholders are lacking. International cooperation is also lacking.

Too often the component parts are being managed (also in regard to visitor management) as entities on their own and not as part of the largest transnational UNESCO designation in the world, which shares the core characteristics and also responsibilities. Cooperation between component parts on national level should be strengthened, first and foremost. However, it is often even more important to learn from component parts that are bound in different legal frameworks and have often developed unexpected solutions. Thus, the cooperation between the component parts should be established on the transnational level directly and not mainly only through the State Parties and the Joint Management Committee.

The other common theme is that tourism is often seen as one of the best ways to allow for economic development of otherwise peripheral regions or one of the main engines in the more touristic developed regions. The UNESCO designation can thus be seen either as a perfect opportunity to develop additional offers. However, the local or host communities are often forgotten in the rush to develop an attractive visitor offer. Certain programmes aimed at the local communities would foster better relations and better long-term protection of the components. Additionally, even when the touristic offer is being developed, partnerships between the PA managers and the local providers should be actively sought and given priority.

3. Visitor management and knowledge transfer

3.1. Visitor management

Tourism is one of the world's fastest growing industries and poses very intensive impacts on the environment. High percentage of tourism actually involves visits to the natural sites and many of these visits are orientated in sites where special ecosystems can be observed and experienced. Growing numbers of visitors, increasing trends in pressure on the sites and increasing demands in options to experience the component parts and buffer zones of WH beech forests can lead to degradation of it. Therefore, strategies



for visitor management have to be prepared in order to tackle specific problems and trends to prevent degradation of the site and direct sustainable development of it.

Tourism has to be managed with care and site managers must assess and balance the costs and benefits of tourism in protected areas. It is also important to find ways for local people and communities to benefit from tourism linked to conservation, as this helps to demonstrate the economic value of the natural resources being conserved (Candrea and Ispas, 2009).

Visitor management (VM) is practiced, explicitly and implicitly, within every destination, at every attraction, accommodation and tourism transport option. It considers such different issues as tourist facilities, gateways and orientation, transport routes and visitor flows, guiding and interpretation. Accordingly, a varied range of stakeholders at different levels in tourism management exercise interests in VM. These can include public sector organizations such as local government agencies or regional tourism organizations, (tourism) businesses or business advocacy groups devising VM strategies for the attractions and activities that they offer or manage, local resident groups, and non-governmental and third sector organizations, among others. VM can be subject to legal regulations or statutory frameworks, for example activities in protected areas, risk management in adventure tourism, or VM at UNESCO World Heritage sites (Albrecht, 2016).

World Heritage sites share common characteristics with other visitor attraction categories. These include that they are all usually managed by one organisation, provide place-based visitor experiences in need of management attention (Wolf, et al, 2013) and seek to provide enjoyable, educational and inspirational experiences to visitors (Kang & Gretzel, 2012; Leask, 2018). Possible benefits of implementation of visitor management are to raise the profile and improve the quality of tourism products, to inform visitors of facilities, services and infrastructure, to aid in the dispersal of visitors, to manage and/or modify visitor behaviour, often in order to mitigate negative visitor impacts, and to positively impact visitor experiences through guiding and interpretation (Albrecht, 2016).

Leask (2010) indicates that the aim of visitor management is cultivating civic responsibility among the tourists along with the understanding of resource protection.

It is indicated that the responsibility of people towards the protection of natural resources must be notified along with the promotion of this tourism management tool. In relation to that, the promotion of visitor management can be considered the most crucial tool in sustainable tourism management. Leask (2010) also adds that, this attribute concerns about promoting high-quality experience by visitors and also reducing the degradation of destination by making sure that the visitors adopt a suitable behaviour.

3.2. Principles of tourism and visitor management

A set of ten principles summarised in text below are based on Leung et al, 2018 (also based on McCool, 1996; Eagles et al., 2002a; and EUROPARC Federation, 2012); they provide guidance for decision making on the key issues of sustainable tourism and visitor management in protected areas.

Principle #1: Appropriate management depends on objectives and protected area values

Overview:

- Objectives within protected area management plans provide definitive statements of the desired outcomes of protected area management.
- They identify the appropriateness of management actions and indicate acceptable resource and social conditions.
- They allow evaluation of success of management actions.



Actions:

- Ensure management plans include clear appropriate objectives, with conservation primary above all.
- Establish and agree to objectives through public participation.

Principle #2: Proactive planning for tourism and visitor management enhances effectiveness

Overview:

- Proactive management starts with the articulation of protected area values and management objectives. Policies and management decisions that can be tied to these values have a better chance for effective implementation.
- The practice of forward-thinking can lead to better awareness of emerging opportunities for recreation and tourism activities.

Actions:

- Provide opportunities for visitors to learn about protected area values through information and programming.
- Be cognizant of emerging visitor activity or use pattern that may have management implications.

Principle #3: Changing visitor use conditions are inevitable and may be desirable

Overview:

- Impacts, use levels and expectations of appropriate conditions tend to vary (e.g. impact of a campsite in the periphery vs. centre of the protected area).
- Environmental variables influence visitor use and level of impact (e.g. topography, vegetation, access).

Actions:

- Use zoning explicitly to manage for diverse recreation opportunities.
- Use knowledge of diversity to make decisions on desirability of tourism in specific locations (thereby separating technical decisions from those based on value judgements).

Principle #4: Impacts on resource and social conditions are inevitable consequences of human use

Overview:

- Any level of recreational use leads to some impact; in most cases the initial, small levels of use generate the greatest impacts per unit use. Where there is a conflict between conservation and other objectives conservation has primacy.
- The process of determining the acceptability of impact is central to all visitor use planning and management.
- Evidence of impacts can be used for environmental education for park visitors.



Actions:

- Managers must ask: "How much impact is acceptable based on protected area values and objectives?"
- Managers must act appropriately to manage the acceptable level of impact.

Principle #5: Management is directed at influencing human behaviour and minimising tourism-induced change

Overview:

- Protected areas often protect natural processes and features, so management is generally oriented toward managing human-induced change since it causes most disturbances.
- Human-induced change may lead to conditions considered to be undesirable.
- Some changes are desirable and may be the reason for the creation of the protected area. For example, many protected areas are created to provide recreation opportunities and local economic development.

Actions:

- Determine management actions according to which actions are most effective in influencing amount, type and location of changes.

Principle #6: Impacts can be influenced by many factors so limiting amount of use is but one of many management options

Overview:

- Many variables other than level of use affect the use/impact relationship in protected areas (e.g. behaviour of visitors, travel method, group size, season and biophysical conditions).
- Impacts from visitor use or management activities may occur outside the protected area, or not be visible until later (e.g. prohibitions of use may displace that use to other areas; or poor water treatment may result in water pollution downstream).
- Planners need substantial knowledge of relationships between use and impacts to predict future impacts at a variety of scales and over time.

Actions:

- Implement education and information programmes, as well as regulations aimed at restricting visitor behaviour.

Principle #7: Monitoring is essential to professional management

Overview:

- Monitoring is a key step for all adaptive or proactive management frameworks, generating data on resource, social, community and economic conditions that inform management decisions.
- Monitoring need not be complicated or expensive. There are often several possible options.



Actions:

- Enhance public engagement and visitor education by encouraging their involvement in monitoring.

Principle #8: The decision-making process should separate technical description from value judgements

Overview:

- Many protected area management decisions are technical (e.g. location of trail, design of visitor centre), but others reflect value judgements (e.g. decisions on whether and how to limit use, types of facilities and tourism opportunities provided).

Actions:

- Separate questions of ‘existing conditions’ from ‘preferred conditions’ in the decision making process.

Principle #9: Affected groups should be engaged since consensus and partnership is needed for implementation

Overview:

- All management decisions affect some individuals and groups. These groups should be identified early in the decision-making process.

Actions:

- Involve rights-holders and stakeholders of protected area in identifying values of protected areas and developing indicators.
- Train and engage rights-holder- and stakeholder groups in monitoring, management and education.

Principle #10: Communication is key to increased knowledge of and support for sustainability

Overview:

- Communication of results from monitoring tourist impacts on conservation and community benefits can explain reasons for management decisions.

Actions:

- Develop communication strategy to support a proactive or adaptive management process.

3.3. Knowledge transfer in tourism

The main role of knowledge transfer (KT) is helping stakeholders in tourism to become more sustainable.

“Knowledge transfer (KT) is a concept used broadly to describe the flow of (scientific) knowledge between research organisations and business, with the objective of creating socio-economic impact through promoting better use of the (public) research base. Nowadays the term ‘knowledge exchange’ is used instead to reflect the fact that the flow of knowledge is neither one-dimensional in the direction ‘research organisation to industry’, nor only between the players on this scale. This concept evolution generally reflects the subsequent change of perception of the research-business interaction from a linear and one-dimensional flow to a complex structured process involving many different players - academic institutions,



enterprises, governmental agencies and municipalities, and communities. In short, KT is about treating public research as a strategic resource in transferring and applying basic research into marketable products and services” (Vermeulen & Experts, 2014).

KT is defined as the creation and exchange of knowledge between two agents (individual, team, unit, organization) to promote business learning and performance. In the context of sustainability, KT implies a change in management, where the concern with social and environmental dimensions is as important as the economic performance because the mutual exchange and learning processes among all stakeholders promote sustainable developments through the coproduction of knowledge (Kaiser et al., 2016). Knowledge transfer, cultural variables and social embeddedness are key determinants of global competitiveness for advanced regions and nations, and foster a transformation of capitalism towards a ‘knowledge economy’ (Dayasindhu, 2002; Tödtling et al., 2006; Uzzi, 1996).

Knowledge transfer is therefore also an important tool for the WH beech forest Site, which exists on several levels in various directions:

- Inside specific WH beech forest component management team: the management team usually consists of several different experts who contribute and are responsible for effective management of the WH component parts. It is important to prevent knowledge loss when tenured employees leave. This can be done through establishment of a central company information system where all employees can have access to.
- On WH beech forest site managers’ level: different WH components and their managements use different methods and tools for visitor management. It is important that they share the ideas, results, opinions and other information, since all WH component parts differ from each other and therefore not everything can be copied. WH site managers can therefore learn from each other, adjust their tools & ideas and implement in their own WH component parts the ones that have proved best in similar components. More feedback the managers exchange, better they can design management of their WH component part in order to protect the OUV and ecosystem integrity, while allowing the visitors to experience the component.
- On relation from WH beech forest Site to visitors: the WH Site and the component parts’ management have to introduce suitable infrastructure to efficiently transfer knowledge to the visitors and educate them about the Site and its characteristics.
- From WH beech forest component part visitors to WH site manager: visitors are an important source of new ideas. With efficient monitoring, visitors can provide much feedback on how to better present the component part for visitors. This information can present the manager an important orientation in which way to develop the WH component to bring it closer to the visitor - if this does not cause any threat to OUV and ecosystem integrity.

One of the great challenges in management and knowledge transfer is to minimize the delays between publishing statements of intent (as embodied in policy or implementation objectives), developing scientifically sound concepts and management instruments and ensuring the organizational capabilities that implement them. The heart of sustainable management challenge is the alignment and co-evolution of capabilities to create, verify, absorb, and apply new knowledge. This alignment, compatibility, and flow of knowledge between researchers, policy makers, and resource managers and other involved stakeholders are often far from optimal. We often see misunderstandings, frustration, unhealthy forms of conflict, and significant misalignment. Although all parties are generally keen to contribute to the formulation and effective implementation of resource management policies, the synergy between them is frequently poor. Clearly, it is important for each party to understand what they can contribute to the process, and how best to integrate these contributions to achieve effective outcomes (Roux et al., 2006).



To avoid knowledge loss, we need to create an efficient knowledge transfer plan. There are four main steps to create an efficient knowledge transfer plan:

- Decide what information you need to keep.
- Create a process for transferring knowledge.
- Choose a platform to facilitate knowledge transfer.
- Use your technology for ongoing knowledge transfer efforts.

There are multiple different tools and activities, which can be adopted and used in order to have more efficient knowledge transfer between different stakeholders, parties or on different levels. Beside knowledge transfer, it is also important first identify and store knowledge. These tools and activities to identify, develop, store and transfer knowledge include:

- Best-practice meetings,
- Documenting processes,
- Electronic performance support systems (EPSS),
- Job aids,
- Knowledge audits,
- Knowledge fairs,
- Expert interviews,
- Information exchanges,
- Internships,
- Storyboards,
- Storytelling,
- On-the-job trainings,
- Trainings,
- Skills inventory,
- Mentoring,
- Lessons learned debriefings,
- Learning games,
- Expert interviews,
- Document repositories,
- Communities of practice,
- Etc.

We need to take into account that not all of the listed measures are effective and can be used in all situations and systems. Some of them are often used in attempts to bridge the knowledge divide(s) between research, policy formulation, and operations in natural resources management. Although existing measures may achieve some result, they often fall short of delivering proper alignment and a seamless flow of knowledge between groups (Roux et al., 2006). Roux et al. (2006) also emphasizes the need to appreciate



both explicit and tacit forms of knowledge and to shift from a mode of unidirectional transfer, to the co-creation of knowledge. Given the shortcomings that are commonly experienced with knowledge transfer efforts, knowledge interfacing and sharing is suggested as a conceptual framework for promoting and sustaining an effective science-management partnership.

3.4. Workshop on visitor information and World Heritage knowledge transfer

The concept is the outcome of a two-day online workshop, which was held in October 2020, organised by Kalkalpen National Park (D.T2.2.2). Participants from nearly all project partners discussed the necessary communication for UNESCO WH beech forest component parts in their different phases, from the nomination to the inscription and the established WH status.

The result was a joint development of communication concepts (e.g. for brochures/posters, guided WH tours, WH stakeholder action days, guided WH hiking trips for locals, movie, advertisement activities, mobile exhibition etc.) with all project partners and selected associated partners.

Project partners were asked to contribute with their experience in the following working tasks:

- Networking with other WH Partners
- WH program to schools and kindergartens
- Involvement of local stakeholders (landowners, authorities, tourism providers ...)
- Communication and information to local population (other to stakeholders)
- Information offers to tourists

The workshop served to develop this communication concept. It presents best practise examples, necessary communication activities and the risks that can come with communicating UNESCO WH topics addressed to the following target groups: Tourism sector, local population and schools, local stakeholders, WH partner network.

This communication concept follows all the development phases (preparing a Tentative List, preparing Nomination Dossier, inscription to WH list) to support existing and planned WH sites during their development and existence. The concept was created for the existing and future WH beech forest components, but it may provide inputs for other World Heritage Sites as well.

3.4.1. Tourism

It is important to involve all touristic stakeholders from the beginning of a planned WH Site. Sustainable tourism and a well-working visitor guidance system are vital to ensure the protection of the Outstanding Universal Value (OUV) and the WH Site's integrity.

PR activities are vital to give regular and adequate information to all interested visitors. Producing a film about the WH Site can help local tourism agencies in their marketing activities, as well as tourists to get to know the WH beech forest component part. Personal contact is also important, the WH Site's team should be present at local festivals, fairs, markets, to communicate the values of World Heritage and available tourism offers.

Infrastructure is important to ensure a good experience for visitors. Its design must ensure sustainable use, its location should be in accordance with the protection of the OUV. Thematic infrastructure such as trails, info point, observation decks can attract touristic attention and direct tourists to where we want them to go. Information boards at these point can raise awareness of visitors. Exhibitions can also be an added value,



especially on bad weather days when outdoor sites cannot be visited. Accommodation is also important, especially for international tourists. Working with local stakeholders here is vital.

Touristic offers in and around the WH should be created together with tourism stakeholders and WH managers to ensure their quality. Tourist guides are the most important offer for tourists the visitor experience of the WH Site. Experts' visits can also serve as an added value for guided tourism. Tourist packages which combine all necessary bookings in one programme can be developed by the WH Site and local and regional stakeholders (even other UNESCO WH sites). English proficiency is a requirement if we want to attract international visitors.

Below is an overview of communication activities for tourism, divided by development phases of a WH Site.

Preparation of Tentative List (Pre-Phase):

- Cooperation with local mountaineering associations

Preparation and Submission of Nomination Dossier, evaluation (Planning Phase):

- Create a platform for nature activities
- Cooperation with tourist agencies (regional & national), national tourist boards, regional tourist boards, local info centres and all tourist providers from the area
- Cooperation with local private accommodation hosts
- Creation of WH partner network (with regional businesses)
- Engaging locals (calls for participation, social media campaigns, articles...)
- Cooperation with travel businesses (tour operators, travel agencies, travel guides)
- Foster cooperation between different levels: state, regional and local

Inscription into UNESCO World Heritage List (Implementation Phase):

- Active involvement of the WH management in local and regional planning (management docs, strategies of development etc.)
- Building institutional capacities
- Establish a network with regional authorities (communities and municipalities) and neighbouring protected areas
- Establish an event calendar
- Cooperation between private tour guides and WH site managements
- Engage local travel businesses and the local population
- Set up a clear communication strategy and goals for communication
- Establish social media cooperation
- Use local media, press, radio, and TV



There are also some risks that come with tourism: high expectations of visitors/tourists face a lack of communication within the region, especially in early phases of WH Site, where not all activities have started and staff and budget are lacking. Another big issue is overtourism. UNESCO's label attracts a lot of visitors, which can overburden the infrastructure and threaten the OUV. A professional visitor monitoring system should be in place as well as a visitor guidance system, avoiding sensitive areas of the WH site. Limits to annual visitor numbers could also be established, depending on the level of access a WH site offers.

3.4.2. Local population and schools

Ideally, local populations identify with the WH site in their locality and care about its protection.

Schools are an important partner in fostering a relationship with the WH site. Programmes should be developed for different age groups (kindergarten to high school). Lecture and on-site workshops should be offered, as well as educational work sheets, interpretative guiding and kids-universities during holidays. Wildlife experts, ranger programmes, competitions between schools are additional possibilities to engage youth.

Local population also requires different programmes for different groups and ages to reach a wide variety of the local populace. Rangers can help reach out to the public. Volunteer programmes can attract the local public, as well as regular events, e.g. WH Day. Reaching out through local radio, newspapers, TV, and social media is important to inform people of these event and programmes.

Below is an overview of communication activities for locals, divided by development phases of WH site.

Preparation of Tentative List (Pre-Phase):

- Making the local population feel like they are part of the WH story, with local working groups that give input and ideas
- Exchange with other WH sites
- Information with rules of behaviour in the protected area in general and in the WH sites
- Nature trails with information about the protected area
- Inspire staff - make them proud/inspire them (experience the future World Heritage Sites)

Preparation and Submission of Nomination Dossier, evaluation (Planning Phase):

- Develop educative programmes (for kindergarten and elementary school), inform them with stories, not just facts
- Promotion of benefits through media: local newspapers, documentary, radio - ideally through story telling
- Develop brochures about the WH site
- Educative boards with information about WH site

Inscription into UNESCO World Heritage List (Implementation Phase):

- Reference work about forest ecosystems
- Volunteer opportunities: for schools, students, and adults
- Playful approaches (board game, computer game, virtual trail)



- Wilderness summer camps: survival know-how in the wild, workshops on biodiversity
- Junior ranger/guide training
- Information/excursions for students to become teacher/guides
- Visitor centre
- Guided tours with national park staff (e. g. director)
- WH Movie: The WH site on its road to success
- Regional souvenirs, artwork, food, beverages (enjoy WH with all senses)

To ensure these communication activities are successful, accessibility of the WH site is of utmost importance (trails, info panels, visitor guidance...). Public transport is important. Overcoming a lack of interest and preconceptions about the WH Site is vital to ensure a sustainable and successful relationship with the local populace.

3.4.3. Stakeholders

From management aspects (e. g. regional/national forest agencies, landowners) to finances and budget (e. g. national ministries, international funding), to keep in touch with the most important stakeholders is always important.

WH sites should be integrated into regional economy, education, and politics (multisectoral). The communication concept of the WH site should be tailored to the individual needs and situations in different regions and countries. A central based marketing concept and a WH partner network are helpful for stakeholder communication.

To reach all stakeholders, first the committed ones should be involved to create positive examples for the other ones. Communication can either be personal and direct, or digital.

Personal communication:

- Package offers, combining different activities
- Regular stakeholder meetings to keep them informed and updated
- Decision-making involvement
- Stakeholder board (e. g. Kalkalpen National Park)
- Excursions to sites
- Creating a youth fan club (e. g. Gesäuse National Park)

Digital communication:

- Website, where all necessary information regarding communication can be found (email, phone numbers, etc.)
- Information materials for communication
- Newsletter and active email network with easy access
- Groups within social media sites (e. g. Facebook groups)



Below is an overview of communication activities for stakeholders, divided by development phases of the WH site.

Preparation of Tentative List (Pre-Phase):

- Requires tailored methods, suited to each stakeholder
- Communication strategy must be developed individually at the beginning
- Need of a complete list of stakeholders

Preparation and Submission of Nomination Dossier, evaluation (Planning Phase):

- Clear communication about WH and possible compensation (e. g. for landowners)
- Look at lessons learned from other sites
- Regular communication with stakeholder so they are informed of changes and not surprised by new developments (e. g. with newsletters, regional newspapers)
- Excursions to sites and personal communication
- Day of (at) the beech (including beech party)
- Outreach events to maintain awareness
- Let them show their knowledge of and experience within the WH site (e. g. as rangers)
- Create advisory boards with all kinds of stakeholders like youth, creative sector, art, tourism sector etc.)

Inscription into UNESCO World Heritage List (Implementation Phase):

- Cooperation with festivals and events, being part of the game (increase visibility)
- Make a movie of the history of UNESCO in general and the site in particular
- Invite other WH component part managers/stakeholders and let them present to the local stakeholders, invite mayors
- Excursion to sites and personal communication

Two major risks regarding the communication with stakeholders are to choose the wrong channels to reach certain stakeholders or that the recipients are not willing to change their opinion. Sometimes it is hard to change traditional opinions. Both can be addressed with the activities and measures described above. Another risk is insufficient and incomplete information. Not addressing problems or avoiding conflicts with stakeholders and sticking to “beautiful” topics can lead to a lack of understanding. Communication should be as simplified as possible to make it easier for everybody to understand the message. Managements of WH sites need to try to understand the other person’s needs and problems and address them accordingly and honestly.



3.4.4. Networking with partners

Networking with partners on different levels (regional, national, and international) is crucial for WH sites. Lessons learned and best practice should be exchanged between partners and new inputs can have positive impacts on the management and the conservation status of WH sites.

It is very important to be well connected with the national ministries and organizations responsible for WH sites and their issues. International cooperation within networks (e. g. European Beech Forest Network) and common project proposals to understand the needs and activities of other World Heritages Sites are important. Study trips to other WH component part managements can help to learn about procedures, organizational structures, to develop visitor offers and exchange successful communication strategies. Joint research activities will also bring new ideas, experts, and technical approaches into the region, and can help improve monitoring and research on a regional level.

Below is an overview of communication activities for networking with partners, divided by development phases of WH Site.

Preparation of Tentative List (Pre-Phase):

- Establish a data-platform to provide access to all existing materials (e. g. data, experience, materials, concepts, strategies, project (results), funding programmes, proposals, publications)
- Make a list of contacts of other WH sites and maintain it
- Provide experts' support in project development to the sites - many do not have experience to tap into EU funds efficiently
- Prepare a list of possible funding programmes that other WH component parts can use to partner up with you
- Language: apply for ERASMUS programmes and join partners at activities on language development programmes combined with expert trainings

Preparation and Submission of Nomination Dossier, evaluation (Planning Phase):

- Clear communication strategies (national and international level)
- Raise awareness in the relevant ministries about the importance of WH sites
- Newsletter to keep all partners updated
- Joint promotion of WH site
- Establish long-term bilateral cooperation with other WH component parts

Inscription into UNESCO World Heritage List (Implementation Phase):

- Get a blogger/traveller on board who visits different WH component parts and makes a travel blog
- Exchange of best practice between World Heritage component parts
- Make a call on internship programmes to have volunteers especially in the main seasons in order to make the management less overwhelmed by extra tasks



The biggest risks regarding networking are the lack of resources for exchange and cooperation as well as a language problem. A budget for exchanging experience with other sites is very important for the management of WH sites. It is also necessary to ensure the communication between UNESCO, ministries, national governments, and the management of the sites. A platform for these kinds of exchanges must be ensured.

4. Strategies for visitor management and knowledge transfer

4.1. Vision of visitor management and knowledge transfer

Visitors' needs and expectations are satisfied through specifically designed infrastructure, events and other services that provide at specific WH beech forest site the worthy experience and education while following the rules of protection of site, its OUV and ecosystem integrity. Visitor management is designed with specific objectives and their strategic actions which are integrated through the needs and connectivity of different stakeholders in order to educate the visitors, transfer knowledge between different groups of stakeholders and protect the site.

The overarching goal of this strategy is to present strategies and strategic actions to manage visitors in the most efficient, transparent, kind, educational, non-discriminatory way, while presenting them the option to experience the site, while keep protection of the site at highest possible level.

4.2. Strategy for visitor management and knowledge transfer

According to Eagles et al. (2002b) there are four strategic approaches which can be used to reduce the negative impacts of visitors on protected areas, which is also in accordance with the Code of quality management:

1. Managing the supply of tourism or visitor opportunities, e.g. by increasing the space available or the time available to accommodate more use;
2. Managing the demand for visitation, e.g. through restrictions of length of stay, the total numbers, or type of use;
3. Managing the resource capabilities to handle use, e.g. through hardening the site or specific locations, or developing facilities; and
4. Managing the impact of use, e.g. reducing the negative impact of use by modifying the type of use, or dispersing or concentrating use.

We can use these strategic approaches in order to define the objectives and strategic actions for visitor management and knowledge transfer in the component parts of the WH Site "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe." The objectives proposed also cover the requirements regarding dissemination of knowledge on European beech forests and their management as well as educating visitors about the value and management of (WH) European Beech Forest, which are formulated in the Code of quality management, developed within the BEECH POWER project.

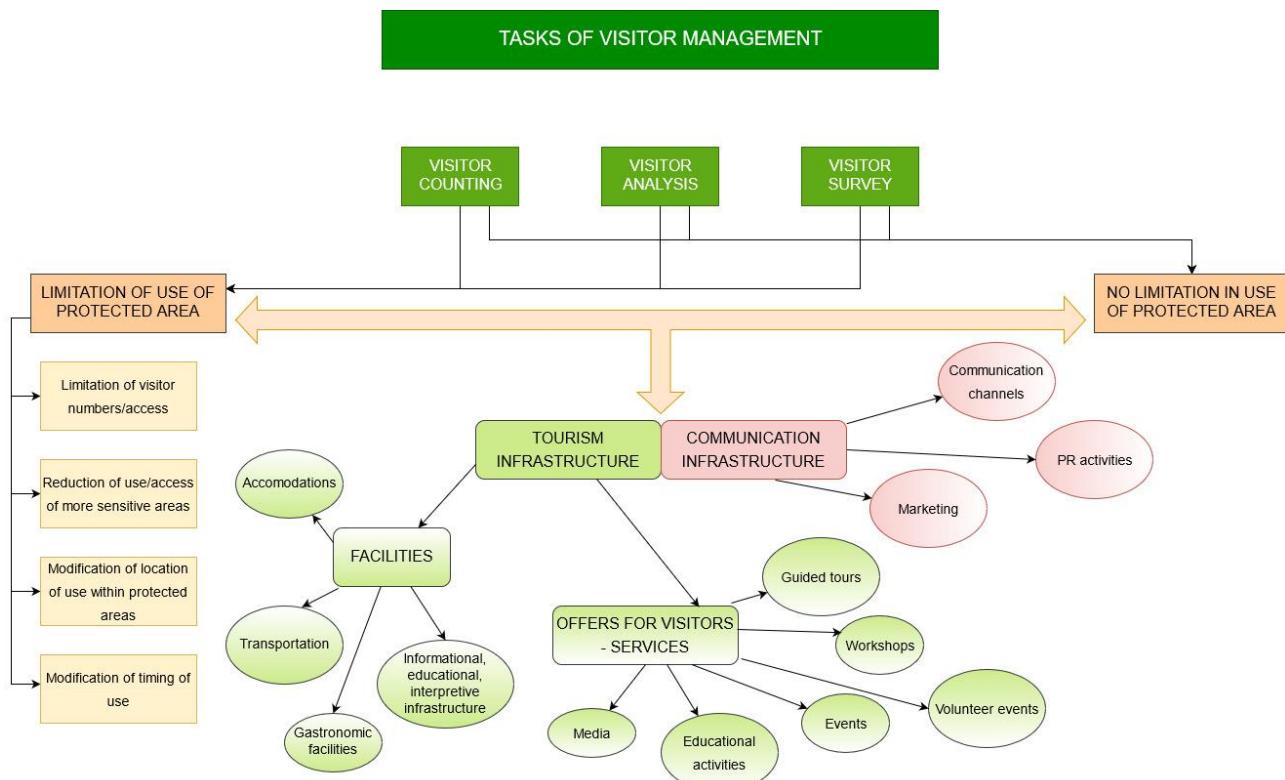


Figure 1: Tasks of visitor management

4.2.1. Objective 1: Promotion of sustainability and protection of the WH site through tourism infrastructure and activities

Tourism infrastructure and activities should be developed, organised and presented to visitors in a way to promote sustainability in all aspects, while protection of the WH site and its ecosystem integrity is the outmost important task.

- Strategic action 1: Build and maintain sustainable based infrastructure (promotion of local green materials), which is consuming only renewable energy, that is produced within the site's management area (e.g. solar panels on the roofs of visitor infrastructure).
- Strategic action 2: Use IT technology for optimisation of infrastructure
 - Information and visitor navigation by offering GPS-based IT-solutions
- Strategic action 3: Development of educational infrastructure, which promotes the importance of protecting of WH site and its role in the ecosystem and in regional development of the wider area.
 - Access points
 - Visitor centres
 - Observation facilities
 - Resting places
- Strategic action 4: Set-up of thematic trails and exhibitions which are put in wider context and offer to the visitors the paths to deeper meaning.
 - Create and promote network of accessible hiking paths, cycling trails
 - Specific visitor guidance and visitor facilities for disabled



- **Strategic action 5:** Use of different interpretive services (personal and non-personal) in order to turn the phenomena into the experiences and foster stewardship for all heritage.
 - Specific theme-oriented hiking and cycling routes
 - Information boards
 - Information material such as maps, brochures, route descriptions (print media and online)
 - Guided tours offered by rangers of the protected area
- **Strategic action 6:** Management of way of transportation to comply with effectiveness, sustainability and protection.
 - Public transport access to certain starting points
 - The existence or non-existence of parking places > access to certain starting points
 - Combine public transportation with other sustainable ways of transportation (bikes, horses & carts, visitor e-trains, snow sleds, etc.)
- **Strategic action 7:** Design tourist packages to offer the best experience of the site while complying with other requirements of sustainability and visitor management.

4.2.2. Objective 2: Avoid deceiving visitors with unrealistic expectations through educational activities and corresponding information

Visitors' expectations and anticipations towards the WH site can be in many cases too high and extreme. Management team should meet visitors' expectations in a realistic way in order to protect the WH site. Visitors' expectations should not be provoked with unrealistic images and adventures of the site. Educational activities should be designed in a way to keep up with realistic presentation of WH site.

- **Strategic action 1:** Inform visitors about appropriate wilderness/PA uses.
- **Strategic action 2:** Inform about potential conditions in wilderness/PA.
- **Strategic action 3:** Design lectures, excursions, workshops for different groups of visitors (e.g. schools, kindergartens, families, experts...)
- **Strategic action 4:** Use wildlife experts as guides.
- **Strategic action 5:** Build and use educational infrastructure.
 - Informational boards and panels
 - Informational material (maps, brochures, route descriptions)
 - Digital depositories which can be accessible through hand-held devices (e.g. mobile phones, tablets, etc.)
 - Models
 - Display cases
 - Strategic action elements
 - Etc.
- **Strategic action 6:** Promote volunteer events and programmes.



4.2.3. Objective 3: Anchoring of WH site into the region

WH site should be embedded into the region in a way to promote regional development of the wider area, include different stakeholders and encourage active participation in tourism sector.

- Strategic action 1: Local stakeholders should be encouraged to actively participate within the management of visitors.
- Strategic action 2: Local products, knowledge and customs should be incorporated into tourism offer.
- Strategic action 3: Include local tour guides and different local experts into the heritage interpretation.
- Strategic action 4: Contribution of other regional stakeholders to better visitor experience of WH site.
- Strategic action 5: Promotion of sustainable regional development through WH.

4.2.4. Objective 4: Promote and foster cooperation and knowledge transfer between different PAs and managers on different levels

Cooperation, knowledge transfer and experience sharing should be promoted between different PAs and managements on regional, national as well as transnational level.

- Strategic action 1: Knowledge transfer through different activities (lectures, workshops, opinion exchanges, field activities and visits, etc.) should be promoted between different PAs sites and their management teams on regional, national and transnational level.
- Strategic action 2: Knowledge transfer through different activities (lectures, workshops, opinion exchanges, field activities and visits, etc.) should be promoted between different groups of stakeholders on regional, national and transnational level.
- Strategic action 3: Communication, cooperation and knowledge transfer should be promoted between the management team and stakeholders of WH site in order to have more efficient management and protection of WH site in place. At the same time this deepens and bond between stakeholders in order to promote sustainability and protection of WH site.

4.2.5. Objective 5: Smart use of communication infrastructure, PR activities and marketing

Communication infrastructure, PR activities and marketing is an important part of each WH site and its management system. This infrastructure and activities should be used in a way to promote protection of the WH site, its ecosystem integrity and address visitors to behave responsibly.

- Strategic action 1: Communication manager should prepare the communication plan.
- Strategic action 2: Communication channels should address the visitors in a way to present them most efficient ways to explore WH site while promoting protection and responsibility of each individual for implementing this.
- Strategic action 3: A clear idea should be developed which PR activities have a positive impact on WH site and which have negative one. Desired PR activities should be therefore promoted, while undesired ones banned from use. There should be a constant track and analysis of PR activities and their impact.



- Strategic action 4: Marketing should be organised in a way to promote protection of WH site and discourage activities which can pose a threat to the ecosystem and WH site in general.

4.2.6. Objective 6: Track, analyse and manage visitor flow

Visitor flow management is one of the most important activities that allows us to recognise, track and analyse the impacts of the visitors on WH site.

- Strategic action 1: Prepare the plan and implement efficient monitoring of visitors.
 - Visual monitoring and counting
 - Digital photo or video monitoring
 - Electronic or mechanical registration of visitor numbers (vehicle counters, person counters, electronic counters)
 - Counting of total visitor numbers
 - Self-registration of visitors
 - Surveys
- Strategic action 2: Analyse the results of monitoring and identify the areas with greatest visitor congestion. Prepare the study of impact of visitors on WH site and specific locations inside it.
- Strategic action 3: Prepare a Strategic action plan to implement different measures in order to reduce visitor pressure on specific locations (if needed).

4.2.7. Objective 7: Implementation of visitor restriction methods and measures

Visitor restriction methods and measures play an important role in protection and preservation of WH site. Many WH sites are facing with overcrowding which can cause damage and degradation of WH site and its ecosystem.

- Strategic action 1: Limit number of visitors
 - In the entire protected area
 - In more sensitive areas - depending of carrying capacity of specific area
 - Group size limit
 - Time limit
- Strategic action 2: Limit length of stay and modify timing of use
 - Length of stay limitations
 - Require a stay limit in problem areas
 - Encourage use outside of peak use periods
 - Discourage/ban use when impact potential high
 - Seasonal or temporal limitation
 - Area closures
 - Scheduling the entry - reservations
- Strategic action 3: Dispersion of visits with promotion of other areas



- Inform about problem areas and alternative areas
 - Discourage or prohibit use of problem area
 - Locate facilities on durable sites and promotion of them in favour of others
 - Concentrate use through facility design or info
 - Pre-assignment of recreation site (and type of recreation)
- Strategic action 4: Charge a flat visitor fee
- Fees in periods of high use/high impact potential
 - Fees for a specific location inside WH site
- Strategic action 5: Limiting access to specific areas with barriers and control
- Seasonal closures of specific areas
 - General closures of specific areas
- Strategic action 6: Zonation of protected area into subzones with more stricter regimes / limitations
- Strategic action 7: Segregation on different types of visitors
- Restrictions by group characteristics
 - Discourage/ban damaging practices/equipment
 - Encourage/require behaviour, skills, equipment
 - Discourage/prohibit horses
 - Discourage/prohibit pets
 - Discourage/prohibit overnight use
- Strategic action 8: Tourism marketing

4.2.8. Objective 8: Increase the resilience of the site

Tourism activities can pose negative impact on the resilience of WH component parts. Several preventive actions can be taken in the wider area (e.g. region) of the WH component part in order to increase its resilience and protect it from potential damage.

- Strategic action 1: Identify the (potential) tourism activities which can cause negative impacts.
- Strategic action 2: Shield the component part from impact
- Designate the (potential) tourism activities the adequate location outside the PA
 - Present measures to track and monitor the impacts of tourism on WH component part
 - Present measures to mitigate the potential impacts of tourism on WH component part
 - Prohibit tourism activities which are having negative impact on WH component part
- Strategic action 2: Strengthen the component part
- Apply measures in buffer zone or wider area to prevent negative impacts on the component part
 - Monitor the state of conservation of the component part and buffer zone
- Strategic action 3: Remove problems



- Prepare the analysis with identification of the problems and causes to it, assessment of the damage on specific indicators
 - Design solutions to relocate (or completely ban) the activities causing the problems and prepare plan to rehabilitate impacted locations
 - Design strategies with mitigating measures
- Strategic action 4: Maintain / rehabilitate impacted locations
- Use nature-based solutions and adaptive measures to rehabilitate the damaged area
 - Implement adaptive measures to maintain the current state and prevent future potential damage to the area
 - Design activities in specific WH beech forest site in a way to comply with ecosystem-based forest management (for more information refer to: Guideline on Ecosystem-Based Forest Management - D.T2.3.3; Code of Quality management - D.T3.3.3)

5. Practice example - Pilot implementation and evaluation of communication measures in Kalkalpen National Park

Pilot implementation and evaluation of communication measures in Kalkalpen National Park was one of the activities that was established within the BEECH POWER project (Deliverable D.T2.2.3), summarized below. For more detailed information, please refer to the document mentioned above. In total 11 activities were implemented.

A WH knowledge transfer concept was developed to provide a vision for the national park and the region concerning the WH topic. An online survey was created to get visitors' thoughts and wishes regarding WH. A leaflet was designed to inform visitors on European beech and Austrian beech WH components. Additional mobile presentation material was made to be used at different events (mobile presentation wall, mobile exhibition, beach flags). Articles were published in newspapers that reached around 600.000 people. A joint WH day was organised by all Austrian WH components. This opportunity was used to provide guided ranger tours (which sadly had to be cancelled due to COVID19), premiere a WH film, and publish a trailer for guided WH tours. We also organised an event where we invited local stakeholders to inform and train them about the WH. A guided excursion into the WH beech forests was also offered. A multi-vision show was redesigned to include the theme of WH. To get an overview of the use of individual WH tours, counting equipment was purchased during the project and installed on our WH trail.

Most activities were successful in reaching their goals, but some were limited due to COVID19 measures. Indirect activities, like publishing newspapers articles are harder to estimate due to lack of feedback.

RECOMMENDATIONS

An intensive examination of the subject of WH - as presented in the WH Knowledge transfer concept - in all its areas seems to be an important cornerstone for all planned activities and is therefore also recommended to the other WH component parts. This is the only way to develop an overall vision for the entire region and to work on its implementation.

When creating new WH offers, an online survey for visitors can be a vital tool in learning about visitors' wishes and thoughts.



PR activities (newspaper articles, films, leaflets...) are a great way to promote WH Sites and to educate the public. Presentation materials should be of excellent quality to stand out from other media. There should always be a mix of digital and analogue information material.

WH offers for local inhabitants are important in getting the local public to support you. One example of this are free guided tours for locals.

Accurate data on visitor pressure on certain points and trails is important for visitor management, this data can be gathered by automatic counting systems.

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