Durmitor National Park

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Montenegro
Inscribed in: 1980
Criteria: (vii) (viii) (x)

This breathtaking national park was formed by glaciers and is traversed by rivers and underground streams. Along the Tara river canyon, which has the deepest gorges in Europe, the dense pine forests are interspersed with clear lakes and harbour a wide range of endemic flora. © UNESCO

SUMMARY

2020 Conservation Outlook

Finalised on 08 Dec 2020

SIGNIFICANT CONCERN

The current conservation status of the World Heritage values of Durmitor National Park is of ‘Significant Concern’ overall. Due to serious financial constraints and lack of personnel, the current management of the site cannot effectively address all present threats, such as illegal logging and the growing impact of tourism activities and over-visititation. Management staff is also very limited in its capacity to address threats originating from outside the site’s boundaries, such as uncontrolled urban and tourism infrastructure development. At the same time, there are high concerns regarding potential threats, particularly a new hydropower project Buk Bijela in Bosnia and Herzegovina and small hydropower projects in the wider Tara catchment, which could not be controlled or even mitigated by the park authorities and which could have a much larger and potentially irreversible impact on the site’s values and integrity.
FULL ASSESSMENT

Description of values

Values

World Heritage values

► Exceptional natural beauty  
Criterion:(vii)

Durmitor National Park’s exceptional scenic beauty has been shaped by glaciers and rivers. The alpine meadows on plateaus and smooth hills are set against the stark backdrop of the numerous high and rugged peaks. The dense forests and the glacial lakes add to the scenic diversity and appeal. The most dramatic elements of the spectacular mountain landscape are the deep river canyons, most notably the famous Tara River Gorge, Europe’s deepest gorge and one of very few unaffected by dams and roads. Even the underground offers stunning natural beauty in the form of numerous caves, most notably the “Ice Cave”, with its impressive ice stalactites and stalagmite (World Heritage Committee, 2015).

► Geological features  
Criterion:(viii)

Geologically, Durmitor and Tara canyons are made up of rocky massifs of the Middle and Upper Triassic, Upper Jurassic and Upper Cretaceous, though more recent rocks are also present. The dominant features are limestone, especially the so-called Durmitor Flysch, a set of tectonic layers inclined at an angle of 90 degrees in the Durmitor Massif. There are displays of many karst features: rugged peaks, limestone plateaus, deep canyons (such as the Tara gorge, 60 km in length), caves (including Montenegro’s deepest cave and subterranean rivers draining some of the glacial lakes), etc. (World Heritage Committee, 2015). Less known but no less fascinating is the underground world of the property. It includes Montenegro’s deepest cave and subterranean rivers draining some of the glacial lakes. In particular, the “Ice Cave” is a visually stunning and a rare relict of past glaciation (World Heritage Committee, 2015).

► Rare and endemic flora  
Criterion:(x)

Spanning an altitude range from 450 to 2,500 m, Durmitor National Park supports a rich karstic flora (700 species, with 1,600 existing in the wider area (World Heritage Committee, 2015) with many rare and endemic species. Durmitor, together with the Tara canyon, represents one of the most important refugia of arcto-tertiary flora, as evidenced by its endemic and relict species. The endemic flora of Durmitor comprises 175 species, which represents 12% of the total flora of this massif. High mountain endemics number 122 species, which is 77% of the total endemic flora of this massif, and 15% of the total high mountain flora. The park contains one of the last virgin black pine forests in Europe, on soils that would usually develop beech woodland (World Heritage Committee, 2015).

► Terrestrial species diversity  
Criterion:(x)

Among the large mammals are predators like Brown Bear, Grey Wolf, European Wild Cat and River Otter. Some 130 bird species include birds of prey, such as Golden and Short-toed Eagle, Honey Buzzard and Peregrine Falcon (World Heritage Committee, 2015). About 50% of the national population of the Western Capercaillie (Tetrao urogallus) is found in the park, making some of the largest leks, not only in Montenegro and the Balkans, but in the whole of Europe. Durmitor is also the first area in Montenegro for Three-toed Woodpecker (Picoides tridactylus) and second best for Hazel Grouse (Bonasa bonasia) and Boreal Owl (Aegolius funereus). River canyons of Tara and Sušica and some other cliffs in the park are nesting site of 4-6 pairs of Golden Eagle (Aquila chrysaetos) and some 10-15 pairs of Eagle Owl (Bubo bubo), while Rock Partridges (Alectoris graeca) and Horned Larks (Eremophila alpestris balcanica) and Rock Thrushes (Monticola saxatilis) inhabit high bare rocky areas. Open grassy areas of the Durmitor plateau are important for Wood Larks (Lullula arborea), Tawny Pipit (Anthus campestris) and
the Short-toed Snake Eagles (Circaetus gallicus). Occasionally the area is visited by small flocks or individual Griffon Vultures (Gyps fulvus) that breed in nearby Uvac canyon in Serbia (Rubinić et al., 2019).

### Endangered freshwater species

The Tara and its tributaries, as well as the lakes, contain a large number of salmonidae (UNEP-WCMC, 2012). The endangered Danube Salmon, under heavy pressure from overuse and dam construction elsewhere in its natural habitat, continues to live in the rivers of the park (World Heritage Committee, 2015).

### Assessment information

#### Threats

**Current Threats**

The current threats, including expansion of the ski resort, extraction of water from Modro jezero, over-visititation and tourism are very high. Poaching and logging, some human activities and urbanisation (inside the site mainly visible as new infrastructure for visitation) are high and have a serious visual impact on the exceptional natural beauty of the area and its biodiversity values.

**Invasive Non-Native/ Alien Species**

*(Introduction of non-native fish species)*

The rivers and lakes have been stocked with non-native fish species (rainbow trout) (WWF, 2007). Several lakes, not connected with the river system and originally without fish, have been stocked artificially.

**Tourism/ Recreation Areas**

*(Ski resort development)*

Ski runs and lifts have been constructed inside the World Heritage site (World Heritage Centre, 2017; World Heritage Committee, 2016). Savin Kuk (near the village of Zabljak) is one of the most important ski centres in Montenegro, easily accessible from Podgorica. A medium-size skiing area has been developed inside the World Heritage site, including chairlifts and ski runs, placing additional inadequately planned growth pressure on the area. The spatial plan for the wider Zabljak area includes plans for a significant extension and enlargement of the existing ski centre Savin Kuk, along with the extension of the existing ski lift, new lifts and new ski slopes and several steps towards the transformation of the ski centre into a larger-scale ski resort have already commenced (works on the slopes of the mountains to enable new ski corridors, construction of the infrastructure and facilities for visitors, new access roads for road traffic, extensive parking lots, erection of a garage, restaurants, creation of a water reservoir for artificial snow etc.). In the initial phase of the enlargement of the ski centre Savin Kuk, the transformation of the existing ski lift into a six-seat cable lift and extension of the ski terrain to the top of Savin Kuk, together with the construction of the extensive water reservoir and other construction works on the infrastructure for visitors, are foreseen and some already being implemented (IUCN and UNESCO, 2018). The spatial plan is currently under revision and the draft amendments are on public hearing until end of September, 2020. It was intended that this would lead to more emphasis on smaller ski developments of local character and limited capacities, however, it is concerning that the amendments to the proposed expansion of the Savin Kuk ski resort would still significantly extend this ski area (IUCN Consultation, 2020). The Government of Montenegro has temporary suspended all plans regarding potential expansion of the ski zones inside the World Heritage site (State Party of Montenegro, 2020). This threat rating is based on the situation at the time of the assessment and also takes into account the cumulative impacts of this threat with other related threats (urban development, tourism). The threat rating may change depending on the revision of the spatial...
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**Mining/ Quarrying**

*Pollution from mining*

Very Low Threat

A mining area with a polluted reservoir was located upstream of the World Heritage site on the Tara River (UNEP-WCMC, 2012). The lead mine tailings and toxic waste disposal are located 32 km upstream of the National Park boundaries. A lead and zinc processing plant, using the flotation of ore, in Mojkovac was in operation from 1976 to 1991. The toxic waste, which was stocked in an area of 19 hectares (altogether around 2 million m3), has been purified in the past, however, the waste threatened the environment after closure of the mine. The rehabilitation works on the lead mine tailings and toxic waste disposal and adjacent contaminated areas have been finalised and significant progress has been made to address the issue. Today, sewage and waste disposal systems are in place and fully functional and the rehabilitation works of the former lead mining complex and of sewage and waste disposal infrastructures have been completed (UNESCO, 2019).

**Utility / Service Lines**

*Power lines*

Low Threat

Transmission lines cross the National Parks of Lovcen and Durmitor, including the Tara canyon, pose a threat to rare and endemic avifauna and the natural beauty of the area. The Detailed Spatial Plan (DSP) for the corridor of a 400 kV optical cable transmission line from the Montenegrin coast to Pljevlja and a 500 kV submarine optical cable between Italy and Montenegro, which was adopted by the Government of Montenegro at a meeting on 28 July 2011, intersects parts of the Municipalities of Budva, Kotor, Cetinje, Niksic, Pluzine, Savnik, Zabljak and Pljevlja. In order to create a connection between the coast and Pljevlja, it is inevitable for the future corridor to pass through the National Parks of Lovcen and Durmitor (Conservation Measures Partnership, 2013). The installation of the 400 kV line is planned to replace the existing 110 kV line on the same route and using the existing maintenance roads of the 110 kV line, also in order to keep the visual impacts limited, which represents the best possible option to minimise visual impacts on the natural beauty of the area, as well as impacts from construction and maintenance works (UNESCO, 2019). While existing and planned power lines clearly affect the natural beauty of the area, their detailed impact on avifauna is not clear.

**Dams/ Water Management or Use**

*Dams - water flow*

Very Low Threat

The dam on the Piva River at the western border of the park impacts fish populations. In May 2020, the Government of Montenegro approved a detailed spatial plan for Komarnica hydropower plant (HPP), located 45km upstream of the Piva HPP. The spatial plan covers an area of 5,577 ha and features a 171m high concrete dam wall impounding up to 227 million m3 (Hydropower and dams, 2020; IUCN Consultation, 2020).

A very large dam project on the Tara River, discussed and planned in the 1990s, with potentially irreversible damages, has been abandoned. There are no plans to construct any dams on the Tara River. The full preservation of the entire river flow is requested by the Declaration of the Parliament on the Protection of the River Tara.

Particular attention should be put on plans for eventual construction of small HPPs on the Tara river and its tributaries, especially if the planned locations would be inside the World Heritage site as those HPPs could have negative impacts on the site's Outstanding Universal Value. The current threat from existing dams outside the site is perceived as very low, however, this could change if new large or small HHPs are constructed.

**Hunting and trapping**

*Poaching*

High Threat

Poaching of chamois, as well as bears and wolves has been reported (World Heritage Centre, 2017; World Heritage Committee, 2016). Illegal hunting is often mentioned as one of the key threats to the
Illegal fishing and inadequate fishing policy, including restocking with alien species, is a major threat to the aquatic life of the Tara River and the lakes within the park (World Heritage Committee, 2016; JPNPCG, 2015). Illegal fishing involves the use of harpoons with scuba equipment.

Fire/ Fire Suppression
(Forest fires)

Fires are a frequent threat, particularly to forested parts of the Durmitor National Park, mostly in the canyons of the rivers Tara and Draga. According to National Park data, the largest fires occurred in Prag near Vaškovo in 2006 and in the reserve Crna Poda (belonging to Protection Zone I - the strictest protection zone) in 2012. More precisely, fires spread in the Tara canyon across 4,000 hectares of forests and other areas (Srdanovic & Pavic, 2013). Although fires appear to be rather localised, climate change could lead to increasing forest fires.

Housing/ Urban Areas
(Urban development)

There is uncontrolled development of the town of Zabljak, inside and outside the World Heritage site. The absence of an effective spatial planning and the lack of its enforcement has led to many illegal constructions (mainly holiday houses) scattered especially around the town of Zabljak (World Heritage Committee, 2015; IUCN Consultation, 2017; Srdanovic & Pavic, 2013). The town of Zabljak and its immediate surroundings have become attractive to investors in recent years; a large number of holiday homes were built in the protection zone of the national park, often built without any prior plans and adversely affecting the overall image of the space (Conservation Measures Partnership, 2013). The government adopted a decision on amending the Spatial Plan for Special Purposes for Durmitor. The local development strategy is to construct high quality and more expensive hotels to replace old and lower standard accommodation. Such a strategy in the World Heritage area have the potential to further increase visitor numbers, whose numbers may likely already exceed the carrying capacity of the area (UNESCO and IUCN, 2018). Future urban development in municipalities within the park, in particular in Zabljak, are not sufficiently regulated through adequate plans, considering the rehabilitation of the entire area, in particular, infrastructures such as sewage and waste disposal systems to be compliant with international environmental standards. The threat rating also takes into account the cumulative impacts of this threat with other similar threats (Savin Kuk ski resort development), where construction of the infrastructure and facilities for visitors, including new access roads for road traffic, extensive parking lots, erection of a garage and restaurants already took place (UNESCO and IUCN, 2018).

Tourism/ visitors/ recreation
(Human activities in Tara gorges)

The main road along the Tara River is an important national highway of Montenegro. It provides easy access to some sections of the Tara River with risk of pollution and deterioration of the natural beauty of the gorges. However, it should be noted that the main road Pljevlja - Zabljak, which stretches along the length of the canyon of the river Tara, existed at the time of the inscription of Durmitor National Park on the World Heritage List. In recent years, this road has been significantly relieved by the reconstruction of the main road Nikšić - Zabljak (IUCN Consultation, 2020b). Several zip lines and points for embarkment on the rafts are located at the entrances in zone III of the national park inside the World Heritage site (IUCN Consultation, 2020a). These areas are also intensively promoted for “adventure tourism”, and may result in mass and environmentally damaging forms of tourism and could initiate negative impacts on the values of the site (UNESCO and IUCN, 2018).

Logging/ Wood Harvesting
(Logging (legal and illegal))

Repeated concerns about logging of valuable old growth subalpine forests have been expressed.
The threat assessment takes into account the fact that these forests constitute one of the key values of the park and are a habitat of the highly endangered bird species (Capercaillie Tetrao urogallus). Extensive logging took place along the Crno jezero in 2019 as a preparation for the construction of bungalows (OZON, 2019); the project has since been stopped. It has been further clarified by the responsible management authorities that these activities were part of sanitary felling, already planned for that period of time to ensure visitors’ safety and in line with the Management programme for Durmitor National Park. The trees were marked for cutting following an expert assessment of their condition (UNESCO, 2019; IUCN Consultation, 2020b).

**Tourism/ visitors/ recreation**

*(Over-visitation, constructions and tourism management)*

Over-visitation of the Durmitor National Park is a serious threat to the Outstanding Universal Value of the site. The number of visitors to the National Park has been increasing in recent years (UNESCO and IUCN, 2018), with 2019 being a record year with ca. 270,000 visitors (IUCN Consultation, 2020b). Although construction of new wooden bungalows, which were planned in the area near to the Crno jezero (entrance zone to the National Park near Zabljak) and would have aggravated disturbance and fragmentation - was stopped, new tourism infrastructure for attracting visitors is being purchased (boats for tourists at Crno jezero, enlargement of facilities). These will attract more and more visitors to this already overcrowded area, which would then require enlargement of the access roads, additional car parking, and will contribute to more noise and pollution. Too many visitors are often seen also in the areas adjacent to the Crno jezero area. Disturbance by 4x4 vehicles and similar (Rubinic, 2019) is evident.

On the other hand, measures are also being undertaken to reduce pressure on key locations. The development of new tourist products, such as the panoramic road “Ring around Durmitor”, is expected to reduce the pressure of visitors to the most attractive localities, such as the Black Lake (IUCN Consultation, 2020b). A carrying capacity study has been planned for some of the most visited locations (e.g. Black Lake, Tara River Canyon, Škrčka Lakes, etc.) in the next planning period (Management Plan 2021-2025).

**Dams/ Water Management or Use**

*(Extraction of water from Modro jezero)*

Plans for development of the ski centre Savin Kuk include creation of artificial snow. The water for the artificial snow creation will be extracted from the Modro jezero; diversion of excess surface waters from the lake before and after the winter period should fill the newly created water reservoir close to the ski-lift area. Waters from the lake are transported through recently created 8 km long pipeline through the World Heritage site. The reservoir should provide water for small settlement downstream the ski resort for irrigation and water supply purposes (UNESCO and IUCN, 2018). In addition to the extraction of waters of Modro jezero, waters from the Crno jezero are extracted for water supply of the town of Zabljak (JPNPCG, 2015).

**Potential Threats**

There are serious potential threats to the site’s values and integrity. These include the construction of hydropower plants on the tributaries of the Tara River and other rivers, unpredicted impacts of the climate change including increase in forest fires and complex issues related to the exclusion of some parts of the area from the boundaries of the World Heritage site. The boundary modification process and designation of the buffer zone are still not completed, which poses a threat to the integrity of the area and may lead to non-sustainable use of natural resources (hunting, logging, urbanisation, water extraction, tourism development etc.). Further uncontrolled urban development of Zabljak and a continued lack of a sustainable tourism strategy for the area, that would be centred around preservation of the World Heritage values, would further threaten the landscape and the biodiversity values of the site.
Dams/ Water Management or Use (Hydroelectricity projects)

Construction of small hydroelectric power plants (HPP) outside the World Heritage site within the Tara river catchment could have negative impacts on the OUV of the site (IUCN and UNESCO, 2018). The danger still exists since there are provisions in legislation for construction of small hydropower plants on the tributaries. In the Republika Srpska, Bosnia and Herzegovina, plans exist to built the Buk Bijela HPP, which would impact the wider Tara river canyon in Montenegro (Durmitor) and Bosnia and Herzegovina (Environmental Justice Atlas, 2020).

In addition, in May 2020 the Government of Montenegro approved a detailed spatial plan for the large Komarnica HPP, located 45km upstream of the Piva HPP at the western border of the Park. Although located outside the Park, the spatial plan covers an area of 5,577 ha and the dam constitute a 171m high concrete wall (Hydropower and dams, 2020; IUCN Consultation, 2020).

Other (Boundary modifications)

A first boundary modification was adopted by the World Heritage Committee in 2005 adjusting the borders to those of the National Park, thus excluding the town of Zabljak. A possible extension to include the whole Tara River canyon as suggested by the 2005 monitoring mission was not considered. The exclusion of Zabljak in 2005 has not yet been compensated by an extension, following the minor modifications to the boundaries. Further exclusions from Durmitor National Park (following exclusion of Zabljak) have not been halted, but continued through the reduction of national park boundaries in 2013, whilst the boundaries of the World Heritage site are still in place (UNESCO and IUCN, 2018).

The recently designated Dragišnica and Komarnica Regional (Nature) Park has been proposed as a potential area to replace the above described excluded parts of the National Park Durmitor (World Heritage Committee, 2016). The Regional Park belongs to the cadastral municipalities of Grabovica, Komarnica, Duži, Dubrovsko and Pošćenje. The total area of the park is 8,834 ha.

The proposed area could potentially be an appropriate addition to the World Heritage site enhancing its integrity. However, unlike initially planned, Dragišnica and Komarnica have not been included into the National Park Durmitor but designated as a Regional (Nature) Park only, which implies that the protection regime for this area is weaker than for National Park Durmitor, according to national legislation on nature in Montenegro. The management of the Nature Park was considered not effective enough to prevent some uses of natural resources that would not be in line with the high protection standards of the national park and the World Heritage site. In particular, active forest management and hunting can be permitted in regional and nature parks of Montenegro. In addition, while national parks have their own on-place ranger services, the regional and landscape parks in Montenegro are subject to forest inspections carried out by sectoral inspectorial units (UNESCO and IUCN, 2018).

Rubinic (2019) reports that some of the ecologically most valuable areas like Šaranci area are not included in the park borders although they are extremely important or even most important areas for many of the endangered bird species, including areas with highest densities or reproductive value for selected endangered bird species – i.e. largest Capercaillie leks.

Droughts, Temperature extremes, Storms/Flooding (Climate change)

Climate change could lead to increasing forest fires, threats to the habitat of endemic species (IUCN, 2017), and more frequent extreme weather events. Some valuable stands of old pines and endemic species in the Tara canyon could be threatened by fire in the case of global temperature increases. There might also be other impacts.

The management authorities have been undertaking the necessary planning in order to be able to prevent and stop forest fires (IUCN Consultation, 2020b).
Overall assessment of threats

The current threats, including growing urban and tourism infrastructure development (including expansion of the ski resort and related extraction of waters for artificial snow production), over-visititation, forest fires, are serious and some have a serious visual impacts on the exceptional natural beauty and likely on the biodiversity values of the site. The commitment of the Government of Montenegro to address the most pressing conservation issues (e.g., proposals for extension of the ski resort, boundary modification and restrictions in the use of natural resources, law enforcement) is an important first step to reduce the threats the site is facing. Further measures would need to be identified and implemented to reduce and manage high visitation pressures, prevent undesired development of supporting infrastructure for visitation and tourism and uncontrolled logging. Similarly, potential threats, particularly the development of mass and adventure-based tourism outside the site and the potential construction of the Buk Bijela HPP in Bosnia and Herzegovina and small hydro-power plants in the wider catchment area of the Tara river, could have a much larger and irreversible impact on the site’s integrity.

Protection and management

Assessing Protection and Management

Management system

The National Park is managed by the Public Enterprise for National Parks (JPNPCG), based in Podgorica. Management is specifically implemented by the National Park Headquarters, located in Zabljak (State Party of Montenegro, 2014). The Public Enterprise for National Parks carries out activities to protect and improve the National Parks. Mechanisms for the protection of the site are carried out through spatial planning documents.

The following documents guide the management: a Special Purpose Spatial Plan in accordance with the law (currently under revision; UNESCO and IUCN, 2018); a five-year management plan and the annual management programme based on the five-year plan. The Government of Montenegro adopted the Management Plan for Durmitor National Park in 2010, for the period 2011-2015 and developed annual management plans (Conservation Measures Partnership, 2013). The current management plan has been drawn up by the JPNP (2015) for the period (2016-2020). It is prepared based on the agreed management planning standards. Stakeholder participation in the process of preparation and implementation of the management plan is enabled, but it is limited. Information on the natural and socio-economic values is not comprehensive and still missing. Threats are identified (JPNPCG, 2015).

Effectiveness of management system

No formal management effectiveness assessment for Durmitor National Park is known but concerns have been previously expressed regarding the capacity to address certain threats and issues (World Heritage Committee, 2016 and 2017; IUCN, 2014). This is consistent with the observation of the State Party that management is generally inadequately resourced (State Party of Montenegro, 2014). Management of the Park is guided by the management objectives. Some of the management objectives in the management plan for the National Park Durmitor are not in line with the IUCN protected area standards for the category II (national park) areas (UNESCO and IUCN, 2018; for example use of natural resources).

Boundaries

Boundaries of the site were modified to correspond to the new boundaries of the National Park, which in fact accommodates the extension of settlements in the area. Various recommendations for extension and inclusion of the whole Tara canyon and other important biodiversity areas have not been pursued to
date, though discussions are ongoing about potential extensions as a compensation for further exclusion of territories around Zabljak (Conservation Measures Partnership, 2013, State Party of Montenegro, 2020). The buffer zone boundaries are defined "on paper" for the National park, but not also for the World Heritage property (World Heritage Committee, 2016; State Party of Montenegro, 2020). The State Party has started with the process of boundary modifications through the revision of the spatial plan in 2019, but the process is not concluded yet.

Integration into regional and national planning systems Some Concern
The State Party stated in 2014 that coordination between the different administrative bodies involved in the management of the property could be improved (State Party of Montenegro, 2014).
Recommendations for extension of the protected area to the west including collaboration with Bosnia and Herzegovina have not been fully implemented. Based on the recommendations of the UNESCO and IUCN advisory mission (2018), the Government of the Republic of Montenegro started the process of revision of the Durmitor Spatial Plan (mainly in respect to the development of the ski resort Savin Kuk and other ski areas in the vicinity of the Durmitor area) and also in preparation of the Environmental Impact Assessment for the constructed water reservoir for collection of waters for artificial snow preparation and drinking water supply for some settlements (State Party of Montenegro, 2020). The Management plan 2016 - 2020 for the Durmitor National Park states that the communication with the sector of tourism is not well advanced and highlights weak enforcement of the measures defined in the spatial plan (JPNPCG, 2015). The State Party is coordinating the procedure to launch new management plan for the Durmitor National Park, which will be based on the Sustainable Tourism Programme of the UNESCO World Heritage Centre (State Party of Montenegro, 2020).

Relationships with local people Some Concern
The State Party has characterised relationships with local stakeholders as ‘fair’, with ‘some’ local input into management decisions (State Party of Montenegro, 2014).
Several strategic objectives in the Management plan for the Durmitor National Park 2016 -2020 refer to the cooperation with stakeholders and local community (JPNPCG, 2015).

Legal framework Mostly Effective
Since 1952, the Durmitor region has been legally protected as a National Park (UNEP-WCMC, 2012). In addition, in 1977 the Tara River Canyon was declared a Nature Reserve and Nature Monument (Decree 1/12/1977, Republic Institute of Nature Conservation). This represented the legal basis for the nomination and inscription of the site to the World Heritage List in 1980. The legal basis appears to be sufficient, although it does not address threats originating outside the property and buffer zone (State Party of Montenegro, 2014).
Durmitor National Park is divided into three management zones: a strictly protected zone covers some 10% of the park, while a zone of protection extends over 75% of the park, leaving some 15% of the total area of the park to a zone of sustainable use. To balance the needs of legitimate local livelihood and conservation is considered indispensable.
In the zone of protection (2nd management zone) some of the uses of natural resources are allowed which do not comply entirely with the IUCN standards for the management of the IUCN Protected Areas category II sites. One of those include the permission for sanitary cuttings in forests. These include removal of branches and trees that have collapsed under the snow load (UNESCO and IUCN, 2018).

Law enforcement Some Concern
According to the most recent periodic report, there are clear deficiencies in the implementation of the existing legislation regarding Durmitor National Park (State Party of Montenegro, 2014). However, no detailed information on the level and impact of implementation shortcomings is available. Weak law enforcement is noted in the Management plan for Durmitor National Park 2016 - 2020 as one of the threats (JPNPCG, 2015).
Implementation of Committee decisions and recommendations

Mostly Effective

World Heritage Committee's requests have been mostly implemented by the State Party in the last years (State Party of Montenegro, 2020), although the process of implementation is sometimes slow.

Sustainable use

Some Concern

The State Party acknowledges that "a balance between the needs of legitimate local livelihood and conservation is indispensable" (World Heritage Committee, 2015), but no detailed information on how this is reflected in practical management arrangements is available. Wild food plants and mushrooms were assessed as having minor subsistence value in Durmitor (IUCN Consultation, 2017), but water was assessed as an important and significantly used value (Sekulic et al., 2017). Fuel wood logging by locals is reportedly allowed in the core zones of the park (State Party of Montenegro, 2014), but it is not clear how this is regulated.

Tourism, based on appreciation of the natural values and resources, is stated in the Management Plan for Durmitor National Park 2016 - 2020 as the key development opportunity; some forms of tourism, such as alpine skiing and mass visitation are clearly in opposition with the goals of protection of the bio- and geodiversity (UNESCO and IUCN, 2018).

Sustainable finance

Data Deficient

Durmitor National Park receives only limited external financing and has to generate its own income (World Heritage Committee, 2016). According to the Law on National Parks, funding for the Public Enterprise for National Parks of Montenegro, and consequently the Durmitor National Park, is provided from the following sources: 1) the State budget, 2) fees for the use of resources (i.e. their own income); 3) donations and 4) other sources in accordance with the Law. During the 2009-2013 period, the park received 53%, 27%, 12% and 8% of its funding from visitor charges, the State budget, operator charges and donations, respectively (State Party of Montenegro, 2014). This funding was considered secure but inadequate.

Staff capacity, training, and development

Data Deficient

The National Park Administration has a director and 40 staff, including 22 rangers; this has been considered below optimum by the State Party (State Party of Montenegro, 2014). The availability of qualified staff was considered poor to fair for most specialisations in the same document, while the availability of training opportunities was considered low to medium. Recent information on staff, training and development is not publicly available. However, there is a clear need for ranger trainings and technical equipment such as thermal cameras, thermal binoculars, drones and similar for the purpose of combating illegal entrances, poaching, etc. (IUCN Consultation, 2020).

Education and interpretation programs

Mostly Effective

There are 2 visitor centers in Durmitor National Park, one is located in the National Park Administration Building on the road from Žabljak to Black Lake and the other on the educational trail around Black Lake. The Visitor Centre in the Administration Building exhibits a natural history collection consisting of a rich collection of insect fauna, as well as exhibits of characteristic representatives of mammals and birds from the Durmitor area. The Visitor Centers conduct a large number of educational workshops and lectures for primary school students and visits of biology and geography students from the country, region and abroad, local population and visitors (IUCN Consultation, 2020b). While overall these programmes might be effective, the World Heritage status of the site has previously been considered not adequately presented (State Party of Montenegro, 2014); therefore educations programmes could be further strengthened and focused on the Outstanding Universal Value of the site.

Tourism and visitation management

Some Concern

The visitor centre, trails and guided tours have been assessed as adequate by the State Party, although a lack of information materials was noted (State Party of Montenegro, 2014). Visitor use of the World Heritage site is not being actively managed despite an identified need, and public information regarding
The spectacular landscape formed by limestone mountains cut by rivers and the canyon is suffering the World Heritage designation is limited (State Party of Montenegro, 2014).

**Monitoring**

According to the most recent periodic report, monitoring activities are very limited. Information on the values of the World Heritage site is sufficient to define key indicators, however, this still remains to be done (State Party of Montenegro, 2014). This is in line with earlier observations which found that there is no comprehensive monitoring system in place. Monitoring is limited to scattered information collection from the National Park Administration (World Heritage Committee, 2016 and 2017; IUCN, 2014).

**Research**

According to the State Party, there is considerable research but it is not directed towards management needs and/or improving understanding of the Outstanding Universal Value; no details about specific research outcomes – such as scientific articles in peer reviewed international journals – have been provided by the State Party (State Party of Montenegro, 2014). Extensive and comprehensive research has recently been conducted on bird populations and trends (Rubinić, 2019).

### Overall assessment of protection and management

Of the 15 management areas assessed, several are assessed as of some concern. Taken together, this leads to the conclusion that the current management levels are insufficient, owing particularly to a lack of personnel and financial resources, and particularly field personnel. The legal framework appears adequate, but its enforcement and control of illegal activities are limited by the lack of resources. Education and interpretation programmes, monitoring as well as research activities could be further strengthened.

### Assessment of the effectiveness of protection and management in addressing threats outside the site

There is a high risk of construction of HPP (Buk Bijela in Bosnia and Herzegovina) and small HPPs in the catchment of the Tara river. Urban development of the Zabljak town and especially lack of sustainable tourism strategy for the wider area of the World Heritage site, which would not be based on mass tourism, are considered as a major threat to the OUV of the site. The waste water treatment and waste management situation in the town of Zabljak are unknown; due to the karstic character of the area they present a serious risk and the capacity of the management to address these threats is very low.

### Best practice examples

Systematic consultation with the World Heritage Centre and IUCN, through the National Commission of Montenegro for UNESCO and in line with the Operational Guidelines of the World Heritage Convention, has considerably improved the planning and assessment of relevant projects since recently.

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**State and trend of values**

### Assessing the current state and trend of values

**World Heritage values**

- **Exceptional natural beauty**
  
  The spectacular landscape formed by limestone mountains cut by rivers and the canyon is suffering
from serious impact from previous illegal and legal urbanization, illegal and sometimes also legal logging and disturbance, infrastructure development, expansion of the ski resort and associated infrastructure (UNESCO and IUCN, 2018). However, a large part of the site is still largely intact.

▶ Geological features

The geological values of the site appear in good condition and stable. However, if constructed, the Buk Bijela dam in Bosnia and Herzegovina and small HPPs in the Tara catchment could irreversibly affect the underground karst system (Hockings et al., 2008; Environmental Justice Atlas, 2020).

▶ Rare and endemic flora

Data deficient

▶ Terrestrial species diversity

Data deficient

The diversity of terrestrial species could only be assessed for few groups of species due to the lack of a systematic monitoring system. Birds were recently investigated; Durmitor is one of the most important areas for Tetrao urogallus in Europe and the populations of Picoides tridactylus reach are the highest in Montenegro. Negative trends were detected for some bird species, mainly due to disturbance, logging and habitat loss (Rubinić, 2019).

▶ Endangered freshwater species

Data deficient

Owing to the lack of a systematic monitoring system, the current status of endangered freshwater species of Durmitor National Park is not possible to assess precisely.

Summary of the Values

▶ Assessment of the current state and trend of World Heritage values

High Concern
Trend: Deteriorating

Urban development (scattered constructions over a large area) and a skiing area have had a serious impact on the beauty and pristine appearance of the site's landscape. Biodiversity values of the site are most likely also affected, but these are not being monitored systematically. Biodiversity values are threatened by some localised activities (such as illegal and legal logging). However, plans for construction of a hydropower plant in Bosnia and Herzegovina and small hydropower plants in the Tara river catchment is of serious concern. Geological features of the site appear in good condition and stable, but new hydropower projects represent a high potential threat to the canyon and the underground karst system. Because of the ‘High Concern’ and deteriorating trend for one of the three values, and the data deficiency of some, the overall status of the values is assessed as ‘High Concern’.

Additional information

Benefits

Understanding Benefits
► Outdoor recreation and tourism

The site has high potential for sustainable tourism (hiking, nature discovery, rural tourism) (IUCN Consultation, 2017).

Factors negatively affecting provision of this benefit:
- Pollution: Impact level - Low
- Overexploitation: Impact level - Low
- Habitat change: Impact level - Low

► Collection of wild plants and mushrooms

There are currently no legal commercial uses in the core zone of the park (State Party of Montenegro, 2014). However, wild food plants and mushrooms were assessed as having minor subsistence value in Durmitor (IUCN Consultation, 2017).

Factors negatively affecting provision of this benefit:
- Pollution: Impact level - Low
- Overexploitation: Impact level - Moderate
- Habitat change: Impact level - Low

► Legal subsistence hunting of wild game

The park is certainly a significant reservoir for game species (chamois, deer) but also for large carnivores (wolf, bear).

► Water provision (importance for water quantity and quality)

Durmitor National Park is an important watershed including production, regulation and provision benefits.

Summary of benefits

Durmitor National Park provides important benefits in terms of watershed production, water regulation and provision, as well as good potential benefits related to sustainable nature-based tourism. The latter needs to be prioritised over impactful forms of tourism. There is also a moderate potential for provisioning ecosystem services, in terms of various forest products.
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