IUCN Conservation Outlook Assessment 2017 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for The Dolomites. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

The Dolomites

SITE INFORMATION

Country:
Italy
Inscribed in: 2009
Criteria:
(vii) (viii)

Site description:
The site of the Dolomites comprises a mountain range in the northern Italian Alps, numbering 18 peaks which rise to above 3,000 metres and cover 141,903 ha. It features some of the most beautiful mountain landscapes anywhere, with vertical walls, sheer cliffs and a high density of narrow, deep and long valleys. A serial property of nine areas that present a diversity of spectacular landscapes of international significance for geomorphology marked by steeples, pinnacles and rock walls, the site also contains glacial landforms and karst systems. It is characterized by dynamic processes with frequent landslides, floods and avalanches. The property also features one of the best examples of the preservation of Mesozoic carbonate platform systems, with fossil records. © UNESCO

SUMMARY

2017 Conservation Outlook

Good with some concerns

The necessary measures to establish an overall management system for the entire property have been achieved at the end of 2015 with the formal acceptance, by the Foundation Dolomites UNESCO and local administrations, of the Overall Management Strategy. The adoption of this overarching strategy which includes Tourism Strategy was a result of a participatory process involving local administrations, communities and a large group of stakeholders. This represents an important step; however, adequate resources will need to be secured for the implementation of the Strategy. Tourism activities and infrastructure within the site and in its surroundings, continue to represent a certain threat to the site’s values. However, these threats tend to be highly concentrated in certain areas and carefully monitored.

Current state and trend of VALUES

Low Concern
Trend: Stable

The conservation of the site’s landscape and its outstanding natural beauty are of some concern due to tourism activities and infrastructure within the property and in its surroundings. It is too early to evaluate a trend of the values. The geological values of the site are currently well preserved and will most likely be maintained in the foreseeable future.

Overall THREATS

Low Threat

Human activities and infrastructure within and surrounding the site, in particular those linked to tourism, represent a relatively high threat to the site’s values, and in particular to the exceptional beauty of its landscape. However, these threats tend to be highly concentrated in some areas. Currently, there are only

very low potential threats.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The necessary measures to establish an overall management system for the entire property have been implemented and resulted in the adoption of the Overall Management Strategy (OMS, 2016). While the adoption of this important framework document was an important step, it will be crucial to effectively implement it and to ensure that the necessary resources are also available for the implementation of the sustainable tourism strategy and of the monitoring system foreseen by the OMS.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Spectacular mountain landscape**
Criterion:(vii)

The Dolomites are widely regarded as being among the most attractive mountain landscapes in the world. Their intrinsic beauty derives from a variety of spectacular vertical forms such as pinnacles, spires and towers, with contrasting horizontal surfaces including ledges, crags and plateaux, all of which rise abruptly above extensive talus deposits and more gentle foothills. A great diversity of colours is provided by the contrasts between the bare pale-coloured rock surfaces and the forests and meadows below. The mountains rise as peaks with intervening ravines, in some places standing isolated but in others forming sweeping panoramas. Some of the rock cliffs here rise more than 1,500 m and are among the highest limestone walls found anywhere in the world. The distinctive scenery of the Dolomites has become the archetype of a “dolomitic landscape” (SoOUV 2009). The serial property comprises a diversity of landscapes that are spectacular not only because of their physical characteristics, but which also responds to natural changes in light to create views of great natural beauty (IUCN evaluation, 2009).

► **Extremely varied limestone formations**
Criterion:(viii)

The Dolomites are the classic site for the development of mountains in dolomitic limestone. The area presents a wide range of landforms related to

erosion, tectonism and glaciation. The quantity and concentration of extremely varied limestone formations is extraordinary in a global context, including peaks, towers, pinnacles and some of the highest vertical rock walls in the world (SoOUV 2009).The property also contains interesting glacial landforms, as well as karst systems. A further key feature is the dynamic nature of the landscape creating frequent landslides, floods, and avalanches (IUCN evaluation, 2009).

► Geological and fossil values of international significance

Criterion:(viii)

The geological values are of international significance notably the representation of a large part of the Mesozoic Era in a continuous manner, as well as some sequences of earlier and later stratigraphy. The property contains important reference areas for the Triassic period and one of the best examples of the preservation of Mesozoic carbonate platform systems, including accompanying fossil records of reef-building organisms (notably the evidence of Mesozoic carbonate platforms, or “fossilized atolls"). As a whole, the Dolomites permit the accurate reconstruction of the evolution of a passive continental margin and successive phases of continental collision and evolution over more than 250 million years (SoOUV 2009, IUCN evaluation 2009).

► Long history of geological studies

Criterion:(viii)

The scientific values of the property are also supported by the evidence of a long history of study and recognition at the international level. Pioneering studies on stratigraphy, mineralogy, sedimentology and paleontology have been undertaken in the Dolomites by leading geologists since the 18th century (SoOUV 2009, IUCN evaluation 2009).

Other important biodiversity values

► Faunal diversity

The property includes areas of national and regional importance for faunal biodiversity. The fauna is very diverse due to the great number of different

habitats, altitudinal levels and the region's pivotal biogeographic location. A gradual recolonisation of remote areas by large carnivores is occurring, and has been facilitated by a diminishing human use and disturbance of both valley lands and alpine pastures. This has encouraged the return of animals such as bear (partially reintroduced) and lynx, previously killed to protect livestock (IUCN evaluation 2009).

► **Plant diversity**

The property includes areas of national and regional importance for plant biodiversity. The flora of the Dolomite region includes c. 2,400 plants. Not all the species are represented in the property, however some component protected areas included in the site host a very high plant biodiversity: the national Park of the Dolomiti Bellunesi alone has 1,350 species, a quarter of Italy's flora, and 55 forest types (IUCN evaluation 2009).

Assessment information

Threats

Current Threats

Low Threat

Activities and infrastructures linked to tourism represent a high threat to the site's Outstanding Universal Value in some areas. Many other human activities represent a low threat but if added together they could be of some concern. It is very important to evaluate de cumulative effect of all the human activities on every component of the property.

► **Livestock Farming / Grazing**

Very Low Threat
Inside site, localised(<5%)

Summer pasture activities occur within the site. While cattle are limited to

the few fertile grazing grounds, sheep are found in many places.

► Hunting (commercial/subsistence)

Very Low Threat
Inside site, localised(<5%)
Outside site

Hunting is permitted in the area, but is well managed (IUCN Evaluation, 2008, Nomination file 2008). Hunting represents a traditional activity, is subject to strict planning and is reserved for local residents only (State Party of Italy, 2017)

► Logging/ Wood Harvesting

Low Threat
Inside site, localised(<5%)
Outside site

The intensity of these forestry activities is low and commonly limited to individual trees. However, no legal prohibition of clear cuttings exists. This is a low threat for the landscape value of the site and its biodiversity (IUCN Evaluation, 2008).

► Roads/ Railroads

Low Threat
Inside site, scattered(5-15%)
Outside site

There are few public roads crossing small parts the property, but many other roads and tracks are present. These are used for the limited forestry and hunting (only in Bolzano province) activities and to supply the mountain refuges (IUCN Evaluation, 2008). These roads represent a low threat to the site’s biodiversity.

► Tourism/ visitors/ recreation

High Threat
Inside site, widespread(15-50%)
Outside site

The Dolomites are a very important touristic destination within the Alps. Current visitors numbers in the Dolomites region are estimated at 10 million annually (State Party of Italy, 2017). Important touristic infrastructure

surrounds the components of the site. Tourism facilities and activities are at the limits of tolerance for a natural World Heritage site in some of the component parts of the property (e.g. Marmolada, component 2 and Tre Cime, part of component 5). Tourism infrastructure also has significant impacts within the buffer zone. Further infrastructure development can have a high potential to affect the landscape and the superlative beauty of the site, as well as its biodiversity (IUCN Evaluation, 2008; Nomination file, 2008). The recently adopted Overall Management Strategy (2016) includes “management and containment of existing tourism facilities within the WHS” as one of its strategic goals (State Party of Italy, 2017).

Potential Threats

Very Low Threat

Currently, there are only very low potential threats.

► Earthquakes/ Tsunamis

Very Low Threat
Inside site, throughout(>50%)
Outside site

The Dolomites in Friuli and the Sinistra Piave (left Piave bank) are known to be particularly active. This area is part of the western edge of the Friuli seismogenic system and is subject to widespread, frequent earthquakes with a magnitude of < 3. Occasionally, stronger earthquakes have been recorded at the edges of this system (8th October 1986, M = 3,1) (CPTI11). Seismic activities could lead to large scale landslide phenomena, which could potentially affect the landscape and geomorphology linked attributes (Nomination dossier, 2008).

► Temperature extremes

Very Low Threat
Inside site, extent of threat not known

The glaciers and permafrost melting is mentioned in the Nomination files (2008). This could be a potential threat for the values related to the superlative beauty of the site.
Climate change has also been recognized as a significant and increasing

factor in the most recent Periodic Report (State Party of Italy, 2014).

Protection and management

Assessing Protection and Management

▶ Relationships with local people

Mostly Effective

In the recently adopted Overall Management Strategy (OMS, 2016) the role of local communities, local authorities and other stakeholders is planned and a list of actions and strategic lines is considered. Up to now, 55 municipality and 15 other common ownerships (Mountain communities, “Regole” or “Magnifiche Comunità”) are involved as members in the Board of Supporters, a formal structure of the Foundation Dolomites UNESCO (OMS, 2016). Otherwise, local authorities and stakeholders are actively involved in the development of the guidelines for the sustainable tourism strategy and other functional networks (Management Progress report 2013, 2015; Guideline for Tourism, 2014).

▶ Legal framework

Mostly Effective

The existing legal framework is considered effective (Mission report, 2011). However, in regards to some threats (especially tourism development), some concerns remain.

▶ Enforcement

Data Deficient

Data deficient

▶ Integration into regional and national planning systems

Mostly Effective

The regional management system is integrated into the overall management strategy (OMS, 2016).

► Management system

Mostly Effective

The Foundation Dolomiti-Dolomen-Dolomitis-Dolomites UNESCO was established on the 13th May 2010 as the institutional mechanism for co-ordinated management of the nine separate component sites of the serial World Heritage Property. The nine component sites are found within five provinces and three separate Regions (Friuli Venezia Giulia, Trentino Alto Adige and Veneto) (IUCN, 2011). The proposed management structure will integrate all important stakeholders and coordinate all different regions/provinces and local governance structures.

► Management effectiveness

Mostly Effective

The Overall Management Strategy was finalized in 2016 (OMS, 2016) but because of the short time since its adoption (2016), it is not possible at this stage to evaluate the effectiveness of its implementation.

► Implementation of Committee decisions and recommendations

Mostly Effective

The adopted overall management strategy (OMS 2016) seems to respond positively to the requests and recommendations made at the time of the inscription (World Heritage Committee, 2009).

► Boundaries

Mostly Effective

The property includes all areas that are essential for maintaining its OUV. What concerns biodiversity values of the site, there is a lack of data on the ecological connectivity between the component protected areas included in the site.
However, the boundaries of the property and its components are not well known by local residents and landowners (State Party of Italy, 2014).

► Sustainable finance

Highly Effective

The finances are provided by the regions and provinces on the basis of a plan approved every three years (the financing for 2016 was approved on this basis with the total funding of 500.000 Euro/year). Since 2012 the Foundation received an annual contribution from the Board of supporters (77.000 Euros in 2016); another 17.700 € in 2016 derive from the services provided by the Foundation Dolomites UNESCO and products sold under the brand name (Annual Budget 2016).

► Staff training and development

Mostly Effective

In 2017 5 full time staff members (a manager and 4 employees) worked for the management body (Foundation Dolomites UNESCO). Staff members have an opportunity to attend different relevant courses (State Party of Italy, 2017).

► Sustainable use

Mostly Effective

The sustainable tourism strategy was completed in 2015 and formally adopted in 2016 as part of the Overall Management Strategy (OMS, 2016).

► Education and interpretation programs

Mostly Effective

A number of educational and awareness raising materials and activities were prepared following the inscription of the property on the World Heritage List (IUCN, 2011). A training program on management of world natural heritage is being implemented and research programs in collaboration with universities and institutes are ongoing. (Management progress report, 2015).

► Tourism and visitation management

Mostly Effective

The sustainable tourism strategy was completed in 2015 and formally adopted in 2016 as part of the Overall Management Strategy (OMS, 2016). However, at this stage it is impossible to evaluate its effectiveness.

▶ Monitoring

Mostly Effective

A monitoring system is included in the Overall Management Strategy (OMS, 2016).

▶ Research

Mostly Effective

There are some research institutes involved (EURAC; University of Udine, University of Trento, IUAV of Venice, University of Ferrara) in different researches and projects related to the Property (Management progress report, 2015).

Overall assessment of protection and management

Mostly Effective

The necessary measures to establish an overall management system for the entire property have been implemented and resulted in the adoption of the Overall Management Strategy (OMS, 2016). While the adoption of this important framework document was an important step, it will be crucial to effectively implement it and to ensure that the necessary resources are also available for the implementation of the sustainable tourism strategy and of the monitoring system foreseen by the OMS.

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

Some Concern

Management outside the site is not directly linked to the conservation of the site’s OUV.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Spectacular mountain landscape

Low Concern
Trend:Stable

The state of the site's mountain landscape remains in good condition, however existing threats from tourism overuse and development are of concern in some areas (IUCN Evaluation 2008, Mission report 2011).

▶ Extremely varied limestone formations

Good
Trend:Stable

Geological values of the site remain well preserved and are less impacted by tourism activities and infrastructure (IUCN Evaluation 2008).

▶ Geological and fossil values of international significance

Good
Trend:Stable

Geological values of the site remain well preserved and are less impacted by tourism activities and infrastructure (IUCN Evaluation 2008).

▶ Long history of geological studies

Good
Trend:Stable

Geological values of the site remain well preserved and are less impacted by tourism activities and infrastructure (IUCN Evaluation 2008).

Summary of the Values

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

Low Concern

Trend: Stable

The conservation of the site's landscape and its outstanding natural beauty are of some concern due to tourism activities and infrastructure within the

property and in its surroundings. It is too early to evaluate a trend of the values. The geological values of the site are currently well preserved and will most likely be maintained in the foreseeable future.

▶ **Assessment of the current state and trend of other important biodiversity values**

Low Concern

Trend: Stable

Different activities linked to tourism as well as other activities (sanitary cuttings, hunting) affect the site’s fauna and flora (Mission report, 2011). The impact of these activities, within the property, seems to be minimal (State of the Conservation of the Property, 2017); however, it is still too early to evaluate the trend for these values.

Additional information

Benefits

Understanding Benefits

▶ **Outdoor recreation and tourism**

The Dolomites are one of Italy´s main tourist attractions and an iconic international tourism for Italy.

▶ **Importance for research**

The Dolomites have along history of being important research areas for geological processes.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	MANAGING VISITOR ACCESS TO PROTECTED MOUNTAIN AREAS	From: 2011 To: 2014	The project aims to identify approaches for the sustainable management of protected mountain areas, by defining strategies of visitor access that preserve the environmental quality of such areas while ensuring adequate recreational opportunities.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	Joint educational program	An educational program on World Heritage and the OUV of the property needs to be developed for schools of all the regions (Provinces).	

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3	Guideline for Tourism, 2014, EURAC/ Fondazione Dolomiti UNESCO (http://www.dolomitiunesco.info/?pubblicazioni=linee-guida-d…)
4	Management progress report 2013, Fondazione Dolomiti UNESCO (http://www.dolomitiunesco.info/wp-content/uploads/2015/05/F…)
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