IUCN Conservation Outlook Assessment 2014 **(archived)**
Finalised on 26 May 2014

Please note: this is an archived Conservation Outlook Assessment for Teide National Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Teide National Park

SITE INFORMATION

Country:
Spain
Inscribed in: 2007
Criteria:
(vii) (viii)

Site description:
Situated on the island of Tenerife, Teide National Park features the Teide-Pico Viejo stratovolcano that, at 3,718 m, is the highest peak on Spanish soil. Rising 7,500 m above the ocean floor, it is regarded as the world's third-tallest volcanic structure and stands in a spectacular environment. The visual impact of the site is all the greater due to atmospheric conditions that create constantly changing textures and tones in the landscape and a 'sea of clouds' that forms a visually impressive backdrop to the mountain. Teide is of global importance in providing evidence of the geological processes that underpin the evolution of oceanic islands. © UNESCO

SUMMARY

2014 Conservation Outlook

Good

The outstanding universal value of the site is mostly robust to anthropogenic impact and affected by low threats. This is combined with effective management. As a result, the site's state is good and stable, which allows to assess its conservation outlook as good. However, this requires that the ongoing strong efforts to control invasive alien species and other threats to the site, particularly to its biodiversity and ecosystem values are maintained on the currently high level. It also requires that, notwithstanding the planned delegation of powers to local authorities, the management framework remain as effective as it has been to date.

Current state and trend of VALUES

Good
Trend: Stable

Because of their inherent robustness against anthropogenic impact as well as the effective management and adequate boundaries of the site, its World Heritage values in a good state.

Overall THREATS

Low Threat

The geological values of the park are robust against anthropogenic impacts, as well as well-managed, and are generally not significantly threatened currently. However, the natural beauty and ecosystem and biodiversity values are affected by intensive although well-managed visitation, invasive alien species, occasional forest fires and the visual impact of the limited but significant tourism infrastructure inside the site. The geological values of the property are likely to be as robust to potential threats as they are to present ones, although the

potential impact of climate change is difficult to estimate.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The protection and management of the site has improved over time with great efforts undertaken by the local administration as well as insular and national authorities. The park is well funded and staffed and its management is mostly effective. It must be noted, however, that management powers are currently being transferred from the regional to the local level making it unclear as to whether this effective management will be affected.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **Exceptional volcanic system**
Criterion:(viii)

Teide National Park is an exceptional example of a relatively old, slow moving, geologically complex and mature volcanic system. It demonstrates the geological processes that underpin the evolution of oceanic islands. The property offers a diverse and accessible assemblage of volcanic features and landscapes in a limited area. It is a major centre for research with a long history of influence on geology and geomorphology, and hence a significant site in the history of volcanology (SoOUV, 2007).

► **Superlative volcanic landscape extraordinary natural beauty**
Criterion:(vii)

Mount Teide is a striking volcanic landscape dominated by the jagged Las Cañadas escarpment and a central, almost perfectly cone-shaped volcano. Tenerife is the third tallest volcanic structure in the world. The landscape consists of a superlative suite of landforms that reveal different phases of construction and remodeling of the volcanic complex and highlight its unique geodiversity. The overwhelming visual impact is emphasized by atmospheric conditions that create constantly changing textures and tones in the way we view the landscape and often with the impressive backdrop of the ‘sea of clouds' (SoOUV, 2007).

Other important biodiversity values

► Mountain ecosystems with associated flora and fauna

In addition to its geological and scenic values, Teide National Park, including its buffer zone, comprises peculiar Macaronesian ecosystems characterized by high plant endemism and a less diverse but equally interesting fauna. Among them is the unique Canarian summit scrub and peak ecosystem, which has particularly high plant and invertebrate endemism, including the emblematic Teide White Broom Spartocytisus supranubius. The property has eleven Habitats of Community Interest (75% of the territory of the park) according to the EU Habitats Directive, including vegetation on the recent volcanic flows, cliffs and craters, Mediterranean scrubs, open endemic Juniperus forest, and Macaronesian pine forest. The park‘s flora comprises 140 vascular plant species (50 of them endemic) (Durbán Villalonga et al., 2006), as well as 74 specis of mosses, 8 of liverworts and 100 of lichens (UNEP-WCMC, 2011). The avifauna of the park contains only 20 species but more breed in the buffer zone, including the endemic Blue Chaffinch Fringilla teydea. Five species of bats (including the endemic Plecotus teneriffae) are the only native mammals. There are also populations of the endemic (to the archipelago) Canary Lizard Gallotia galloti. About 50% of the estimated 1,000 invertebrate species are endemic to the islands, and many to the park itself (Durbán Villalonga et al., 2006). Teide National Park overlaps with a global Centre of Plant Diversity (WWF and IUCN, 1994), the Endemic Bird Area of “Madeira and the Canary Islands” (BirdLife International, 2012a), and the WWF Global 200 priority ecosystem “Mediterranean Forests and Scrub” (WWF, 2012). There are three Important Bird Areas overlapping the periphery and buffer zone of the property (BirdLife International, 2012b, c, d). The property does not overlap with any Conservation International global biodiversity hotspot (Conservation International, 2012) and has not been mapped for Important Plant Areas to date (PlantLife, 2012).

Assessment information

Threats

Current Threats

Low Threat

The geological values of the park are robust against anthropogenic impacts and well-managed, and therefore are not significantly threatened currently. However, the natural beauty and biodiversity values are affected by intensive although well-managed visitation, invasive alien species, occasional forest fires and the visual impact of the small-scale but nonetheless visible tourism infrastructure inside the site.

► Invasive Non-Native/ Alien Species

Very Low Threat
Inside site
Outside site

Strong grazing impact of rabbit (Oryctolagus cuniculus) and Corsican Mouflon (Ovis gmelini musimon) on endemic flora, and significant predation by feral cats on Canary Lizard and other reptiles (Nogales et al., 2006). Most of the 70-80 invasive alien plant species are concentrated in nitrogen rich areas near tourism infrastructure, and do not spread throughout the site. Significant measures to control herbivores and invasive plant spcies are underway (Durbán Villalonga et al., 2006).

► Tourism/ visitors/ recreation

Low Threat
Inside site

Geological values of the site are not affected by tourists, but visitors sometimes disturb each other’s appreciation of the outstanding natural beauty of the site (impact on V2), and may have localized impacts on biodiversity and ecosystem values (erosion, disturbance) (Durbán Villalonga

et al., 2006). It is important, nevertheless, to keep in mind that tourist numbers are on the rise. In fact, in 2013 Teide was amongst the ten most visited national parks in the world, with over 2.5 million visitors per year (Millet, 2014).

► Tourism/ Recreation Areas

Low Threat
Inside site

Tourism infrastructure is limited, but has some impact on the outstanding scenic beauty of the site (e.g. cable car infrastructure on). Further infrastructure development is prohibited and this ban is effectively enforced.

► Fire/ Fire Suppression

Low Threat
Inside site
Outside site

Wild fires affect mainly biodiversity and ecosystem values (Vx) and secondarily the outstanding natural beauty of the site (V2). However, wildfires do very little to the volcanic landscape and are known to have occurred for centuries. The scrub vegetation of Teide National Park is less susceptible to fires than the forests of the buffer zone (IUCN, 2007), but fires have reached the park in the past (e.g. 2012 – El País, 2012) and the values of the buffer zone cannot be separated fully from those of the park itself. Fire risk management appears to be effective (Durbán Villalonga et al., 2006).

Potential Threats

Data Deficient

The geological values of the site are likely to be as robust to potential threats as they are to current threats, but climate change and possible new volcanic eruptions could affect the scenic beauty and ecosystem and biodiversity values of the site. However, the potential impact of climate change is difficult to estimate.

► Temperature changes

Data Deficient

Inside site

Teide National Park has been characterized as one of the 19 natural World Heritage site most susceptible to climate change (Perry, 2011). Although a 1.5-2 degree mean temperature increase has been predicted for the Canary Islands for the coming 100 years, its exact magnitude and impact is still difficult to estimate (Durbán Villalonga et al., 2006).

► Volcanoes

Low Threat
Inside site

Volcanic activity is a natural process and is not an external threat (Durbán Villalonga et al., 2006).

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

Only three people live inside the park and its buffer zone, and the population in the immediate vicinity of the site is limited to a few mountain villages like Vilaflor. The National park runs a dedicated communication, education and public awareness raising programme for the local population (Durbán Villalonga et al., 2006). However, the formal participation of nearby inhabitants in the management and decision making about the park is unclear from the available documentation.

► Legal framework and enforcement

Highly Effective

Teide National Park is based on national legislation such as the 1989 Law on the Conservation of protected Natural Spaces and Wild Fauna and Flora of Spain, and legislation specific to the park, such as the 1954 decree that created it and Decree 153/2002 approving the management plan of the park (Durbán Villalonga et al., 2006). The legal framework is considered highly

effective (IUCN, 2007). However, as of early 2014 enforcement powers were in the process of being transferred from the regional government in charge of the Canary Islands (Comunidad Autonoma de Canarias) to Tenerife island´s governing body (Cabildo de Tenerife). More information is needed to determine if and how this may affect enforcement of the national park´s regulatory framework.

► Integration into regional and national planning systems

Highly Effective

The management plan of the site is complementary to the General Plan for the Public Use of the Island of Tenerife Insular Planning Document and the Tenerife Insular Tourism Planning Special Territorial Plan (Durbán Villalonga et al., 2006). The integration of outstanding universal values protection into the insular planning framework appears highly effective.

► Management system

Mostly Effective

The management is regulated by the Teide National Park Management Plan (which was supposed to be renewed in 2008), which has 11 overall management objectives and has legal force. Many specific management tasks under this plan are outsourced by the management authority to private companies (Durbán Villalonga et al., 2006). The National Park received the European Diploma for Protected Areas of the Council of Europe in 1989, which testifies its high management level (IUCN, 2007). As of 2010, the responsibility of Teide´s management was transferred from Spain´s national government to the regional authority, the Comunidad Autonóma de Canarias (Millet, 2014). A new transfer of powers is currently taking place, further shifting authority to the local level. Specifically, in early 2014, the regional government began the process of delegating its powers relative to Teide NP to Tenerife´s Island Council (Cabildo de Tenerife). This delegation of powers appears to be in its final stages (El Día, 2014). Although, it seems that this move involves a delegation of powers rather than a complete transfer of responsibilities (Millet, 2014), it all remains to be seen. Further follow-up is necessary to determine if the current management system is threatened in any way.

► Management effectiveness

Highly Effective

Although no formal management effectiveness assessment of the site has been published since inscription, both the park's annual reports and the reports produced annually for the European Diploma for Protected Areas of the Council of Europe include some information on management effectiveness (Durbán Villalonga et al., 2006). According to these reports (for 2004) and the IUCN evaluation (IUCN, 2007), management of the site is highly effective.

► Implementation of Committee decisions and recommendations

Data Deficient

Decision 31 COM 8B.17 includes five recommendations regarding harmonization of tourism planning, visitor monitoring, enhanced research on climate change impacts on the site, intensified cooperation between the three World Heritage sites in the Canary Islands and improved cooperation between the Spanish and Canary islands Governments (WHC, 2007). It is not clear to what extent these recommendations have been followed.

► Boundaries

Highly Effective

The boundaries of the World Heritage site are consistent with natural boundaries (Protected Planet, 2012) and existing protected area, and are considered adequate. There is also an adequate buffer zone with appropriate restrictions (e.g. on construction) and an effective zoning system of the National Park (Durbán Villalonga et al., 2006, IUCN, 2007).

► Sustainable finance

Mostly Effective

The 2005 annual budget of the site (from the State budget) was ca. 4.9 Million EUR. About 10-15% of these funds were given not to the administration of the park but to local municipalities, businesses and NGOs (Durbán Villalonga et al., 2006). Funding is considered adequate (IUCN,

2007).

► Staff training and development

Mostly Effective

The property has 23 staff, 11 of them permanent and 12 contracted. Another 110 staff members worked for companies that have been contracted to fulfill specific management tasks in 2006. They are supported with their professional development in an adequate way. There is also a park-certified guide training course for freelance guides since the late 1990s (Durbán Villalonga et al., 2006). Staffing and staff training level are considered adequate (IUCN, 2007).

► Sustainable use

Mostly Effective

There is now only very limited use of biodiversity resources of the park (e.g. apiculture). This use is managed in an adequate manner (IUCN, 2007).

► Education and interpretation programs

Highly Effective

In addition to tourism related interpretation programmes (see below), there is an official education programme, and there are also dedicated information and training courses for schools and teachers, educational excursions and workshops, and courses for the local population, for instance on management, interpretation and herbivore control. A wide range of education and interpretation materials is available, and there is an Environmental Education Support Service that is available to 113,000 students on the island. These offers are considered highly effective (Durbán Villalonga et al., 2006).

► Tourism and interpretation

Mostly Effective

Teide National Park received 3.5 million visitors in 2004. Its visitor capacity has been estimated at 4.4 million visitors. The management plan of the park includes prescriptions for visitor management. The property has 2 visitor centres, a botanical garden, a nature activities centre (outside the park), 21

one main trails and 14 secondary trails, and a wide range of tourism interpretation materials and products such as guided tours (Durbán Villalonga et al., 2006). Additional tourism infrastructure not run by the park includes a cable car and several restaurants and hotels. Overall, visitor management is considered effective, in spite of the high tourism numbers.

► Monitoring

Highly Effective

The establishment of a dedicated monitoring programme based on 11 indicators organized by the administration of the National Park was foreseen at the time of inscription (Durbán Villalonga et al., 2006). In addition, the site reports annually on its environmental performance (e.g. Gobierno de Canarias, 2010) and overall work and partakes in the UNFCCC Global Change Monitoring Network (IUCN, 2007).

► Research

Highly Effective

The site has supported the production of an enormous body of scientific work on vulcanology since the times of von Humboldt, von Buch and Lyell, and continues to be studied in terms of seismology, earthquakes, palaeomagnetism, geochronology, and especially volcanology. Due to its location and atmosphere, it is also important for astronomy and atmospheric sciences, with the Izana Astophysical Laboratory nearby (UNEP-WCMC, 2011).

Overall assessment of protection and management

Mostly Effective

The protection and management of the site has improved over time with great efforts undertaken by the local administration as well as insular and national authorities. The park is well funded and staffed and its management is mostly effective. It must be noted, however, that management powers are currently being transferred from the regional to the local level making it unclear as to whether this effective management will be affected.

► Assessment of the effectiveness of protection and management in

addressing threats outside the site

Mostly Effective

The main threats to the natural beauty of the site originating from the outside are invasive species and forest fires; whereas the geological values and the volcanic landscape is unlikely to be affected by that. Considerable efforts (culling and eradication, monitoring) are made to control invasive species, with significant success and an improvement of the conservation status of endemic flora since the establishment of the National Park. Although fire risk management is officially the responsibility of the Cabildo de Tenerife, Teide National Park has its own system to prevent and extinguish fires on its territory (Durbán Villalonga et al., 2006).

► Best practice examples

1. The park’s Environmental Education Support Service appears a highly effective institution with a high numerical capacity and excellent links to formal education institutions on Tenerife, which could be replicated in comparable properties elsewhere.
2. The invasive species control programme of the site has so far had significant success, considering the threat from various invasive species, and may be an example for invasive species management on other insular properties, including those inscribed under World Heritage criteria ix and x.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► Exceptional volcanic system

Good
Trend:Stable

The geological values of the site are extremely robust against anthropogenic impacts and are effectively managed. As a consequence, they are in a good and stable state (IUCN, 2007).

► Superlative volcanic landscape extraordinary natural beauty

Low Concern
Trend:Stable

The extraordinary natural beauty of the volcanic landscape at Teide National Park is not affected by anthropogenic factors and is effectively preserved. However, heavy visitation, which tends to concentrate in a few small areas of the site, have at times made it difficult to enjoy this exceptional beauty, and it is furthermore impacted by changes to the biodiversity that contributes to the experience of the site, and occasional forest fires particularly in the buffer zone (Durbán Villalonga et al., 2006).

Other important biodiversity values

► Mountain ecosystems with associated flora and fauna

In addition to its geological and scenic values, Teide National Park, including its buffer zone, comprises peculiar Macaronesian ecosystems characterized by high plant endemism and a less diverse but equally interesting fauna. Among them is the unique Canarian summit scrub and peak ecosystem, which has particularly high plant and invertebrate endemism, including the emblematic Teide White Broom Spartocytisus supranubius. The property has eleven Habitats of Community Interest (75% of the territory of the park) according to the EU Habitats Directive, including vegetation on the recent volcanic flows, cliffs and craters, Mediterranean scrubs, open endemic Juniperus forest, and Macaronesian pine forest. The park‘s flora comprises 140 vascular plant species (50 of them endemic) (Durbán Villalonga et al., 2006), as well as 74 specis of mosses, 8 of liverworts and 100 of lichens (UNEP-WCMC, 2011). The avifauna of the park contains only 20 species but more breed in the buffer zone, including the endemic Blue Chaffinch Fringilla teydea. Five species of bats (including the endemic Plecotus teneriffae) are the only native mammals. There are also populations of the endemic (to the archipelago) Canary Lizard Gallotia galloti. About 50% of the estimated 1,000 invertebrate species are endemic to the islands, and many to the park itself (Durbán Villalonga et al., 2006). Teide National Park overlaps with a global Centre of Plant Diversity (WWF and IUCN, 1994), the Endemic Bird Area of “Madeira and the Canary Islands” (BirdLife International, 2012a), and the WWF Global 200 priority ecosystem “Mediterranean Forests and Scrub”

(WWF, 2012). There are three Important Bird Areas overlapping the periphery and buffer zone of the property (BirdLife International, 2012b, c, d). The property does not overlap with any Conservation International global biodiversity hotspot (Conservation International, 2012) and has not been mapped for Important Plant Areas to date (PlantLife, 2012).

Summary of the Values

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

Good

Trend: Stable

Because of their inherent robustness against anthropogenic impact as well as the effective management and adequate boundaries of the site, its World Heritage values in a good state.

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

Low Concern

Trend: Improving

Since the cessation of intensive biodiversity resource use in 1954 and the successive efforts of the Teide National Park aimed at the management/eradication of invasive alien species, fire risk management and visitor management, most of the autochthonous biota and ecosystems of the site have shown an impressive recovery (Durbán Villalonga et al., 2006). However, a few species (such as Egyptian Vulture Neophron percnopterus, EN – IUCN, 2012) have been locally lost and others remain in a negative conservation state. Overall, the state and trend of the mountain ecosystems/biota of the property can be assessed as “Low Concern” and “Improving”.

Additional information

Key conservation issues

▶ Visitor management

Local

The exceptionally high visitor numbers (particularly in certain periods of the year and of the day) create significant problems, not so much to the values of the site but primarily to the experience of the site (Durbán Villalonga et al., 2006). At the same time, the management of the National Park rightly limits vehicle access to the few public roads to and through the site. Part of the solution may be in improved real time visitor monitoring and adaptive visitor management, aimed at balancing protection of the park and enhanced visitor experience, as suggested by Decision 31 COM 8B.17 (WHC, 2007).

▶ Invasive alien species management

Local

Most invasive plant species are confined to nitrogen rich areas but only few have been eradicated fully from the park (Durbán Villalonga et al., 2006). The same is true for herbivores like mouflon and rabbit, and feral cats. This means that control measures will need to be kept up at a high level for the foreseeable future. The monitoring of the potential occurrence of new invasive species also needs to be continued.

▶ Local participation in decision making

Local

While local communities around the park clearly participate in the sharing of its benefits, it is not as clear how they are involved in decision making (Durbán Villalonga et al., 2006). There may be a case for reviewing this issue, or for clarifying it.

Benefits

Understanding Benefits

▶ Is the protected area valued for its nature conservation?

The considerable nature conservation values of the property are reflected by

its designation as a National Park in 1954 (Durbán Villalonga et al., 2006).

► Does management of the site provide jobs (e.g. for managers or rangers)?

The property provides more than 130 jobs for the management and maintenance of facilities alone. In addition, a significant number of jobs (hundreds to thousands of jobs in tourism) indirectly benefit from the attractiveness of the OUV and biodiversity of the property (Durbán Villalonga et al., 2006).

► Outdoor recreation and tourism

There are 3.5 million visitors to the property annually, with a high contribution of international visitors, and nature based tourism is practiced at a high intensity (Durbán Villalonga et al., 2006).The site offers a unique opportunity to experience an extraordinary landscape with its associated biodiversity. This contributes significantly to income generation and the socio-economic development in the property’s vicinity.

► Importance for research

The site has critically contributed to the scientific understanding of vulcanology since the late 18th century, and continues to support extensive scientific research and publications (UNEP-WCMC, 2011). In addition, new know-how on the long-term impact of climate change on ecosystems is generated and tested by the institutions managing the property.

► Contribution to education

Based on the site’s significant importance for volcanological knowledge generation and its visitor and educational programmes and facilities, it also functions as a living museum, which gives people a direct impression of the landscape forming forces of volcanism (Durbán Villalonga et al., 2006).

► History and tradition

The extraordinary volcanic landscapes of the property have captured the imagination of artists for centuries and inspired a wide range of artistic works, including those of Luis de la Cruz de Ríos, Francisco Bonnin, Manuel

Martin González (Durbán Villalonga et al., 2006). It has also been used in popular music (like the compositions of Mike Oldfield) and served as a backdrop to movies such as Clash of the Titans, Barbarella, and Star Wars Episode III.

Summary of benefits

The main benefits of the property are tourism, education and science, with the immense socio-ecomomic benefits that depend on them, but the property also offers globally significant nature conservation benefits and extraordinary artistic importance.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	Ministry of the Environment and Government of the Canary Islands		Responsible for most State-funded projects inside the property, including on nature conservation, visitor management, and interpretation.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	.	Development of an informative and user-friendly website: The current website of the property (a subsection of the website of the Spanish PA network) could be made much more user-friendly and informative.	
2	.	Communication and coordination of the activities of the three World Heritage sites on the islands, development of a network and properties and of combined tourism and interpretation products.	
3	.	Review of local participation mechanisms in decision making and management of Teide National Park.	

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