

## Recognizing and rewarding best practice in management of World Heritage properties

State Party: SPAIN

Title proposed World Heritage property: TEIDE NATIONAL PARK

Brief description of the property: <http://whc.unesco.org>]: 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.

**Please answer the questions below demonstrating the successful management and sustainable development of the World Heritage property and why it is an example of a best practice.**

	<b>Topics for demonstrating best management practice:</b>	<b>Please indicate in this column why your World Heritage property is a best practice in relation to the topic:</b>
1.	<b>Conservation:</b> <i>What innovative management practices or strategies are being applied in order to ensure the conservation of the Outstanding Universal Value (OUV) of the property (e.g. better resource management, restoration and rehabilitation, addressing various man-made or natural threats and challenges, etc.)?</i>	<b>CONSERVATION OF THE PLANT LANDSCAPE IN TEIDE NATIONAL PARK PROGRAMME</b>  The landscape is one of the principle resources of the National Park and one of the main reasons it was added to the World Heritage List. In order to guarantee its conservation and renewal, following criteria that seek to maintain its natural features as much as possible, a programme has been developed that promotes both the development of specific management activities and the acquisition of scientific knowledge upon which to base those activities always strictly following natural environmental standards. This programme is based on the following points:

Topics for demonstrating best management practice:	Please indicate in this column why your World Heritage property is a best practice in relation to the topic:
	<p>1) Given that the two principle factors that negatively affect the National Park are the presence of introduced herbivores and the effect of climate change, a programme to monitor the evolution of the ecosystem is carried out which focuses on quantifying the impact of these two factors. This control is carried out on two networks of permanent plots of sample land which span all of the habitats that exist in the National Park and the different ecotones between them. One of these networks consists of 500 x 500 m grids which are precisely mapped out based on the UTM grid WGS84, and the other is based on localized sampling in which at each location three 10 x 10 m plots of land are established providing different levels of access to predators. One of the plots is partially fenced in, allowing access to rabbits, but not to mouflons; another is totally fenced in excluding both rabbits and mouflons; and a third allows access to both. In all three cases, autochthonous predators are allowed access. The data collected from both sampling networks is related to the diversity and richness of the flora, either based on the presence or absence of a species or calculated using objective sampling techniques on different environmental parameters such as plant coverage. The results to date show a progressive expansion of species as a consequence of global warming and also the extreme resilience of the summit scrub, while also revealing the aggressiveness of the introduced predators (especially the rabbit) which can totally alter the plant landscape and leave it far from its ideal natural state. In fact, it has been revealed that broad areas of land that scientists had traditionally thought to be naturally barren due to the harsh climate and poor edaphic quality are actually susceptible to large leguminous scrubs with coverage greater than 75%. This data reveals that in large areas of the National Park the plant landscape is noticeably different than the ideal natural state due to the aggressive impact of the introduced herbivores which impede the establishment and subsequent development of plant species. Simultaneously, specific studies are being carried out to identify the environmental needs of each taxon, in order to later apply this information when developing management measures.</p>

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	<p>2) Controlling threat factors, especially the populations of introduced herbivores, which have become the principle disturbance to the ecosystem. In fact, the rabbit and the mouflon are the main disturbances and specific norms are in place to manage their population through hunting. Over the past decade this approach has managed to stop the increase of the rabbit population and has also greatly decreased the mouflon population. The mouflon population has dropped from almost 400 specimens in 2001 to less than 50 in 2010. The rabbit abundance index has decreased from 2.16 to 1.24 per km over the same period (2001-2010).</p> <p>3) Mitigating activities designed to decrease the pressure of these principle threat factors. The data obtained from the different scientific studies carried out and mentioned earlier support integral measures to restore the habitat. This has led to fencing in large, relatively barren areas to allow the summit scrub to recover free from the impact of predators. Recovering the ecosystem will later allow less abundant threatened species to expand, many of which had regressed because they lacked appropriate ecological niches. However, these species are also targeted for specific actions, based on the results of the studies carried out principally in genetics and population biology, designed to increase the number of individuals of each species by reinforcing and reintroducing them. Finally, actions have been taken to protect areas that had been affected by fires or natural disasters against herbivores by fencing in the entire area in order to allow it to recover naturally.</p> <p>Thanks to the activities carried out through this programme the mountain scrubs that are a large part of the unique landscape of the National Park have begun to be successfully restored.</p>

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2.	<p><b>Local People:</b></p> <p><i>What exemplary practices are you using in order to effectively address the needs of local stakeholders within the management system for the property, and enable their full and active participation?</i></p>	<p>The National Park has a Patronage which acts as a deliberative body that guarantees the participation of local stakeholders in the National Park. Among its functions is to provide information for the National Park's Management Plan (<i>Plan Rector de Uso y Gestión - PRUG</i>) and the specific sectorial plans, to approve the annual report on activities and results, to propose measures to correct problems or improve management, to provide information for annual work and investment plans, etc. The Patronage includes representatives from the State General Administration, the Administration of the Autonomous Community of the Canary Islands and the local municipal administrations, the social agents of the area, as well as all institutions, associations and organizations related to the National Park.</p> <p>Public consultation and participation in the preparation of planning documents that regulate life in the National Park –the Teide National Park Management Plan (PRUG) and other plans related to the conservation of natural and cultural resources, public usage activities and their organization, traditional uses of the National Park's natural resources, etc.– is encouraged from the start of the process, in documents prior to writing and defining the Plan and before it has been processed by the administration.</p> <p>Before the first public consultation and participation, the Administration establishes a list of interested parties that are implicated in the process that includes institutions, associations, nature conservation groups and individuals affected by the planning document. After this stage, the interested parties are informed of meetings that they can attend in which different work documents are presented, debated and agreed upon, passing through different phases until a final document is obtained through the contribution and participation of everyone involved in the process.</p>

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<b>3.</b>	<b>Legal framework:</b>  <i>What special measures have you taken to ensure that the legal framework for the World Heritage site is effective in maintaining the OUV of the property?</i>	<b>MANAGENT PLAN AND SYSTEM OF ENVIRONMENTAL AUDITS</b>  <p>Teide National Park's main governing document is the Management Plan (PRUG), which defines the objectives of the National Park and regulates the activities directly related to managing it, particularly in areas of protection, conservation, improvement, study, teaching, organized enjoyment of the park and the sustainable use of its environmental and cultural values. This document also establishes territorial zoning, the authorized uses of the park, as well as uses that can be authorized or that are prohibited.</p> <p>The current Management Plan was approved in 2002 by Decree 153, and a new plan is presently being prepared.</p> <p>In order to guarantee that the objectives of the Management Plan are met and that the Park is managed correctly, the Park voluntarily allows itself to be audited by external organizations. These audits are carried in two simultaneous ways:</p> <ul style="list-style-type: none"> <li>• Annual reports and five or ten-year audits by the Council of Europe according to the requirements of the European Diploma of Protected Areas.</li> <li>• Annual audits within the ISO 14001 system and the EU Eco-Management and Audit Scheme (EMAS), a voluntary regulation of the European Union which recognizes that Teide National Park has implemented an Environmental Management System and that the Park has made a commitment to continually improve which is verified through strict independent audits.</li> </ul>

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<p><b>4. Boundaries:</b></p> <p><i>What innovative ways of dealing with the boundaries of the property, including for management of the buffer zone do you have in place, to effectively to manage the site and protect its OUV?</i></p>	<p>The boundaries of Teide National Park are precisely defined and appropriately indicated with signs across its entire perimeter. There are also signs indicating areas that are temporarily restricted from access by individuals.</p> <p>In addition, constant coordination is maintained with the Administration that manages Corona Forestal Natural Park, which constitutes the Teide National Park's buffer zone.</p>
<p><b>5. Sustainable finance:</b></p> <p><i>What effective strategies have you developed and implemented to assure adequate and sustainable financial resources for implementing the management measures required to maintain the site's OUV?</i></p>	<p>The Management Plan (PRUG) includes a financial prevision for the period that the plan is active. This guarantees more or less constant funding to allow the Park to be managed adequately. In addition, the demands of the Management Plan itself require a progressive increase in the budget, increasing from 2,848,237 € in 2001 to 4,600,226 € in 2010.</p> <p>Another important point in the financial management of Teide National Park is the fact that it processes multiyear expenditure reports that commit budget items for subsequent years, reducing the possible effects of economic downturns.</p>
<p><b>6. Staffing training and development:</b></p> <p><i>What approaches and strategies have you developed and implemented to assure that the human resources are adequate to manage the World Heritage property?</i></p>	<p>Since 2001 Teide National Park has a list of established job positions which has been continually growing, increasing from 22 to 28 over the last decade. Every year these personnel have access to a wide range of refresher courses or new training both within the National Park and in other centres available to the Administration of the Autonomous Community of the Canary Islands or the State Administration.</p>
<p><b>7. Sustainable development:</b></p> <p><i>What are the effective mechanisms in place to ensure that resource use permitted in and around the World Heritage site is sustainable and does not</i></p>	<p>Apiculture within Teide National Park is considered to be a traditional use related to the summit scrubs that flower in spring and summer. The honey produced in the Park is renowned for its high quality and is greatly valued on the island. This activity takes place according to the "Apiculture Rules" established by the Park Administration every year. In this way the activity is heavily regulated and has been maintained at relatively stable rates</p>

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<p><i>impact negatively on OUV?</i></p>	<p>since 2001. In fact, in 2001 2,238 hives were authorized, while in 2010 this number only increased slightly to 2,959 hives. The activity takes place in a total of 20 authorized and precisely defined apiaries.</p> <p>Another aspect worth mentioning within the context of sustainable development is rabbit hunting by the local population. Hunting permits are strictly regulated and related to biological conservation activities, as it is the principle activity designed to control the population of this introduced herbivore.</p>
<p><b>8. Education and interpretation programmes:</b></p> <p><i>How do the education, interpretation and awareness programmes you have developed and implemented significantly enhance the understanding of OUV of the site among stakeholders?</i></p>	<p>The National Park has an ambitious Education and Interpretation programme directed at both school children and the general public. Within the area of formal education the following activities are carried out:</p> <p><i>Activities inside the Park:</i> these consist in taking school children and teachers on guided trail interpretation tours in different areas of the Park, environmental workshops carried out in the field or in the El Portillo Botanical Garden, guided tours to train teachers and the creation of didactic and informational material. These activities have been consistently maintained since 2001 when 113 tours and other guided activities were carried out for a total of 5,388 students and 360 teachers from 78 schools. In 2010 121 tours were carried out for 5,708 students and 316 teachers from 86 schools.</p> <p><i>Activities outside the Park:</i> include workshops, talks and conferences held in schools. In 2001 135 talks were given to a total of 7,261 students and 412 teachers in 90 schools. In 2010 146 talks were given to a total of 7,502 students and 426 teachers belonging to 95 schools.</p> <p>Among the activities directed at the general public the most important are guided tours and the visitor centres. The total number of people to take guided tours in 2001 was 5,924 in a total of 554 tours, while in 2010 these numbers increased to 6,928 people and 476 tours, all</p>

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		<p>of them carried out within the National Park's trail network. In addition, in 2001 a total of 190,740 used the visitor centres and in 2010 175,516. This decrease is due to the fact that over the past decade a series of smaller facilities (information booths) were put into operation which attended to 50,440 people in 2010.</p>
9.	<p><b>Tourism and interpretation:</b></p> <p><i>What innovative plans have you designed and successfully implemented to ensure that visitor management does not negatively impact on the maintenance of the property's OUV?</i></p>	<p>The management of more than 3,000,000 visitors a year requires a great deal of effort and long term planning, supported by a series of measures that guarantee the protection of the natural resources. These measures are:</p> <ul style="list-style-type: none"> <li>• Zoning, defined in the Management Plan (PRUG), which creates different categories of sectors in the Park's territory, each with a different regime restricting its usage to a greater or lesser degree, depending on the natural values contained in the sector and their conservation. The highest category of protection is the "Reserve Area", which does not allow access (not even on foot) except for scientific or management purposes.</li> <li>• Channelling mass tourism to stay around the highways by establishing a network of lookout points, parking areas and other facilities.</li> <li>• Closing non-paved trails and installing lateral protection on the edges of the highways to avoid the dispersion of vehicles, which has allowed large areas of the National Park to remain isolated and far from human intervention.</li> <li>• A suitable surveillance system which covers the entire area of the National Park, but focused especially in sectors where visitors usually concentrate.</li> <li>• Establishing a network of 35 trails covering a total of 155 km, all of them suitably signposted, which allows practically the entire Park to be visited on foot.</li> <li>• Availability of facilities and information which interprets the surroundings, allowing visitors to gain a clear and concise idea of the richness and importance of the National Park's natural heritage. This work is supported both by the 2 visitor centres and the information booths, as well as a network of information panels available</li> </ul>



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	<p>throughout the trail network and in the main areas where visitors concentrate.</p> <p>One of the most emblematic places in Teide National Park is the summit cone of the volcanic edifice, which many people wish to visit because it is the highest point in Spain. In this case, however, a carrying capacity has been established and a specific usage regime stipulated in the access norms for visitors to the Telesforo Bravo trail. Visitors must obtain a permit which they can solicit by telephone. In 2001 9,918 permits were given for 29,220 people, while in 2010 these numbers doubled to 17,190 permits for a total of 51,594 people.</p> <p>Normally the more than 3,000,000 visitors to the National Park come to the park using an external tour guide generally contracted by tourism companies. In order to guarantee that these guides provide accurate and quality information the National Park provides a course for them every year. The guides need to complete in order to be certified to work in the National Park.</p>
<b>Additional comments:</b>	
<b>Brief description/ summary of the best practice, including a statement on how it can be useful for other sites (max.600 words)</b>	
<p><b>CONSERVATION OF THE PLANT LANDSCAPE IN TEIDE NATIONAL PARK PROGRAMME</b></p> <p>The landscape is one of the principle resources of the National Park and one of the main reasons it was added to the World Heritage List. In order to guarantee its conservation and renewal, following criteria that seek to maintain its natural features as much as possible, a programme has been developed based on the following points:</p> <ul style="list-style-type: none"> <li>• Strict protection of geological resources.</li> </ul>	

- Protection of the plant covering:
  - Given that the two principle factors that negatively affect the National Park are the presence of introduced herbivores and the impact of climate change, a programme to monitor the evolution of the ecosystem is carried out which focuses on quantifying the impact of these two factors. This control is carried out on two networks of permanent plots of sample land which span all of the habitats that exist in the National Park and the different ecotones between them. One of these networks is made of 500 x 500 m grids which are precisely mapped out based on the UTM grid WGS84, and the other is based on a local sample in which at each location three 10 x 10 m plots of land are established providing different levels of access to predators. At the same time specific studies are carried out to identify the ecological needs of each taxon in order to apply this knowledge to management measures.
  - Controlling threat factors, especially the populations of introduced herbivores, which have become the principle disturbance to the ecosystem.
  - Mitigating activities designed to decrease the pressure of these principle threat factors. The data obtained from the different scientific studies carried out and mentioned earlier support integral measures to restore the habitat. This has led to fencing in large, relatively barren areas to allow the summit scrub to recover free from the impact of herbivores. Recovering the ecosystem will later allow less abundant threatened species to expand, many of which had regressed because they lacked appropriate ecological niches. Finally, actions have been taken to protect areas that had been affected by fires or natural disasters against herbivores by fencing in the entire area in order to allow it to recover naturally.
  - Controlling Public Use in order to guarantee the protection of the natural resources through the following measures:
    - Zoning which creates different categories of sectors within the territory, each with its own regime of uses.
    - Channelling mass tourism around the highways by establishing a network of lookout points, parking areas and other facilities.
    - Closing non-paved trails and installing lateral protection on the edges of the highways to avoid the dispersion of vehicles.
    - Implementing a suitable surveillance system.
    - Establishing a network of 35 trails covering a total of 155 km, all of them with signs, which allows practically the entire Park to be visited on foot.
    - .Providing interpretation facilities and material to visitors, thus allowing them to gain a clear and concise idea of the richness and importance of the Park's natural heritage.
    - Calculating the carrying capacity of each sector of the National Park to guarantee both the conservation of its

resources as well as the quality of the visit.

**Finally, please provide us, if possible, with up to ten images of the concerned World Heritage property that can be used free of rights in UNESCO publications (commercial and/or non-commercial), and on the UNESCO website. Please provide the name of the photographer and the caption along with the images (he/she will be credited for any use of the images).**

Foto 1.- Caption: Taffonis. Author DIEGO L. SÁNCHEZ

Foto 2.- Caption: Echium wildpretii. Author DIEGO L. SÁNCHEZ

Foto 3.- Caption: Arenas Negras. Author PEDRO L. SÁNCHEZ

Foto 4.- Caption: Pico Viejo Crater . Author PEDRO L. SANCHEZ

Foto 5.- Caption: Volcanic Dike. Author DIEGO L. SANCHEZ

Foto 6.- Caption: Teide Landscape. Author ROBERTO GONZÁLEZ

Foto 7.- Caption: National Park Northeast Zone. Author PEDRO L. SANCHEZ

Foto 8.- Caption: National Park Northwest Zone. Author PEDRO L. SANCHEZ

Foto 9.- Caption: Volcanic Python of La Catedral. Author DIEGO L. SANCHEZ

Foto 10.- Caption: Teide, Roques de García and Pico Viejo. Author ROBERTO GONZÁLEZ





















