

EUROPE / NORTH AMERICA

JUNGFRAU - ALETSCHE - BIETSCHHORN
(EXTENSION)

SWITZERLAND



WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

JUNGFRAU-ALETSCH-BIETSCHHORN (SWITZERLAND) – ID No. 1037 Bis

(Extension)

Background note: The existing World Heritage property, Jungfrau-Aletsch-Bietschhorn (JAB), was inscribed on the World Heritage List in 2001 under three natural criteria: (i) (now viii); (ii) (now ix); and (iii) (now vii). This recognised that the property provides an outstanding example of the formation of the High Alps, including the most glaciated area in the region and the largest and longest glacier in Eurasia; includes a wide diversity of ecosystems, including successional stages due particularly to the retreat of glaciers resulting from climate change; and has an impressive landscape that has played an important role in European art, literature, mountaineering and alpine tourism. The proposed extension would extend the property to the east and west, with an increase in area from 53,900 ha to 82,400 ha.

1. DOCUMENTATION

- i) **Date nomination received by IUCN:** April 2006
- ii) **Dates on which any additional information was officially requested from and provided by the State Party:** IUCN requested supplementary information on 4 October 2006 after the IUCN Evaluation Mission. The State Party responses were submitted on 27 November 2006 and 26 February 2007, including a new management plan and responses to all the issues raised by IUCN.
- iii) **UNEP-WCMC Data Sheet:** 13 references (including nomination)
- iv) **Additional literature consulted:** Wiesmann, U. et al. (2005). **Between conservation and development: Concretizing the first World Natural Heritage Site in the Alps through participatory processes.** Mountain Research and Development 25, 128-138.
- v) **Consultations:** 9 external reviewers. Extensive consultations were undertaken during the field visit with: representatives of the Federal Office for the Environment; representatives of the Office for Communes and Spatial Planning of the Canton of Berne and the Forest and Landscape Service of the Canton of Valais; representatives of 15 of the 26 communes on which the proposed extended World Heritage property is situated (mainly those in the proposed extensions); scientists from the University of Berne; representatives of Kraftwerke Oberhasli (KWO: hydro-electricity generating company); staff of the JAB Management Centre; and members of the JAB Supervisory Board and JAB Core Groups.
- vi) **Field visit:** Martin Price and Bastian Bomhard, September 2006
- vii) **Date of IUCN approval of this report:** April 2007

2. SUMMARY OF NATURAL VALUES

The current Jungfrau-Aletsch-Bietschhorn (JAB) World Heritage property covers an area of 53,900 ha on the territory of 15 communes in the Swiss Alps. The proposed extension would increase the area by 53% to 82,400 ha on the territory of 26 communes. Of this extended area, 57% lies in the Canton of Valais (18 communes) and 43% in the Canton of Berne (8 communes). The Summary of Natural Values in the 2001 IUCN Technical Evaluation of the current property largely covers the key points for the extended property. Significant additions include the following:

- 1) A number of new glaciers, especially those in the upper basin of the Aar catchment (Oberaar, Lauteraar, Finsteraar, Unteraar, Rosenloui, Oberer Grindelwald) to the east and the plateau glacier of the Kanderfirn/Petergrat to the west, so that the glaciated area increases from 24,900 to 35,000 ha, with five of the longest glaciers in the Swiss Alps. Many of these have global importance for monitoring climate change, particularly the Lauteraar glacier, which has been a key site for glaciological research since the work of Louis Agassiz in the 1840s;
- 2) The extension of the northern perimeter of the property, from 25 to 40 km, so that it now includes almost the entire dramatic north wall of the Bernese

Alps, including the Bluemlisalp group in the west and the Wetterhorn and Wellhorn in the east;

- 3) The Grimsel area, the Doldenhorn group, and parts of the Bietschhorn massif which are not included in the current property;
- 4) Other key landscape features, such as the Oeschinensee (glacial lake), the roche moutonnée landscape in the Grimsel region, and the Rosenlauischlucht (fluvial gorge); and
- 5) New elements from the Helvetic sedimentation region.

3. COMPARISONS WITH OTHER AREAS

The comparison made in the 2001 IUCN Technical Evaluation covers the key points for the proposed extended property and the proposed extensions only add to the logic of the argument, as exemplified by the significant additions mentioned above.

4. INTEGRITY

4.1 Legal status

The communes own most of the land in the extended JAB property; another major landowner is KWO, which owns 8500 ha in the Grimsel area. Almost all of the proposed extended property (77,400 ha: 94%) is protected within two sites of the Federal Inventory of Landscapes and Natural Monuments of National Importance (BLN). In addition, 41% of the area has additional protection status. This includes five biotopes of national importance (1,150 ha, 1.4%), six federal hunting reserves (9,000 ha, 11%), four landscapes protected under the Ordinance Concerning Compensation for Losses in Hydropower Generation (16,000 ha, 19%) – these designations are more strictly protected than BLN; as well as 29 cantonal nature protection areas (13,110 ha, 16%). Many of these designations overlap; of the 5.6% of the proposed extended property that is not under BLN protection, 2%, in the Engelhörner massif at the northeast extremity of the expanded site, is protected as a federal hunting reserve. Thus, only 3.6% is not under any type of protection. The two relatively small areas concerned (one in the commune of Blatten in the Lötschental, the other below the Doldenhorn north of the Oeschinensee) were visited, and discussions in the field concluded that their natural values are not at risk, and therefore the proposed boundaries of the extended property are appropriate. Eventually, it would be desirable for these two small areas, as well as the small area in the Engelhörner massif, to be included in the BLN during the ongoing process of review and revision.

In addition, it should be noted that, within the Canton of Valais, the natural and cultural heritage protection legislation of 1 October 2000 requires communal land-use plans to list the JAB property as a protected area of international importance. In the Canton of Berne, the Cantonal Landscape Development Concept includes location-specific statements on 'cantonal priority areas' which include all the federally-designated sites mentioned

above, and there is a special policy to implement the JAB property.

4.2 Boundaries

The delineation of the boundaries of the current JAB property resulted from intensive consultations among 14 of the region's communes and other stakeholders. At the time of the evaluation mission to the originally nominated site in March 2001, it was noted that extensions to the west and east would be likely. The new boundaries for the proposed extensions were again intensively negotiated from 2001 to 2004, this time with 26 communes and other stakeholders. Overall, the proposed boundaries, as noted in Section 2 of this report, significantly increase the values for which the JAB property has been inscribed. These boundaries are largely those of the two BLN sites in the region (see above). The primary exception is to the east of the area, where the majority of the commune of Innertkirchen (especially the Gault glacier and forefield) falling within the BLN site was not included because of concerns from the traditional agricultural and tourism sectors. During the mission in September 2006, representatives of this commune stated that this land might be proposed for inclusion at a later date. Also to the east, the boundaries of the proposed extended property around the Grimselsee have been drawn to allow for possible raising of the hydropower dam. For related reasons, a considerable part of the commune of Gutannen falling within the BLN site is not included because of extensive hydropower infrastructure (and it should be noted that there is an extensive network of tunnels for this purpose under much of the proposed eastern extension, though these do not in any way endanger the characteristics for which the property is designated). To the west, the boundary of the extension also does not match the BLN site, as the Balmhorn massif is excluded. However, the location of the boundary along the north side of the Gasterntal is appropriate.

4.3 Management

Following extensive participatory processes, a highly democratic institutional structure has been implemented through the JAB World Heritage Association, registered in May 2002 under Swiss law. The four main elements of this Association are:

- ◆ An assembly of delegates, with 24 members from each of the two cantons, representing regions, communes and organisations;
- ◆ A supervisory board, with 6 members from each of the cantons, representing regions, communes and organisations;
- ◆ A strategic steering committee, with representatives from the Confederation and the two cantons; and
- ◆ A management centre, with two offices, one each in the Cantons of Bern and Wallis, with a staff of two full-time equivalents who are highly qualified and have some administrative support.

In addition, the staff of the management centre work with core groups, including representatives of key stakeholders, in developing and implementing work in 21 'fields of action' that relate to a wide range of activities

within the proposed extended World Heritage property and also across the entire area of each of the 26 communes which have parts of their territory within the proposed extended World Heritage property, what is referred to as a 'World Heritage Region', as discussed below.

This institutional structure is appropriate given the institutional complexity. The 'management plan' dated 1 December 2005 was developed in an exemplary participatory process directly involving 256 people from the full range of stakeholder groups. The overall goals of this document, however, are not entirely consistent with the natural values for which the existing World Heritage property (and equally its proposed extension) has been inscribed; for instance, the goals referring to economic use. This reflects the fact that the document refers to a larger 'World Heritage Region' with 35,000 inhabitants which includes, as its core, a World Heritage property which has only 10 permanent inhabitants, though it has both seasonal residents (e.g., at mountain huts and occupied with grazing animals) and, throughout the year but especially in winter, very large numbers of visitors to sites on or near its boundary as well as mountaineers and skiers, some of whom arrive by helicopter. Consequently, this document is not an effective plan for the management of the proposed extended property, for three reasons:

- 1) Although the document outlines a very large number of highly desirable actions, it does not state how they will be practically achieved. More accurately, it could be described as a 'management strategy';
- 2) It does not refer in any great detail to many actions already being undertaken in the area which contribute to the maintenance of the values for which the property has been inscribed. Such activities are undertaken by federal and cantonal employees and others, including employees of various conservation and recreation NGOs; and
- 3) It does not adequately differentiate between actions which directly contribute to the maintenance of these values, those which indirectly contribute, and those which are desirable but more generally of relevance for the sustainable development of the so-called broader 'World Heritage Region'.

IUCN therefore recommended on 4 October 2006 that this 'management plan' should be regarded as a 'management strategy', and that a new management plan should be prepared, which should clearly identify 1) priorities for action, differentiating between activities that directly contribute to the maintenance of the values of the natural World Heritage property and its integrity (i.e., essential measures) vs. those that contribute indirectly and/or to regional sustainable development; and 2) specific activities, each with the responsible organisation(s) and the resources (especially in terms of funding and manpower) allocated to them. Given the many conservation designations in the area, IUCN also noted that it is essential that the new management plan clearly states how these activities are to be coordinated and, in this, what is the role in planning and management of the respective organisations, including the management centre.

In response to IUCN's recommendation the State Party prepared a new management plan which was submitted on 26 February 2007. Together with its six annexes, this new management plan provides all the necessary information on the activities, responsible organisations and resources for the conservation of the World Heritage property, and how these activities are to be coordinated.

The establishment of the management centre, with two offices, was essential for the coordination of a large number of activities by diverse stakeholders over a large area. The current levels of staffing at the management centre appear appropriate. There are also a number of staff employed by federal and cantonal institutions and both recreation and conservation NGOs who work within the proposed extended World Heritage property. However, IUCN noted on 4 October 2006 that, while long-term funding commitments from members of the Association and the Canton of Berne are in place, core funding to support the key activities of the management centre is not guaranteed, especially from the Canton of Valais and the Confederation. In response to IUCN's recommendation the State Party submitted on 26 February 2007 letters from the Federal Office for the Environment as well as the Cantons of Berne and Valais confirming their commitment and financial support for the implementation of essential measures and key activities into the foreseeable future.

4.4 Threats and human use

The proposed extension will not change the relatively small number of threats to the property. Tourist developments are limited, and a federal review of the use of the area for helicopter skiing is currently underway. This appears likely to limit the number of landing sites and flights. Climate change is certainly affecting the property, as shown by the retreat of the glaciers. However, this – and its ecological consequences – should be recognised as ongoing glaciological / geomorphological and ecological processes (criteria viii and ix) of which the property provides an outstanding example.

IUCN considers that the proposed extension meets the conditions of integrity as required under the Operational Guidelines.

5. ADDITIONAL COMMENTS

5.1 Name

While the name of the existing World Heritage property is appropriate, the proposed extension would add a considerable area, so that some of the surrounding communes (especially those added as a result of the extension process) have little affinity to the three names in the name of the current property, i.e., Jungfrau, Aletsch, Bietschhorn. Following discussions during the evaluation mission, it was therefore suggested that a more appropriate name for the extended property should be identified, which should have at least three benefits: 1) it should have greater acceptance by the majority of people in the concerned communes; 2) it should be more widely recognised at the international scale (and also potentially avoid confusion with existing tourist-oriented names such as Jungfrau Region); and 3) it should leave open the

possibility of serial nominations within the Alps on the territories of other States (see below). Given that other sites within the Swiss Alps have been named for much more local characteristics (e.g., Monte San Giorgio, Benedictine Convent of St John at Münstair), such renaming should not cause any confusion. Options for the renaming of the property are currently under consideration and the State Party should be encouraged to bring forward a new name for the property in due course.

5.2 Possible future extensions

As noted above, the majority of the commune of Innertkirchen (especially the Gault glacier and forefield) within the boundaries of the BLN site was not included in the proposed extended property because of concerns from the traditional agricultural and tourism sectors. It would be desirable if this relatively small area could be included at a later date, through a minor boundary modification, to further strengthen the integrity of the property.

5.3 Possible future inclusion in a serial property

There have been many discussions, including those at a regional thematic expert meeting held in June 2000 in Austria, concerning a serial World Heritage nomination in the Alps. Such discussions are ongoing, particularly within the context of the Alpine Network of Protected Areas.

6. APPLICATION OF CRITERIA / STATEMENT OF OUTSTANDING UNIVERSAL VALUE

The proposed extended JAB property has been nominated under criteria (vii), (viii) and (ix). The arguments presented in the nomination are in line with those identified in the 2001 IUCN Technical Evaluation and remain valid. IUCN considers that the nominated property meets these criteria and proposes the following Statement of Outstanding Universal Value:

The Jungfrau-Aletsch-Bietschhorn region is the most glaciated part of the European Alps, containing Europe's largest glacier and a range of classic glacial features, and provides an outstanding record of the geological processes that formed the High Alps. A diverse flora and fauna is represented in a range of habitats, and plant colonization in the wake of retreating glaciers provides an outstanding example of plant succession.

Criterion (vii): Superlative natural phenomena or natural beauty and aesthetic importance

The impressive landscape within the property has played an important role in European art, literature, mountaineering and alpine tourism. The area is globally recognised as one of the most spectacular mountain regions to visit and its aesthetics have attracted an international following. The impressive north wall of the High Alps, centred on the Eiger, Mönch and Jungfrau peaks, is a superlative scenic feature, complemented on the southern side of the Alpine divide by spectacular peaks and a valley system which supports the two longest glaciers in western Eurasia.

Criterion (viii): Earth's history, geological and geomorphic features and processes

The property provides an outstanding example of the formation of the High Alps resulting from uplift and compression which began 20-40 million years ago. Within an altitude range from 809 m to 4,274 m, the region displays 400 million-year-old crystalline rocks thrust over younger carbonate rocks due to the northward drift of the African tectonic plate. Added to the dramatic record of the processes of mountain building is a great abundance and diversity of geomorphological features such as U-shaped glacial valleys, cirques, horn peaks, valley glaciers and moraines. This most glaciated part of the Alps contains the Aletsch glacier, the largest and longest in Europe, which is of significant scientific interest in the context of glacial history and ongoing processes, particularly related to climate change.

Criterion (ix): Ecological and biological processes

Within its altitudinal range and its dry southern/wet northern exposures, the property provides a wide range of alpine and sub-alpine habitats. On the two main substrates of crystalline and carbonate rocks, a variety of ecosystems have evolved without significant human intervention. Superb examples of plant succession exist, including the distinctive upper and lower tree-line of the Aletsch forest. The global phenomenon of climatic change is particularly well-illustrated in the region, as reflected in the varying rates of retreat of the different glaciers, providing new substrates for plant colonization.

Conditions of Integrity, Protection and Management

The property is well managed, with a management strategy and plan in place which have been developed through an exemplary participatory process. Almost all of the property is under some form of legal protection. Key management issues include the potential impact from climate change, the management of tourism, and the need to ensure effective coordination of management responsibility between federal, cantonal and communal levels of government.

7. RECOMMENDATIONS

IUCN recommends that the World Heritage Committee **extends** the Jungfrau-Aletsch-Bietschhorn property, Switzerland, on the World Heritage List on the basis of criteria (vii), (viii), and (ix).

IUCN recommends that the World Heritage Committee commends the State Party for preparing a comprehensive management plan and strategy to ensure the effective conservation and management of the property.

IUCN also recommends that the State Party be requested to consider changing the name of the property to better reflect its extended area and notes that the State Party has already initiated a process to identify a suitable name.

Map 1: Location and boundaries of nominated property



Übersicht
Trockenstandorte des
Kantons Bern

