

Siachen Peace Park: a case study for the valorisation of high mountain ecosystems

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Siachen Glacier, a high mountain endangered ecosystem

The Karakoram range, which includes K2, the world's second highest mountain, is one of the wonders of the world. The Siachen Glacier, a high mountain endangered ecosystem near K2, comprises an area surprisingly rich in wildlife: snow leopards, brown bears, herbivores and the plants they depend on; the area could well qualify for a World Heritage Site (see Allan 1995 for an extensive reference list). Despite this, years of war and border tensions between the armed forces of India and Pakistan have pushed this critical ecological habitat to the brink of disaster.

Quite apart from the tragic loss of human lives, the Siachen glacier is being quite catastrophically polluted by human waste (which does not easily decompose at those altitudes), by garbage, by chemical contamination from weapons and heavy equipment, and by oil and kerosene, essential for survival at high altitudes by both armies. These pollutants end up in the Nubra river, which in turn flows into the Shyok River and then into the Indus "on whose waters millions of people depend." (Ali 2002)

Issues of peace and conflict in the region: history of the conflict

The Saltoro Range area has been disputed between India and Pakistan since 1947 and armed conflicts have taken place in Kashmir: in 1947-48, in 1965 and in 1971-1972. After the latest round of hostilities, a 790 km Line of Control (LOC) between India and Pakistan was established; this generally followed the Cease-Fire Line of 1949. The LOC in the Siachen region was defined rather fuzzily ("... and thence north to the glaciers [beyond the point known as NJ 9842]") and, for 35 years, this imprecise definition posed no problem. There had been no military action, no claims and counter-claims, and no conflict in this region. Essentially, Siachen was simply considered a "no man's land".

In a recent article on the topic, Aamir Ali points out that both countries interpreted "north to the glaciers" in accordance with their own interests, and both included the Siachen – Saltoro. (Ali 2002) In April 1984, India pre-empted a Pakistani plan and moved troops onto the glacier and to the Saltoro Ridge, occupying key passes – the Sia La (6160m) and the Biafond La (5550 m).

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Pakistan now occupies the southern slopes of the Salto Ridge, whereas India occupies the northern slopes and the approximately 5480 to 6700 m ridge. The encampment of thousands of soldiers on both sides of the ridge and on the Siachen Glacier exposes them to incredible hardships. Casualties from cold, altitude, avalanches, crevasses and blizzards have been almost ten times higher than casualties from military action.

The pollution resulting from the presence of these troops and their military activities is significant. Hundreds of tons of garbage and military hardware have accumulated; material is dumped into crevasses, from which it will eventually emerge, flowing into the water supply (the Nubra – Shyok – Indus River connection).

Talks between the two countries have attempted to end this situation. The recent easing of tensions has created widespread optimism that some accommodation might be reached.

K2 1954-2004: fifty years after the first ascension

In 1954 Italian mountaineers Achille Compagnoni and Lino Lacedelli, members of a team, led by Ardito Desio (later founder of the Ev-K²-CNR Committee for high altitude scientific research), were the first to reach the summit of K2. Next year, 2004, a new Italian-Pakistani expedition will celebrate this golden jubilee by climbing K2 from both the Pakistani and Chinese sides, preceded by an Everest climb from the North face. A number of parallel joint cooperation and research projects, including identifying ways to promote the Siachen Peace Park (SPP), will also be undertaken.

Siachen Peace Park proposal

The designation of the entire Siachen – Salto area as a Transboundary Peace Park (for a definition, see Sandwith *et al.* 2001) has been proposed. As stated by Ali, this could be done without waiting for a total solution for the Kashmir problem and indeed would constitute a “confidence building measure”: “...turning the entire area into a Transboundary Peace Park [...] would enable both armies to withdraw under conditions of honour and dignity; it would not prejudice their positions on Kashmir as a whole; it would stop further degradation of a magnificent mountain area; it would save thousands of lives and billions of rupees; it would heal a running sore in the Kashmir imbroglio. [...] The mountain terrain would present special difficulties, but from reports of recent discussions, it may be assumed that these can be overcome.” (Ali 2002)

Other proposals which help to bolster the SPP concept have also been advanced. In 1998, various specialists under the umbrella of the Cooperative Monitoring Centre, Sandia National Laboratories (Albuquerque, USA) proposed a Siachen Science Centre for co-operation in the area (Biringir, 1998) and a Military disengagement on the Siachen Glacier (Ahmed and Sahni 1998). With input from Indian and Pakistani technicians; the same organization also explored how Cooperative Aerial Monitoring could be used in the de-militarisation of the India –Pakistan border (Chaudhry and Cariappa 2001).

The SPP concept is gaining momentum and its implications for conflict resolution and ecosystem protection are being actively discussed in various environmental, development and conservation sectors around the world. Last year, a joint Indian and Pakistani mountaineering

expedition, organized by Roger Payne of UIAA (International Mountaineering and Climbing Federation) and IUCN, organized a Symbolic Peace Climb (August 24-29, 2002) involving Indians and Pakistanis, with a series of climbs in the Aletsch Glacier area, and highlighted the Siachen issue. Flags of both nations were unfurled on the summits (L. Hamilton *in litteris*).

In 2004 UIAA is coordinating a series of international youth climbs to promote peace and protection of the environment. The walks and climbs will celebrate transboundary protected areas, including the hoped-for declaration of protected area status for both the Siachen Glacier and the Mont Blanc Range (source UIAA 2003).

An informal *ad hoc* group of IUCN's World Commission on Protected Areas (WCPA), coordinated by Larry Hamilton, has been raising this issue at international levels. A statement in favour of the SPP, with particular reference to the protection of endangered local species such as the snow leopard, was adopted by participants at the IUCN/WCPA South Asian Regional Workshop held in Dhaka on June 19-21, 2003, in preparation for the V World Parks Congress: "*As a part of the normalisation process/confidence building measures, the Governments of India and Pakistan are urged to establish a Siachen Peace Park to protect and restore the spectacular landscapes which are home to so many endangered species including the Snow Leopard*". An appeal in support of the Siachen Peace Park Initiative 2003 was subsequently published on the Sanctuary Asia web site www.sanctuaryasia.com and has since been signed by many concerned people from Pakistan, India and indeed from all over the world.

Parallel to the K2-2004 celebrations, an informal working group organized by the Italian Parliamentary Group "Friends of the Mountains" and the Ev-K2-CNR Committee is also considering the SPP proposal and a petition has been launched for signing by Italian stakeholders, including researchers, PA officials and government representatives.

The proposal's impacts on peace and conflict

Statements have been made by some Indian officials supporting a step wise approach to demilitarisation of the territory. It has been suggested that both sides recognise each other's claims, agree not to change the status quo by force and agree not to introduce irregulars. In the long term, he envisages a three-step process:

1. End fighting without disengaging or redeployment. Let Siachen recede from the public mind (2 –3 years).
2. Introduce technical means of monitoring and surveillance, permitting meaningful reductions of forces to be negotiated.
3. Work out a complete demilitarisation.

The concept of a Transboundary Peace Park fits in completely with these suggestions, giving a positive dimension to the process. It would work not only towards disengagement but also towards the creation of a park to protect the environment — to allow the ibex, the snow leopard and the wild roses to return. (Ali 2002)

The SPP initiative in the Pakistani socio-economic and environmental context

A study by the Ecotourism Society Pakistan (Haroon 2001) shows that poverty isn't the only reason for degradation in mountain areas of Pakistan. Planning of watershed management,

local social structure, the role of NGOs, legislation and its implementation and the role of international donors are central to socio-economic development and ecosystem protection in the area.

Ecotourism is the most important potential source of income for Pakistan's Northern Areas, but it needs a strong environment-based approach in planning (Mock and O'Neil 1996). September 11th caused a strong decline in the number of foreign visitors to Pakistan and international promotion to increase inflow of tourist resources is needed.

The K2-2004 golden jubilee celebration represents an important opportunity for promoting Pakistani mountain tourism. Discussions between Italian organizers of the K2-2004 expedition and relevant national authorities, such as the Ministry of Culture and Tourism have already begun and a joint organizing committee has been formed.

Another interesting field of wildlife tourism is Community-Based Trophy Hunting; such programs are already established and used as a tool for species conservation, public involvement and increase of local revenue (Shackleton 2001).

Promotion of the snow leopard image as a "flagship species", as already suggested by IUCN/WCPA, could become an important symbol representing fragile transboundary mountain ecosystems. Furthermore, the snow leopard's distribution covers both India and Pakistan and the Siachen is in the species' core area. (Jackson 2002) Singh provides a detailed discussion of the transboundary stakeholders' involvement and development of cross-border conservation linkages for this species. (Singh 2002)

Regarding the role of mountain protected areas in the promotion of ecotourism, and local livelihood generation, two significant examples can be cited. In the 1970s, based on a proposal by famous conservationist George Schaller, Pakistani authorities established the Kunjerab National Park in the country's extreme north on the Chinese border. The approach adopted in management, however, did not include an appropriate involvement of local stakeholders. Not only did the Park remain mainly "on paper", but it became a source of conflict with local populations, in particular, in the Shimshal village. (Mock 1995) Concerns were raised following a visit to Shimshal in 1992, where use of natural resources as a basis for the village's existence was clear, yet villagers' priorities were insufficiently represented in the development of Park policies (Butz 1997; for a detailed analysis of the Shimshal situation, see Knudsen 1999).

The nearby Central Karakoram National Park (CKNP), that occupies an area of 973,845 ha immediately west of the Siachen Glacier and including K2, was established in late 1993 (Notification No. Admin. – III – II- (28/93). Development of a management plan for the CKNP and a proposal for declaration of the area as a World Heritage Site were undertaken by IUCN with a focused participatory approach, in an attempt to integrate the lessons learned in the KNP experience. (Fuller 1994) In September 1994, IUCN organised a Central Karakoram World Heritage Site Planning Workshop in Skardu, as an initial participatory activity, but the government was unable to reach agreement there on division of park revenues with the local populations. It was concluded that the "co-management" approach had yet to find a firm foothold in Pakistan (Mock 1995) and a Critical Review of the workshop analysed the numerous constraints relative to this kind of approach (MacDonald 1994). Ahmad, 1995, provides an additional contribution, analysing the lessons learned in the KNP project.

The CKNP today remains a “paper park” and the K2-2004 initiative has identified promotion and implementation of an updated CKNP Management Plan, based on the draft drawn up by IUCN with local stakeholders in 1999, as one of its aims. Launch of a related demonstration project as part of the K2 jubilee celebrations, foreseeing involvement of local stakeholders from the development phase and placing an emphasis on sustainable tourism, improvement of livelihoods, institutional capacity building, research and environmental monitoring is being planned. Local ownership of the concept and involvement in policy making will be crucial for success.

The same local populations involved in the CKNP, considering the importance of a transboundary approach in the management of mountain ecosystems, could become staunch supporters of the SPP initiative. Could it thus be concluded that implementation of the CKNP management plan will not only serve to protect and valorise the immense natural and cultural heritage of the Karakoram mountain region encompassing K2, but may also act as a stimulus for spreading conservation to the highly vulnerable Siachen region? The CKNP and SPP are clearly distinct projects, but successful management of the CKNP and consistent and significant indicators of positive results could help build support for the SPP.

Twinning projects with other existing parks to exchange experience and best practices and to support local capacity building could optimize implementation of the CKNP management strategies and consequently aid in promotion of the SPP initiative. Some historical Italian Parks, such as Stelvio Park, are already considering such “sister parks” initiatives.

The SPP initiative in the Indian socio-economic context

To develop tourism, Indian Kashmir will have to face many of the same problems as Pakistan. The presence of an armed conflict which has in the past attacked tourist attractions has led to a decrease in economic growth from tourism in recent years. The wildlife has clearly been adversely affected the war as well. (Sharma 1999).

Protected areas in Jammu - Kashmir are mainly located south to Srinagar, with the important exception of the Karakoram Wildlife Sanctuary (WLS) established in 1987, and managed by the Wildlife Warden in Kargil, Ladakh (Envis 2003). The Karakoram WLS, cited as “Karakoram (Saichen - Shyok) Wildlife Sanctuary” in Jackson 2002, is located at 34°43' N – 77°26' E, and measures around 500.000 hectares (half of the CKNP). The KWLS is classified as IUCN Category IV (WCMC 1992). The Botanic Survey of India classify the Karakoram WLS amongst the “under explored” areas with regards to botanical knowledge (BSI w.d.), only very few studies are available (Kala w.d.). This area, situated on the Indian side of the LOC, could become the transboundary counterpart of Pakistan’s CKNP in Pakistan. If effectively linked by the SPP, the entire area could ideally apply for a recognition as a single World Heritage Site.

Paragraph 3.4 of the National Conservation Strategy and Policy Statement on Environment and Development (India Gov. 1992) reports as an obtained result “Establishment of NP and Sanctuaries covering about 4% of the area” and also “Eco-development plans for Sanctuaries and NP”. India’s Wildlife Conservation Strategy (2002) asked for a declaration of wildlife and forests as a national priority, with special attention paid to relationships between local populations and wildlife, especially in protected areas, and providing additional frontline staff for National Parks and Sanctuaries (including managers expert in wildlife management).

India is developing a National Biodiversity Strategy and Action Plan (BSAP) and a “Western Himalayan Ecoregion Strategy and Action Plan” will be implemented within this framework (MoEF 2003). This plan is key for development of a governance route for the Karakoram Wildlife Sanctuary as linked to the potential SPP, as it establishes some central principles for all Indian Himalayan protected areas, such as: “*restructuring and modernisation of administrative network of forest and protected areas keeping in view the needs of conservation of biodiversity and ecosystem services*” (Issue 4A), “*modernise management of PAs*” (Issue 4B) and, most importantly, “*Strengthening inter-ecoregional cooperation ... (including neighbouring countries) and especially “Between WH and China and Pakistan: ... Exchange of experience and knowledge for strengthening the management of illegal trade of medicinal plants and in managing cold desert ecosystems.”*” (Issue 8 B). This last point could very well represent a starting point for further development of the SPP concept.

Cooperation projects in the Karakoram and Himalayas

The activity of international donors in the Himalayas, especially the World Bank’s Global Environment Facility (GEF), UN agencies like UNEP, UNDP and FAO, and international NGOs as IUCN, Aga Khan Foundation, WWF and BirdLife International, have led to the development of strategic approaches that can support the SPP initiative in a wider context of cooperation and sustainability. Many such projects, like the Mountain Areas Conservation Project (MACP) in Pakistan are aiding in development of a strategic, coordinated approach based on local community participation and bearing in mind gender and social issues.

A regional project aimed at development of participatory and systemic approaches for effective management of mountain natural resources may help lead towards the SPP. It is a Partnership Initiative launched at WSSD and promoted by Italy (Ministry of Foreign Affairs - DGCS), for the creation of a scientific-based Decision Support System in the Hindu Kush – Karakoram – Himalaya region. This project, oriented around building of local institutional capacities for local and transboundary management of mountain ecosystems, involves the Italian Ev-K²-CNR Committee, the Italian NGO CESVI – Cooperazione e Sviluppo, the International Centre for Integrated Mountain Development (ICIMOD) and IUCN. The three pilot countries identified for project implementation are Nepal, China (Tibet A.R.) and Pakistan, with specific reference to the K2 area.

UNDP has a number of initiatives in India, including support to the afore-mentioned National BSAP, in co-operation with GEF. Relevant to PA management capacity building is the UNDP Environment Programme Support Sub-programme on Wildlife Protected Area Management in West Bengal, that follows the 1993 GOI/UNDP/FAO Sub-programme IND/92/007 “Strengthening Wildlife Management and Eco development Capabilities”, the start of a process for decentralising support to Protected Areas.

Conclusions and recommendations

Summarising the preceding analyses, we can put forward some (tentative) recommendations regarding development of the SPP concept as an instrument of valorisation of a fragile transboundary high mountain ecosystem:

- full involvement of both countries at a government level to design a SPP proposal which respects the different views and sensitivities;

- the proposal should follow a temporal path that allows public opinion in India and Pakistan to “adapt” to an idea of a common ground of co-operation on Siachen Glacier;
- “soft” involvement of the international community to avoid the impression in India and Pakistan that the proposal could be in some way imposed from outside;
- strong link to “practical” issues for the local communities, i.e. development of community based projects and parks structures (CKNP in Pakistan, Karakoram Wildlife Sanctuary in India) that can lead to an increase of tourist access to both concerned areas.

In conclusion, once again in the words of Aamir Ali: “It is said, on both sides of the LOC, that to honour the blood of brave soldiers that has been spilled, not an inch of territory should be given up. One could say with even more emphasis that the sacrifice of brave men could best be honoured by protecting a spectacular area consecrated with their blood. [...] *Sia* in the Balti language means “rose”. The lower valley of the Siachen was covered with wild roses, hence the name. The establishment of a Peace Park would enable the roses to return”.

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