

SIACHEN GLACIER: GETTING PAST THE DEADLOCK

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Introduction

On 7 April 2012, an avalanche struck Gayari in the eastern part of Ganche district of Gilgit-Baltistan. A whole battalion headquarters of the 6 Northern Light Infantry (NLI) and 138 persons — mostly military — were buried under a several metres thick cover of snow spread across more than 1,000 metres. Such was the magnitude of the disaster and the inhospitability of the terrain that the rescuers managed to unearth the first body on 26 May after weeks of intense efforts, let alone making any rescue. The unit, 6 NLI, is one of the three battalions of the Pakistan army manning the Line of Actual Contact or the Actual Ground Position Line (AGPL) along the Siachen Glacier conflict zone in the northern-most un-demarcated part of the Line of Control (LoC). The area is a conflict zone since 1984, when the Indian army occupied it, and Pakistani army had to react to the aggression and scramble to hold positions across the Salto ridgeline to halt the Indians' advance.

At altitudes between 16,000-22,000 feet in the un-demarcated border regions of China, India, and Pakistan in the Himalayas, Siachen glacier is one of the most inhospitable places on earth. It actually remained uninhabited by humans until the Indian and Pakistani militaries set foot on it. The conflict has defied resolution despite several rounds of negotiations since 1986. Both countries have paid dearly in terms of human and financial costs. Most of the human losses have been inflicted by the adverse topographical and weather conditions of the region rather than hostile fire as proven by the 7 April incident. Similarly, just keeping the two militaries stationed on the high altitude positions on the glacier or its vicinity is a financially costly affair even if they are not trading fire. The most enduring cost of the conflict for the future generations of the two countries, however, is the destruction of the fragile glacial ecosystem because of the presence of the armies.

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Since the border region of conflict around Siachen was uninhabited until the two militaries occupied it in 1984, an ideal resolution of the conflict will have to involve a demilitarization of the region. Moreover, given the fact that this region was and still is un-demarcated, and that successive agreements for the authentication of the LoC have deliberately ignored the demarcation of the region beyond a point to the south of the glaciers commonly referred to as NJ-9842, such a settlement will also have to take into account whether the region needs to be demarcated after all the bloodshed or not.

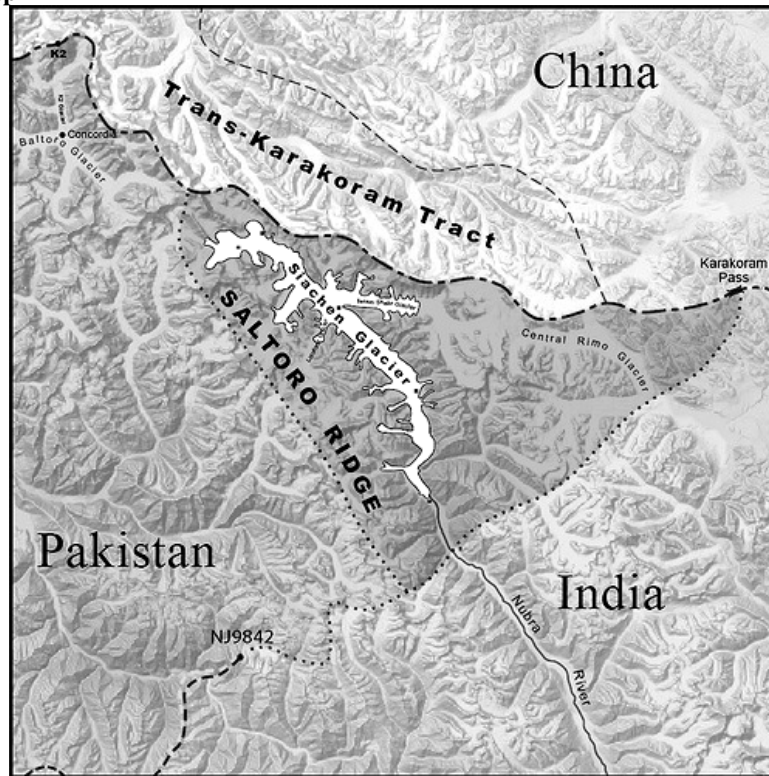
Most studies conducted on the Siachen glacier dispute so far have argued in favour of demilitarization of the glacier. Some environmentalists have gone a step ahead and called for an agreement to declare the region a trans-boundary peace park reserved for conservation and scientific exploration. Almost all of these studies are predicated on the assumption that the presence of the two armies in the region is militarily, economically and environmentally hazardous, and that the glacier in itself has no strategic significance. The two countries are, thus, fighting a futile war in an inhospitable terrain with undesirable levels of human, economic, and environmental costs.

Although the 7 April tragedy is a wakeup call for India and Pakistan to let this natural wilderness be, and demilitarize the region, it is also a time to reassess the costs of this conflict, and the possible alternative discourses for its resolution. A trauma-induced impulsive debate on the subject at times tends to short-sight imagination and shrinks the depth and breadth of understanding. Pakistan's Foreign Office was right in reiterating the persistence of Pakistan's stance on the issue in a statement on 19 April,⁽¹⁾ which could help in de-traumatizing and de-politicizing the discourse on the subject. This study is also an attempt at rationalizing the debate on this important subject by revisiting the aforementioned questions on Siachen. The study takes a fresh look at the intractability of the conflict, its military/economic costs, and its environmental fallout for the glacial ecosystem. It critically analyzes the demilitarization of the Siachen glacier and the peace park proposals for the area in the light of the on-ground realities of the battlefield as well as the overall relations between India and Pakistan, and gives a roadmap for demilitarization of the glacial region as an environmental priority.

The 'Third Pole'

The 70-km-long Siachen glacier is located in the eastern Karakoram Range and runs from Indira Col in the north-west to the starting point of Nubra river in the south-east (see Map 1). The width of the glacier is between 2 and 8 km, and the total area is less than 1,000 sq. km. It is located in one of the most inhospitable terrains of the world owing to extremely cold weather and high altitude. It is the second longest non-polar glacier in the world after the Fedchenko Glacier in the Pamirs, which is 77 km long. "It receives 6 to 7 meters of the annual total of 10 meters of snow in winter alone. Blizzards can reach speeds up to 150 knots (nearly 300 kilometres per hour). The temperature drops routinely to 40 degrees C below zero, and even lower with the wind chill factor. For these reasons, the Siachen Glacier has been called the 'Third Pole.'⁽²⁾

Map 1



Englishman W. Moorcroft was the first outsider to step on the glacier in 1821, but it was discovered first by Henry Starchy in 1848. Francis Younghusband, another British, unknowingly bumped on to Bilafond La in the Siachen glacier region in 1889, but he could not affirm his location being on Siachen. The lower parts of the glacier were sketched in 1861 by E.C. Ryall of the Survey of India.⁽³⁾

The glacier was finally discovered by T.G. Longstaff, A.M. Neve, and A.M. Slingsby in 1909. Pioneering survey expeditions of the glacier were undertaken by W.H. Workman and his wife Fanny Workman in 1911-12, who also gave it its current name, the Siachen Glacier. The Workman survey expeditions were undertaken from the Skardu direction.⁽⁴⁾ Despite the assertions by some Indian authors that access to the glacier is easier from the Indian side than the Pakistani side,⁽⁵⁾ mountaineering history and the relative costs of stationing the two armies around the glacier attest to the easier access to the glacier from the Pakistani side.

Fighting over ice

At the time of independence of India and Pakistan in August 1947, the princely state of Kashmir under the British rule was given a choice of either

accessing to India or Pakistan. The accession of the state's ruler to India became a matter of dispute between the two countries, which resulted in a war at the end of 1947 extending well into 1948. The war ended leaving a part of the former princely state in the actual control of Pakistani military forces and civilian militias and the rest with India. The Karachi Agreement, which was signed between India and Pakistan on 27 July 1949, gave the control of Gilgit-Baltistan, and Azad Jammu and Kashmir (AJK) to Pakistan. The control of Kashmir Valley as well as Jammu and Ladakh was given to India. The agreement, which took into account the actual positions of the troops of the two countries at the conclusion of the battle, drew a cease-fire line (CFL) between the two parts of Kashmir that was only demarcated up to a point at the base of the Salto Range, commonly known as NJ-9842 (see Map 1).

The area beyond NJ-9842 remained un-demarcated and uninhabited until 1984 when India secretly launched "Operation Meghdoot" to occupy the Siachen glacier, claiming to pre-empt perceived Pakistani military designs in the region, which could not be substantiated. Pakistan could not respond to the Indian aggression immediately, although attempts were made in 1984 and 1985 to recapture the area. Air Marshal (Retd.) Ayaz Ahmed Khan gives a detailed account of the major battles in Siachen, as follows:

"To dislodge India from Bilafond La, Pakistan deployed the elite Special Service Group (SSG) in 1987, at Khapalu. General Musharraf, then in charge of the SSG, took part in intensive operations at Siachen. In 1990 there were intense skirmishes on the periphery of the glacier. According to Indian claims in 1995, Pak SSG suffered 40 casualties in an attack on an outpost held by a Sikh battalion. In 1996, Pakistani gunners shot down three Indian MIGs and an IAF MI-17 helicopter. In 1998 there were five attacks in 15 days by the Pakistan Army on Ashok, Malon, Fateh, 5,770 and other Indian posts at Siachen. The last Pak Army attack was on March 10, 1999 some three weeks after the Lahore Summit [between Pakistan prime minister Nawaz Sharif and his Indian counterpart Atal Bihari Vajpayee]. Artillery and mortar fire exchanges have continued for 20 years."⁽⁶⁾

In November 2003, as a goodwill gesture in anticipation of the resumption of the composite dialogue process between India and Pakistan, Pakistan offered a ceasefire along the LoC, which was extended to the Siachen glacier conflict zone in accordance with the Indian desire. The ceasefire is holding since then for about nine years now. While the conflict has arisen out of the Indian aggression in the uninhabited no man's land in the glacial region, it has been perpetuated by differing interpretations of the words, "thence north to the glaciers," in the Karachi Agreement (1949), the Tashkent Agreement (1966), and the Simla Agreement (1972), and the Indian army's refusal to give up an area on the negotiating table that Pakistan has not been able to recapture militarily.

Joydeep Sircar, writing in 1985, summed up Siachen glacier's strategic significance for India in these words: "One, if India loses Siachen, it will lose an enormous chunk of territory. Having suffered several territorial body blows in Jammu and Kashmir, India is evidently not prepared to suffer another. Two, if

Pakistan controls Siachen, the whole Nubra valley, and through it Ladakh, is jeopardised. Pakistanis being on high ground will overlook all our outposts in Nubra valley. Three, if we cannot hold Nubra valley, we will also lose access to the rest of our Karakoram territory because the valley provides the best access route to our northern outposts like Daulat Beg Oldi.”⁽⁷⁾ Another observer also marked the Operation Meghdoot as an important milestone in cutting off border links between China and Pakistan through Indira Col or Karakoram Pass.⁽⁸⁾ Some Indian strategists also see Siachen as a bleeding ground for Pakistan in which India is at a tactical advantage.⁽⁹⁾ On the other hand, Pakistan lays claim to all the territory between NJ-9842 and the Karakoram Pass claiming that it was always under the administrative control of Pakistan with international mountaineering expeditions obtaining permissions from Pakistan since the 1950s.⁽¹⁰⁾ India is also widely perceived as an aggressor, militarily occupying a no-man’s land in violation of the spirit of the Simla Agreement.⁽¹¹⁾ The Pakistanis also fear that Indian occupation of Siachen threatens the Gilgit-Baltistan area and the Karakoram Highway (KKH) that connects China and Pakistan through a land route.⁽¹²⁾

The perceived strategic advantage and threat-perceptions of the two countries have eluded peace efforts on resolving the dispute that continues to inflict heavy human, material, and environmental costs on both countries. Several observers have also argued that the glacier does not have any strategic significance as such but that the issue has been turned into one of national pride over the years. Such national pride is coming at a great cost to the poor people of both the countries that are financially paying a heavy price for the war. The immediate impact of the war is, of course, on the armies of the two countries. Another major and, perhaps most enduring, cost of this war is environmental as already stated above. The presence of the two armies is destroying the fragile glacial ecosystem of the Himalayas and the Karakorams. The three aspects of the impact of the war on India and Pakistan is discussed in the next section of the paper.

A costly and tenacious conflict

The Indian military base camp is at the altitude of 12,000 feet above the sea level, while its forward bases are at altitudes ranging from 16,000 to 22,000 feet.⁽¹³⁾ Although Pakistan’s forward bases are at a slightly lower altitude, the terrain and the weather is no less formidable. Several news reports have claimed that at such unforgiving heights and climatic conditions, the Indian forces are losing a man every other day while Pakistanis are losing a man every fourth day. One estimate has put the total loss of human life from the conflict since 1984 at 8,000 (3,000 Pakistani and 5,000 Indian).⁽¹⁴⁾ Most casualties (as was evidently demonstrated by the 7 April avalanche at Gayari) are because of the adverse weather conditions rather than hostile fire. According to one source, only 3 per cent of the Indian casualties from 1984 to 1998 were caused by hostile fire.⁽¹⁵⁾ The human cost of just stationing the troops in the region is, thus, immense, unlike many other border areas between India and Pakistan and along the LoC in Kashmir.

There are conflicting claims in the press about the numbers of troops on both sides of the border in the Siachen region. One Pakistani journalist who routinely covers defence matters has claimed that India has deployed 20,000 troops in the Siachen region.⁽¹⁶⁾ According to another report, there are 3,000 to 10,000 troops deployed in the glacier region on each side.⁽¹⁷⁾ Yet another source puts the numbers of Pakistani troops deployed along the glacier at 4,000 and Indian troops at 7,000.⁽¹⁸⁾ Air Marshal (Retd.) Ayaz Ahmed Khan claims that Pakistan has three battalions in Siachen while India has nine; Imtiaz Gul has put the number of Indian battalions at seven.⁽¹⁹⁾ Considering that there are around 1,000 military personnel in a battalion, there could be 10,000 to 12,000 soldiers posted in the Siachen battlefield.

The estimates of costs of stationing the troops in the region are equally sketchy. Most estimates, however, hover around similar ranges. Pakistani journalist Saleh Zafir once wrote that India was spending \$ 1 million per day on stationing its troops in the Siachen battlefield while Pakistan was spending one-tenth of that amount.⁽²⁰⁾ On another occasion though, he claimed that daily Indian spending was equal to Pakistan's expenditure of around a month.⁽²¹⁾ Another source that "it costs the Indians \$ 438 million a year to fight for Siachen, while Pakistan's bill is estimated at \$ 182 million."⁽²²⁾ Yet another source says that Pakistan's annual expenditure on stationing troops in Siachen until 1999 was Rs. 3.6 billion per annum while that of India was Rs. 14.4 billion per year.⁽²³⁾ According to the estimates of Strategic Foresight Group (SFG) in their report *The Second Freedom — South Asian Challenge 2005-2025* published in 2005, the Siachen conflict would have cost India Rs. 72 billion and Pakistan Rs. 18 billion from 2006 to 2010. Together they might have lost about 1,500 soldiers in the same five years without fighting a war.⁽²⁴⁾ Imtiaz Gul sums up the daily, monthly, and annual figures of economic costs of both countries on fighting this war in the following words:

According to careful estimates by defence analysts, Pakistan spends approximately Rs. 15 million a day to maintain three battalions at the Siachen Glacier, which makes Rs. 450 million a month and Rs. 5.4 billion a year. On the other hand, the deployment of seven battalions at the Glacier costs India Rs.50 million a day, Rs.1.5 billion a month and Rs.30 billion a year.⁽²⁵⁾

Even though the figures suggest that Indian casualties as well as Indian expenditure on maintaining troops in Siachen is much higher than that of Pakistan, the smaller size of Pakistani economy makes the war costlier for Pakistan in relative terms.

Statistics apart, there is a human angle to the sufferings borne not only by the people of the two countries for financing the war, but also by the soldiers of both sides in just occupying their positions in that forbidding terrain without receiving a single enemy bullet—which has been the case since end of November 2003. The difference between the lives of the soldiers posted on Pakistan's border with India at, say, Kasur or Bahawalnagar, and those posted in Siachen is stark. The day-to-day life of a soldier in Siachen is a struggle against

the forces of nature.⁽²⁶⁾ They have to live in expensive insulated igloos and wear specially designed super-warm clothing (including self-heating shoes) or they would freeze to death in temperatures that drop to 60 degrees below zero Celsius in winters. They have to wear specially designed sunglasses or they would go blind because of the strong reflection of sunlight from the snow. Eating fresh food is unthinkable in that climate as everything reaching there freezes on the way. They have to continuously burn kerosene oil to keep themselves warm and keep inhaling its fumes. Movement from one place to another is fraught with dangers of snow blizzards, crossing deep hidden and visible crevasses, avalanches, frost-bites, and other weather-related diseases and calamities. A soldier that deviates only slightly from the standard procedures regarding safety against weather conditions and terrain, risks losing his life or limb. Several soldiers who serve there return with frost-bites, lung ailments, fungal infections, and mental trauma after finishing their terms, if they survive.

Besides the human and material loss incurred by India and Pakistan in sustaining the conflict, the two countries are also paying a startling environmental cost. The next section discusses this cost associated with the conflict.

Fighting against Mother Nature

The environmental costs of the Siachen conflict are, perhaps, the gravest; because they are not only affecting the current generations but could have longstanding repercussions for the coming generations as well. The 7 April avalanche is a glaring example of nature's revenge on humans for traversing into its domain. A Pakistani glaciologist, Arshad H. Abbasi, who has done extensive research on the subject, argues that Siachen glacier is receding at the rate of 110 metres per year.⁽²⁷⁾ He adds that the conflict is causing the glacier to melt faster than any other part of the world.⁽²⁸⁾ Another estimate suggests that the Siachen glacier is reduced by 1.9 km in longitudinal extent from 1989 to 2006, and its ice-mass has thinned 17 per cent during the same period.⁽²⁹⁾

Dr. Ghulam Rasul of the Pakistan Meteorological Department (PMD) maintains that not only is the shrinking of glaciers a matter of grave concern, but also the accumulating carbon deposit on them because of human (especially military) activity in the region. He argues that the deposit of carbon on top of ice caused by human activity such as burning of fuel is compromising their capacity to reflect sunlight back.⁽³⁰⁾ This phenomenon, coupled with the recession of glaciers that exposes the unreflective surface of the earth, has auto-accelerated the increase in atmospheric temperature in the region and, thus, melting of the glaciers is spiralling into an environmentally destructive cycle.⁽³¹⁾

While Pakistan experienced an overall temperature rise of 0.76°C from 1960 to 2009, the increase in temperatures in the mountain regions has been 1.5°C during the same period.⁽³²⁾ These factors are already causing formation of glacial lakes in Pakistan's north, which are prone to Glacial Lake Outbursts Floods (GLOFs).⁽³³⁾ While there are several natural and anthropogenic causes of warming in the mountain region of Pakistan, shrinking of the Siachen glacier—as well as other glaciers in close proximity to it such as the Baltoro glacier—is

attributed to military presence in the region.⁽³⁴⁾ Arshad H. Abbasi argues, however, that military presence in the Siachen glacier region is the primary cause of its melting and asserts that other glaciers in Gilgit-Baltistan where there is little or no military activity—including the Baltoro glacier—are actually growing.⁽³⁵⁾ He asserts that military activity as well as deliberate cutting and melting of the glacier by the Indian army—which controls it—with chemicals to construct military bunkers is the major cause for its recession rather than global warming.⁽³⁶⁾

Irrespective of the question whether the cumulative natural and anthropogenic factors are causing the Siachen glacier to melt, or the military activity alone is to blame, the toll on Siachen glacier is also posing a threat to glaciers on the Indian side, such as Gangotri and Miyar that feed the Ganges River, and Milam and Janapa that feed the Chenab and Sutlej.⁽³⁷⁾ According to a study conducted by the State Council for Science, Technology and Environment of the Himachal Pradesh state of India, about 67 per cent of the Himalayan glaciers have shown retreating trends.⁽³⁸⁾

Another concern for the environmentalists is the presence of enormous amounts of human and military debris on the glacier caused by the conflict. One estimate has put the amount of human waste that is discarded into glacial crevasses at around 1,000 kg per day on the Indian side alone.⁽³⁹⁾ Another source estimates that 40 per cent of that waste is plastic and metal, which merge with the glacier as permanent pollutants adding toxins like cadmium, chromium, and cobalt into the ice.⁽⁴⁰⁾ For Dr. Ghulam Rasul, however, the melting of the glaciers because of military presence is the major concern. “Even if garbage disposal procedures are improved, it would only solve one per cent of the environmental problems of the glacier caused by the military presence,” he said.⁽⁴¹⁾ He argues that since the major concern is the melting of the glacier, it can only be taken care of through reduction or elimination of human (military) presence there.⁽⁴²⁾

Considering such huge human, material, and environmental costs of the conflict, India and Pakistan have engaged in negotiations to resolve it from the very beginning. The peace efforts have not borne fruit so far because of a variety of reasons. The next section discusses the peace efforts in resolving the conflict since it emerged in 1984.

Peace efforts

Contrary to the claims of strategic significance of the presence of troops along the ridges astride the Siachen glacier by the hawkish elements in India and Pakistan, there are many observers who think that the glacier has little strategic significance or at least not as much as the cost that both the countries have to pay for it.⁽⁴³⁾ Even though peace efforts for resolution of the conflict started as early as 1984-85 with flag meetings between sector commanders,⁽⁴⁴⁾ the defence secretary-level dialogue started in 1986. Since their first meeting in January 1986, the defence secretaries of the two countries have held a total of 12 rounds of negotiations on the subject (see Table 1 below for a chronology of the various rounds of defence secretary-level talks). Except for the 1989 and 1992

rounds, the talks have been characterized by a lack of serious resolve in finding a negotiated settlement to the dispute on both sides. As a former foreign secretary of Pakistan, Amb. Riaz Hussain Khokhar, said, “I have attended six or seven of the total 12 rounds of [Defense Secretary-level] talks, and the minutes of all of them read almost the same.”⁽⁴⁵⁾

Table 1

The twelve rounds of Defense Secretary-level talks			
Rd.	Dates	Venue	Outcome
1 st	Jan 1986	Islamabad	The two countries resolved to seek a negotiated settlement to the dispute in accordance with the spirit of the Simla Agreement, but no substantial progress was made.
2 nd	Jun 1986	New Delhi	Inconclusive
3 rd	May 1988	Islamabad	Inconclusive
4 th	Sept 1988	New Delhi	Inconclusive
5 th	Jun 1989	Islamabad	An understanding was reached for withdrawal of troops from the glacier.
6 th	Nov 1992	New Delhi	The two sides pledged to implement the 1989 agreement but the Indian side showed reluctance.
7 th	Nov 1998		India backtracked on the understanding reached in 1989 and 1992 with the assertion that certain developments had taken place that needed to be taken into account.
8 th	Aug 2004	New Delhi	No progress was achieved.
9 th	May 2005	Islamabad	India insisted on demarcation of Actual Ground Position Line (AGPL) prior to demilitarization, while Pakistan called for implementation of the 1989 understanding between the two countries.
10 th	May 2006	New Delhi	India and Pakistan remained stuck to their stated positions despite a lot of optimism in the Pakistani press in the run-up to this round of talks.
11 th	Apr 2007	Islamabad	Pakistan did not agree to India’s argument of authenticating the actual ground position line legally and internationally before troop withdrawal. Once again, a lot of hope was generated in the Pakistani press in

			the run-up to the talks.
12 th	May 2011	New Delhi	The talks had resumed after the hiatus caused by the Mumbai terrorist attacks on November 26, 2008; therefore, much could not be achieved in the first round since the attacks.

Source: Compiled from several press reports about different rounds of talks

The major sticking point in the negotiations is the line of actual contact or the Actual Ground Position Line (AGPL) between the two militaries. While Pakistan wants Indian forces to demilitarize this no-man's-land without any preconditions, the Indian side asserts that it would only vacate the region if Pakistan authenticates the AGPL prior to demilitarization to allay any Indian concerns of the future recapture of the commanding heights that they are currently occupying. Indian concerns were further exacerbated by the Kargil conflict of 1999 in which Pakistan's army and irregulars occupied positions atop the hills on the Indian side of the LoC to cut the Indian supply route to Siachen.

Influential Indian authors like V.R. Raghavan have called for making the AGPL an extension of the LoC and, thus, freezing the division of the region into Indian- and Pakistani-controlled territories along the Saltoro ridge-line where the troops of the two countries are positioned at the moment.⁽⁴⁶⁾ While Pakistan is on a higher moral pedestal owing to Indian aggression in 1984, its on-ground position is disadvantageous. This is the reason the Indian army is against any negotiated solution to the dispute because in their perception the politicians do not need to give Pakistan something that they are unable to achieve in the battlefield. "Of all the issues governing India-Pakistan talks, it is on Siachen that the army has the biggest say,"⁽⁴⁷⁾ wrote Sujjan Dutta in 2005.

In October 2006, when Pakistan's then foreign minister Khurshid Mehmud Kasuri was all excited about an impending solution to the conflict and said that India and Pakistan were very close to reaching an agreement on the Siachen dispute, the hopes were dismissed by the Indian Ministry for External Affairs.⁽⁴⁸⁾ The Indian army also stepped in to make sure that the government did not make "undue" concessions on Siachen to Pakistan. "I am sure that security concerns will be kept in mind when any such decisions are arrived at by the government," said Indian army chief General J.J. Singh in November 2006.⁽⁴⁹⁾ "Pakistan has absolutely no claims over Siachen. Our troops are stationed at least 20-30 km west of the glacier. The Pakistanis cannot even get a look in, let alone lay claim to the glacier," added Brigadier Om Prakash, commander of the Indian Army formation responsible for guarding the disputed region of Siachen.⁽⁵⁰⁾ The Indian government showed more signs of non-seriousness towards the resolution of the dispute when in September 2007 the Indian army opened the glacier for trekking expeditions of civilians along with military personnel and recruits despite Pakistan's protests.⁽⁵¹⁾ India sent a similar expedition in 2008 as well.⁽⁵²⁾

Stephen P. Cohen called Siachen "a dispute between two bald men over a comb" that has evaded resolution.⁽⁵³⁾ Looking at the human, material, and

environmental costs of the conflict, and its tenacity to linger on despite the costs, it does appear that it is a dispute between two bald men over a comb in which they are also bleeding their own heads with their nails. This is because in the process of satisfying their national egos, the two countries are destroying and depriving their coming generations most precious common good, i.e. a source of water. Environment of the area in and around the glacier being a common good of both the countries creates a commonality of cause for its demilitarization and, thus, provides that little window of opportunity offering incentive for peace. Therefore, the creation of a demilitarized peace-park has been a focus of attention of environmentalists and peace activists alike. The following section discusses the peace park proposals for the demilitarization of the conflict zone around the glacier.

A Siachen Peace Park?

On 12 June 2005, while on a visit to the Siachen base camp, Indian Prime Minister Manmohan Singh said that time had come to turn the Siachen conflict zone into a “mountain of peace.”⁽⁵⁴⁾ The statement raised a lot of hope among the peace constituencies on both sides of the border for the resolution of the longstanding dispute. As discussed in the previous section, however, despite very high hopes during the resumed Composite Dialogue process (2004-2008) the dispute could not be resolved. And in the 12th round of negotiations at the defence secretary level in May 2011 after the dialogue was resumed following a hiatus since the November 2008 terrorist attacks in Mumbai both countries had to restart from stating their respective positions on the issue (see Table 1).

The idea of peace parks is neither new nor is it specific to the geographical location of India and Pakistan. Environment being a transnational concern has built bridges among nation states for some time now. According to the International Union for Conservation of Nature and Natural Resources (IUCN), “Parks for Peace are transboundary protected areas that are formally dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and to the promotion of peace and co-operation.”⁽⁵⁵⁾

Although the transformation of the conflict zone into a transboundary protected area seems like the ideal solution, demilitarization of the region would be a prerequisite for it. Most of the existing peace parks are either between non-hostile neighbouring countries or were created after cessation of hostilities between two warring nations. Even the Condor-Kutuku Peace Park established in 2004 in Cordillera del Condor between Ecuador and Peru—which is considered a precedent for Siachen Peace Park — was established after the cessation of hostilities between the two countries over the control of the territory involved. In other words, peace has not followed peace parks, it has been the other way round.

Some environmentalists have suggested skirting around the hurdle to begin with by calling for encouraging the militaries of India and Pakistan to act as rangers in managing the conservation area as an ad hoc arrangement, and giving tourist access to the area with a visa issued by either of the two

countries.⁽⁵⁶⁾ There are others who demand a complete demilitarization of the conflict zone and the creation of an international Science Centre in the area for astronomical, geological, glaciological, and even psychological and behavioural studies.⁽⁵⁷⁾ A transboundary peace park under the auspices of the IUCN or a World Heritage Park under the auspices of United Nations Educational, Scientific, and Cultural Organization (UNESCO), or both, is also suggested for the post-demilitarization protection of environment in the glacial ecosystem.⁽⁵⁸⁾ Hakeem *et. al.* have given an extensive overview of how the disengagement and demilitarization process in the region could take place once the decision is taken and that which areas would be included in the demilitarized zone.⁽⁵⁹⁾ Their report gives a comprehensive account of the monitoring of the disengagement and demilitarization process itself and its post-demilitarization verification through on-site and remote monitoring.⁽⁶⁰⁾ All of these studies, while educative and insightful, do not address the basic question of how the lure of a peace park would influence a positive decision on demilitarization, before it could be monitored and verified and before scientists could get to the area for research and conservation.

Although the encouragement of environmental protection and conservation in the presence of the armies could be helpful in protecting certain rare wildlife plant and animal species of the region, the problem of melting ice would stay, and might aggravate with addition of humans in the form of tourists and scientists. Similarly, if human presence is the biggest danger to the glacial ecosystem, there is no point in replacing the two militaries with tourists, mountaineers, and scientists from across the world to do a whole plethora of research in the area from astronomy to psychology under the auspices of IUCN, UNESCO, or any other organization. If all that the glacial ecosystem needs to be protected is to be left alone, there is hardly any need of transforming it into an international laboratory from a conflict zone. Finally, the concept of peace park does not address the question of management of access to the demilitarized area, which was the cause of conflict in the first place. An agreement on access to the area post-demilitarization could itself be a complicated affair, which would need to be addressed as well.

Therefore, jumping on to the idea of a peace park at a time when the Indian and Pakistani governments have not shown any serious resolve for demilitarization is premature and even wishful. In other words, demilitarization of the glacier does not need to be equated with the creation of an international peace park. The focus needs to be on a step-by-step approach at the national levels in both the countries towards environmental protection in the northern glacial region that could also entail demilitarization — not necessarily the creation of an international peace park under the auspices of some international non-governmental organization (INGO), an issue that could be taken up at some later stage.

The rationale behind international patronage for an international peace park in the demilitarized zone is that it would fill the gaps of trust-deficit between India and Pakistan, and that it would also provide some financial incentives for the protection of the demilitarized zone. The two subjects are

taken up in the concluding section of the paper below, besides a suggested blueprint for demilitarization of the area.

Conclusion

India and Pakistan have paid dearly in terms of human, economic, and environmental losses because of the war in Siachen. Ultimately, though, it is the environmental costs of the conflict that may endure longest. Therefore, there is reason enough, on both sides, to resolve the dispute as a priority. There have been several rounds of negotiation, but unfortunately they remain hostage to the vicissitudes of relations between the two countries as well as a broader lack of commitment to resolving the Siachen dispute.

Serious differences over the modalities of demilitarization persist. While India wants a demarcation of the AGPL prior to demilitarization, Pakistan considers that tantamount to an acceptance of the Indian military action of 1984. Both sides are reluctant to make compromises because Pakistan thinks that it is on a higher moral ground owing to the Indian aggression, while India thinks that it has a stronger on-ground position considering the territory it controls. For both countries, it is partly a matter of trust and partly a matter of national pride.

Pessimism about demilitarization of the glacier and restoration of the pre-1984 position in the conflict zone around Siachen is now creeping among Pakistani strategic thinkers and intelligentsia, which in turn is influencing them to support the confrontational status quo.⁽⁶¹⁾ If the dispute remains unresolved for another few years, India and Pakistan will not only suffer militarily and economically, they will continue to destroy the precious water resources on which millions of people in both countries depend.

There is a serious need for moving the focus of discussion from moral or strategic high grounds to a collective responsibility for the protection of a common good. Only such a shift in perceptions would help bring about urgency as well as creativity and accommodation for resolving this conflict. At the moment, decision-makers in India and Pakistan appear oblivious to the urgency of the environmental call for the resolution of the conflict. Once there is such a realization, the demarcation or non-demarcation of AGPL as well as issues of national pride would become secondary subjects; and the discussion would move from emotional to rational.

India and Pakistan will have to evolve support for resolution of the conflict at their respective national levels based on the importance of the common good involved, i.e. environment, as well as the collective human and economic costs both the countries have to pay for the war. Currently, the non-government sector — the INGOs, NGOs, and civil society — has taken the lead in raising awareness about the damage the conflict is doing to the Himalayas. The two governments now need to proactively pursue — possibly in a coordinated way — environmental exploration and awareness on the Himalayas and the Karakorams to generate momentum for the resolution of the dispute. Greater awareness about the danger of environmental degradation and its impact would enable decision-makers in both countries to get past the historical inertia of the conflict.

Aspects of Pakistan's position on the dispute need reevaluation. Whereas Pakistan presses for reversion to the pre-1984 situation — where the glacial region would become an un-demarcated no-man's-land — that would complicate management of future human interventions in the area. One suggested solution is to turn the area into one managed by a non-state entity, such as an INGO — a solution enthusiastically advocated by environmentalists. It also has obvious drawbacks. Abdication of control of an area to an INGO after a loss of more than 8,000 lives in a 28-year-long conflict would draw criticism in both the countries. Secondly, even if managed by an INGO for scientific exploration, access to the area would still have to be controlled by either or both states—an aspect not addressed by the advocates of this solution. Lastly, there is little point in turning a battlefield into an international laboratory, unless it is for environmental protection.

Therefore, the idea of an international peace park or scientific observatory under the auspices of an INGO is premature. India and Pakistan might or might not need third-party mediation for the resolution of this dispute. Even if they did need one, it would be for converging on an agreement rather than implementing the agreement. The two countries do not need an INGO to preserve nature for them once the two militaries have withdrawn. As far as financial management of the protection of environment in the demilitarized zone is concerned, it can be done by the two countries on their own through budgetary allocations contained in a bilateral agreement—which, in any event, would be far less than they currently spend on military deployments.

A workable solution would involve more than a reversion to the pre-1984 situation with the assistance of an INGO. India and Pakistan must come to a settlement involving give and take for the sake of demilitarization of the region for the protection of precious environmental resources in both the countries. This could entail the division of the demilitarized zone into Indian- and Pakistani-administrated domains. Such a division could take place along the AGPL or some other mutually agreed lines. Remote-monitoring methods, such as satellite imagery and motion-sensing equipment, could be used to verify compliance with demilitarization and respect for areas of administrative responsibility.⁽⁶²⁾

Any such agreement, however, would not only involve provisions against remilitarization of the area and effective mutually acceptable monitoring and verification mechanisms for the demilitarized zone, but also provisions for non-tampering with the environment, and non-diversion and non-extraction of its natural resources (such as water, minerals, etc.) in one administrative area without consultation with the other government. The agreement could also have provisions against future permanent human settlement in the area, and construction of power projects and water projects for storage or diversion.⁽⁶³⁾ Inclusion of such provisions would allay Pakistani concerns like the recent ones over Indian drilling in the region for geothermal energy exploration.⁽⁶⁴⁾

Besides, the agreement would also need to have provisions for coordinating any civilian exploration activity in the region, whether scientific or resource-oriented. For instance, there could be provisions in the agreement on

pre-notification of civilian activity in one country's domain of administrative responsibility by its own nationals to the other side. Similarly, foreign tourists, mountaineers, or scientists could be obliged to obtain visas for both India and Pakistan and special permission from both governments for visiting any part of the demilitarized zone in the administrative domain of any country. At the same time, joint exploratory and research activities conducted by India and Pakistan with official permission and coordination of both the countries will have to be encouraged to gradually diminish the relevance of the AGPL.

The people and the governments of India and Pakistan should realize that after all the sacrifices in men and material, the two neighbours should be able to evolve a consensus on demilitarization of the area as a priority with or without delineation of the AGPL as long as that decision is taken in the best interest of the people of the two countries rather than some vague abnormal national ego-centric perceptions.

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