

**APECS ANTARCTIC TREATY ESSAY CONTEST  
CONTACT INFORMATION**

**NAME:**

Kate Harris

**DEPARTMENT AND INSTITUTION:**

Earth, Atmospheric and Planetary Sciences Department  
Massachusetts Institute of Technology

**MAILING ADDRESS:**

54 Bay State Ave, Apt 2  
Somerville, MA 02144 USA

**EMAIL & TELEPHONE:**

kjharris@mit.edu  
617-963-4139

**CAREER STAGE:**

Graduate Student

**EDUCATIONAL BACKGROUND:**

**Ph.D. candidate in Geobiology**, Massachusetts Institute of Technology (anticipated 2013).

**M.Phil. History of Science, Technology and Medicine**, University of Oxford (2008).

**B.Sc. Biology (major), Geology (minor)**, University of North Carolina at Chapel Hill (2005).

**BRIEF BIOGRAPHY**

Kate Harris, 26, is a young scientist, explorer and writer hailing from Georgetown, Ontario. She studied biology and geology as an undergraduate Morehead Scholar at the University of North Carolina at Chapel Hill. Next she completed a Master's degree in the History of Science as a Rhodes Scholar at Oxford University, where she wrote her dissertation on the history of scientific peacekeeping. Now she is a first-year graduate student enrolled in a Ph.D. program in Geobiology at the Massachusetts Institute of Technology. Kate has led or participated in scientific research and endurance expeditions on all seven continents, including Antarctica. She hopes to ultimately translate her love for polar and glacial places into a life of science, adventure, exploration, and public advocacy for the preservation of the world's cold, icy wildernesses.

**ESSAY PROMPT:** Describe a major lesson that has arisen from the last 50 years of Antarctic Treaty System policy-making, and explain how it could be applied to another global or international commons of your choice.

**Scientific peacekeeping: From Antarctica to Kashmir's Siachen glacier**  
**By Kate Harris**

The Siachen glacier is a perpendicular wilderness in the high-altitude heart of Kashmir, where mountain ranges from India and Pakistan clash, and civilizations clash with them. Controlled and contested by these countries since Partition in 1947, Kashmir is a landscape of convoluted geographic and political contours, and the Siachen glacier located within its disputed borders claims the dubious distinction as the highest battlefield in the world. Siachen also claims the distinction of being the longest non-polar glacier on the planet. While Kashmir is a long way from Antarctica, the success of the Antarctic Treaty System (ATS) proves science can be a powerful force for peace in the administration of contested spaces. This essay explores how lessons from scientific peacekeeping with the ATS in Antarctica can translate to the Siachen glacier, another international commons of nebulous sovereignty where science might serve as a basis for peace and cooperation.

The history of the Siachen glacier conflict begins in 1972, when the Line of Control (LOC) between Indian- and Pakistan-governed Kashmir was settled. At this time the LOC was arbitrarily terminated at a mountain survey point called NJ9842, and from there vaguely extrapolated "hence north to the glaciers."<sup>1</sup> Siachen, located beyond NJ9842, was essentially dismissed as a wasteland of rock and ice of no strategic value to either nation. Everything changed in the 1980's when foreign mountaineers sought permits from Pakistan to climb virgin peaks in the Siachen region. India later learned of these expeditions and interpreted them as assertions of possession by Pakistan. In an escalating altitude race, the two nations' armies invaded the glacier and sought the advantage of high ground, and they have been up there ever since.

With military posts at elevations above 20,000 feet, most casualties in the Siachen conflict have stemmed from natural hazards, with avalanches and altitude sickness proving more deadly than enemy action. Millions of dollars are spent each day to maintain troops on Siachen, and thousands of tons of human waste and other trash are regularly dumped in crevasses. The devastating human, economic, and environmental costs of the Siachen conflict offer ample incentive for both India and Pakistan to pull out. But what the glacier lacks in strategic and economic value it makes up for in symbolic value, and neither nation wants to lose face by losing Siachen. Science is complicit as a catalyst in the Siachen conflict, for scientific studies and geographic surveying inspired the initial exploration of the glacier and rendered it known, navigable, and vulnerable to exploitation and appropriation. But science might also serve as a solution to the territorial dispute through a treaty modeled after the Antarctic Treaty System (ATS).

Antarctica, like Siachen, is a near-pristine wilderness invaluable as a natural laboratory for studying local biological and physical phenomena as well as environmental and climatic processes of global significance. The ATS devotes remote and resource-poor but science-rich territory to the peaceful pursuit of knowledge by all humankind, and as would be the case for a Siachen Treaty, it was established despite tense relations between the nations involved. Based on a form of cooperative caretaking known as "governance without government,"<sup>2</sup> the ATS has been

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<sup>1</sup> 1972 Simla Agreement.

<sup>2</sup> Young, O. *International Governance: Protecting the Environment in a Stateless Society* (Ithaca, 1994).

hailed as a “world order miracle”<sup>3</sup> that has kept Antarctica demilitarized and devoid of international conflict for half a century. While the ATS is not a perfect case study for Siachen, certain aspects of the fourteen original articles in the 1959 Treaty are highly applicable. These include the demilitarization of a territory and its dedication to scientific research (Articles I and II); the establishment of research centers open to joint inspection (Articles III and VII); the resolution of disputes through neutral, third-party means (Articles III and XI); the ban on nuclear activity (Article V) and most importantly, the deferral of sovereignty resolution for the duration of the Treaty (Article IV).

From the goal of demilitarizing Siachen to the essential transparency of scientific activity on the glacier, there is compelling rationale for applying these articles to a Siachen Treaty. Article IV in particular is the most novel, successful, and controversial aspect of the ATS. By setting aside the sovereignty issue, this article permitted the negotiation of foundational rules for conduct and governance on Antarctica, which effectively institutionalized harmony between Treaty parties. Since it is in the economic and environmental interests of both India and Pakistan to settle the Siachen conflict, a Siachen Treaty could adopt a strategy similar to that of Article IV, wherein both countries agree to disagree over the ultimate sovereignty of the glacier. This would isolate the Siachen issue from the seemingly intractable Kashmir conflict, enabling India and Pakistan to move forward on shared scientific and environmental imperatives on Siachen despite enduring disagreement on Kashmir.

Whether Article IV offers a sustainable, long-term solution for Siachen, or Antarctica for that matter, is unclear, but it certainly creates a politically workable atmosphere for science in the short-term. But while territorial claims to Antarctica are dormant, they are far from dead. And like the innocent dismissal of the Kashmiri Line of Control as vaguely extending “thence north to the glaciers,” the deliberate postponement of Antarctic sovereignty might prove a ticking time bomb of a policy. But while there is risk in delaying the inevitable, “Article IV at least dampens the energy with which states pursue claims and fosters meanwhile an atmosphere of cooperation between claimant states that may ease future negotiations over sovereignty.”<sup>4</sup> Should territorial claims eventually surface to threaten the ATS, the hope is that a long-enduring pattern of harmony and cooperation between the Treaty Parties would prevail over other politics. The same hope would hold for Siachen.

In conclusion, the first step toward achieving permanent peace on Siachen is the establishment of a scientific peacekeeping treaty modeled after the ATS but tailored for bilateral governance by India and Pakistan. The treaty would include the Antarctic approach of sidelining sovereignty so that science and environmental conservation can proceed unhampered by political tensions, at least in the short-term. In this way, scientific peacekeeping on Siachen could be a politically acceptable, scientifically fruitful, and environmentally beneficial approach to conflict resolution in this corner of contested Kashmir. Siachen thus presents an opportunity for establishing common ground between nemesis nations. By applying lessons gleaned from the ATS, the Siachen glacier could serve as a nunatak of hope in the bleak, icy landscape of the broader Kashmir conflict.

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<sup>3</sup> Falk, R. ‘The Antarctic Treaty System: Are there Viable Alternatives?’ Jorgensen-Dahl, A., W. Ostreng (eds.) *The Antarctic Treaty System in World Politics* (London, 1991)

<sup>4</sup> Joyner, C.C. *Governing the Frozen Commons: The Antarctic Regime and Environmental Protection*. (Columbia, 1998).