

Pikialasorsuaq as a Coupled Inuit-Environmental System: The Need to Align Cultural and Environmental Histories in a Changing North

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For researchers in Arctic cultural and environmental heritage, the resurgence of expansionism underscores the need to reframe Arctic environments—not as passive spaces for external control, but as landscapes of deep historical stewardship. Pikialasorsuaq (the North Water Polynya) exemplifies this, where archaeological and paleoecological records can align to reveal long-term Indigenous environmental governance. Polynyas are areas where the arctic ocean does not freeze for extended periods of the winter, creating an ecological hotspot vital to primary production. Pikialasorsuaq is the largest such polynya in the Arctic, but more than a physical feature, it is an Inughuit environment—actively shaped, navigated, and engineered for over 4,400 years. This paper synthesizes archaeological and ethnographic research from the Qaanaaq region to challenge dominant narratives that portray the Arctic as a pristine, self-regulating system. It examines how Inughuit knowledge, decision-making, and environmental engineering have sustained the North Water, and proposes how we might trace these dynamics across millennia. By reframing ecological inheritance—not in genetic terms, but as a recurring process of environmental stewardship—this paper argues that the Indigenous history of the polynya extends to its very formation in the Early Paleo-Inuit period. To foster discussion, I raise key questions on how hunting practices, mobility, and cross-polynya resource management have functioned as ecological stabilizers, shaping biodiversity, nutrient cycles, and species relationships—and, most critically, enhancing the resilience and responsiveness of the system itself.

