

# Feeling the Melt: Visualizing Climate Change Through Arctic Data and Emotion

## Rutgers Climate Symposium 2025: The Blue Planet

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### Abstract

This poster was inspired by my father, Dr. Jun Huh’s 2025 Arctic expedition aboard ARAON, South Korea’s first icebreaking research vessel operated by the Korea Polar Research Institute (KOPRI). His photographs of melting glaciers and polar bears transformed the distant notion that “the Earth is melting” into a tangible reality. Over the past fifty years (1975–2025), the global sea level has risen by about 11–12 centimeters, reflecting profound environmental change. According to the National Snow and Ice Data Center (NSIDC), Arctic sea ice has been declining at an average rate of 13% per decade, with summer ice extent now less than half of what it was in the late 1970s. This drastic loss of sea ice has a direct impact on polar bears, whose hunting and migration depend on stable ice platforms. Research shows that declining ice cover has led to longer fasting periods, lower cub survival rates, and shrinking population ranges across the Arctic. By combining qualitative data—my father’s photographs and records—with quantitative data on temperature rise, sea ice loss, and glacier melt, this project explores how climate data can be felt rather than only understood. The work seeks to evoke empathy and awareness, transforming scientific information into a sensory and emotional experience.

*Keywords:* Climate Change, Arctic Sea Ice, Polar Bear Habitat Loss, Data Visualization, Emotional Ecology

### Methods

This project employs a mixed-method approach that merges personal documentation, historical imagery, and scientific data to explore the emotional dimensions of climate change. Qualitative materials include my father’s diary and photographs from his Arctic expedition. His records capture moments of melting glaciers, polar bears in their fragile habitats, and the human experience of witnessing environmental change. These personal archives are paired with historical paintings from the Anchorage Museum that depict past views of Arctic landscapes and polar wildlife. By juxtaposing these images, the project reveals a visual contrast between the Arctic remembered and the Arctic transformed. Quantitative data are drawn from NASA Earth Observatory’s report “Polar Bears Struggle as Sea Ice Declines”, illustrating the measurable relationship between shrinking sea ice extent and habitat loss. These datasets were translated into visual graphics and layered with photographic and painterly elements. The poster transforms numerical data into a sensory narrative, aiming to connect evidence and empathy in the visualization of Arctic change.

### Conclusion

- Combines qualitative materials (father’s ARAON expedition diary and photographs) with quantitative data from NASA Earth Observatory.
- Through the fusion of data and memory, the work bridges the gap between understanding and empathy.
- Transforms climate data into a sensory and emotional experience, merging scientific observation with human perception.
- Visualizes how melting ice is both a measurable process and an emotional phenomenon that reveals the fragility of our planet.
- The loss of sea ice and polar bear habitats symbolizes a broader ecological crisis and humanity’s shared vulnerability.
- Encourages viewers to feel the urgency of climate change, recognizing that the Arctic’s transformation is not distant but deeply connected to all life on Earth.

### Acknowledgements

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## The Relationship Between Sea Level and Polar Bear Habitats

“The cracks in the ice were not only in the landscape but within my heart; I realized how quickly this frozen world is slipping away.”

Dr. Jun Huh, Aug. 27. 2025

### Past



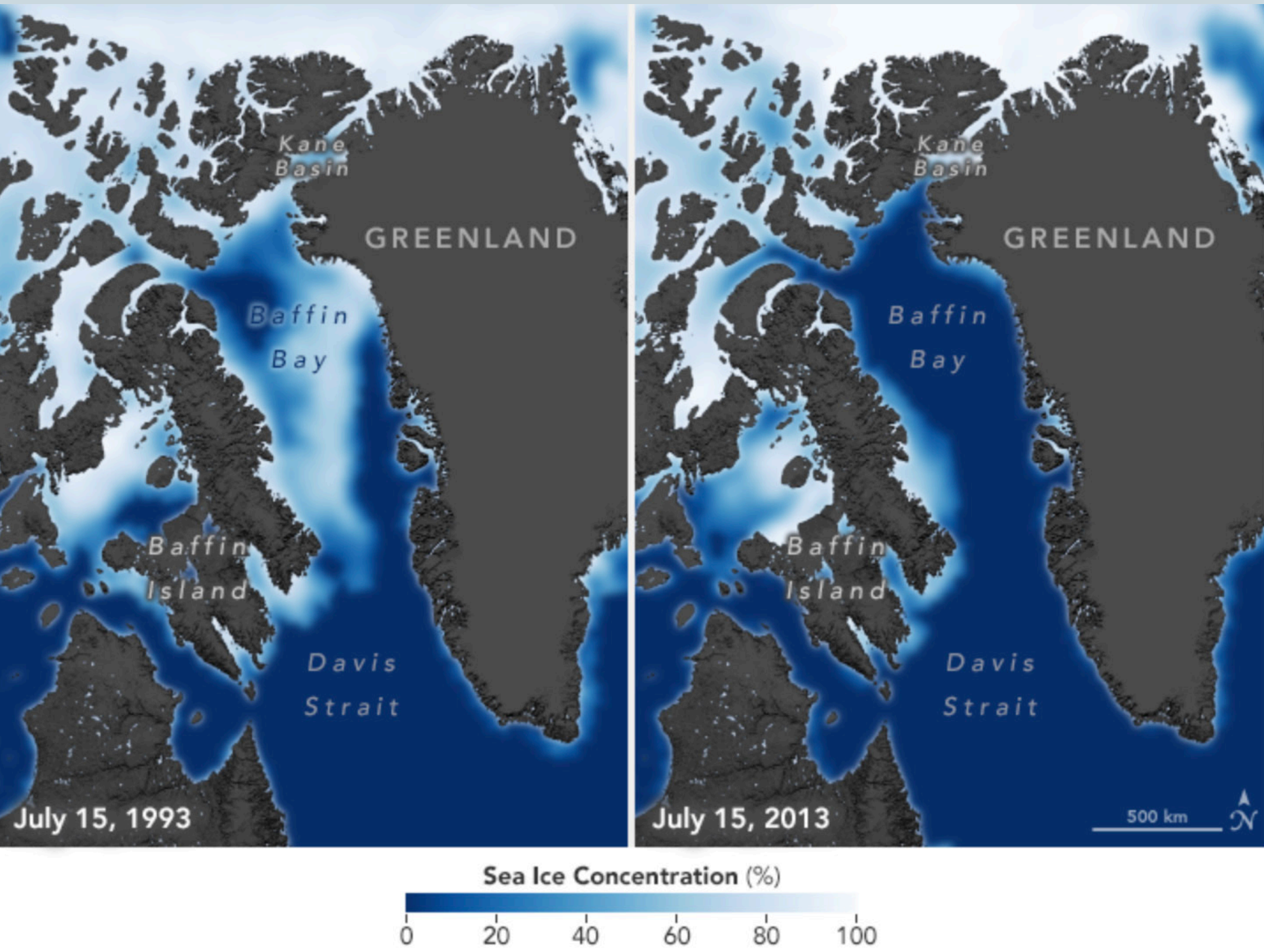
Iceberg Fantasy by Doris McCarthy 1976

### Present



Photos taken by Dr. Jun Huh 2025

### Data



“Not long after our arrival, I saw a mother polar bear carrying her two cubs across drifting ice. It was the first time I truly felt what it means when we say ‘the ice is melting.’ The glaciers and bears I had only seen on television were suddenly before me—real, fragile, and moving farther apart.”

...

“Watching the mother bear struggle to find solid ground, I felt both awe and sorrow. Her journey mirrored our own human search for balance on an increasingly unstable planet.”

Dr. Jun Huh Aug. 30. 2025

### Past



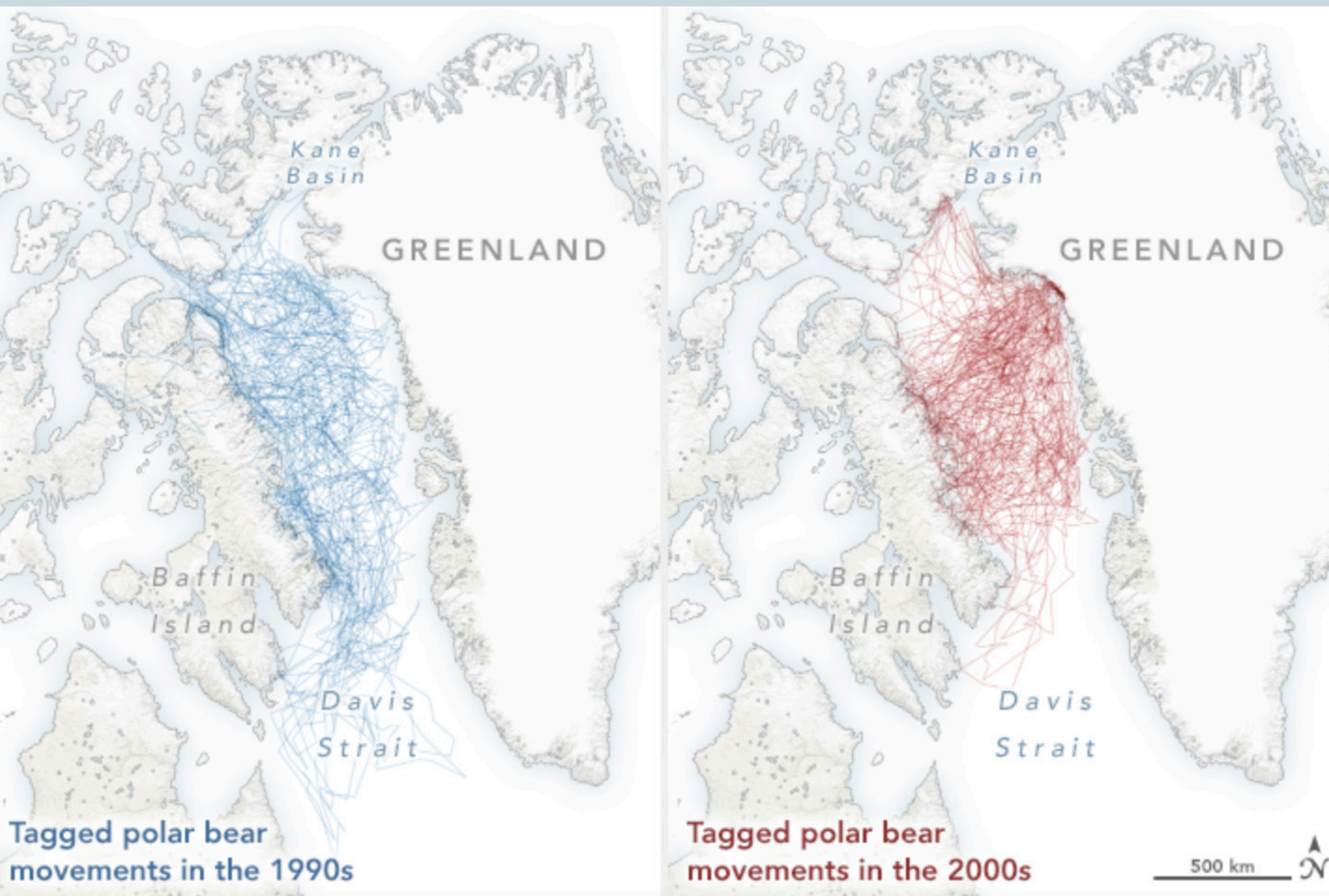
Paintings by Fred Machetanz 1986

### Present



Photos taken by Dr. Jun Huh 2025

### Data



Changes in Polar Bear Habitats

### References

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