Chapter 5
The Greenland Ice:
A Story of Changing Climate

ABSTRACT

Human society has done great damage to the oceans of Earth. It will take the dedicated efforts of a great many people working on a great many ideas to take on these great problems of the 21st century. Some of those people will be young people. In this chapter’s story, “The Cabin Boy’s Tale,” a young person serves as an intern on a vessel involved in monitoring a mineralization of the seas program. In a few months, the young person learns more than he bargained for.

TOPICS FOR DISCUSSION

The following discussion points come from information covered in this chapter:

1. As the melting of Greenland’s ice sheet continues, how will different societies around the world be effected?
2. What kinds of efforts might be tried to address the problems of the oceans? Of the melting ice caps?
3. What efforts will be needed to monitor and fine-tune whatever efforts human societies make?
4. Is there a story in place of young people in these efforts? Could that story be the reader’s story?
The Oceans cover 70% of the Earth’s surface, and hold 97% of Earth’s water. And the glaciers currently cover around 16 million square kilometers of the surface of our planet and almost all are represented by the Antarctic ice sheet and Greenland. They are formed in places where it is very cold, more precisely where more snow falls in winter than melts in summer. The sea ice is formed when sea water freezes excluding most of the salt at very low temperatures and to this is added also the snow. The sea ice that forms in Antarctica is seasonally melts back to land’s edge each spring, while the core of the Arctic ice can last for several years.

In a glacier there are two zones:

1. The *accumulation area*, where the accumulation of ice occurs. In this area, the snow falling during the winter remains stored even in the hot season. In the high mountain glaciers, the accumulation zone is located at high altitude.
2. The *area of ablation*, where the loss of ice occurs. In this zone the melting of the fallen snow and ice occurs as well as detachment of parts of ice. Alpine glaciers have an area of just 3,000 square kilometers and make up just 0.018% of the Earth’s surface; 46% are in Switzerland, 20% in Italy, 18% in Austria, 14% in France, and 0.03% in Germany.

*Figure 1. S.S. Jeannette Expedition (1879-1881) in North Pole before encountering almost any ice, (Source: http://www.history.navy.mil/)*
Related Content

Using Public Relations Process in Setting up Websites: A Model Proposal for Open and Distance Education Universities
Berrin Özkanal (2013). *Project Management Approaches for Online Learning Design* (pp. 204-218).
[www.igi-global.com/chapter/using-public-relations-process-setting/73280?camid=4v1a](www.igi-global.com/chapter/using-public-relations-process-setting/73280?camid=4v1a)

Making the Move: Supporting Faculty in the Transition to Blended or Online Courses
[www.igi-global.com/article/making-the-move/106814?camid=4v1a](www.igi-global.com/article/making-the-move/106814?camid=4v1a)
The Learning Style-Based Adaptive Learning System Architecture
www.igi-global.com/article/the-learning-style-based-adaptive-learning-system-architecture/126975?camid=4v1a

Dialogue Pedagogical Strategies Perceived to Enhance Online Interaction: Instructors' Perspective
www.igi-global.com/article/dialogue-pedagogical-strategies-perceived-to-enhance-online-interaction/181813?camid=4v1a