

Module 0
Sea Ice Politics and Policy: Deriving a Sea Ice System Services Approach
Geos/MLS 695
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Objectives

This module explains the development of a Sea Ice System Services approach towards the “problem” of diminishing and unpredictable sea ice coverage in the Circumpolar North. At the end of this module you will be able to:

- Characterize social-ecological systems;
- Explain how ecosystem services are derived by societies;
- Understand the public policy concept of problem definition and
- Use it to approach analysis of social-ecological systems;
- Evaluate sea ice as a fundamental component of the SES in Northern Coastal Alaska;
- Consider the jurisdictional and political consequences of changes to expected sea ice; and
- Conceptualize potential futures for your own work and the Sea Ice System.

Texts

Seidman E. and J. Rappaport eds. 1986. *Redefining Social Problems* (Chapter 1). Plenum Press: New York, NY.

Chapin, F.S., III, A.L. Lovecraft, E.S. Zavaleta, J. Nelson, M.D. Robards, G.P. Kofinas, S.F. Trainor, G. Peterson, H.P. Huntington, and R.L. Naylor.. 2006. Policy Strategies to address Sustainability of Alaskan Boreal Forests in Response to a Directionally Changing Climate. *Proceedings of the National Academy of Sciences* 103(45):16637-16643.

These required texts and two other papers for optional reading can be downloaded at [ftp.gi.alaska.edu /pub/eicken/G695/Module0](http://ftp.gi.alaska.edu/pub/eicken/G695/Module0)

Required Skills and Materials

Listening, thinking “outside the box”, writing implements and notebook/paper/laptop.

Come prepared to explain your own reasons for taking the course and how you would characterize the role sea ice plays in your discipline. For example, is it a geophysical phenomenon, platform to observe seals, ocean coolant, hazard to shipping, protective barrier for sensitive habitats and so forth? Also, consider how the rules (national, state, local, formal or informal) of your home country relate to how sea ice is to be treated. For example, is ice off limits at certain times, do you have to get permits to be on the ice, are there rules related to wildlife or other organisms that are ice-users, whose jurisdiction is the area of ice coverage and when?

Overview

This module will introduce you to the development of the Sea Ice System Services model. This is a lecture-based portion of the course where you will learn broadly about social-ecological systems (SESs): (1) how system “definition” across temporal and spatial scales by differing actors directly affects policy creation, (2) how ecosystem variables feed into and are affected by these policies, (3) why this process (including some of your work) is inherently political, and (4) what we can speculate about the future of the SIS. More narrowly, we will focus on the sea ice system of Alaska’s northern coasts. Your participation will help the course to frame this SES, its dynamics, and potential futures.

Assignment

You will be asked to engage your colleagues during the lecture with some writing/thinking exercises as well as to provide brief (approx. 500 words) written feedback at the conclusion.

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