Assessing and Governing Long-term Risks

Thursdays 2:15-5:15pm, 168 Civic Square Building, 33 Livingston Ave., New Brunswick
16:460:629 Seminar in Earth System Science / 33:833:685 Seminar in Public Policy /
16:378:502 Seminar in Human Dimensions of Environmental Change
Rutgers, the State University of New Jersey, Spring 2015[1]

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In our globalized age, civilization has no spare, and dangers propagate rapidly around the planet. We face an increasing number of long-term risks: risks where the probability and/or magnitude of harm increases on a multi-decadal timescale.

Long-term risks can arise from purely social causes (e.g., risks associated with political or economic institutions, violence, and technology), but often arise from the interaction of humans with the Earth system (e.g., climate change; ozone depletion; resource depletion; pandemics; flood and seismic risk in areas subject to increasing development). In the past, many such risks – such as pandemics and earthquakes in the pre-scientific world – arose without the potential for foresight and were blamed on supernatural causes. Today, there are many that are within human knowledge. Nonetheless, long-term risk governance remains challenging for multiple reasons, including that uncertainty in projected hazards often increase the further we project into the future.

Risk governance "includes the totality of actors, rules, conventions, processes, and mechanisms concerned with how relevant risk information is collected, analyzed, and communicated and management decisions are taken" (Renn & Roco, 2006). It can be broken into two spheres: risk assessment and risk management. Assessment is concerned with generating knowledge or "analyzing and understanding" the risk. Risk management uses this knowledge to guide decision-making and implement risk reduction strategies. This class will focus on specific ways to assess and manage longer-term risks through case studies where long term risks have been identified and specific tools (such as the info-gap and robust decision-making method) that have been developed to govern long-term risks.

In this class we will explore:

1) Dimensions of long-term risks
2) Identification and assessment of long-term risks
3) Tools for governing long-term risk

At the end of this class you will be able to:

1) Interpret and understand the dimensions of long-term risks
2) Identify and apply appropriate tools to manage long-term risks

[1] *Note for Princeton students:* PU students can register via the Rutgers Exchange Program (http://bit.ly/18HmaIg). Please note that the Rutgers term is longer than the Princeton term. The first day of class is January 22. The last day of class is April 30.