Unit 3.5 Capacity to Govern Cooperatively: How can we work together to achieve what we cannot achieve alone in the pursuit of sustainability?

Solving sustainability challenges requires diverse actors—often with competing interests and unequal power—to work together, often in the face of deep uncertainty and unexpected change. As we explored in Unit 2.6, governance emerges from the interactions among actors operating within institutional contexts, with power mediating their relationships. What distinguishes governance capacity from these raw elements is the deliberate effort to align these interactions toward collective goals—to create arrangements that enable cooperation despite divergent interests.

Sustainable development, as we saw in Part I of this course, is the name the world community has given to its collective goal of using the planet's resource commons to foster equitable improvements in human well-being, now and in the future. Garrett Hardin argued in his famous 1968 article (see supplementary reading 'b') that this goal could not be achieved through cooperation, claiming that "freedom in a commons brings ruin to all." Your own experience playing Fishbanks in Unit 0.2 might have suggested Hardin was right and that tragedies of the commons are inevitable. But decades of research have proven Hardin wrong. Humans have, on their better days, built the capacity to govern shared resources in ways that promote both intra- and inter-generational equity. This capacity doesn't emerge fully formed---it must be built incrementally, starting with small agreements between actors with divergent interests that can grow into increasingly robust and inclusive governance arrangements over time. As you'll see in the case studies cited in this course, successful governance requires discovering which roles different actors can play best, aligning their contributions to complement one another, and connecting strategies that foster collaboration from local to global levels.

We'll examine cases demonstrating governance at multiple scales, from local resource management in Nepal's irrigation systems to global cooperation on stratospheric ozone depletion. Both cases illustrate how actors working together have overcome collective action problems inherent in the goal of sustainable development.

Preparation for class: To prepare for this unit, please:

a) **Read**: Matson, P., Clark, W. C., & Andersson, K. (2016). *Pursuing Sustainability: A Guide to the Science and Practice*. Princeton University Press.
- **Read:** "Governance in social-environmental systems," Ch. 4, pp. 83–104.
- **Read/Review**: The case study on "Farmer-managed irrigation systems in Nepal" (Appendix A, pp. 165–172).
- **Read/review:** The case study on "An international success story: Ozone and the Montreal Protocol" (Appendix A, pp.179–185, or search for the title).

Study Questions to help you get the most out of the readings:

I. **Returning to Fishbanks:** Garrett Hardin famously claimed that "freedom in a commons brings ruin to all" (see reading 'a' for brief overview and supplementary reading 'b' to read more about Hardin's perspective). In many ways, your own experience playing Fishbanks at the start of this course only served to underscore Hardin's assertion. But you stuck with this course presumably hopeful that sustainability science could teach you something that might help you and others better manage common pool resources and steer more sustainable development pathways going forward. So, if you were to play Fishbanks again, knowing what you know now from the course as a whole and from reading 'a' on governance in particular, what should you do differently? In particular, how would you design institutions to better manage your shared resources?

II. **Diagnosing Collective Action Problems:** Using Matson's analysis of governance processes in reading 'a', chapter 4, identify the specific collective action problems in each case (Farmer-managed

irrigation systems in Nepal and An international success story: Ozone and the Montreal Protocol). Which of the three barriers to collective action—motivational problems, power asymmetries, or information problems—were most significant in each case? Why?

III. **Understanding What Makes People Tick:** Matson chapter 4 emphasizes that "figuring out what makes people tick" is essential for governance. Compare how intrinsic versus extrinsic motivations played out differently across the two cases. Why did the "unusual bedfellows" alliance work in the ozone case? What motivated farmers in Nepal to cooperate despite individual incentives to defect?

IV. **Your Case:** Using the governance system framework discussed in reading 'a', map the 'Governance System' in your case. In particular, focus on:

Who are the groups of **actors** most central to promoting and/or impeding the pursuit of sustainability in the case? For each actor group, characterize which of its *interests* are most relevant—whether in a positive or negative way—to the pursuit of sustainability.

What **institutional arrangements** (rules, norms, culture, beliefs) are most important in shaping the prospects for sustainability in the case? In particular, what are the barriers and opportunities posed by these institutions for the pursuit of sustainability? When were these institutions put in place? Who had the greatest influence in shaping them? How have they been reshaped in ways relevant for sustainable development?

Digging deeper (optional materials for further exploring frontiers in the pursuit of sustainability):

b) Read: Hardin, G. (1968). The tragedy of the commons. *Science*, *162*, 1243–1248.

Influential paper arguing that multiple actors using a resource commons inevitably leads to overexploitation. Important historical context for understanding why Ostrom's work showing alternative pathways was so revolutionary.

c) **Read**: Ostrom, E., Burger, J., Field, C. B., Norgaard, R. B., & Policansky, D. (1999). Revisiting the Commons: Local Lessons, Global Challenges. *Science*, *284*(5412), 278–282. https://doi.org/10.1126/science.284.5412.278.

Accessible overview of strategies for overcoming the 'tragedy of the commons' through collective management of common pool resources by Eleanor Ostrom (first female recipient of the Nobel Prize in Economics and one of the founders of sustainability science) and colleagues. Ostrom revolutionized our understanding of commons governance

d) **Read**: Dryzek, J. S. (2016). Institutions for the Anthropocene: Governance in a changing Earth system. *British Journal of Political Science*, *46*(4), 937–956. https://doi.org/10.1017/S0007123414000453.

This paper is an excellent overview of the challenges posed to governance by the complex, adaptive, multi-level character of the Anthropocene.

e) **Read:** Harley, A. G., & Clark, W. C. (2025). *Building Capacity to Govern Cooperatively in Pursuit of Sustainable Development: Lessons from scholarship and practice* (Nos. 25–06; Sustainability Science Program Working Paper, p. 20). Harvard Kennedy School of Government. https://www.hks.harvard.edu/sites/default/files/centers/mrcbg/programs/sustsci/files/Governance%20Capacity_SSP%20Working%20Paper_Final.pdf (Available in Course Library).

This working paper synthesizes two decades of research and practice on building governance capacity, examining both why it is essential for sustainability and why it has proven so difficult to do well.