Last updated on April 1, 2022

# Human Ecology: Rivers
# Spring 2022

Moodle: https://moodle.cc.sophia.ac.jp/course/view.php?id=4467
Application Form: https://forms.gle/mZCrkJzqikin3iPi9

*This syllabus will be updated periodically.*

*To register for this course, please submit your application by* ***April 8, 2022***

## Instructors

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## Course Registration (Important!)

Please make sure that you are registered for two courses. You may fail the course if you are not registered for both courses:

Undergraduates: ANT302 & POL304
Graduates: AG545 & AG546

Credits: 4 total (taken as 2 two-credit courses)

## Course Application (Important!)

Students wishing to take this course are required to complete and submit an application form and receive an approval from the professors. Visit the course's Moodle Page for more information.

## Introduction

This is a field-based course on environmental issues in contemporary Japan. Through hands-on study of initiatives in Hokkaido and other locations, the course will examine the interaction between human society and the natural world. The focus is on rivers and how they interact with human and non-human communities.

This course is a case-driven, solution-centered practicum. Through fieldwork and lectures, students will learn about how legal, economic, political, social, cultural institutions shape and are shaped by ecological systems. Students will meet government officials, scientists, community leaders, and industry experts who are at the frontlines of this interface between society and the natural environment.

The course is divided into two parts. The first part, which will take place in Tokyo during the spring semester, will consist of lectures and group work. It will introduce students to

environmental studies and prepare them for the field study in Hokkaido. The second part, which is **optional** and will take place in Hokkaido for five days (September 1 ~ 5), will consist of research and study in the field, meeting with local community, government, and industry leaders.

The language of instruction is English. Japanese ability, while useful, is not necessary. The course is offered jointly by the Faculty of Liberal Arts (FLA) and the Graduate Program in Global Studies (GPGS).

This year's theme is rewilding salmon in Eastern Hokkaido. As salmon domestication and the loss of their habitat continues, Hokkaido is at the center of the global debate over fisheries, river engineering, and the protection of wilderness. In addition we will be thinking about indigenous claims over rights to catch salmon on both sides of the Pacific, as Japan, in April 2019, recognized the Ainu as indigenous people. We will study this keystone species as an opportunity to restore the ecosystem and, ultimately, our ethical relationship with nature.

## Requirements and Grading

It is important that everyone completes the required reading materials and attends class. Graduate students will read both required and suggested reading materials.

- 24% Class Engagement: quality participation in discussions (3pts x 8 topics)
  - Completing all assigned readings
  - Zoom meetings or other methods
  - The format for meetings will be later decided after first day of classes
- 24% Weekly Response Papers (up to 250 words): Instructors will read and give feedback. (3pts x 8 papers) Due noon on Monday. Instructors will read student papers before evening class.
- 12% Discussion Leading Roles (Choice of two topics per student)
- 40% Final Paper (2,500 words for undergrads and 4,000 words for grads)

## Optional Fieldwork in Kushiro Wetland

Details will be given during the spring semester.

**Tentative Schedule**

Day 1: Trekking in the Wetland
Day 2: Tour of a working dairy farm in Shibecha
Day 3: Finding spawning salmon in the Kushiro River

**Estimated Cost**

| | |
|---|---|
| Travel to Kushiro (air, ground): | ¥50,000 ~ 70,000 |
| Hotel (3 nights): | ¥16,000 ~ 24,000 |
| Meals (4 days): | ¥9,000 ~ 15,000 |
| Travel in Kushiro: | ¥6,000 ~ 9,000 |
| Gear (boots, rain gear, hat, etc) | about ¥10,000 |

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**TOTAL:** **¥91,000 ~ 128,000**

*Please note that a portion of the cost may need to be paid early in the semester. Details about payment and trip schedule will be explained during the first meeting.*

## Online Tools & Course Materials

We plan to use Moodle (and Zoom for students outside Japan) for the course. If these tools are inaccessible (due to system failure, equipment breakdowns, etc.), we will communicate through the Loyola bulletin system or email. In such cases, the report submission function on Loyola may also be used.

Moodle
Our moodle discussions, links for readings, and other information will be held on Moodle. Students must be registered for the Moodle site.

Zoom (for students outside Japan)
Please make sure that you log in using your Sophia email account. The Zoom link is provided on the Moodle page. Also note that each professor will use different Zoom links.

Loyola
If Moodle is not accessible due to server problems, you will be informed of announcements and assignments by the bulletin system on Loyola.

Sophia Library - VPN
Some of the assigned readings are available through the university's Library system. Please make use of their VPN gateway into the library system and access them by yourself.

## Zoom Lectures Policy (for students outside Japan)

**Policy on Lectures:** Lectures are for the personal use of students enrolled in this course ONLY. Lectures cannot be shared or uploaded to the internet.

**Policy on Zoom Meetings:** Recording of Zoom sessions is **NOT** permitted.

Zoom Username: When signing on to Zoom you will be prompted for a username. Please make this your easily identifiable name (ex. Jane Doe), rather than expressing your personality or interests (ex. Iluvpuppies1203). Unlike social media, this is not a time to be creative with your handle. Rather, be direct and professional so that the instructor can easily identify you.

Cell Phones: Cell phones **must be turned off** during Zoom sessions. Students who send emails or personal messages on their phones during sessions will be asked to leave the meeting.

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Zoom Meeting Behaviour: You should think of our Zoom meetings as virtual classrooms and behave as you would a real classroom. You are expected to be attentive, awake, dressed, and able to participate. This means that for every Zoom class meeting you should:

- Be Appropriately Dressed.
- Have the Lights On.
- Sit Up. No laying in beds, on sofas, etc.
- Be in a Static Space. Have a wall behind you, where others in the meeting are not distracted by all that may be moving around beside and behind you.
- Be in a Quiet Space. If you are sharing a room with roommates or family, they need to know when you are online to respect your professional workspace, in this case: the classroom. If need be, please have earphones so that you can hear the meeting. **Once the meeting starts, you should have your video on and microphone off (muted) to facilitate a more learning-conducive environment.** You will turn on your mic when speaking.
- Be in a Stationary Space. No driving, walking, cycling, while in a meeting. You should find a space where you can sit and focus.

## Schedule

**Apr 18 (Ito & Watanabe)**
Meeting #1 Introduction

**Apr 25 (Ito)**
Meeting #2 Topic 1: Engineering Nature and the Tragedy of the Commons
Discussion leaders:

**May 02 Reading Day**

**May 09 (Watanabe)**
Meeting #3 Topic 2: Environmental Ethics and Ecological Literacy
Discussion leaders:

**May 16 (Ito)**
Meeting #4: Topic 3: Social-Ecological Systems (SES)
Discussion leaders:

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**May 23 (Watanabe)**
Meeting #5 Topic 4: From Wasteland to Wetland
Discussion leaders:

**May 30 (Reading Day)**

**Jun 06 (Ito)**
Meeting #6 Topic 5: Rivers as Ecosystems
Discussion leaders:

**Jun 13 (Watanabe)**
Meeting #7 Topic 6: History of Indigeneity and Nature in Hokkaido
Discussion leaders:

**Jun 20 (Reading Day)**

**Jun 27 (Ito)**
Meeting #8 Topic 7: Salmon as Keystone Species in SES
Discussion leaders:
https://www3.nhk.or.jp/nhkworld/en/ondemand/video/2054130/?cid=wohk-fb-org_vod_ttot_sal_dps-202202-700&fbclid=IwAR2X6OcvO5ExCGWsGiJtgH2eqRcm_MWGtHi92ifsKbp5hfrKNkc4SDaHqYI

**Jul 04 (Watanabe)**
Meeting #9 Topic 8: Human Economy and Animal Ecology in the North Pacific
Discussion leaders:

**Jul 11 (Ito & Watanabe)**
Meeting #10 Conclusion / Preparation for Hokkaido

**Jul 18 (Reading Day)**

Final Paper Due (due date Aug 1)

Discussion leaders: Lead discussion by preparing questions. You can start with a very very brief summary, but it will be better to spend more time on the discussion itself (at least 30 minutes). Some suggestions: refer to a particular page in the reading and ask for meaning, or clarification of a specific term (a list of key words may be good to prepare). Avoid a question that no one can answer or questions that are too big.

## Thematic Topics

**Topic 1: Engineering Nature and the Tragedy of the Commons (Ito)**

Blackbourn, D. 2006. *The Conquest of Nature: Water, Landscape, and the Making of Modern Germany*. New York: W.W. Norton: 3-19.
Hardin, Garrett. 1974. “Living on a Lifeboat.” *BioScience* 24(10): 561-568.
Feeny, D. et al. 1990. “The Tragedy of the Commons: Twenty-Two Years Later.” *Human Ecology* 18(1), pp. 1-19.

*Suggested*:

Scott, James. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press: Ch. 1 Nature and Space (pp. 11-52).

*Further references*:

McPhee, John. 1990. *The Control of Nature*. New York: Farrar, Straus, and Giroux.
Ostrom, Elinor, Joanna Burger, Christopher B. Field, Richard B. Norgaard and David Policansky. 1999. “Revisiting the Commons: Local Lessons, Global Challenges.” *Science* 284: 278-282.
Berkes, F. et al. 1989. “The Benefits of the Commons.” *Nature* 340, pp. 91-93
Berkes, F. 2002. “Cross-Scale Institutional Linkages: Perspectives from the Bottom Up.” in Ostrom et al. *The Drama of the Commons*. Washington, D.C.: National Academy Press: 293-321.
McCay, Bonnie and Svein Jentoft. 1998. “Market or Community Failure? Critical Perspectives on Common Property Research.” *Human Organization* 57(1): 21-29.
Agrawal, A. and Gibson, C.C. 1999. “Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation.” *World Development* 27(4), pp. 629-649.
Blaikie, Piers. 2006. “Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana.” *World Development* 34(11), pp. 1942-1957.

**Topic 2: Environmental Ethics and the Economy of Limits (Watanabe)**

Aldo Leopold, “Marshland Elegy” (95-100), “Thinking Like a Mountain” (129-132), “Wilderness” & “The Land Ethic” (188-end) in *A Sand County Almanac, and Sketches Here and There*.
Kenneth Boulding, “The Economics of the Coming Spaceship Earth”
Stone-Jovicich, Samantha, “Probing the interfaces between the social sciences and social-ecological resilience: insights from integrative and hybrid perspectives in the social sciences” *Ecology and Society* 20(2): 25. http://dx.doi.org/10.5751/ES-07347-200225

*Suggested*:

Orr, David. “What is Education for?” (237-245) in *Hope is an Imperative: The Essential David Orr*

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E. F. et al. (2009). A safe operating space for humanity. *Nature*, 461(7263), 472-475. https://doi.org/10.1038/461472a

*Further references*:

Attfield, Robin. 2018. *Environmental Ethics: A Very Short Introduction*

Richard White. 1996. *The Organic Machine: The Remaking of the Columbia River*. (Hill & Wang)

Freeman, Scott. 2018. *Saving Tarboo Creek: One Family's Quest to Heal the Land*. Portland: Timber Press.

**Topic 3: Social-Ecological Systems (SES): Biodiversity, Resilience, and the Sustainability of Society and Nature (Ito)**

What is biodiversity? Video: https://youtu.be/GK_vRtHJZu4

Levin, S.A. 1999. *Fragile Dominion: Complexity and the Commons*. Cambridge, MA: Helix Books: 1-15.

Intergovernmental Panel on Climate Change (IPCC). 2019. *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security,and greenhouse gas fluxes in terrestrial ecosystems*: TS.1-6 pp. 40-66.

*Suggested*:

Folke, Carl et al. 2016. "Social-Ecological Resilience and Biosphere-Based Sustainability Science." *Ecology and Society*, 21(3): 41.

*Further references*:

Intergovernmental Panel on Climate Change (IPCC). 2019. *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security,and greenhouse gas fluxes in terrestrial ecosystems*: TS.7 pp. 67-70.

Watts, M. and R. Peet. 2004. "Liberating Political Ecology." In R. Peet and M. Watts eds. *Liberation Ecologies: Environment, Development, Social Movements*. New York: Routledge.

Berkes, F. and H. Ross. 2013. "Community Resilience: Toward an Integrated Approach." *Society and Natural Resources* 26: 5-20.

Ostrom, E. and M.D. McGinnis. 2014. "Social-Ecological System Framework: Initial Changes and Continuing Challenges. *Ecology and Society* 19(2): 30.

Berkes, F., and C. Folke, eds. 1998. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge, Eng.: Cambridge University Press.

**Topic 4: From Wasteland to Wetland: Political Ecology of Migratory Birds, Farmers, and Land-Water Use (Watanabe)**

Wilson, R. M. (2011). *Seeking Refuge: Birds and Landscapes of the Pacific Flyway* University of Washington Press. (preface by Cronon, introduction, chs. 1, 2, 5, epilogue. Graduate student: please read all)

*Further references*:

McLean, S. (2011). Black Goo: Forceful Encounters with Matter in Europe's Muddy Margins. *Cultural Anthropology* 26, 589-619.

Gruppuso P. (2018) Edenic Views in Wetland Conservation: Nature and Agriculture in the Fogliano Area, Italy. *Conservation and Society* 16:397-408. http://www.conservationandsociety.org/text.asp?2018/16/4/397/235337

Huijbens, Edward & Païsson, Gisli. (2009). The bog in our brain and bowels: Social attitudes to the cartography of Icelandic wetlands. Environment and Planning D Society and Space. 27. 296-316. https://doi.org/10.1068/d9508.

Emily T. Yeh, From Wasteland to Wetland? Nature and Nation in China's Tibet, *Environmental History*, Volume 14, Issue 1, January 2009, Pages 103–137, https://doi.org/10.1093/envhis/14.1.103

Scaramelli, C. (2018). "THE WETLAND IS DISAPPEARING": CONSERVATION AND CARE ON TURKEY'S KIZILIRMAK DELTA. *International Journal of Middle East Studies, 50*(3), 405-425. https://www.cambridge.org/core/journals/international-journal-of-middle-east-studies/article/wetland-is-disappearing-conservation-and-care-on-turkeys-kizilirmak-delta/3FDD876B6A3309AFD548F72D5F7F614C

**Topic 5: Rivers as Ecosystems (Ito)**

Wohl, Ellen. 2004. "Why Should We Care About Rivers?" and "American Rivers" IN Ellen Wohl *Disconnected Rivers: Linking Rivers to Landscape*. New Haven: Yale University Press: pp. 1-39.

Rosentreter, J. et al. 2021 "Half of Global Methane Emissions Come from Aquatic Ecosystems." *The Conservation* https://theconversation.com/half-of-global-methane-emissions-come-from-aquatic-ecosystems-much-of-this-is-human-made-156960

*Suggested*:

Molle, F., Wester, P.; Hirsch, P. 2007. River basin development and management. In Water for food, water for life: A Comprehensive Assessment of Water Management in Agriculture, Chapter 16. edited by David Molden. London: EarthScan, pp. 585-624.

*Further references*:

Wohl, E. 2018. *Sustaining River Ecosystems and Water Resources*. Switzerland: Springer: 1-49.

Wohl, E. 2019. “How rivers can help in climate change.” https://blog.oup.com/2019/10/how-rivers-help-climate-change-resilience/

Peluso et al. 2015. “Using Historical Political Ecology to Understand the Present: Water, Reeds, and Biodiversity in the Camargue Biosphere Reserve, Southern France. *Ecology and Society* 20(4): 17.Berkes, F. 2003. “Rethinking Community-Based Conservation.” *Conservation Biology* 18(3), pp. 621-630.

Olsson, P., C. Folke, and T. Hahn. 2004. Social-ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden. *Ecology and Society* 9(4): 2

**Topic 6: History of Indigeneity and Nature in Hokkaido (Watanabe)**

Walker, Brett L. 2006. *The Conquest of Ainu Lands: Ecology and Culture in Japanese Expansion, 1590-1800*. University of California Press, Introduction, chs. 3, 4, 5, 6 (Graduate students: please read all).

*Further references*:

Kayano, S. 1998. “Traditional Ainu Life,” and “Kamuy Yukar”, in *First Fish, First People: Salmon Tales of the Pacific Rim*. pp.23-37.

**Topic 7: Salmon as Keystone Species in SES (Ito)**

Kayano. 1998. "Traditional Ainu Life: Living off the Interest" in J. Roche and M. McHutchison eds. *First Fish, First People: Salmon Tales of the Pacific Rim*. Seattle: University of Washington Press: pp. 41-45.

Su et al. 2021. “Human Impacts on Global Freshwater Fish Biodiversity.” *Science* 371, 835-838.

Morita, K. 2014. “Japanese Wild Salmon Research: Toward a Reconciliation between hatchery and Wild Salmon Management.” *NPAFC Newsletter*, 35, pp. 4-14.

Kolmes, S. 2004. “Salmon Farms and Hatcheries.” *Environment: Science and Policy for Sustainable Development*: pp. 40-43.

Vidal, J. 2017. “Salmon farming in crisis: 'We are seeing a chemical arms race in the seas.” *Guardian*

*Internet Resources and Video*

*Artifishal: The Fight to Save Wild Salmon* (2019) Watch the full movie on Youtube: https://youtu.be/XdNJ0JAwT7I

Salmon Migration Game
https://americanindian.si.edu/nk360/pnw-history-culture/pnw1-salmon/index.html?instructions=false

*Suggested*:

Saguin, Kristian. 2016. “Blue Revolution in a Commodity Frontier: Ecologies of Aquaculture and Agrarian Change in Laguna Lake, Philippines.” *Journal of Agrarian Change* 16(4), pp. 571-593.

*Further references*:

Clausen, Rebecca and Stefano B. Longo. 2012. “The Tragedy of the Commodity and the Farce of AquAdvantage Salmon.” *Development and Change* 43(1): 229-251.

Swanson, Heather Anne. 2015. “Shadow ecologies of conservation: Co-production of salmon landscapes in Hokkaido, Japan, and southern Chile.” *Geoforum* 61: 101-110.

Vanden Heuvel and Julius. 2020. “Snake River Dams in Hot Water.” Seattle Times June 29, https://www.seattletimes.com/opinion/snake-river-dams-in-hot-water/

**Topic 8: Human Economy and Animal Ecology in the North Pacific (Watanabe)**

Coen, Ross. 2013 “Owning the Ocean: Environment, Race, and Identity in the Bristol Bay, Alaska, Salmon Fishery, 1930-1938” in *The Pacific Northwest Quarterly* 104(3): 133-150. https://www.jstor.org/stable/24628777

Jones, Ryan Tucker. “Running Into Whales: The History of the North Pacific From Below the Waves.” *The American Historical Review* 118.2 (2013): 349-77. https://academic.oup.com/ahr/article/118/2/349/42096

*Suggested:*

Demuth, Bathsheba. “The Walrus and the Bureaucrat: Energy, Ecology, and Making the State in the Russian and American Arctic, 1870–1950.” T*he American Historical Review* 124.2 (2019): 483-510. https://academic.oup.com/ahr/article/124/2/483/5426289

*Further references*:

Finley, Carmel. “The Social Construction of Fishing, 1949.” *Ecology and Society* 14.1 (2009)

Akaha, Tsuneo. “From Conflict to Cooperation: Fishery Relations in the Sea of Japan.” *Pac. Rim. L. & Pol’y J.* 1 (1992): 225. https://digitalcommons.law.uw.edu/cgi/viewcontent.cgi?article=1010&context=wilj

Howell, David L. 1995. *Capitalism From Within: Economy, Society, and the State in a Japanese Fishery*. University of California Press.