**Marine Fisheries Policy**

**GLOBAL FISHERIES: Human-Environment Interactions in Marine and Coastal Ecosystems**

**Department of Human Ecology**

**Spring Semester 2021**

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| **Course Information**  **Number Section: 374-428-01**  **Meeting Time: (class meets once a week, Thursday 1.45 hrs; remotely)**  **Location: ZOOM**  **Website: Canvas** | **Instructor**  **Victoria C. Ramenzoni**  **Cook Office Building, Office 211.**  [**Victoria.Ramenzoni@r**utgers.edu](mailto:Victoria.Ramenzoni@rutgers.edu)  **Office Hours: by appointment.** |
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**Marine Fisheries Policy**

**Introduction**

During this course, we will explore major theoretical and methodological approaches to the study of human environmental interactions in coastal and marine landscapes. We will explore classic, contemporary, and cutting-edge research articles from different disciplines such as Anthropology, Sociology, Human Geography, Economics, Fishery Sciences, and Natural Resource Management. Our goal will be to identify the major approaches that have been proposed to understand how societies and environments can reciprocally influence each other. Through this process, we will also examine the status of key issues in the management of coastal and marine resources we rely on, challenges to their sustainable use, and potential pathways into the future.

The class will be framed around two principles:

1. Marine and coastal ecosystems are complex socioecological systems that can show emerging behaviors. Through feedback mechanisms and processes of interaction at different scales and among different components, new unpredictable conditions may arise. In short, we are approaching a moving target.
2. Managing natural resources is tantamount to managing people. We require multidisciplinary approaches to effectively anticipate and adapt to new conditions.

During this class, I strongly encourage the critical consideration of conceptual definitions such as environment, culture, society, and landscape. Critical in this instance means that we will not take any assumptions or explanations for granted. In class, we will reconstruct the historical and epistemological context in which definitions and argumentations are used and how they have been applied in resource use policies.

**Objectives: *What’s in for me?***

If all goes well, at the end of this course you would have gained a new theoretical and analytical toolbox that will help you understand how different societies and cultures can influence and be influenced by coastal and ocean environments. Hopefully, you may be able to transpose some of these insights and skills into your own work.

* New skills and abilities in identifying the different uses of marine and coastal environments by human societies, and the resulting patterns of environmental modification and/or trajectories of degradation.
* New skills and abilities in identifying the many societal and cultural configurations that result from interacting with/in coastal and marine environments.
* New skills in identifying past, current, and emerging threats to coastal and marine landscapes.

Thematic

* Review and evaluate major theoretical and applied frameworks for explaining human-environmental interactions, coastal and marine ecosystems persistence and change.
* Consider human adaptation, and cultural and behavioral variation across different ecologies and spatial and temporal scales.
* Explore and discuss theoretical tools and methodological techniques for studying landscapes (from qualitative studies, to reconstructions and statistical models).
* Discuss the application of theoretical frameworks into different resource management tools and policies.

Instructional

* To expose students to different approaches in the field of socioecological systems, human ecology, and natural resource management policies, including historical and contemporary works, with a keen eye on social science contributions to management.
* To train students to be more effective readers and engage in discussions, to be able to identify major theses and limitations in other perspectives, to identify benefits and ways to move forward in addressing obstacles.
* To train students to be more effective in written and oral presentation, argumentation and facilitation techniques.
* To train students in the development of a thematic literature review and annotated bibliography.

**Assignments**

1. DISCUSSION LEADER

You will be responsible for leading discussion in one session (see topics below). This requires the formulation of a reading guide with questions for the class you are assigned to lead. The guide has to be elaborated and uploaded to Canvas **3 days ahead of the appointed session (Monday before, 11:59 PM)**.

1. BOOK: We will be reading the Salmon from M. Kurlansky.

1. EXAMS

You will be responsible for **two short essays** (1500 words) addressing questions posed by the instructor. Essays should include a critical consideration of the readings and issues explored in the class.

1. FINAL

You will be responsible for developing a short and to the point research paper (3000 words, without citations), on the history of a fishery of your choosing. The term paper offers students (1) the opportunity to explore a topic of their choosing in greater depth, and (2) an exercise in scientific critical writing. Topics should pertain to the themes discussed in the class. **The paper is something you should be working on throughout the semester.** The assignment will have several parts and due dates. More specifics of the assignment will be provided in a separate handout.

The paper has to include: introduction, history of the fishery (overview), state of the stocks, policies and major issues, and an extension/intervention component which can take the shape of direct recommendations for action on a particular issue.

**To complete the full assignment: You will be required to submit a short statement describing the research problem you will address, its relevance, and your plan for generating the recommendations (250 words), an annotated bibliography (no less than 10 additional peer-reviewed sources, NO WEBSITES UNLESS FAO or NOAA), a first draft for revisions (optional), and a final draft at the end of the course.**

On writing conventions and citation style:

All written materials for this class will be typed and consistently formatted. For issues of style beyond general document formatting refer to the current APA/MLA norms. Use American word spellings. If you need any help on managing citations and software, please do not hesitate to reach out. I advise the use of Zotero or any other reference manager for your project.

Grades

To get an A, you are required to have at least 94 points. To get a B, you should score somewhere between 85 and 83, and a C anywhere between 73 and 75. A D is any score between 63 and 65. You will fail if you score below 60.

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| A+, A | 94–100%, 94–100%, 90–93% |
| B+, B | 86–89%, 83–85%, 80–82% |
| C+, C | 76–79%, 73–75%, 70–72% |
| D+, D | 66–69%, 63–65%, 60–62% |

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| **Item** | **Points** | **Due Date** |
| Participation by leading/assisting discussion. | 10 points | By choice |
| Research problem statement | 5 points | 2/4 |
| Take Home Exams | 20 points each | 3/4 and 4/22 |
| Annotated Bibliography | 10 points | 3/11 |
| Book Discussion | 10 points | 3/25 |
| Final Paper | 25 points | 5/5 |
|  | **100 points** |  |

**Extra points will be awarded for participation and during extra-credit assignments (10 points). So, you can still make an A even when you don’t get perfect scores on the class assignments.**

**Expectations and Requirements:**

* Punctual attendance.
* Active participation in class.
* On-time submissions (you will lose points for not submitting on time…)
* DO THE READINGs and Do your own work!
* Compliance with Rutgers policies for ethical conduct. Each student is responsible to inform themselves about those standards before performing any academic work.

Participation:

The instructor recognizes that talking in public may be easier for some while difficult for others. All of this said, you are strongly encouraged to take part in discussions, state your informed opinion (based on arguments from the class materials and evidence-based articles or case studies), and challenge any assumptions that you may find compelling or wrong.

Late Assignments/Make-ups: Can I take an exam late or submit an assignment late? Not unless you have a really good reason—trouble with the law, unforeseen illness or death, savage attack by wild geese, etc. Whether a make-up assignment will be permitted, and its format, are at the discretion of the instructor. If at all possible, please contact the instructor before the due date, or alternatively, within the following 24 hours.

Attendance: Class attendance is very important, both for individual benefits and for the collective social benefits that come from class discussion. As an added incentive to participate, you will lose (0.5 %) class points for each class you miss. Doctors’ notes, obituaries, and attendance to academic conferences are the only justifiable excuses for missing class. If weather, vehicle maintenance issues, heartache, sickness, etc. cause you to miss class, the instructor will be sympathetic, but you will not earn attendance points.

Learning disabilities: Students with disabilities who require reasonable accommodations in order to participate in course activities or meet course requirements should contact the instructor or designate during regular office hours or by appointment. Rutgers has many resources that we can rely upon, but this requires some planning. So meeting with the instructor is the best way we can make the most out of available resources.

**Course Readings**

Textbooks (Can be purchased online on your vendor of preference. Get the ebook version and save a tree in the process.)

Longo, Stefano B., Rebecca Clausen, and Brett Clark. 2015. *The Tragedy of the Commodity: Oceans, Fisheries, and Aquaculture*. Rutgers University Press.

Kurlansky, Mark. 2020. *Salmon: A Fish, the Earth, and the History of Their Common Fate.* Patagonia.

**Readings by Week**

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| 1/21 | Week 1   1. Syllabus and scoping the field. Major issues.   McGoodwin, James R. 1990. *Crisis in the World’s Fisheries: People, Problems, and Policies*. Stanford University Press. |
| 1/28 | Week 2  Scoping the field. Introduction to major issues and basic definitions: coastal and fishing communities, societies, and cultures, marine and coastal ecosystems. The governing system vs. the system to be governed.  Longo, Stefano B., Rebecca Clausen, and Brett Clark. 2015. *The Tragedy of the Commodity: Oceans, Fisheries, and Aquaculture*. Rutgers University Press. Chapter 1.  Jackson, J. B., Kirby, M. X., Berger, W. H., Bjorndal, K. A., Botsford, L. W., Bourque, B. J., ... & Hughes, T. P. (2001). Historical overfishing and the recent collapse of coastal ecosystems. Science, 293(5530), 629-637.  Aswani, S. 2020. New Directions in Maritime and Fisheries Anthropology. American Anthropologist.  <https://doi.org/10.1111/aman.13380>  Documentary discussion. “Troubled Waters” by Matthew Judge and Robert Crane. <https://www.youtube.com/watch?v=YACTNvuijQY&t=452s> |
| 2/4 | Week 3  Theoretical Approaches I: Archaeology and anthropology of marine societies. A long history of interactions. The role of humans in coastal and marine landscapes: effects and impacts. Stressors and mechanisms. **DUE PROBLEM STATEMENT.**  Acheson, James M. 1981. “Anthropology of Fishing.” *Annual Review of Anthropology*, 10: 275–316.  Yesner, David R., William S. Ayres, David L. Carlson, Richard S. Davis, Robert Dewar, Manuel R. González Morales, Fekri A. Hassan, et al. 1980. “Maritime Hunter-Gatherers: Ecology and Prehistory [and Comments and Reply].” *Current Anthropology* 21 (6):727–50.  Reenberg, A., Birch-Thomsen, T., Mertz, O., Fog, B., & Christiansen, S. (2008). Adaptation of human coping strategies in a small island society in the SW pacific—50 years of change in the coupled human–environment system on Bellona, Solomon Islands. *Human Ecology*, *36*(6), 807-819. |
| 2/11 | Theoretical Approaches II: Economics, Human Ecology, and Human Behavioral Ecology.  Acheson, J.M. 1975. The lobster fiefs: economic and ecological effects of territoriality in the Maine lobster industry. Human Ecology 3, 183–207.  Lopes, Priscila F. M., Mariana Clauzet, Natalia Hanazaki, Milena Ramires, Renato A. M. Silvano, and Alpina Begossi. 2011. “Foraging Behaviour of Brazilian Riverine and Coastal Fishers: How Much Is Explained by the Optimal Foraging Theory?” *Conservation & Society* 9 (3):236–46. <https://doi.org/10.4103/0972-4923.86994>.  Ramenzoni, V. 2013. Endenese Fisheries: Exploratory Findings on Environmental Perceptions, Fish Effort, and Overfishing in Eastern Indonesia. DOI: <https://doi.org/10.14237/ebl.4.2013.8> |
| 2/18 | Theoretical Approaches III: The Tragedy of the Commons and Bio-Economic Models of the Fishery: MSY and Major Fishery Extinctions. Limits to Parametric and Non-Parametric tools part 1.  Gordon, H. Scott. 1953. “An Economic Approach to the Optimum Utilization of Fishery Resources.” Journal of the Fisheries Board of Canada 10 (7):442–57.  Salas, Silvia, and A. Charles. 2007. “Are Small-Scale Fishers Profit Maximizers?: Exploring Fishing Performance of Small-Scale Fishers and Factors Determining Catch Rates.” Proceedings of the 60th Gulf and Caribbean Fisheries Institute, no. Journal Article.  Longo, Stefano B., Rebecca Clausen, and Brett Clark. 2015. *The Tragedy of the Commodity: Oceans, Fisheries, and Aquaculture*. Rutgers University Press. Chapter 2 and 3. |
| 2/25 | Theoretical Approaches IV: Measuring the fish. Reconstructing and Predicting future outcomes. Limits to Parametric and Non-Parametric tools part 2.  Pauly, Daniel, and Dirk Zeller. 2017. “Comments on FAOs State of World Fisheries and Aquaculture (SOFIA 2016).” *Marine Policy* 77 (Supplement C):176–81.  Ye, Yimin, Manuel Barange, Malcolm Beveridge, Luca Garibaldi, Nicolas Gutierrez, Alejandro Anganuzzi, and Marc Taconet. 2017. “FAO’s Statistic Data and Sustainability of Fisheries and Aquaculture: Comments on Pauly and Zeller (2017).” *Marine Policy* 81 (Supplement C):401–5. <https://doi.org/10.1016/j.marpol.2017.03.012>.  <https://doi.org/10.1016/j.marpol.2017.01.006>.  Sethi, Gautam, Christopher Costello, Anthony Fisher, Michael Hanemann, and Larry Karp. 2005. “Fishery Management under Multiple Uncertainty.” Journal of Environmental Economics and Management 50 (2):300–318. <https://doi.org/10.1016/j.jeem.2004.11.005>. |
| 3/11 | Theoretical Approaches V: Political Ecology and Community/Local Representations. Discourses of Overfishing, Access, and Precautionary Management. **Take home exam 1 due.**  Carothers, C. 2010. Tragedy of commodification: displacements in Alutiiq fishing communities in the Gulf of Alaska. *Mast* 9, 95–120.  Loring, Philip A. 2017. “The Political Ecology of Gear Bans in Two Fisheries: Florida’s Net Ban and Alaska’s Salmon Wars.” *Fish and Fisheries* 18 (1):94–104. <https://doi.org/10.1111/faf.12169>.  Brewer, J.F. 2011. Paper fish and policy conflict: catch shares and ecosystem-based management in Maine's groundfishery. *Ecology and Society* 16, 15. |
| 3/18 | SPRINGBREAK |

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| 3/25 | Theoretical Approaches VI. Complex Systems Part 1: Resilience in Coastal Systems. Ecosystem Based Management, Adaptive Management, SES. **ANNOTATED BIBLIOGRAPHY DUE.**  Kittinger, J. N., Finkbeiner, E. M., Glazier, E. W., & Crowder, L. B. 2012. Human dimensions of coral reef social-ecological systems. *Ecology and Society*, *17*(4), 17.  Wilson, J.A., Acheson, J.M., Metcalfe, M. and Kleban, P. (1994) Chaos, complexity, and community management of fisheries. *Marine Policy* 18, 291–305.  Pikitch, E. K., C. Santora, E. A. Babcock, A. Bakun, R. Bonfil, D. O. Conover, P. Dayton, et al. 2004. “Ecosystem-Based Fishery Management.” *Science* 305 (5682):346–47. <https://doi.org/10.1126/science.1098222>. |
| 4/1 | BOOKs discussions: Salmon. Longo Chapter 4 and 5 |
| 4/8 | Complex Systems Part 2: Socio-Ecological Systems in transition. Adaptation, Livelihood Approaches to Climate Change in Coastal and Marine scenarios.  Jentoft, S. and Chuenpagdee, R. (2009) Fisheries and coastal governance as a wicked problem. Marine Policy 33, 553–560.  McIlgorm, Alistair, Susan Hanna, Gunnar Knapp, Pascal Le Floc’H, Frank Millerd, and Minling Pan. 2010. “How Will Climate Change Alter Fishery Governanceʔ Insights from Seven International Case Studies.” Marine Policy 34 (1):170–77.  Badjeck, Marie-Caroline, Edward H. Allison, Ashley S. Halls, and Nicholas K. Dulvy. 2010. “Impacts of Climate Variability and Change on Fishery-Based Livelihoods.” Marine Policy 34 (3):375–83. |
| 4/15 | Development and Contributions of Social Sciences to Marine Management Issues.  Clay, P.M. and McGoodwin, J.R. (1995) Utilizing social sciences in fisheries management. *Aquatic Living Resources* 8, 203–207.  Ferro-Azcona et al. 2019. Adaptive capacity and social-ecological resilience of coastal areas: A systematic review. Ocean and Coastal Management, 173.  Hicks, Christina C., Arielle Levine, Arun Agrawal, Xavier Basurto, Sara J. Breslow, Courtney Carothers, Susan Charnley, et al. 2016. “Engage Key Social Concepts for Sustainability.” *Science* 352 (6281):38–40. <https://doi.org/10.1126/science.aad4977>. |
| 4/22 | **Take Home Exam 2 DUE.**  Complexity and Governance: Integrated Coastal Management Zones, Marine Protected Areas, Territorial Use Rights for Fishing, Co-Governance.  Cinner, J.E. (2007) Designing marine reserves to reflect local socioeconomic conditions: lessons from long-enduring customary management systems. *Coral Reefs 26*, 1035–1045.  Nguyen Thi Quynh, Chi, Steven Schilizzi, Atakelty Hailu, and Sayed Iftekhar. 2017. “Territorial Use Rights for Fisheries (TURFs): State of the Art and the Road Ahead.” *Marine Policy* 75 (Supplement C):41–52. <https://doi.org/10.1016/j.marpol.2016.10.004>.  Charles, Anthony, and Lisette Wilson. 2009. “Human Dimensions of Marine Protected Areas.” ICES Journal of Marine Science: Journal Du Conseil 66 (1):6–15. |
| 4/29 | Reassessing Management for the Future. **FINAL PAPER DUE following week.**  Carneiro, G. 2011. “Marine Management for Human Development: A Review of Two Decades of Scholarly Evidence.” Marine Policy 35 (3):351–62.  Discussion of Seaspiracy (Documentary available on Netflix). |