

NREM 620 – Graduate Seminar
Advanced Topics in Resource and Environmental Management

Collaborative Care and Management of Natural Resources

Spring 2017
Thursdays 10:30AM – 1:00PM
St. John 15

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Office hours: **by appointment**, Sherman 223

Conservation efforts increasingly rely upon collaboration and communication between many partners including scientists, natural resource managers, land owners, government agencies, policy makers, conservation groups, funding organizations, resource users, indigenous peoples and community members. We will use case studies, mostly centered on coastal resources in Hawai‘i, to examine changing roles and interactions among these many potential partners, while building concrete skills to enhance collaboration. In this course, we will focus especially on collaborations to care for natural resources at the local level. These collaborations, often described as community based natural resource management or co-management, can involve community groups, users, and government agencies.

Students in this course will gain experience in the following skills: identifying and interacting with community groups, running effective meetings, communicating science and research to policy makers and the public, listening, and facilitation, as well as understanding and analysis of collaboration and conflict. The course culminates in **a final project** conducted in partnership with a collaborative resource management effort in Hawai‘i, along with a **paper** reviewing the scientific literature on a question of relevance to that effort.

This year our project will focus on the community-based fisheries management effort in Hawai‘i through assisting Kua ‘Āina Ulu ‘Auamo, a grassroots organization helping to facilitate a network of Hawai‘i fishing communities engaged in kia‘i ‘āina (guardianship, protection, and management) of their coasts. We will focus on helping to document these community efforts and produce materials to educate the public about them.

Guiding questions include:

Who are relevant communities of use in any given conservation project, why do they matter, and how can they be identified and engaged?

What are established social and institutional conditions thought to lead to successful community based resource management? How is “success defined?”

How do multiple partners collaborate to decide, implement, and adapt policy and environmental regulations?

What are some principles of effective collaboration?

What constraints (legal, fiscal etc.) guide decision making by different partners including

relevant government agencies?

Where do collaborative conservation efforts tend to break down. How might they be improved?

Key Topics:

- 1) Collaboration: What is collaboration? Between whom? Why and when is it useful? How does collaboration work or not work?
- 2) Approaches to conservation and world views of relationship to place including within Native Hawaiian communities.
- 3) Community: Who is community? How can community be identified and engaged?
- 4) Community based natural resource management and local level care taking of resources.
- 5) Co-management collaborations between community groups, NGOs and government agencies.

Key Skills:

- **Interviewing** and qualitative data analysis
- Identifying and **interacting with community**
- **Facilitation** and running effective meetings
- Listening and adapting to a given situation
- Understanding and analysis of collaboration and conflict
- Communicating research to diverse audiences

Rules:

Come Prepared and Participate

Food (bring, share, eat)

No bad questions, no bad ideas

Listen well

Computers are expected to be used to enhance not detract from collaboration

Course Requirements:

Discussion: This is a discussion-based class. Participation is a key component of both student learning and grades. Students are expected to come to class having read the material (**carefully chosen by thoughtful writers**) and ready with questions and insights to share. All students will submit a two-paragraph **weekly reading response**, along with 1-2 **discussion questions**. This is intended to be an informal assignment that captures what grabs you in the readings. Please use one paragraph to briefly tell us about one aspect of the reading that you found to be very important, positive or exciting (the good stuff). Use your next paragraph to tell us about one aspect of the reading that you found to be problematic, negative or confusing (the bad stuff). Weekly reflections/discussion questions are **due at 9 pm on Mondays**. Please post under “Discussions” on Lulima, so that your response is visible to other students.

Journals will provide students with an opportunity to express what they have learned and are wondering about in written form. The instructor may offer guiding questions for each journal entry, and students are always welcome to include whatever else they are thinking about related

to the course. Journal entries should be thoughtful, thorough, and around 3-5 typed, double spaced pages. They are due **three times during the course of the semester**. With student permission, the instructor may share portions of journal entries with the class anonymously in order to deepen learning and incorporate insights that may not be shared in discussion.

Grading:

- Participation: **30%**
 - Attendance (including Field Trips)
 - In Class Participation
- Assignments: **40%**
 - Reflections on Readings
 - Facilitation / Leading Discussion in two classes
 - Journals and Other Assignments
 - Project Check Point Assignments
- Final Group Project: **30%**

Short quizzes may be given on key concepts and terms from readings and discussion. These would be used to assess in class participation. Additional weekly assignments may be given as needed. Plagiarism or cheating of any kind will result in failure of the course.

Regular Activities: Each course meeting incorporates a variety of activities, which may include a short lecture on the day's topic, one-two skill building activities in small groups, student led discussion of both theoretical and case based readings, and closing reflections. In addition, the course incorporates regular guest speakers, a field trip during the second class period and one Saturday field trip to visit and learn from a collaborative resource management effort on O'ahu.

EXPECTED LEARNER OUTCOMES:

This course is designed to meeting the following NREM Departmental SLOs

- 1) Students demonstrate knowledge of social and ecological principles, and interdisciplinary aspects of natural resource and environmental management issues
(Assessed by class discussion and activities, final paper and project).
- 2) Students can analyze and address natural resource and environmental management problems by using appropriate methods from social and/or natural science disciplines.
(Assessed by final paper and project, class discussion and activities).
- 3) Students communicate effectively, both orally and in writing, to diverse audiences including professionals, resource managers, local communities and policy makers.
(Assessed by paper and presentation communicating research findings to broad audiences)
- 4) Students can function as professionals in their specialization area by demonstrating responsible and ethical conduct, effective collaboration, informed decision making, and life-long

learning. (Assessed by discussion leadership, group project, literature review paper, and class participation).

Course Specific Learner Outcomes:

- Students will be effective listeners and facilitators, and gain understanding of different perspectives.
- Students will be able to analyze resource management efforts to understand participant roles, the degree and conditions of participation and collaboration.
- Students will analyze community based resource management and co-management efforts based on established principles of success, the degree of power sharing, rights and responsibilities.
- Students will learn to structure effective partnerships.
- Students will collaborate and operate effectively with others, including other students and experts from multiple different disciplines and backgrounds, as well as in both policy and community settings.
- Students will be able to gather high quality information from existing **cultural, policy and ecological resources about Hawai'i places** and evaluate data sources.
- *Students will be able to conduct respectful, effective, high quality interviews.*

Broader Course Goals and Desired Outcomes:

- More natural resource management professionals with awareness of rights/responsibilities, power dynamics, degrees of participation, and effective principles of collaboration.
- Enhanced capacity for local level resource management in Hawai'i.
- More professionals with capacity to understand, address, and eventually decrease counter-productive conflicts over natural resources in Hawai'i, to increase collaboration and understanding, and ultimately health and resilience of both human and natural communities.

SCHEDULE

All readings, reference materials, and updates to syllabus will be posted in course Dropbox.

1/12	<p>CLASS 1: Overview of syllabus. Introduction of students and expectations for the class. Begin oli. What is collaboration? Why collaborate? Why study it?</p> <p>SKILL: Introductions / Listening Use syllabus and follow it! ☺, Set up Food sign ups starting 1/26</p> <hr/> <p>Readings: Arnstein, S. R. (1969). A ladder of citizen participation. <i>Journal of the American Institute of planners</i>, 35(4), 216-224.</p> <p>Koontz, T. M., & Thomas, C. W. (2006). What do we know and need to know about the environmental outcomes of collaborative management?. <i>Public administration review</i>, 66(1), 111-121.</p> <p style="text-align: center;">Survey Due: Friday by 3 PM – LAULIMA – Sign up to for Rotating Food Sharing Starting 1/26 class</p> <p style="text-align: center;">Ho‘okupu and pot luck item for field trip next class, Memorize Oli</p>
1/19	<p>CLASS 2: Visit to Ho‘oulu ‘Āina – Kalihi Valley</p> <p>Wear work clothes that can get dirty, covered shoes or tabi that can go in lo‘i, and sunscreen. Bring water, hat, change of clothes, rain gear, ho‘okupu, food to share.</p> <p style="text-align: center;">ASSIGNMENT DUE: Memorize oli</p>
1/26	<p>CLASS 3: Indigenous and Hawaiian Perspectives on Natural Resource Management. Opportunities and obstacles for collaboration – who, what and how.</p> <p>SKILL: Awareness of Terms/Vocabulary, Running Effective meetings & discussion, Interviewing, Researching diverse sources of information</p> <p style="text-align: center;">ASSIGNMENT DUE: Journal 1 – upload to Assignments in Laulima, by 2/1 Wednesday 4:30 PM</p> <hr/> <p>Readings: Chapters 3 & 5 in: Kapā'anaokalāokeola, K. A. R. M., & Oliveira, N. (2014). <i>Ancestral Places: Understanding Kanaka Geographies</i>. Oregon State University Press.</p> <p>Roberts, M. (1998). Indigenous knowledge and Western science: Perspectives from the Pacific. <i>Science and technology education and ethnicity: An</i></p>

	<p><i>Aotearoa/New Zealand perspective, 59-75.</i></p> <p>Meyer, M. A. (2001). Our own liberation: Reflections on Hawaiian epistemology. <i>The Contemporary Pacific</i>, 13(1), 124-148.</p> <p>Nou e ‘Anakala (Poem)</p>
<p>2/2</p>	<p>CLASS 4: Participatory Research, Conflicts and Opportunities in Blending Diverse Perspectives on Resource Management and Research.</p> <p>PROJECTS: Introduce Projects and Assign Groups.</p> <p>SKILL: Gaining Entry. Participatory Research. Interviewing/Research Sources?</p> <hr/> <p><u>Readings:</u></p> <p>Tipa, G., & Panelli, R. (2009). Beyond ‘someone else's agenda’: An example of indigenous/academic research collaboration. <i>New Zealand Geographer</i>, 65(2), 95-106.</p> <p>Fletcher, C. (2003). Community Based Participatory Research Relationships with Aboriginal Communities in Canada, An Overview of Context and Process. <i>Pimatisiwin: A Journal of Aboriginal & Indigenous Community Health</i>, 1(1): pp. 27-62.</p> <p>Vaughan, Mehana. (2014). He Lei Aloha ‘Āina. In <i>Ancestral Places: Understanding Kanaka Geographies</i>. Kapā'anaokalāokeola, Katrina-Ann Rose-Marie, and Nākoa Oliveira. Oregon State University Press.</p> <p>Richmond, L. (2014). Anagyuk (Partner): Personal Relationships and the Exploration of Sugpiaq Fishing Geographies in Old Harbor, AK. In J. Johnson and S. Larson eds. <i>A Deeper Sense of Place: New Geographies of Indigenous-Academic Collaboration</i> Oregon State University Press.</p> <p>KUA Research Protocol (Draft)</p> <p><u>Recommended Reading:</u></p> <p>Nielsen, M.O. and Gould, L.A. (2007). Non-Native scholars doing research in Native American communities: A matter of respect. <i>The Social Science Journal</i>, 44(3), pp.420-433.</p>
	<p align="center">ASSIGNMENT DUE: TBA</p>

<p>2/9</p>	<p>CLASS 5: How of Collaboration. Working with Different Perspectives.</p> <p>SKILL: Listening, Facilitation</p> <p>GUEST SPEAKER: Aunty Puanani Burgess, Wai‘anae</p> <hr/> <p><u>Readings:</u></p> <p>Vaughan, Mehana. (2014). <i>He Alo a he alo: Talking Story with Aunty Puanani Burgess</i>. In <i>A Nation Rising: Hawaiian Movements for Life, Land and Sovereignty</i>. Editors Noelani Goodyear Ka’ōpua, Kahunawai Wright and Ikaika Hussey. Duke University Press.</p> <ul style="list-style-type: none"> • Burgess, Puanani. Three Poems. • Ching (Notes on Facilitation, to be handed out in class) <p>Adler, Peter S. (1995). Pig wars: Mediating forest management conflicts in Hawaii. <i>Negotiation Journal</i> 11(3): pp. 209-215.</p> <p>Umemoto, Karen. (2001). Walking in another’s shoes: Epistemological challenges in participatory planning. <i>Journal of Planning Education and Research</i> 21(1): pp. 1-17.</p>
<p>2/16</p>	<p>CLASS 6: Who is Community? Who collaborates? Identifying Communities of Use. Property (Bundle of Rights), Access, Rights and Responsibilities.</p> <p>PROJECTS: Research Questions, Interview Questions, Table of Contents.</p> <p>SKILL: Analysis of property rights, Community Identification, IRB of place and community, Approaching community.</p> <hr/> <p><u>Readings:</u></p> <p>Vaughan, Mehana B. and Peter Vitousek. (2013). Mahele: Sustaining communities through small-scale in-shore fishery catch and sharing networks. <i>Pacific Science</i>. 67(3): pp. 329-344.</p> <p>Ribot, Jesse C. and Nancy Lee Peluso. (2003). A Theory of Access. <i>Rural Sociology</i>. 68(2): pp. 153-181</p> <p>Rose, Carol M. (1994). Property as storytelling: Perspectives from game theory, narrative theory, feminist theory. In <i>Property and Persuasion: Essays on the History, Theory and Rhetoric of Ownership</i>. Westview Press. Boulder, Colorado. (1994): pp. 25-47.</p>

	<p><u>Recommended Reading:</u></p> <p>Aschmann, H. (1963). 84. Proprietary Rights to Fruit on Trees Growing on Residential Property. <i>Man</i>, 63, 74-76.</p>
	<p>ASSIGNMENT DUE: TBA</p>
<p>Saturday DATE TBD</p>	<p>FIELD TRIP (8AM – 5PM) Papahana Kuaola & Paepae o He‘eia</p> <p>Bring: Food to share, sunscreen, hat, water, wear work clothes (wet), change of clothes, tabi, swim suit, rain gear, ‘ohana?</p>
<p>2/23</p>	<p>CLASS 7: Community Based Natural Resource Management. Why Community Matters? Organizing, and Building Community.</p> <p>SKILL: Community Outreach and Engagement</p> <p>SHARE Group Projects, Interview Practice!!!</p>
	<p><u>Readings:</u></p> <p>Acheson, James M. (2003). The Island game: Informal rules and the factors producing them. In <i>Capturing the Commons: Devising Institutions to Manage the Maine Lobster Industry</i>. University Press of New England. Lebanon, NH.</p> <p>Lukacs, Heather, Nicole Ardoin, and Emily Grubert. (2016). Beyond formal groups: neighboring acts and watershed protection in Appalachia. <i>International Journal of the Commons</i> 10(2).</p> <p>Introduction and Conclusion: Rose, Carol M. (1994). Seeing Property. In <i>Property and Persuasion: Essays on the History, Theory and Rhetoric of Ownership</i>. Westview Press. Boulder, CO.</p>
<p>3/2</p>	<p>CLASS 8: Guest speaker Malia Akutagawa – Aha Moku System Puni, Shae?</p> <p>Skill: Engaging Community & Building Community Institutions of Governance</p>
	<p><u>Readings:</u></p> <p>By Malia Akutagawa and students:</p> <p>Mana‘e Project Report 2016</p> <p>DLNR AMAC Administrative Rules</p>

	ASSIGNMENT DUE: Journal 2 – upload to Assignments in Laulima, by 3/8 Wednesday 4:30 PM
3/9	<p>CLASS 9: Common Property and Conditions for Success</p> <p>SKILL: Analysis based on conditions for success</p>
	<p><u>Readings:</u> Hardin, Garrett. (1968). “The tragedy of the commons.” <i>Journal of Natural Resources Policy Research</i>. 162: pp. 105-119.</p> <p>Feeny, David, Fikret Berkes, Bonnie J. McCay, and James Acheson. (1990). “The tragedy of the commons: Twenty-Two years later.” <i>Human Ecology</i>. 18.</p> <p>Ch. 2, 3, 5 & 6: Ostrom, Elinor. (1990). <i>Governing the Commons, The Evolution of Institutions for Collective Action</i>. Cambridge University Press.</p> <p><u>Recommended Readings:</u></p> <p>Schlager, Edella, and Elinor Ostrom. (1992). "Property-rights regimes and natural resources: a conceptual analysis." <i>Land economics</i> 249-262.</p>
3/16	<p>CLASS 10: Common Property and Conditions for Success, Critical Perspectives on Community Based Management - Power and Political Ecology</p> <p><u>Readings:</u></p> <p>Agrawal, Arun and Clark C. Gibson. (1999). “Enchantment and disenchantment” The role of community in natural resource conservation.” <i>World Development</i>. 27(4): pp. 629-649.</p> <p>Poepoe, Kelson K., Paul K. Bartram and Alan M. Friedlander. (2005). “The use of traditional knowledge in the contemporary management of a Hawaiian community’s marine resources” in <i>Fishers’ Knowledge in Fishery Science and Management</i>. Coastal Management Sourcebooks 4. UNESCO publishing.</p> <p>Blomquist, W. and Schlager, E. (2005). Political pitfalls of integrated watershed management. <i>Society and Natural Resources</i>, 18(2), pp.101-117.</p> <p>McCay, Bonnie J. (1996). "Common and private concerns." <i>Rights to Nature: Ecological, Economic, Cultural and Political Principles of Institutions for the Environment</i>, pp. 111-126.</p> <p><u>Recommended Readings:</u></p> <p>Neumann, Roderick P. (2002). "Toward a critical theorization of conservation</p>

	enclosures." <i>Liberation ecologies: environment, development and social movements</i> , 179.
3/23	<p>CLASS 11: Co-management Partnerships, Spectrum of Co-management, Principle for Success, <i>Case Study</i></p> <p>SKILL: Analysis based on conditions for success / power sharing spectrum</p> <p>Readings:</p> <p>Pomeroy, Robert S. and Fikret Berkes. (1997). "Two to tango: The role of government in fisheries co-management." <i>Marine Policy</i>. 21(5): pp. 465-480.</p> <p>Tipa, Gail and Richard Welch. (2006). "Co-management of natural resources: Issues of definition from an indigenous community perspective." <i>Journal of Applied Behavioral Science</i>. 42(3): pp. 373-391.</p> <p>Cinner, J.E., McClanahan, T.R., MacNeil, M.A., Graham, N.A., Daw, T.M., Mukminin, A., Feary, D.A., Rabearisoa, A.L., Wamukota, A., Jiddawi, N. and Campbell, S.J. (2012). Comanagement of coral reef social-ecological systems. <i>Proceedings of the National Academy of Sciences</i>, 109(14), pp. 5219-5222.</p> <p>Ostrom, E., Burger, E. J., Field, C. B., Norgaard, R. B., and Policansky, D. (1999). Revisiting the commons: Local lessons, global challenges. <i>Science</i>, 284 (5412): pp. 278–282.</p> <p>Borrini-Feyerabend, G., Pimbert, M., Farvar, M. T., Kothari, A., & Renard, Y. (2004). <i>Sharing power: Learning by doing in co-management of natural resources throughout the world</i>. Cenesta, Tehran: IIED and IUCN/ CEESP/ CMWG.</p>
	ASSIGNMENT DUE: Draft Materials for Project
3/30	SPRING BREAK – NO CLASS
4/6	<p>CLASS 12: Co-management Institutions: Bridging Organizations / NGOS, Government Agencies, DLNR</p> <p>Readings:</p> <p>Diver, Sibyl. (2012). Columbia River Tribal Fisheries: Life History Stages of a Co-management Institution. In <i>Keystone Nations: Indigenous Peoples and Salmon across the North Pacific</i>. Edited by Benedict J. Colombi and James F. Brooks. Santa Fe, NM: School for Advanced Research Press.</p>

	<p>Pinkerton, E. and Weinstein, M. (1995). Fisheries that work. David Suzuki Foundation.</p> <p>Ayers, A. L. & Kittinger, J. N. (2014). Emergence of co-management governance for Hawai'i coral reef fisheries. <i>Global Environmental Change</i> 28, 251–262.</p> <p>Vaughan, Mehana Blaich, and Margaret R. Caldwell. (2015). "Hana Pa'a: Challenges and lessons for early phases of co-management." <i>Marine Policy</i>, 62, pp. 51-62.</p> <p><u>Recommended Readings:</u></p> <p>Peluso, Nancy Lee. (1993). "Coercing conservation?: The politics of state resource control." <i>Global environmental change</i> 3(2): 199-217.</p>
	ASSIGNMENT DUE: Project Presentation Updates
4/13	CLASS 13: Lessons for Co-management Guest Speakers: Panel on Co-management
	ASSIGNMENT DUE: Sharing on Group Projects with Guests Come with questions on co-management for our panel!!!
4/20	<p>CLASS 14: Adaptive Co-management, considering case of co-management between government agencies, federal and state. Monitoring!</p> <p>WORK ON GROUP PROJECTS IN CLASS (Presentation Planning)</p> <p><u>Readings:</u></p> <p>Kittinger, J. N., Dowling, A., Purves, A. R., Milne, N. A., & Olsson, P. (2010). Marine protected areas, multiple-agency management, and monumental surprise in the Northwestern Hawaiian Islands. <i>Journal of Marine Biology</i>.</p> <p>Armitage, D. R., Plummer, R., Berkes, F., Arthur, R. I., Charles, A. T., Davidson-Hunt, I. J., & McConney, P. (2009). Adaptive co-management for social–ecological complexity. <i>Frontiers in Ecology and the Environment</i>, 7(2), 95-102.</p> <p>Marshall, G. (2007). Nesting, Subsidiarity, and Community-based environmental Governance beyond the Local Scale. <i>International Journal of the Commons</i>. 2(1), pp.75–97. DOI: http://doi.org/10.18352/ijc.50</p>
	ASSIGNMENT DUE: Practice Presentations

4/27	CLASS 15: IN CLASS POWERPOINT PRESENTATION
	<p style="text-align: center;">ASSIGNMENT DUE: Final Write up, Presentation & Journal 3 – upload to Assignments in Laulima, by 5/3 Wednesday 4:30 PM</p> <p>In your final journal, please provide:</p> <ol style="list-style-type: none"> 1) A short assessment of your own contributions to the group project, what you learned from each other, how the group worked overall as a team, lessons learned, and ways to improve. 2) Your impressions of the course overall, both negative and positive aspects, and ways this course could be improved. 3) Other reflection you want to help you wrap up course (final panel of guest speakers, key concepts and how you'll remember them etc). 4) What do you suggest taking out of the course? 5) How many hours of time you'd say you spent outside of class per week on this course?
5/11	<p style="text-align: center;"><u>FINAL COMMUNITY PRESENTATIONS</u></p> <p style="text-align: center;">5:30 – 8 PM Evening pau hana time, by invitation and open to public</p>

Other Recommended Readings:

Agrawal, A. (2005). Environmentalism: Community, Intimate Government, and the Making of Environmental Subjects in Kumaon, India. *Current Anthropology*, 46(2), 161–190.

Anantharaman, M. (2014). Networked ecological citizenship, the new middle classes and the provisioning of sustainable waste management in Bangalore, India. *Journal of Cleaner Production*, 63, 173-183

Barry, J. M. (2007). *Rising tide: The great Mississippi flood of 1927 and how it changed America*. Simon and Schuster. Chapters 1-3; Available at UH Manoa Library.

Bray, D. B., Antinori, C., & Torres-Rojo, J. M. (2006). The Mexican model of community forest management: The role of agrarian policy, forest policy and entrepreneurial organization. *Forest Policy and Economics*, 8(4), 470-484.

Kahan, D. M., Wittlin, M., Peters, E., Slovic, P., Ouellette, L. L., Braman, D., & Mandel, G. N. (2011). The tragedy of the risk-perception commons: culture conflict, rationality conflict, and climate change.

Kroh K. (2014) The Complete Guide to Everything That's Happened Since the Massive Chemical Spill in West Virginia. ThinkProgress. Retrieved from <https://thinkprogress.org/the-complete-guide-to-everything-thats-happened-since-the-massive-chemical-spill-in-west-virginia-1a7d09185b7d#.snmthc9ua>

Kulkarni, S. P. (2000). Environmental ethics and information asymmetry among organizational stakeholders. *Journal of Business Ethics*, 27(3), 215–228. doi:10.1023/A:1006340624326

Meinzen-Dick, R., & Mwangi, E. (2009). Cutting the web of interests: Pitfalls of formalizing property rights. *Land Use Policy*, 26(1), 36-43.

Mwangi, Esther. (2003). Institutional Change and Politics: The Transformation of Property Right in Kenya's Maasailand. Indiana University. PhD Diss. Chapters 1, 3 (great theory section), 9.

Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. *Science*, 325(5939), 419-422.

Ostrom, E., Janssen, M. A., & Anderies, J. M. (2007). Going beyond panaceas. *Proceedings of the National Academy of Sciences*, 104(39), 15176-15178.

Paskus, L. (2003). Sound science goes sour. High Country News (253). Retrieved from <http://www.hcn.org/issues/253/14052>.

Richmond, L. (2013). Incorporating indigenous rights and environmental justice into fishery management: comparing policy challenges and potentials from Alaska and Hawai'i. *Environmental management*, 52(5), 1071-1084.

Richmond, L., & Kotowicz, D. (2015). Equity and access in marine protected areas: The history and future of 'traditional indigenous fishing' in the Marianas Trench Marine National Monument. *Applied Geography*, 59, 117-124.

Richmond, L., Middleton, B. R., Gilmer, R., Grossman, Z., Janis, T., Lucero, S., ... & Watson, A. (2013). Indigenous studies speaks to environmental management. *Environmental management*, 52(5), 1041-1045.

Satz, D. (2010). *Why some things should not be for sale: The moral limits of markets*. Oxford University Press.

Sawe, N. & Knutson, B. (2015) Neural valuation of environmental resources. *Neuroimage* 122, 87–95.

Schlager, E., & Ostrom, E. (1992). Property-rights regimes and natural resources: a conceptual analysis. *Land economics*, 249-262.

Scott, J. C. (1998). *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale University Press. Chapter 1, p. 11-15.

Weir, Jessica K.. Weir, J. K. (2009). *Murray River country: an ecological dialogue with traditional owners*. Aboriginal Studies Press. Chapters 2-4.

Wynne, B. (1996). May the Sheep Safely Graze? A reflexive view of the expert-lay knowledge. In S Lash, B. Szerszynski, & B. Wynne (Eds.), *Risk, Environment, and Modernity: Towards a New Ecology*. Sage Publications Ltd.