Nadine Heck

Department of Coastal Studies, East Carolina University  
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**EDUCATION**

2011 Ph.D. Geography, University of Leeds

2005 M.S. Geography, University of Exeter (distinction)

1999-2003 B.S. studies Geography, Geology & Biology (minors), University of Freiburg

# ACAdemic Positions

2020-present Assistant Professor, Department of Coastal Studies, East Carolina University

2020-present Adjunct Assistant Professor, Department of Geography, East Carolina University

2019 Adjunct Lecturer, Department of Environmental Studies, Santa Clara University

2016-2020 Assistant Project Scientist, Department of Ocean Sciences, UC Santa Cruz

2014-2016 Postdoctoral Research Associate, Institute of Marine Sciences, UC Santa Cruz

2013-2014 Visiting Research Scholar, Wildlife Ecology & Conservation, University of Florida

2011-2014 Postdoctoral Research Associate, Department of Natural Resources, Cornell University

2011 Research Fellow, School of Geography, University of Leeds

2009-2010 Research Analyst, Centre for Canadian Studies, University of Leeds

**Research Grants**

***I have raised over $2.6 million in research funding as a PI or Co-PI since 2020***

2023-2025 IUCN EbA Fund; *Upscaling Mangrove Restoration for Coastal Hazard Reduction in a Deltaic Environment: Prioritizing Restoration Efforts for Nature-based Solutions in the Volta Delta*, Co-PI, East Carolina University, $312,183

2023-2025 NC Sea Grant, *Co-Developing a Community and Data-Driven Framework for Coastal Protection Decision Making*, Co-PI, East Carolina University, $259,331.

2022-2027 NSF DISES, *Drivers of Ecosystem-based Adaptation to extreme events in mangrove-reef social-ecological systems,* Co-PI, East Carolina University, $1,599,006.

2020-2024 NSF Belmont Forum *Negotiating Ocean Conflicts among Rivals for Sustainable and Equitable Solutions* (NO CRISES), PI, East Carolina University, $240,000.

2020-2021 NC Sea Grant, *The influence of environmental factors and changes to hydrology on brown shrimp recruitment*, Co-PI, East Carolina University, $60,000

2020 International Climate Initiative (IKI)/UC Santa Cruz, *Cost-Benefits Analysis of Coral and Mangrove Restoration for Risk Reduction in the Caribbean*, PI Nadine Heck, East Carolina University, $24,048

2019-2020 International Climate Initiative (IKI), *Resilient Islands,* Co-I, UC Santa Cruz, $80,000

2017-2019 NOAA Sea Grant, *Impediments and Opportunities for Coordinating Use of California’s Coastal Ocean*, Co-I, PI: Carrie Pomeroy, Carolynn Culver, UC San Diego, $98,470

2017-2018 International Climate Initiative (IKI) *Ecosystems, Risk, and Climate Adaptation – Fisheries, Food Security and Climate Change*, Co-I, PI: Michael Beck, UC Santa Cruz, $625,000

2014-2017 NSF, *Coastal SEES*, Co-I, PI: Adina Paytan, UC Santa Cruz, $531,67

2014 USFWS, *Social-Ecological Conservation Targets for the Peninsular Florida Landscape Conservation Cooperative*, Co-I, PI: James Watling, University of Florida/IFAS, $43,200

2012-2014 Great Lakes Fishery Commission, *Pathogens and Invasive Species in the Great Lakes: Understanding Managers and Stakeholders’ Responses*, Co-I, PIs: Bruce Lauber, Richard Stedman, Cornell University, $188,000

2011-2013 Great Lakes Fishery Commission, *Human Dimension Research Needs for Great Lakes Fishery Management,* Co-I, PIs: Dan Decker, Richard Stedman, Cornell University, $200,000

**Awards and Scholarships**

2018 National Science Foundation, Coastlines and People, Travel Award, San Diego, CA

2014 National Science Foundation, Marine Research Network, Travel Award, Newport, OR

2010 Canadian Studies Centre University of Leeds, Postgraduate Award $1,000

2009 Ocean Management Research Network, Student Travel Award, $1,000

2008 Canadian Studies Centre, Postgraduate Award, $1,000

2008 Social Science and Humanities Research Council (SSHRC) - Field Research Grant, $1,700

2008 British Association for Canadian Studies, Travel Award, $1,000

2007 Canadian Studies Centre Travel Award, $1,000

2006 University of Leeds, University Research Scholarship, $70,000

2003 European Union, Erasmus Scholarship, University of Reading & Stockholm University

**PUBLICATIONS**

**Peer-reviewed Journal Articles**

**\***indicates a student mentored by Heck

Vave, R., Selim, S., Van Putten, I., Heck, N., Dutra, L., Narayan, S., Das, J., Carrizales, S., Glaser, M., Johnson, K., Kenison, D., Leslie, C., Nelsen, SA., Vasulevu, AL., and Paytan, A. (submitted) Mapping the governance landscape for marine resource conflicts in Bangladesh, Fiji, and Hawaiˈi: The tricky business of engagement and capturing local community perceptions, *Marine Policy*.

Glaser, M., Selim, S., De la Cruz-Modina, R., van Putten, I., Aswani, S., Paytan, A., Dutra, L. **Heck, N.,** Narayan, S., and Sauer, W. (accepted) Analysis across case studies in global sustainability projects: An emerging challenge in the Anthropocene, *MAST*.

Van Putten, I., Aswani, S., Boonstra, W., de Cruz\_Modino, R., Das, J., Glaser, M., **Heck, N.**, Narayan, S., Paytan, A., Selim, S., and Vave, R.\* (2023) History matters: The link between societal acceptance and incipient conflicts in Papua New Guinea deep-sea mining venture", to Maritime Studies, *Maritime Studies*, 22:32.

Schlenker, L., Stewart, C., Rock, J., **Heck, N.,** and Morely, J. (2023) Environmental and climate variability drive population size of annual penaeid shrimp in a large lagoonal estuary, PLoS ONE 18(5): e0285498.

**Heck, N.,** Goldberg, L., Ahmadia, G.N., Andradi-Brown, D.A., Lagomasino, D. (in revision) Global drivers of mangrove loss in protected areas across governance regimes and protection levels, *Conservation Biology.*

**Heck, N.,** Beck, M.W., Reguero, B., Pfliegner, K., Ricker, M., and Pfuetz, R. (2022) Global climate change risk to fisheries - a multi-risk assessment, *Marine Policy* *148*, p.105404.

**Heck, N.,** Paytan, A., Potts, D.C., and Haddad, B. (2022) Variations in stakeholders’ ecosystem service priorities for managing a Marine Protected Area, *Marine Policy 146:105330*.

Farquhar, S.\*, Nirindrainy, A.F., **Heck, N.** (2022) The impacts of long-term changes in weather on small scale fisheries available fishing hours in Nosy Barren, Madagascar. *Frontiers in Marine Science* 9:841048*.*

Beck, M.W., **Heck, N**., Narayan, S., Menéndez, P., Reguero, B.G., Bitterwolf, S., Torres-Ortega, S., Lange, G.M., Pfliegner, K., McNulty, V.P. and Losada, I.J. (2022) Return on investment for mangrove and reef flood protection. *Ecosystem Services*, *56*: 101440.

**Heck, N.,** Beck, M.W., Reguero, B. (2021) Storm risk and marine fisheries: a global assessment, *Marine Policy* 132, 104698*.*

Narayan, S., Esteben, M., Albert, S., Jamero, M.L., Chrichton, R., **Heck, N.,** Goby, G. and Jupiters, S. (2020) Local adaptation responses to coastal hazards in small island coastal communities: insights from 4 Pacific island nations, Environmental Science and Policy 104: *199-207*.

Lykkebo, K.\* **Heck, N.,** Reguero, B., Potts, D., Hovagimian, A., and Paytan, A. (2019) Environmental impacts of brine discharge - an in situcase-study from Carlsbad, *Water 11: 208*.

Whitcraft, C., Grubbs, M., **Heck, N.,** Bednarsek, N., and Feely, R.A. (2018) Envisioning Coastal Hubs: Identifying climate stressors to inform coastal systems responses & adaptation, *NSF CoPe Scoping session conference paper*, San Diego, CA.

**Heck, N.,** Paytan, A., Potts, D.C., Haddad, B., and Lykkebo Peterson, K.\* (2018) Management preferences and attitudes regarding environmental impacts from seawater desalination: perspectives from a small coastal community, *Ocean and Coastal Management 163:* 22-29.

**Heck, N.,** Lykkebo Peterson\*, K., Potts, D.C., Haddad, B., and Paytan, A. (2018) Predictors of coastal stakeholders’ knowledge about seawater desalination impacts on marine ecosystems, *Science of the Total Environment 639: 785-792.*

**Heck, N.,** Paytan, A., Potts, D.C., Haddad, B., and Lykkebo Peterson, K.\* (2017) Management priorities for seawater desalination plants in a marine protected area: a multi-criteria analysis, *Marine Policy 88: 64-71*.

**Heck, N.**, Paytan, A., Potts, D.C., and Haddad. B. (2016) Predictors of local support for a seawater desalination plant in a small coastal community, *Environmental Science and Policy* 66: 101-111

**Heck, N.,** Lauber, T.B., and Stedman, R. C. (2016) The spread of pathogens and aquatic invasive species in the Great Lakes basin: An application of the Drivers-Pressures-State-Impacts- Responses model, *Ocean and Coastal Management,* 132: 38-45.

**Heck, N.,** Stedman, R., and Gaden, M. (2016) Indicators to evaluate the social dimensions of the recreational fishery in the Great Lakes. *North American Journal of Fisheries Management* 36 (3*):* 477-484*.*

**Heck, N**., Paytan, A., Potts, DC, Haddad, B. (2016) Coastal residents’ literacy about seawater desalination and its impacts on marine ecosystems in California, *Marine Policy* 68: 178-186.

**Heck, N.,** Stedman, R., and Gaden, M. (2016) Human dimensions’ information needs of fishery managers in the Laurentian Great Lakes. *Journal of Great Lakes Research* 42(2)*:* 319-327.

**Heck N**., Stedman, R., and Gaden, M. (2015) The integration of social science information into Great Lakes fishery management:  Opportunities and challenges. *Fisheries Research 167: 30-37.*

**Heck, N.,**Stedman, R., and Gaden, M. (2014) Human Dimension Research Needs for Great Lakes Fishery Management, *HDRU Publication 14-2*. Department of Natural Resources, N.Y.S. College of Agriculture and Life Science, Cornell University, Ithaca, NY.

**Heck, N.,** and Lauber, B. (2013) Pathogens and invasive species in the Great Lakes: Understanding manager responses targeting bait dealers and anglers, *HDRU Publication 13-9.* Dep. of Natural Resources, N.Y.S. College of Agriculture and Life Science, Cornell University, Ithaca, NY.

**Heck, N.** and Dearden P. (2012), Local expectations for future marine protected area performance: a case study of the proposed national marine conservation area in the Southern Strait of Georgia, Canada*, Coastal Management* 40: 577-593.

**Heck, N.**and Dearden P., and McDonald, A. (2012), Stakeholder evaluation priorities for demonstrating marine protected area effectiveness at the Pacific Rim National Park Reserve, Canada, *Coastal Management* 40 (1): 55-72.

**Heck, N.**and Dearden P., and McDonald, A. (2012) Insights into marine conservation efforts in temperate regions: marine protected areas on Canada’s West Coast, *Ocean and Coastal Management* 57 (1): 10-20.

**Heck, N.**, Dearden, P., and McDonald, A. (2011)Stakeholders’ expectations towards a proposed marine protected area: a multi-criteria analysis of MPA performance criteria*, Ocean and Coastal Management* 54 (9): 687-695.

**Heck, N.**, Dearden, P., McDonald, A., and Carver, S. (2011) Stakeholder opinions on the assessment of MPA effectiveness and their interest to participate at Pacific Rim National Park Reserve, Canada, *Environmental Management* 47 (4): 603-616.

**Heck, N.**, Dearden, P., McDonald, A., and Carver, S. (2011) Developing MPA performance indicators with local stakeholder’s input in the Pacific Rim National Park Reserve, Canada, *Biodiversity and Conservation* 20 (4): 895-  911.

Gössling, S., Kunkel, T., Schumacher, K., **Heck, N.,** Birkemeyer, J., Froese, J., Naber, N., and Schliermann, E. (2004) A target group-specific approach to “green” power retailing: students as consumers of renewable energy, *Renewable and Sustainable Energy Reviews* 9: 69- 83.

Gössling, S., Berger, R., **Heck, N**., and Morell, M. (2004) Tourism and street children in Antananarivo, Madagascar, *Tourism and Hospitality Research* 5 (2): 131- 50.

**Technical Reports**

Vave, R.\*, **Heck, N.,** Narayan, S.,  Carrizales, S.\*, and Paytan, A. (2023) Understanding Coastal Fisheries and Resource Governance Issues Amongst Communities and Tourism Industry in Kealakekua Bay, Hawaiˈi Island. NOCRISES NSF Belmont Report.

Vave, R.\*, **Heck, N.,** Narayan, S.,  Carrizales, S.\*, and Paytan, A. (2023) Understanding Coastal Fisheries and Resource Governance Issues Amongst Traditional and Non-Traditional Fishers in Kauhako Bay, Ho'okena. NOCRISES NSF Belmont Report.

**Heck, N.** Beck, M. W., V. Agostini, V., B. Reguero, K. Pfliegner, P. Mucke, L. Kirch (2021) *Fisheries at Risk - Vulnerability of Fisheries to Climate Change*. The Nature Conservancy.

Beck, M. W., **Heck, N.** Narayan, S., Menéndez, P., Torres-Ortega S., Losada, I. J., Way, M. Rogers, M. and McFarlane- Connelly, L. (2020) *Reducing Caribbean Risk: Opportunities for Cost-Effective Mangrove Restoration and Insurance*. The Nature Conservancy, Arlington, VA.

**Heck, N.,** Narayan, S. and Beck, M. W. (2019) *Co-Benefits of Mangroves and Coral Reefs in the Caribbean*, The Nature Conservancy.

Beck, M.W., **Heck, N.,** Acosta, M., Schill, S. and McNulty, V. (2019*) The Value of Reefs for Protecting the Most Vulnerable Populations in the Dominican Republic, Jamaica and Grenada*, The Nature Conservancy.

**Heck, N.,** Stedman, R., and Gaden, M. (2014) *Human Dimension Research Needs for Great Lakes Fishery Management*, Great Lakes Fishery Commission, Ann Arbor, MI.

**Heck, N.** (2009) *Academic Relations with Canadian Institutions*, Centre of Canadian Studies, University of Leeds.

**Heck, N.** (2008) Marine Protected Areas in Canada: How can the research community help?, *OMRN MPA Working Group Report*.

**Book chapters**

Friess, DA, Adams, J., Andradi-Brown, DA, Bhargava, R., Carrasco, G., Dahdouh-Guebas, F., **Heck, N.**, Herr, D., Sunanda Kodikara, KA, Michie, L., Shribman, ZI, Slobodian, L., Su, J., Taira, D., Main Uddin, M., Wodehouse, D., (2023) Mangrove forests: their status, threats, conservation and restoration, in Wolanski, E. and McLusky, D.S. (eds), Treatise on Estuarine and Coastal Science, 2nd edition., Academic Press.

Haddad, B., **Heck, N.,** Paytan, A., Potts, D. (2018) Social issues and public acceptance of seawater desalination plants, *Sustainable Desalination Handbook*, Elsevier.

**Teaching & Mentoring**

**Teaching**

**East Carolina University, 2020-present**

ICS 7007 Research Design, Instructor

ICS 8001 **Integrative Problem Solving in Coastal Sciences II,** Instructor

COAS 2025 Survey of Marine & Coastal Resources, Co-Instructor

ICS 7005 Human Dimensions of Coastal Management, Guest lecturer

GEOG 1000 Introduction to Geography: People, Places and Environments, Guest lecturer

**Santa Clara University, 2019**

EVS 195 Environment and Development, Instructor

**Middlebury Institute of International Studies at Monterey, 2018**IEPG 8611A Sustainable Coastal Management, Guest Lecturer

**University of California Santa Cruz, 2015-2018**

ENVS 196  Water Resources, Human Rights, and Sustainability, Guest Lecturer

EARTH 240 Communicating Ocean Science, Visiting Instructor

**Cornell University, 2013-2014**

NTRES 4940 Current Perspectives of Marine Conservation, Instructor

NTRES 2201 Society and Natural Resources, Guest Lecturer

**University of Leeds, 2006-2010**

GEOG1230 Analytical Skills in Physical Geography, Teaching Assistant

GEOG 3410 Climate Change: Science and Society, Teaching Assistant

**Advising & Mentoring**

*Postdoctoral Scholar*

*2022-*present Ron Vave, East Carolina University

*Graduate*

2023-present Megan Geesin, PhD, Integrated Coastal Studies, ECU, Committee member

2022-present Christine Wiegand, PhD, CRM, ECU, Committee member

2022-present Mariela Garcia Vega, PhD, Integrated Coastal Studies, ECU, PhD advisor

2020-present Shalimar Moreno, PhD, Integrated Coastal Studies, ECU, PhD advisor

2020-present Samantha Farquhar, PhD, Integrated Coastal Studies, ECU, PhD advisor

2019-2020 Gwyneth Schuler, MS, Parks & Recreation, ECU, Committee member

*Undergraduate*

2022 & 2023 Sonya Carrrizales, Global Sustainability Scholar, East Carolina University

2021 Niza Contrero, Global Sustainability Scholar, East Carolina University

2021 Mariela Garcia-Vega, NSF REU program, East Carolina University

2016 Kaylee Glenney, B.Sc. Environmental Studies, UC Santa Cruz

2016 Samuel Pelham, B.Sc. Environmental Studies and Economics, UC Santa Cruz

2016 Sarah Faraola, B.Sc. Earth and Planetary Sciences, UC Santa Cruz

2016 Brolin Mirza, B.Sc., California State University, Stanislaus

*Research Assistants*

2020 Valeriaa Vakhitova, East Carolina University

2020 Grant Tyler, East Carolina University

**Teaching Development & certificates**

2013 Teaching in Higher Education, Cornell University

2013-2014 5 Teaching Certificates, Center for Teaching Excellence, Cornell University

2012-2014 Faculty Seminars & Workshops, Center for Teaching Excellence, Cornell University

2012 - 2014 Graduate Student Seminar, Mentoring of PhD and MS students, Cornell University

**Workshops & Presentations**

**Invited Presentations**

**Heck, N.,** (2022) *Spatial Variations in Global Mangrove Loss in Protected Areas*, World Wildlife Fund, Washington, D.C.

**Heck, N.** (2022) *Governance and Mangrove Conservation Outcomes*, National Socio-Environmental Synthesis Center, March 14th, Annapolis, MD

Farquhar, S.\*, Avisoa, F., **Heck., N,** (2022) *Impacts of Long-Term Changes in Weather on Small Scale Fishers’ in Madagascar*, ECU Brown Bag Series.

Vave, R., **Heck, N.,** and Narayan, S. (2022) *Governance mapping – findings from Hawai`i*. Block seminar on Ocean and coastal conflicts, their origins, trajectories and management, University of Bremen, and University of São Paulo, July 21-22 & 25-27 2022.

Vave, R., **Heck, N**. Narayan, S., Paytan, A. (2022) *Negotiating Ocean Conflicts among Rivals for Sustainable and Equitable Solutions,* Kipahulu community network meeting, Maui Island, Hawaiˈi, USA.

Vave, R., **Heck, N**., Narayan, S., Paytan, A. (2022) *Negotiating Ocean Conflicts among Rivals for Sustainable and Equitable Solutions,* West Hawaiˈi Fisheries Council meeting, Hawaiˈi Island, Hawaiˈi, USA

Vave, R., **Heck, N.**, Narayan, S., and Paytan, A. (2022) *Negotiating Ocean Conflicts among Rivals for Sustainable and Equitable Solutions*, Maui Nui Makai Network (MNMN) meeting, Maui Island, Hawaiˈi, USA.

**Heck, N.,** Narayan, S., and Paytan, A. (2021) *Multiple Ocean Uses and Conflicts in Community-Managed Fisheries in Hawai`i*, Kai Kuleana Network meeting, online.

Farquhar, S., **Heck, N.** Xi, Y. (2021) *Impacts of Beach Driving on Sea Turtle Nesting in North Carolina National Seashores,* National Park Service

**Heck, N.** (2021) *Social Dimensions of Coastal Resilience & Adaptation,* NSF REU summer program, East Carolina University

**Heck, N.** (2021) *How do people interact with coastal & marine ecosystems?*, Research talk, Dean’s visit, East Carolina University

**Heck, N.** (2018) *Vulnerability of Fisheries to Climate Change - A Global Assessment*, Pacific Islands Fishery Science Centre, Honolulu, HI

**COnference Presentations**

**Heck, N.,** Goldberg, L., Andradi-Brown, DA, Campbell, A., Narayan, S., Ahmadia, G., and Lagomasino, D. (2023) Drivers of mangrove loss in protected areas vary by governance and IUCN categories, *MMM6*, July 23-28th, Cartagena, Columbia.

Andradi-Brown, D., Slobodian, L., Buelow, C., Villareal-Rosas, J. Turschwell, M., Adama, F., Alvarez, S., Amir, A., Baker, S., Bell-James, J., Bood, N., Bukoski, JJ, Calzada, A., Carrie, R., Connolly, R., Fatoyinbo, L., Goldberg, L, Golebie, E., **Heck, N.,** Lagomasino, D., Randriamanantena, D., Sidik, F., Valdivia, A., White, A., Wood, K., and Brown, C. (2023) Linking national-scale policy interventions to mangrove conservation outcomes, *MMM6*, July 23-28th, Cartagena, Columbia.

Garcia-Vega, M.\*, **Heck, N.,** and Narayan, S. (2023) Management of mangrove ecosystems in response to storm events,*MMM6*, July 23-28th, Cartagena, Columbia.

Vave, R.\*, Carrizales, S\*, **Heck, N**., Narayan, S., Kenison, D., Johnson, K., Leslie, C., and Paytan, A. (2023) Mixed methods approaches to understanding and addressing fisheries conflicts in two Hawai`ian communities, *MARE conference People & the Sea XII*, June 26-30th, Amsterdam, Netherlands.

Vave, R.\*, **Heck, N.,** and Narayan, S., (2023) Negotiating Ocean Conflicts among Rivals for Sustainable and Equitable Solutions (NOCRISES): Hawai`i case study, *Locally Managed Marine Area (LMMA) Network*, June 12th, Suva, Fiji.

**Heck, N.,** Narayan, S., Rahman, E.\*, and Selim, S. (2023) The adaptation strategies of small-scale fishers to storms and extreme climatic events in the coastal region of Bangladesh, *Effects of Climate Change on the Ocean (ECCWO), 5th Symposium*, April 17-21, Bergen Norway.

### Farquhar, S.\* and **Heck, N.** (2023) **Using Agent-based models to understand relationship between industrial shrimp trawling and small-scale fishers- implications for food sovereignty and food security, *American Associate of Geographers (AAG) Annual Meeting*, March 23-27, Denver, Colorado.**

Vakithova, V. \*, **Heck, N.,** and Narayan, S. (2023) MPAs, and Flood risk reduction: Understanding where mangrove protection can provide flood reduction, *International Marine Protected Area Congress (IMPAC) 5*, February 3-9, Vancouver, BC.

Goldberg, L. \*, **Heck, N**., Lagomasino, D. and Fatoyinbo, L. (2023)Understanding spatial human and natural drivers of mangrove loss within MPAs**,** *International Marine Protected Area Congress (IMPAC) 5*, Vancouver, BC.

Farquhar, S.\*, **Heck, N.,** Schlenker, L., and Morley, J.W. (2021) Comparing social data to ecological models: environmental factors affecting the North Carolina shrimp fishery with fishers’ perceptions, *American Fisheries Society Annual Meeting*, 6-10 November, Baltimore, MD.

Schlenker, L.S., Stewart, C., Rock, J., **Heck, N.,** and Morley, J.W. (2021) Understanding the effects of environmental variability on recruitment, growth, and abundance of penaeid shrimp populations in Pamlico Sound, North Carolina, *American Fisheries Society Annual Meeting*, 6-10 November, Baltimore, MD.

Pezeshki, E.\*, Xu, Y.\*, Kops, J.\*, and **Heck, N.** (2021) Flood forecasting, trends in migration, and related expected Damages in Greenville, North Carolina, *Young Coastal Scientists and Engineers Conference*, October 29-31, Myrtle Beach, SC.

Pomeroy, C., Culver, C., and **Heck, N.** (2021) Policy and Practice in Marine Space Use Governance: On Common Ground or at Cross Purposes? *Society for Applied Anthropology Annual Meeting*, March 18-19 & 22-27th 2021, Norfolk, VI.

Goldberg, L., **Heck,** N., Lagomasino, D., and Fatoyinbo, L. (2020) The Global Distribution of Human and Natural Threats to Protected Mangrove Regions, *AGU Fall Meeting*, 1-17 December, online.

Pomeroy, C., Culver, C.. and **Heck, N.** (2020) Policy and Practice in Marine Space Use Governance: On Common Ground Or At Cross Purposes? , *Society for Applied Anthropology Annual Meeting*, March 17-21, Albuquerque, NM.

Culver, C., Pomeroy, C., and **Heck, N.** (2020) Beyond mapping: capturing the complexities of fisheries space use to better integrate aquaculture with other ocean uses, *Aquaculture America* *2020*, Feb 9-12, Honolulu, HI.

**Heck, N.,** Pomeroy, C. and Culver, C. (2019) Integrating aquaculture & fisheries space use values and needs into siting decisions, *Society for Applied Anthropology Annual Meeting*, March 19-23, Portland, OR.

Lykkebo Petersen\*, K., **Heck, N.**, Paytan, A., and Potts, D.C. (2017) Desalination brine discharge impacts on coastal biology and water chemistry - a case study from Carlsbad Southern California. *AGU Fall Meeting*, 11-15 December, New Orleans, LA.

**Heck, N.,** Stedman, R., and Gaden, M. (2017) The goals for and challenges of incorporating HD information into fishery management. *8th World Recreational Fishing Congress*, July 16-20, Victoria, BC.

Faraola, S.\*, **Heck, N.**, Mirza Ordshahi, B.\*, and Paytan, A. (2016) Coastal Residents Ocean Literacy about Seawater Desalination and its Impacts on Marine Ecosystems in the Monterey Bay. *AGU Fall Meeting*, 12-16 December, San Francisco, CA.

Lykkebo Petersen, K.\*, **Heck, N.**, Paytan, A., and Potts, D.C. (2016) Impacts of effluent from Carlsbad Desalination Plant on the coastal biology and chemistry in a *in-situ*study of pre- and post-discharge. *AGU Fall Meeting*, 12-16 December, San Francisco, CA.

**Heck, N.**, Paytan, A., and Potts, D. (2016) Coastal Residents’ Perception of Seawater Desalination and Its Impacts on Coastal Ecosystems, *Association of* *American Geographers Annual Meeting*, 29 March -02nd April 2016, San Francisco, CA.

**Heck, N.**, Paytan, A., and Potts, D. (2016) Coastal Residents’ Perception of Seawater Desalination and Its Impacts on Coastal Ecosystems, *Ocean Sciences Meeting*, 21-26th February 2016, New Orleans, LA.

Peterson, K., Paytan, A., Potts, D., and **Heck, N.** (2016) Impacts of effluent from Carlsbad Desalination Plant on the coastal biology and chemistry - a in-situ study of pre- and post-discharge, *Ocean Sciences Meeting*, 21-26th February 2016, New Orleans, LA.

Johnson, K., Klain, S, **Heck, N.**, and Spalding, A. (2015) Towards Untangling Social-Ecological Choices: A Transdisciplinary Approach to Determine the Key Drivers of Fishing Effort in the US West Coast Groundfish Fishery. *145th American Society Fisheries Meeting*, August 16-20, Portland, OR.

Stedman, R., **Heck, N.**, and Gaden, M. (2015) Human Dimensions of Great Lakes Fisheries: Managers' Information Needs, *58th Annual Conference on Great Lakes Research,*International Association for Great Lakes Research, May 25-29th, Burlington, VT.

**Heck, N.,**Paytan, A., Potts, D., and Haddad, B. (2015) Coastal SEES: Brine discharge from desalination plants, *NSF Coastal SEES PI Meeting*, January 29-30th, 2015 at NSF Headquarters in Arlington, VA.

**Heck, N.,** Stedman, R., and Gaden, M. (2013) Integration Human Dimensions into Great Lakes Fishery Management: Opportunities and Challenges, *25th International Congress for Conservation Biology*,July 21-25, Baltimore, MD.

**Heck, N**., Stedman, R., and Gaden, M. (2013) Human Dimension information needs for Great Lakes Fishery Management, *19th International Symposium on Society and Resource Management,* June 4-8, Estes Park, CO*.*

**Heck, N.** (2010) Defining success: Stakeholders’ opinion in two MPA sites on Canada’s West coast, *24th International Congress for Conservation Biology*, July 3-7, Edmonton, AB.

**Heck, N.,** (2009) How to measure MPA success - a stakeholders’ perspective in the Pacific Rim National Park Reserve, *Ocean Management Research Network National Conference*, October 21-24, Ottawa, ON.

Dearden, P., **Heck, N**., and Gray, D. (2009) Global Context for MPAs, *Marine Protected Areas in British Columbia meeting: Where are We Going and How Do We Get There?*, October 6-7, Duncan, BC.

**Heck, N**. (2009) Stakeholders’ opinions on MPA performance and evaluation needs in the Pacific Rim National Park Reserve, *1st International Marine Conservation Congress*, May 19-24, Washington, DC.

### **Newspaper, Newsletter and Web Articles**

Heck, N. (2021) Ripple Effect, *Outer Banks Milepost Magazine*, November 2021.

**Service**

**Service to THE Department**

2020-2023 Personnel Committee, Department of Coastal Studies

2021 Environmental Social Scientist Search Committee, Department of Coastal Studies

**Service to THE University**

### 2021-present NSF National Research Traineeship Admissions Committee, Coastal Community Environmental Data Scholars

2020-present Graduate Curriculum Committee, Department of Coastal Studies

**Service to The Scientific community**

**Working groups & Panels**

2023 *NSF REU panel* on Coastal Resilience in Hurricane Impacted Social-Ecological Systems, June 5th 2023

2022 *People and Wetlands*, Wetlands Regional Monitoring Working group, San Francisco Bay Estuary Partnership

2022 National Socio-Environmental Synthesis Center (SESYNC) working group on *Mangrove Science for Action – How threats and National Governance shape Mangrove Conservation Outcomes*

2019 Aquaculture Panel, *Coastal and Marine Policy* (Invited), University of California, Santa Cruz

2018 Developing Socioeconomic Indicators for NOAA's National Coral Reef Monitoring Program, NOAA

2018 National Science Foundation*, Coastlines and People* (Invited), San Diego, CA

**Reviewer**

Journals Conservation Letters, Science of the Total Environment, Environmental Science and Policy, Marine Policy, Environmental Management, Journal of Environmental Planning and Management, Ocean and Coastal Management, Environmental Monitoring and Assessment, Journal of Great Lakes Research, Coastal Management, Human Dimensions of Wildlife, Management of Biological Invasions, Natural Resources Forum, Ecological Anthropology, People and Nature, Environment, Systems and Decisions, Water Research and Sustainability

Books *Marine Environmental Impact of Seawater Desalination*, proposal, Elsevier, 2016

Grants NOAA Review Panel (2021, 2023)

NSF Postdoctoral Research Fellowships program (2021)

Great Lakes Fishery Commission (2014)

NY Sea Grant (2019)

**Editor**

Journals Frontiers in Marine Science (Guest editor)

**Conference Activities**

2023 Session Co-Chair, Mangroves and MPAs: How can we increase effective and systematic protection of mangroves and their ecosystem services?, *International Marine Protected Area Congress (IMPAC) 5*, Vancouver, BC.

2016 Session Chair, Coastal and Marine Session, *Association of American Geographers Annual Meeting*, San Francisco, CA.

2016 Session Co-chair, A holistic discussion on the impacts of seawater desalination on the marine environment: research, monitoring, Town Hall, *Ocean Sciences Meeting*, New Orleans, LA.

2016 Session Co-chair, The Impact of Seawater Desalination on the Marine Environment, Poster Session, *Ocean Sciences Meeting*, New Orleans, LA.

**Science Communication and outreach**

2018-2021 Waste FEW ULL, Belmont Forum - NSF, University of California, Santa Cruz

2018 Expanding Your Horizon, Hartnell College, Salinas, CA

2014 **Ocean science outreach**, University of California, Santa Cruz

2013-2014 HDRU fishery management outreach, Cornell University

**Affiliations & Memberships**

**Affiliations**

2020- Coastal Studies Institute, East Carolina University

2014- Institute of Marine Sciences, University of California, Santa Cruz

2011-2014 Human Dimensions Research Unit, Natural Resources, Cornell University

2010- Yorkshire Network for Canadian Studies

2008-2011 Water@Leeds Research Group, University of Leeds

2008-2011 Marine Protected Area Research Group, University of Victoria

**Memberships in Professional Organizations**

* American Association of Geographers
* American Fisheries Society
* International Association for Society and Natural Resources
* Society for Conservation Biology
* Conservation GIS
* International Association of the Sciences of Limnology and Oceanography
* Valuing Nature Network

**Software Skills**

ArcGIS, SPSS, R, Qualtrics, QGIS, Minitab, Expert Choice, Ucinet, Atlas.ti, NVivo, ENVI, SeaDAS