



UNITED STATES DEPARTMENT OF COMMERCE  
**National Oceanic and Atmospheric Administration**  
**National Marine Fisheries Service**  
**Alaska Fisheries Science Center**

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November 12, 2020

David Witherell,  
Executive Director North Pacific Fishery Management Council  
605 West 4th, Suite 306 Anchorage,  
Alaska 99501-2252

Dear Mr. Witherell:

It is my sincere honor to highly recommend Dr. Marysia Szymkowiak as a member of the Scientific and Statistical Committee (SSC) of the North Pacific Fishery Management Council (NPFMC) for 2021. Marysia is a Social Scientist with the NOAA Fisheries Alaska Fisheries Science Center, who focuses on the intersection between research and policy, coupling scientific ingenuity and stakeholder engagement to inform fisheries management processes.

Marysia would be a great contributor to the SSC bringing a wealth of interdisciplinary social science expertise and knowledge of Alaska fisheries, fishing communities, and management systems. Since earning her PhD in Marine Policy from the University of Delaware's School of Marine Science and Policy in 2015, Marysia has been the single or first author on a dozen publications, including groundbreaking work on quantifying women's participation in fisheries and the role of the fishing family in adapting to changing conditions. She has an interdisciplinary background in social sciences including sociology, political science, anthropology, and economics with a skill set that spans qualitative and quantitative social science methods from focus groups and semi-structured interviews to econometrics as well as experience using qualitative network models that bridge disciplinary divides. Marysia has worked throughout Alaska fishing communities to understand how individuals, families, and communities participate in, derive well-being from, and adapt to changes in fisheries systems. She also has tremendous expertise in fisheries management system in Alaska, having led the Twenty-year Review of the Pacific Halibut and Sablefish IFQ Program in 2016 and serves on the NMFS Catch Share Working Group and the Social Scientists in Regional Fisheries Management Working Group, as well as conducting research on State limited entry programs and other Federal rationalization programs.

Marysia would bring a wealth of knowledge about the Council process and the

underlying data systems that inform it to the SSC. As a member of the Council's Social Science Planning Team and Gulf of Alaska Groundfish Plan Team, Marysia has a deep understanding of how social science is and could be used in the North Pacific fisheries management process. In her own research, Marysia has examined nearly every data source that is regularly used in the Council process from EDRs to fish tickets and QS holder data. She has also worked to incorporate new or underutilized data and information sources into analyses, as well as tools to make existing data more accessible, which will be a useful perspective for staff analysts to have on the SSC.

Marysia's research background, qualitative and quantitative skillset, and enthusiasm for improving the scientific process that underlies fisheries management in Alaska would make her a great addition to the SSC, and complement its existing expertise in the social sciences. Marysia understands the importance of the SSC in informing the scientific integrity that underlies the Council process and would be excited at the opportunity to contribute to the sustainable management of North Pacific fisheries through this role.

Thank you for considering my nomination of Dr. Marysia Szymkowiak to the SSC.

Sincerely,

A handwritten signature in black ink that reads "Robert Foy". The signature is written in a cursive, slightly slanted style.

Robert Foy

Dr. Marysia Szymkowiak  
Curriculum Vitae

**Social Scientist**  
NOAA Fisheries Alaska Fisheries Science Center  
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**Education**

**Ph.D.** University of Delaware, Marine Studies/Fisheries Management, 2015  
**M.A.** American University, International Environmental Policy, 2009  
**B.A.** Rutgers University, Sociology, 2005

**Experience**

**2017-present** **Social Scientist**, Economic and Social Sciences Research Program, NOAA Alaska Fisheries Science Center (AFSC); Juneau, AK.  
**2016-2017** **Social Scientist, Pacific States Marine Fisheries Commission**, Economic and Social Sciences Research Program, NOAA AFSC Juneau, AK.  
**2015-2016** **Alaska Sea Grant Fellow**, National Marine Fisheries Service Alaska Regional Office; Juneau, Alaska  
**2013-2015** **Social Scientist, Pacific States Marine Fisheries Commission**, Economic and Social Sciences Research Program, NOAA AFSC Juneau, AK.  
**2012** **Fisheries Economist Intern**, National Marine Fisheries Service Alaska Regional Office; Juneau, Alaska.  
**2009-2011** **Oak Ridge Institute for Science and Education Research Fellow**, U.S. Environmental Protection Agency, Office of Water; Washington, DC.  
**2007-2009** **Teaching and Research Assistant**, American University, Global Environmental Policy Program; Washington, DC.  
**2008** **Fisheries Researcher**, American Association for the Advancement of Science; Washington, DC.  
**2007** **Fisheries Researcher**, Cape Cod Commercial Hook Fishermen's Association (CCCHFA); North Chatham, Massachusetts.

**Publications**

**Szymkowiak, M.** and S. Kasperski. Sustaining an Alaska coastal community: integrating place based well-being indicators and fisheries participation. Forthcoming in *Coastal Management*.

Rosellon-Druker, J., **M. Szymkowiak**, K.Y. Aydin, C.J. Cunningham, E. Fergusson, S. Kasperski, G.H. Kruse, J.H. Moss, M. Rhodes-Reese, K. Shotwell, E. Spooner, and E.M. Yasumiishi. Participatory place-based IEA in Sitka, Alaska: Constructing and operationalizing a socio-ecological conceptual model for sablefish (*Anoplopoma fimbria*). Forthcoming in special issue "Understanding Ecosystem Processes in the Gulf of Alaska: Volume 3", in *Deep-Sea Research Part II: Topical Studies in Oceanography*.

**Szymkowiak, M.** and M. Rhodes-Reese. Adaptive behaviors to marine ecosystem shifts: examining fishermen's strategies in response to abundant juvenile sablefish (*Anoplopoma fimbria*) in Alaska. Forthcoming in *Frontiers of Marine Science*.

## Dr. Marysia Szymkowiak Curriculum Vitae

- Szymkowiak, M.**, S. Marrinan, and S. Kasperski. (2020). The Pacific Halibut (*Hippoglossus stenolepis*) and Sablefish (*Anoplopoma fimbria*) Individual Fishing Quota Program: A twenty-year retrospective. Forthcoming in *Marine Fisheries Review*.
- Szymkowiak, M.** (2020). Adaptations and well-being: Gulf of Alaska fishing families in a changing landscape. *Marine Policy* 197: 105321.
- Szymkowiak, M.** and M. Rhodes-Reese. (2020). Addressing the gender gap: using quantitative and qualitative methods to illuminate women's fisheries participation. *Frontiers of Marine Science* 7: 299.
- Szymkowiak, M.** (2020). Genderizing fisheries: Assessing over thirty years of women's participation in Alaska fisheries. *Marine Policy*: 103846
- Rosellon-Druker, J., **M. Szymkowiak**, C. Cunningham, S. Kasperski, G. Kruse, J. Moss, E. Yasumiishi. (2019). Development of socio-ecological conceptual models as the basis for an IEA framework in Southeast Alaska. *Ecology and Society* 24(3): 30. <https://doi.org/10.5751/ES-11074-240330>
- Szymkowiak, M.**, Kasperski, S., and D. K. Lew. (2019). Identifying community risk factors for quota share loss. *Ocean & Coastal Management* 178: 104851.
- Szymkowiak, M.**, and A. Himes-Cornell. (2018). Fisheries allocations for socioeconomic development: Lessons learned from the Western Alaska Community Development Quota (CDQ) program. *Ocean & Coastal Management* 155: 40-49.
- Szymkowiak, M.**, and A. Himes-Cornell. (2017). Do active participation measures help fishermen retain fishing privileges?. *Coastal Management* 45(1): 56-72.
- Szymkowiak, M.** (NPFMC/NMFS) (2017). Twenty-year review of the Pacific Halibut and Sablefish IFQ Program. Principal Investigator. Available online: [https://www.npfmc.org/wp-content/PDFdocuments/halibut/IFQProgramReview\\_417.pdf](https://www.npfmc.org/wp-content/PDFdocuments/halibut/IFQProgramReview_417.pdf)
- Szymkowiak, M.**, and R. Felthoven. (2016). Understanding the determinants of hired skipper use in the Alaska halibut individual fishing quota fishery. *North American Journal of Fisheries Management* 36(5): 1139-1148.
- Szymkowiak, M.**, and A. Himes-Cornell. (2015). Towards individual-owned and owner-operated fleets in the Pacific Halibut and Sablefish IFQ program. *Maritime Studies* 14(1): 19.
- Szymkowiak, M.** Examining the expansion of qualitative network models towards integrating multifaceted human dimensions. In review at *Frontiers of Marine Science*.
- Szymkowiak, M.** Incorporating the complexity of human dimensions within integrated ecosystem assessments. In review at *ICES Journal of Marine Science*.
- Suryan, R., M. Lindeberg, S. Barbeaux, M. Dorn, T. Gelatt, D. Hanselmann, D. Kimmel, B. Laurel, J. Moran, W. Palsson, L. Rogers, I. Spies, K. Sweeney, **M. Szymkowiak**, E. Yasumiishi, and S. Zador. Ecosystem response to a prolonged marine heatwave in the Gulf of Alaska. In review at *Nature Communications*.

### **Presentations**

- “Building human adaptation into the GOA-CLIM.” A presentation to GOA-CLIM researchers. Juneau, AK; November 2020.
- “Sablefish case study: fleet performance indicator” Presentation for the Ecosystem and Socioeconomic Profiles for Stock Assessments Workshop. Juneau, AK; June 2020.

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“What can social science do for you?” Presentation for AFSC Winter Seminar Series. Juneau, AK; March 2020.

“Accounting for changing fishing practices in stock assessments – a case study of adaptive behaviors in the Alaska sablefish fixed-gear fishery.” SocioEconomic Aspects in Stock Assessments Workshop (SEASAW); New Orleans, LA; February 2020.

“Sustaining an Alaska coastal community: integrating place based well-being indicators and fisheries participation.” Alaska Marine Science Symposium; Anchorage, AK; January 2020.

“Integrating local knowledge into ecosystem based fisheries management – a case study of Sitka,” American Fisheries Society Alaska Chapter Annual Meeting; Sitka, AK; March 2019.

“Rural access and entry opportunities in the halibut and sablefish IFQ fisheries,” Presentation for the Prince William Sound Science Center; Cordova, AK; September 2018.

“Family resilience and women’s participation in Alaska’s changing fisheries,” International Institute of Fisheries Economics and Trade (IIFET) 2018; Seattle, WA; July 2018.

“Identifying community risk factors for quota loss – examining QS transfer patterns in the Pacific halibut IFQ fishery,” International Institute of Fisheries Economics and Trade (IIFET) 2018; Seattle, WA; July 2018.

“Rural access and entry opportunities in the halibut and sablefish IFQ fisheries,” Presentation for the IFQ Outreach Meeting in Kodiak; Kodiak, AK; June 2018.

“Human dimensions in North Pacific fisheries management”, Presentation to the Living Marine Resources Cooperative Science Center; Seattle, WA; June 2018.

“Twenty-year review of the Pacific halibut and sablefish IFQ Program,” North Pacific Fishery Management Council; Anchorage, AK; October 2016.

“Understanding the determinants of hired skipper use in the Alaska halibut IFQ fishery,” North American Association of Fisheries Economists (NAAFE); Ketchikan, Alaska; May 20, 2015.

“Examining the impacts of active participation mandates in the Alaskan halibut IFQ program,” American Fisheries Society – Alaska Chapter Meeting; Juneau, Alaska; October 20-24, 2014.

“A study prospectus: understanding active participation, crew compensation, and lease rates in the BSAI crab rationalization program,” North Pacific Fishery Management Council; Seattle, Washington; February 5, 2014.

“Assessing the hired skipper provision in the halibut IFQ program – A Proposal,” Presentation to the Economics and Social Science Research Division of the Alaska Fisheries Science Center; Seattle, Washington; November 14, 2013.

“Assessing the impacts of community protection measures in catch share programs,” Poster Presentation at the Managing Our Nation’s 3 Fisheries Conference; Washington, D.C.; May 7-9. 2013.

“Emerging Contaminants in Coastal Waters,” Moderator of Panel at the Annual EPA National Estuary Program Meeting, Arlington, VA; March, 2011.

# Dr. Marysia Szymkowiak

## Curriculum Vitae

### Skills

- Qualitative data gathering – semi-structured interviews, focus groups, surveys, case studies
- In vivo coding, grounded theory
- Social network analysis
- Principal component analysis, factor analysis, K-means clustering
- Econometrics
- Qualitative network modeling
- Statistical analysis packages – STATA, MAXQDA, Atlas.ti, Nvivo, Gephi, Dia, ArcGIS, R

### Current Research Areas

#### *Examining the role of women within Alaska fisheries*

Women's participation in Alaska commercial fisheries parallels trends and influences documented around the world. This participation is highly responsive to and bound by family conditions and is influenced by gender stereotypes, taboos, norms, and harassment. This research examines the dynamics of women's engagement in Alaska commercial fisheries including their roles within fishing families, the evolution of women's participation, perceptions of equity and access, and the effects of gender traditionalism. The study includes the development of a methodology to incorporate a gender variable into fisheries datasets, the lack of which has previously impeded accounting for women in fisheries. The project is now examining women's upward mobility in fisheries and responses to previous fisheries shocks.

#### *Gulf of Alaska Integrated Ecosystem Assessment (IEA)*

Integrated Ecosystem Assessments (IEAs) are an approach to ecosystem-based management that is increasingly utilized by NOAA. IEAs integrate all components of an ecosystem into the decision-making process to examine trade-offs in management decisions and determine what is more likely to achieve a desired outcome. The GOA IEA has included the development of a methodology for empowering stakeholders in the management process through engagement in the creation of well-being indicators for their community tied to fisheries. This research also included developing conceptual models for four focal species in the region and examining how ecological perturbations manifest across ecosystem components through qualitative network models. Ongoing work related to the GOA IEA includes developing mechanisms for more representative and holistic inclusion of human dimensions within ecosystem based fisheries management. This includes using content analysis of literature to build more realistic qualitative network models of human well-being, heterogeneity, and adaptive behavior. It also includes the development of a conceptual framework for integrating human dimensions into ecosystem based fisheries management that will incorporate human diversity and adaptability, ensuring model outputs are more accurate and realistic.

#### *Examining the effects of a changing ecosystem on the sablefish IFQ fishery*

The economic and social implications of the large 2014 sablefish recruitment class are multifaceted and, for the fixed-gear fleet, are coupled with whale depredation issues which have been occurring for years. Behavioral changes in response to these ecological disturbances may have implications for the sablefish stock assessment. The intent of this project is to examine these issues and to understand the effects of a changing ecosystem, and responses to it, on both human populations and the biophysical

## Dr. Marysia Szymkowiak Curriculum Vitae

environment. This project is a collaborative, interdisciplinary effort between social and natural scientists across the AFSC, seeking to incorporate these changing dynamics within socioeconomic models and stock assessments.

### *Exploring paths of entry in Alaska fisheries*

A concern over the greying of Alaska's fishing fleet coupled with evidence of a shifting age distribution participants toward a new generation warrants further examination, especially as similar issues of accessibility are surfacing across the Nation's fisheries and are being contextualized in broader issues of community well-being and resilience. This project examines paths of entry into Alaska's fisheries and how they may differentially manifest themselves across Alaska's diverse limited entry and catch share programs, using a mix of qualitative and quantitative methods. Foundational to this research is the compilation of a dataset that tracks participants across a variety of vestment levels in fisheries, including crew, permit holders, and quota shareholders.

### *GOA-CLIM – Assessing climate impacts on fishing communities in the Gulf of Alaska*

From individuals to families and communities, social actors and systems modulate human interactions with ecosystems through established mechanisms and institutions as well as adaptations. In turn, adaptive diversity has implications for the ultimate resilience of social-ecological systems and the well-being of individuals, families, and communities. This project will generate a body of knowledge on human adaptation in the face of fishery changes that can be incorporated into dynamic ecosystem models. It will include quantitative analyses of past responses to fisheries shocks to understand adaptive portfolios and their interactions with demographic variables. The study will also apply a participatory approach to research planning in which community leaders and stakeholder representatives will help to inform how a mix of methodologies ranging can be applied most effectively to solicit representative and comprehensive input.

### **Media Coverage**

- Alaska News Nightly
- Seafood News Magazine
- Alaska Fish Radio
- Homer News
- KCAW Sitka
- KMXT Kodiak
- Greenwire
- Pacific Fishing Magazine
- Alaska Dispatch News
- Cordova Times
- KBBI Homer
- KFSK Petersburg

NOAA webstories and other blog posts:

“Exploring women’s engagement in 30 years of Alaska fisheries”:

<https://www.fisheries.noaa.gov/feature-story/exploring-womens-engagement-30-years-alaska-fisheries>

“Women’s global fisheries participation”: <https://www.fisheries.noaa.gov/feature-story/womens-global-fisheries-participation>

“Fishing families and women in Alaska’s fisheries”:

<https://www.fisheries.noaa.gov/alaska/socioeconomics/fishing-families-and-women-alaskas->

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fisheries

“Addressing the gender data gap and illuminating women’s participation in fisheries”:  
<https://www.genderaquafish.org/2020/06/04/addressing-the-gender-data-gap-and-illuminating-womens-participation-in-fisheries/>

**Awards and Recognitions**

- 2018** NOAA Science accomplishment for the NOAA Science Advisory Board meeting
- 2015-2016** Alaska Sea Grant Fellowship, NMFS and Sea Grant
- 2013-2015** Marine Resource Economics Graduate Fellowship, NMFS and Sea Grant
- 2011-2012** Marian R. Okie Fellowship, University of Delaware
- 2009-2011** Environmental Policy Research Fellowship, Oak Ridge Institute of Science and Education
- 2007-2009** Dean’s Award, American University.
- 2005** Athenaeum Honors Society, Rutgers College, Rutgers University
- 2001-2005** Outstanding Scholars Scholarship, Rutgers University
- 2001-2005** Rutgers College Dean’s List, Rutgers University

**Working Groups and Council Plan Teams**

- NPFMC Social Science Plan Team
- NPFMC Gulf of Alaska Groundfish Plan Team
- NMFS Social Scientists in Regional Fisheries Management Working Group
- NMFS Catch Shares Working Group
- NMFS Human Dimensions Integrated Ecosystem Assessment Working Group
- Alaska Fisheries Science Center Harassment Prevention Working Group
- International Year of the Salmon Human Dimensions Theme Group

**Affiliations**

- North American Association of Fisheries Economists
- International Institute of Fisheries Economics and Trade
- American Fisheries Society – Alaska Chapter
- American Association of Geographers