

Zoology at the University of Otago (New Zealand). He then received a Killam fellowship for postdoctoral work at Dalhousie University. He was elected member of the Young Academy of Scotland in 2007, Fellow of the Royal Statistical Society in 2009, and Fellow of the Royal Society of Biology in 2016. Dr. Lusseau has worked on sustainable wildlife management since his PhD at Otago, particularly focussing on developing quantitative methods to detect and avoid wicked problems when managing these socioecological systems. He is a member of IUCN's Cetacean Specialist Group and Sustainable Use and Livelihoods Specialist Group and recently convened the marine mammal assessment chapter of the 2nd UN World Ocean Assessment. ([link](#))

Dawn Noren – Research Fish Biologist, Conservation Biology Division, National Oceanic and Atmospheric Administration – dawn.noren@noaa.gov

Dr. Dawn Noren is a research fishery biologist, with expertise in physiological ecology, at the NOAA Fisheries Northwest Fisheries Science Center in Seattle, WA. She is currently a member of the International Whaling Commission Scientific Committee and primarily works with the environmental concerns and whale watching sub-committees. Her research includes energetics and metabolism, assessment of body condition, diving physiology, and anthropogenic impacts. Her recent work focuses on killer whale prey requirements, the effects of vessels and sound on cetacean behavior and energetics, factors influencing killer whale body condition indices, the transfer of contaminants from female dolphins and killer whales to their calves, and Southern Resident killer whale habitat use patterns. Her earlier research focused on Steller sea lion, northern elephant seal, and bottlenose dolphin physiology. Previously, Dr. Noren was a National Research Council (NRC) Postdoctoral Research Associate at the National Marine Mammal Laboratory at the NOAA NMFS Alaska Fisheries Science Center in Seattle, WA. Dr. Noren earned a M.S. in Marine Sciences and a Ph.D. in Ecology and Evolutionary Biology, both from the University of California, Santa Cruz. She earned a B.S. in Biological Sciences with an emphasis in Marine Sciences from the University of Maryland, College Park. ([link](#))

Susan Parks – Associate Professor, Biology, Syracuse University – sparks@syr.edu

Dr. Susan Parks' research focuses on the ecology and evolution of acoustic signaling. Diverse research topics in the lab span the fields of behavioral ecology, bioacoustics, biological oceanography, and conservation biology. Current projects in the lab involve studies of marine and terrestrial animals ranging from observational studies characterizing the acoustic behavior of species to experimental studies investigating behavioral functions of sounds and the impacts of noise on communication. Dr. Parks holds a PhD from Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution and a BA from Cornell University ([link](#))

Ron Thom (chair) – Staff Scientist Emeritus, Coastal Sciences Division, Pacific Northwest National Laboratory – ron.thom@pnnl.gov

Dr. Ron Thom has conducted applied research in coastal and estuarine ecosystems since 1971. His research includes coastal ecosystem restoration; adaptive management of restored systems; benthic primary production; ecosystem monitoring; climate change and adaptation; carbon storage in restored coastal systems, and ecology of fisheries resources. Dr. Thom has directed approximately 200 multidisciplinary ecological studies and worked on systems in California, Washington, Oregon, Alaska, Massachusetts, New York, Nebraska, and Alabama. He chaired the original Technical Advisory Committee of the EPA's Puget Sound Estuary Program, was appointed by the Governor of Washington to the 2015 Northwest Straits Commission, and served as a member of US EPA Science Advisory Board panel reviewing the Great Lakes Restoration Program in 2011. Dr. Thom served on the National Academy panel that developed recommendations for monitoring the effectiveness

recovery actions in the Gulf of Mexico coastal ecosystem following the 2010 oil spill. He co-chaired the 2015 conference of the Coastal and Estuarine Research Federation (CERF), and co-chaired the 2016 Salish Sea Ecosystem Conference. In 2010, he was elected to the Washington State Academy of Sciences, and in 2016 was elected president-elect of the Academy to serve in 2018-2020. Dr. Thom managed the Coastal Ecosystem technical group at PNNL until 2013. He currently serves as the Senior Science Advisor to the Puget Sound Partnership, which is the EPA National Estuary Program in Puget Sound. ([link](#))

Dom Tollit – Senior Research Scientist, SMRU Consulting – djt@smruconsulting.com

Dr. Dom Tollit is a Principal Scientist with SMRU Consulting. He has over 28 years of experience studying the behavioural ecology, foraging, and population dynamics of marine predators. His primary research interests are to understand the ecological role of pinnipeds in coastal habitats and to define key parameters within multi-species environmental risk assessment frameworks. Following a PhD at the University of Aberdeen in Scotland, Dr. Tollit worked for SMRU in St. Andrews University, the University of Tasmania and the National Trust for Fiji, before leading a Steller sea lion foraging ecology research program at the University of British Columbia. Since 2009, Dr. Tollit has undertaken a variety of North American based consultancy projects, including noise impact assessment, environmental and acoustic-based monitoring programs and pinniped ecological research. His collaborative research has led to more than 35 journal publications in the field of marine mammal science. Recent project experience includes working with industry, NGOs, federal and local regulators (DFO, NOAA, CSLC) and a variety of academic institutions in Canada and the USA. He is currently the technical advisor to Vancouver Fraser Port Authority's ECHO program and actively involved in improving Population Consequences of Disturbance (PCOD) assessments. ([link](#))

APPENDIX B – Q&A prepared for the WDFW Advisory Committee Draft Bibliography

Objective

The purpose of this document is to track literature that the WSAS Underwater Acoustics and Disturbance Committee may consider in reviewing the best available science on underwater acoustics and disturbance of Southern Resident Killer Whales (SRKW) by small vessels. The committee is reviewing literature from species beyond *Orinus orca* due to the dearth of information on SRKW directly. The committee has excluded multiple studies on responses to specific sound types such as pile-driving and naval sonar that are not relevant to the scope of this review. This list of literature reflects suggestions made by scientists participating in the April 27, 2020 workshop and stakeholders participating in the May 6, 2020 workshop.

Topics

- Comparative connection of taxa
 - Patterns of behavior and abandonment in other cetaceans
 - Stress physiology
- Effects of
 - Physical disturbance of vessels
 - Underwater noise
 - Echo sounders
 - Acute vs Chronic exposure
 - Numbers of vessels and amount of time spent
 - Interacting stressors – relative effects
- Boat density and distribution – Small vessels, Whale watch vessels
 - Especially around San Juans
- Vessel noise generation – cavitation, technology
- Ocean ambient noise; masking
- Sound propagation
- Marine mammal hearing
- Types of effects
 - Physiology
 - Behavior
- Whale watch customers
 - What customers want (outreach, closeness to whales, # of whales)
 - Demographics
- Whale watching
 - Effects on conservation
 - Best practices for conservation
 - Effects of public perception
 - Sentinel effect
- Adaptive management of regulations

Tags:

[Orca] = Killer Whales

[Comparative] = evidence for comparable effects between species

[Vessel] = Focus on vessel effects

[Disturbance] = Disturbance

[Cumulative] = compounding effects of multiple stressors

[Boats] = Focus on the boat sounds, density, distribution

[Acoustics] = Sound propagation; focus on the acoustic stimuli or hearing

[Physiology] = Physiology and/or energetics effects

[Behavior] = Behavioral effects

[Communication] = Changes in echolocation/acoustic behavior

[Customers] = Info about whale watch customer demographics, desires

[WhaleWatch] = sentinel or conservation effect of whale watching; effects of public perception

[Management] = pertaining to management/regulations

[NPR] = not peer reviewed

Bibliography

1. Aktas, B., Atlar, M., Turkmen, S., Shi, W., Sampson, R., Korkut, E., & Fitzsimmons, P. (2016). Propeller cavitation noise investigations of a research vessel using medium size cavitation tunnel tests and full-scale trials. *Ocean engineering*, 120, 122-135. [Vessels][Acoustics]
2. Andersen, M.S., Miller, M.L. (2006) Onboard Marine Environmental Education: Whale Watching in the San Juan Islands, Washington. *Tourism in Marine Environments* 2:2 p 111-118 [WhaleWatch]
3. Arcangeli, A., and Crosti, R. (2009). "The short-term impact of dolphin-watching on the behaviour of bottlenose dolphins (*Tursiops truncatus*) in western Australia," *J. Mar. Anim. Ecol.* 2, 3-9. [Vessels][Behavior]
4. Ashe E., Noren D.P., Williams R. (2010) Animal behaviour and marine protected areas: Incorporating behavioural data into the selection of marine protected areas for an endangered killer whale population. *Animal Conservation*.13:196-203. [Orca][Behavior]
5. Ashe, E., Wray, J., Picard, C. R., & Williams, R. (2013). Abundance and survival of Pacific humpback whales in a proposed critical habitat area. *PloS one*, 8(9). [Behavior]
6. Au, J. K. Ford, J. K. Horne and K. A. Newman Allman, "Echolocation signals of free-ranging killer whales (*Orcinus orca*) and modeling of foraging for Chinook salmon (*Oncorhynchus tshawytscha*).," *Journal of the Acoustical Society of America*, vol. 115, no. 2, pp. 901-909, 2004. [Orca][Communication]
7. Au, W. W., & Hastings, M. C. (2008). *Principles of marine bioacoustics* (pp. 121-174). New York: Springer. [Acoustics]
8. Ayres, K.L., R.K. Booth, J.A. Hempelmann, K.L. Koski, C.K. Emmons, R.W. Baird, K. Balcomb-Bartok, M.B. Hanson, M.J. Ford, and S.K. Wasser. 2012. Distinguishing the impacts of inadequate prey and vessel traffic on an endangered killer whale (*Orcinus orca*) population. *PLoS ONE* 7:e36842. [Cumulative] [Vessel] [Orca]
9. Bahtiarian, M., & Fischer, R. (2006). Underwater radiated noise of the NOAA ship Oscar Dyson. *Noise control engineering journal*, 54(4), 224-235. [Vessels][Acoustics]
10. Bailey, H., & Thompson, P. M. (2009). Using marine mammal habitat modelling to identify priority conservation zones within a marine protected area. *Marine Ecology Progress Series*, 378, 279-287.
11. Bain and Dahlheim, "Effects of masking noise on detection thresholds of killer whales.," in *Marine mammals and the "Exxon Valdez"*, San Diego, CA, Academic Press, 1994, pp. 243-256. [Communication]
12. Bain, D., Smith, J., Williams, R., Lusseau, D., (2006) Effects of vessels on behavior of southern resident killer whales (*Orcinus spp.*). NMFS Contract Report. [NPR][Vessels][Behavior]
13. Baird, R. W., Hanson, M. B., & Dill, L. M. (2005). Factors influencing the diving behaviour of fish-eating killer whales: sex differences and diel and interannual variation in diving rates. *Canadian Journal of Zoology*, 83(2), 257-267
14. Bassett, C., Polagye, B., Holt, M., & Thomson, J. (2012). A vessel noise budget for Admiralty Inlet, Puget Sound, Washington (USA). *The Journal of the Acoustical Society of America*, 132(6), 3706-3719. [Vessels][Acoustics]
15. Baumann-Pickering, S., Frasier, K. E., Roch, M. A., McKenna, M. F., Fristrup, K. M., Stanley, J., ... & Hatch, L. (2019). Discrimination of chronic and transient sound sources in marine soundscapes. *The Journal of the Acoustical Society of America*, 146(4), 2885-2885. [Acoustics] [NPR]
16. Bechshoft, T., Wright, A. J., Weisser, J. J., Teilmann, J., Dietz, R., Hansen, M., Björklund, E., & Styrihave, B. (2015). Developing a new research tool for use in free-ranging cetaceans: recovering cortisol from harbour porpoise skin. *Conservation physiology*, 3(1), cov016. <https://doi.org/10.1093/conphys/cov016> [Physiology]
17. Bejder, L., A. Samuels, H. Whitehead, and N. Gales. 2006. Interpreting short-term behavioural responses to disturbance within a longitudinal perspective. *Animal Behaviour* 72(5):1149-1158. [Behavior] [Disturbance]

18. Bejder, L., A. Samuels, H. Whitehead, H. Finn, and S. Allen. 2009. Impact assessment research: Use and misuse of habituation, sensitisation and tolerance in describing wildlife responses to anthropogenic stimuli. *Marine Ecology Progress Series* 395:177-185.
19. Bejder, Lars and David Lusseau (2008) Valuable Lessons from Studies Evaluating Impacts of Cetacean-Watch Tourism, *Bioacoustics*, 17:1-3, 158-161, DOI:10.1080/09524622.2008.9753800 [WhaleWatch][Vessels]
20. Bejder, Samuels, Whitehead, Gales, Mann, Connor, Heithaus, Watson-Capps, Flaherty, Krutzen. 2006. Decline in Relative Abundance of Bottlenose Dolphins Exposed to Long-Term Disturbance. *Conservation Biology* 20:6, 1791-1798. [Disturbance][Behavior]
21. Bentz, J., Lopes, F., Calado, H., Dearden, P. (2016) Enhancing satisfaction and sustainable management: Whale watching in the Azores. *Tourism Management* 54:p 465-476 [Customers]
22. Blair, H. B., Merchant, N. D., Friedlaender, A. S., Wiley, D. N., & Parks, S. E. (2016). Evidence for ship noise impacts on humpback whale foraging behaviour. *Biology letters*, 12(8), 20160005. [Vessels][Behavior]
23. Booth CG, Sinclair RR and Harwood J (2020) Methods for Monitoring for the Population Consequences of Disturbance in Marine Mammals: A Review. *Front. Mar. Sci.* 7:115. doi: 10.3389/fmars.2020.00115
24. Branstetter BK, St. Ledger J, Acton D, Stewart J, Houser D, Finneran J, Jenkins K (2017) Killer whale (*Orcinus orca*) behavioral audiograms. *J Acoust Soc Am* 141: 2387–2398 [Acoustics][Orca]
25. Brooker, A., & Humphrey, V. (2016). Measurement of radiated underwater noise from a small research vessel in shallow water. *Ocean Engineering*, 120, 182-189. [Vessels][Noise]
26. Buckstaff, K.C. 2004. Effects of watercraft noise on the acoustic behavior of bottlenose dolphins (*Tursiops truncatus*) in Sarasota Bay, Florida. *Marine Mammal Science* 20:709-725. doi: 10.1111/j.17487692.2004.tb01189.x. [Communication]
27. Burgin, S., and N. Hardiman. 2015. Effects of non-consumptive wildlife oriented tourism on marine species and prospects for their sustainable management. *Journal of Environmental Management* 151:210-220. [WhaleWatch]
28. Canadian Science Advisory Secretariat. (2017) Evaluation of the Scientific Evidence to Inform the Probability of Effectiveness of Mitigation Measures in Reducing Shipping-Related Noise Levels Received by Southern Resident Killer Whales. Science Advisory Report. [Orca] [Vessels] [Management] [NPR]
29. Caro, T.M., and G. O'Doherty. 1999. On the use of surrogate species in conservation biology. *Conservation Biology* 13(4):805-814. [Comparative]
30. Castellote, M., C.W. Clark, and M.O. Lammers. 2012. Acoustic and behavioural changes by fin whales (*Balaenoptera physalus*) in response to shipping and airgun noise. *Biological Conservation* 147(1):115-122. [Communication] [Behavior]
31. Chan, A.A., Y.H. Chan, W.D. Stahlman, D. Garlick, C.D. Fast, D.T. Blumstein, and A.P. Blaisdell. 2010. Increased amplitude and duration of acoustic stimuli enhance distraction. *Animal Behaviour* 80:1075-1079. [Acoustics]
32. Chion C , Lagrois D , Dupras J. A Meta-Analysis to Understand the Variability in Reported Source Levels of Noise Radiated by Ships From Opportunistic Studies; 2019 *Frontiers in Marine Science* [Acoustics][Boats]
33. Chion C., Cantin G., Dionne S., Dubeau B., Lamontagne P., Landry J.-A., Marceau D., Martin C.C.A., Ménard N., Michaud R., Parrott L & Turgeon S. (2013) Spatiotemporal modelling for policy analysis: Application to sustainable management of whale-watching activities. *Marine Policy* 38: 151-162. [WhaleWatch][Management]
34. Chion C., Lagrois D., Dupras J., Turgeon S., McQuinn I.H., Michaud R., Ménard N. & Parrott L. (2017) Underwater acoustic impacts of shipping management measures: Results from a social-ecological model of boat and whale movements in the St. Lawrence River Estuary (Canada). *Ecological Modelling* 354: 72-87. [Acoustics][Vessel][Behavior]

35. Cholewiak, D., Clark, C.W., Ponirakis, D., Frankel, A., Hatch, L.T., Risch, D., Stanistreet, J.E., Thompson, M., Vu, E. and Van Parijs, S.M., (2018). Communicating amidst the noise: modeling the aggregate influence of ambient and vessel noise on baleen whale communication space in a national marine sanctuary. *Endangered Species Research*, 36, pp.59-75.
36. Christiansen, F., and D. Lusseau. 2015. Linking behavior to vital rates to measure the effects of non-lethal disturbance on wildlife. *Conservation Letters* 8(6):424-431. [Behavior]
37. Christiansen, F., Lusseau, D., Stensland, E., & Berggren, P. (2010). Effects of tourist boats on the behaviour of Indo-Pacific bottlenose dolphins off the south coast of Zanzibar. *Endangered Species Research*, 11(1), 91-99. [Behavior][Vessels]
38. Christiansen, F., Rasmussen, M., & Lusseau, D. (2013). Whale watching disrupts feeding activities of minke whales on a feeding ground. *Marine Ecology Progress Series*, 478, 239-251. [Behavior]
39. Clark, C.W., W.T. Ellison, B.L. Southall, L.T. Hatch, S.M. Van Parijs, A. Frankel, and D. Ponirakis. 2009. Acoustic masking in marine ecosystems: Intuitions, analysis, and implications. *Marine Ecology: Progress Series* 395:201-222. [Acoustics]
40. Cominelli, S., Devillers, R., Yurk, H., MacGillivray, A., McWhinnie, L., & Canessa, R. (2018). Noise exposure from commercial shipping for the southern resident killer whale population. *Marine pollution bulletin*, 136, 177-200. [Orca][Vessels]
41. Conn, P.B., and G.K. Silber. 2013. Vessel speed restrictions reduce risk of collision-related mortality for North Atlantic right whales. *Ecosphere* 4(4):43.
42. Constantine, R. 2001. Increased avoidance of swimmers by wild bottlenose dolphins (*Tursiops truncatus*) due to long-term exposure to swim-with-dolphin tourism. *Marine Mammal Science* 17(4):689-702. [Disturbance]
43. Constantine, R., Brunton, D.H., and Dennis, T. (2004). “Dolphin-watching tour boats change bottlenose dolphin (*Tursiops truncatus*) behavior,” *Biol. Cons.* 117, 299-307. [Vessels][Behavior]
44. Corkeron, P.J. (1995) Humpback whales (*Megaptera novaeangliae*) in Hervey Bay, Queensland: behaviour and responses to whale-watching vessels. *Canadian Journal of Zoology* 73:7 p 1290-1299 [Behavior][Vessels]
45. Courbis, S., Timmel, G., (2008) Effects of vessels and swimmers on behavior of Hawaiian spinner dolphins (*Stenella longirostris*) in Kealake‘akua, Honaunau, and Kauhako bays, Hawai‘i. *Marine Mammal Science*. DOI: 10.1111/j.1748-7692.2008.00254.x [Vessels][Behavior]
46. Cox, T.M., T.J. Ragen, A.J. Read, E. Vos, R.W. Baird, K. Balcomb, J. Barlow, J. Caldwell, T. Cranford, L. Crum, A. D’Amico, G. D’Spain, A. Fedandez, J. Finneran, R. Gentry, W. Gerth, F. Gulland, J. Hildebrand, D. Houser, T. Hullar, P.D. Jepson, D. Ketten, C.D. MacLeod, P. Miller, S. Moore, D.C. Mountain, D. Palka, P. Ponganis, S. Rommel, T. Rowles, B. Taylor, P. Tyack, D. Wartzok, R. Gisiner, J. Mead, and L. Benner. 2006. Understanding the impacts of anthropogenic sound on beaked whales. *Journal of Cetacean Research Management* 7:177-187.
47. Crain, C.M., K. Kroeker, and B.S. Halpern. 2008. Interactive and cumulative effects of multiple human stressors in marine systems. *Ecology Letters* 11:1304-1315. [Cumulative]
48. Cranford, T.W., and P. Krysl. 2015. Fin whale sound reception mechanisms: Skull vibration enables low-frequency hearing. *PLoS ONE* 10:1-17 [Acoustics]
49. Dahl, P. H., Miller, J. H., Cato, D. H., & Andrew, R. K. (2007). Underwater ambient noise. *Acoustics Today*, 3(1), 23-33. [Acoustics] [NPR]
50. De Robertis, A. and Handegard, N. O. 2013. Fish avoidance of research vessels and the efficacy of noise-reduced vessels: a review. – *ICES Journal of Marine Science*, 70:34–45. [Vessels][Acoustics]
51. Deng, Z Daniel et al. “200 kHz commercial sonar systems generate lower frequency side lobes audible to some marine mammals.” *PloS one* vol. 9,4 e95315. 15 Apr. 2014, doi:10.1371/journal.pone.0095315 [Acoustics]
52. Diefenderfer, HL, GE Johnson, RM Thom KE Buenau, LA Weitkamp, CM Woodley, AB Borde, and RK Kropp (2016) Evidence-based evaluation of the cumulative effects of ecosystem restoration. *Ecosphere* 7(3):e01242 [Management]

53. Dimmock, K., Hawkins, E.R., Tiyce, M., (2014) Stakeholders, industry knowledge and adaptive management in the Australian whale-watching industry. *Journal of Sustainable Tourism* 22:7, p 1108-1121. [WhaleWatch]
54. Donovan, C.R., C. Harris, J. Harwood, and L. Milazzo. 2013. A simulation-based method for quantifying and mitigating the effects of anthropogenic sound on marine mammals. *Proceedings of Meetings on Acoustics* 17:070043. [NPR]
55. Dyndo, M., Wiśniewska, D. M., Rojano-Doñate, L., & Madsen, P. T. (2015). Harbour porpoises react to low levels of high frequency vessel noise. *Scientific reports*, 5, 11083. [Vessels][Behavior]
56. Ellison, W.T., B.L. Southall, C.W. Clark, and A.S. Frankel. 2011. A new context-based approach to assess marine mammal behavioral responses to anthropogenic sounds. *Conservation Biology* 26:21-28. [Behavior]
57. Erbe, C. (2013). Underwater noise of small personal watercraft (jet skis). *The Journal of the Acoustical Society of America*, 133(4), EL326-EL330. [Vessels]Acoustics]
58. Erbe, C. 2013. International regulation of underwater noise. *Acoustics Australia* 41:12-19.
59. Erbe, C., Liang, S., Koessler, M., Duncan, A., Gourlay, T. (2016) Underwater sound of rigid-hulled inflatable boats. *J. Acoust. Soc. Am.* 139: 6. [Vessels]
60. Erbe, C., MacGillivray, A., & Williams, R. (2012). Mapping cumulative noise from shipping to inform marine spatial planning. *The Journal of the Acoustical Society of America*, 132(5), EL423-EL428. [Vessels][Noise]
61. Erbe, C., Marley, S., Schoeman, R., Smith, J., Trigg, L., Embling, C. (2019) The Effects of Ship Noise on Marine Mammals – A Review. *Frontiers in Marine Science* 6:606. [Vessel][Acoustics]
62. Erbe, C., Reichmuth, C., Cunningham, K., Lucke, K., & Dooling, R. (2016). Communication masking in marine mammals: A review and research strategy. *Marine pollution bulletin*, 103(1-2), 15-38. [Communication]
63. Erbe, Christine (2002) Underwater noise of whale-watching boats and potential effects on killer whales (*Orcinus orca*) based on an acoustic impact model (2002) *Marine Mammal Science*, Volume 18 Issue 2 Page 394-418 [Orca] [Vessel]
64. Farmer N.A., Baker K., Zeddies D.G., Denes S.L., Noren D.P., Garrison L.P., Machernis A., Fougères E.M., Zykov M. (2018) Population consequences of disturbance by offshore oil and gas activity for endangered sperm whales (*Physeter macrocephalus*). *Biological Conservation* 227:189-204. [Disturbance]
65. Farmer N.A., Noren D.P., Fougères E.M., Machernis A., Baker K. (2018) Resilience of the endangered sperm whale *Physeter macrocephalus* to foraging disturbance in the Gulf of Mexico, USA: A bioenergetic approach. *Marine Ecology Progress Series* 589:241-261. [Disturbance][Physiology]
66. Felleman FL, Heimlich-Boran JR, Osborne RW (1991) Feeding ecology of the killer whale (*Orcinus orca*). In: Pryor K, Norris KS (eds) *Dolphin societies*. University of California Press, Berkeley, CA, p 113–147
67. Ferrara, Grace A., Teresa M. Mongillo, Lynne M. Barre. Reducing disturbance from vessels to Southern Resident killer whales: Assessing the effectiveness of the 2011 federal regulations in advancing recovery goals. NOAA Tech. Memo. NMFS-OPR-58 [NPR]
68. Fischer, R. W., & Brown, N. A. (2005, September). Factors affecting the underwater noise of commercial vessels operating in environmentally sensitive areas. In *Proceedings of OCEANS 2005 MTS/IEEE* (pp. 1982-1988). IEEE. [Vessels][Acoustics]
69. Foote, Andrew D., Osborne, Richard W., Hoelzel, A. Rus (2004) Whale-call response to masking boat noise. *Nature*; Vol 428, 910 <https://doi.org/10.1038/428910a> [Orca] [Vessel] [Communication]
70. Ford, "Acoustic behaviour of resident killer whales (*Orcinus orca*) off Vancouver Island, British Columbia," *Canadian Journal of Zoology*, pp. 67(3): 727-745, 1989. [Communication] [Orca]

71. Ford, J. K., Ellis, G. M., Olesiuk, P. F., & Balcomb, K. C. (2010). Linking killer whale survival and prey abundance: food limitation in the oceans' apex predator? *Biology letters*, 6(1), 139-142. [Orca]
72. Ford, J.K.B., Pilkington, J.F., Reira, A., Otsuki, M., Gisborne, B., Abernethy, R.M., Stredulinsky, E.H., Towers, J.R., and Ellis, G.M. 2017. Habitats of Special Importance to Resident Killer Whales (*Orcinus orca*) off the West Coast of Canada. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/035. viii + 57 p. [Orca][NPR]
73. Francis, C.D., and J.R. Barber. 2013. A framework for understanding noise impacts on wildlife: An urgent conservation priority. *Frontiers in Ecology and the Environment* 11:305-313. [Comparative] [Acoustics]
74. Friedlaender, A.S., E.L. Hazen, J.A. Goldbogen, A.K. Stimpert, J. Calambokidis, and B.L. Southall. 2016. Prey-mediated behavioral responses of feeding blue whales in controlled sound exposure experiments. *Ecological Applications* 26(4):1075-1085. [Behavior]
75. Fromm, D.M. 2009. Reconstruction of acoustic exposure on orcas in Haro Strait. *NRL Review* 2009:127-129. [Acoustics]
76. García-Cegarra, A.M., Pacheco, A.S. (2017) Whale-watching trips in Peru lead to increases in tourist knowledge, pro-conservation intentions and tourist concern for the impacts of whale-watching on humpback whales. *Aquatic Conservation*, Vol 27:5, p 1011-1020. [WhaleWatch]
77. Gassmann, M., Wiggins, S. M., and Hildebrand, J. A. (2017). "Deep-water measurements of container ship radiated noise signatures and directionality," *The Journal of the Acoustical Society of America* 142, 1563-1574. [Boats][Acoustics]
78. Giles, D. A. (2014). Southern Resident Killer Whales (*Orcinus orca*): The effect of vessels on group cohesion and behavior of southern resident killer whales (*Orcinus orca*). University of California, Davis. (Thesis) [Vessels][Orca] [NPR]
79. Giles, D.A., Koski, K.L., (2012) Managing Vessel-Based Killer Whale Watching: A Critical Assessment of the Evolution From Voluntary Guidelines to Regulations in the Salish Sea. *Journal of International Wildlife Law & Policy* 15:2 p 125-151 [WhaleWatch]
80. Gill, J.A., K. Norris, and W.J. Sutherland. 2001. Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation* 97:265-268.
81. Gillespie, A. 2010. Noise pollution, the oceans, and the limits of international law. *Yearbook of International Environmental Law* 21:114-139.
82. Gisiner, R., S. Harper, E. Livingston, and J. Simmen. 2006. Effects of Sound on the Marine Environment (ESME): An underwater noise risk model. *IEEE Journal of Oceanic Engineering* 138(4):1067-1081
83. Gomez, C., Lawson, J. W., Wright, A. J., Buren, A. D., Tollit, D., & Lesage, V. (2016). A systematic review on the behavioural responses of wild marine mammals to noise: the disparity between science and policy. *Canadian Journal of Zoology*, 94(12), 801-819. [Behavior][Comparative]
84. Goodwin, L., and Cotton, P. A. (2004). "Effects of boat traffic on the behaviour of bottlenose dolphins (*Tursiops truncatus*)," *Aquat. Mamm.* 30, 279-283. [Vessels][Behavior]
85. Gospić, N. R., and Picciulin, M. (2016). "Changes in whistle structure of resident bottlenose dolphins in relation to underwater noise and boat traffic," *Mar. Pollut. Bull.* 105, 193-198. [Communication][Vessels]
86. Gray, D.L., Canessa, R.R., Keller, C.P., Dearden, P., Rollins, R.B. (2011) Spatial characterization of marine recreational boating: Exploring the use of an on-the-water questionnaire for a case study in the Pacific Northwest. *Marine Policy* 35(3) 286-298 [Boats]
87. Guerra M. & Dawson S.M. (2016) Boat-based tourism and bottlenose dolphins in Doubtful Sound, New Zealand: The role of management in decreasing dolphin-boat interactions. *Tourism Management* 57:3-9. [WhaleWatch][Management]
88. Hamlin, H., (2016) An interview-based cognitive analysis of stakeholder perceptions of whale watching in Puget Sound, Washington. University of Washington (Thesis) [WhaleWatch][NPR]

89. Hanson, B., M., Emmons, C. K., Ward, E. J., Nystuen, J. A., & Lammers, M. O. (2013). Assessing the coastal occurrence of endangered killer whales using autonomous passive acoustic recorders. *The Journal of the Acoustical Society of America*, 134(5), 3486-3495. [Orca]
90. Harris, C.M., D. Sadykova, S.L. DeRuiter, P.L. Tyack, P.J.O. Miller, P.H. Kvasdheim, F.P.A. Lam, and L. Thomas. 2015. Dose response severity functions for acoustic disturbance in cetaceans using recurrent event survival analysis. *Ecosphere* 6(11):236.
91. Hatch, L.T., C.W. Clark, S.M. Van Parijs, A.S. Frankel, and D.W. Ponirakis. 2012. Quantifying loss of acoustic communication space for right whales in and around a U.S. National Marine Sanctuary. *Conservation Biology* 26:983-994 [Communication] [Acoustics]
92. Hauser, D. D. W., Logsdon, M. G., Holmes, E. E., VanBlaricom, G. R., & Osborne, R. W. (2007). Summer distribution patterns of southern resident killer whales (*Orcinus orca*): Evidence of core areas and spatial segregation of social groups. *Marine Ecology Progress Series*, 351, 301-310. <http://dx.doi.org/10.3354/meps07117> [Orca]
93. Hauser, D.D.W. Summer space use of Southern Resident killer whales (*Orcinus orca*) within Washington and British Columbia inshore waters. University of Washington (Thesis) [Orca][NPR]
94. Hauser, D.D.W., VanBlaricom, G.R., Holmes, E.E., Osborne, R.W. (2006). Evaluating the use of whalewatch data in determining killer whale (*Orcinus orca*) distribution patterns. *J. Cetacean Res. Manage.* 8(3):273-281 [WhaleWatch]
95. Haver, S.M., Gedamke, J., Hatch, L.T., Dziak, R.P., Van Parijs, S., McKenna, M.F., Barlow, J., Berchok, C., DiDonato, E., Hanson, B. and Haxel, J., 2018. Monitoring long-term soundscape trends in US Waters: the NOAA/NPS Ocean noise reference station network. *Marine Policy*, 90, pp.6-13. [Acoustics]
96. Haviland-Howell, A. Frankel, C. Powell, A. Bocconcelli, R. Herman and L. Sayigh, "Recreational boating traffic: a chronic source of anthropogenic noise in the Wilmington, North Carolina Intracoastal Waterway.," *J Acoust Soc Am*, pp. 122(1): 151-160, 2007. [Vessel]
97. Heenehan H.L., Basurto X., Bjeder L., Tyne J.A., Higham J.E.S. & Johnston D.W. (2015) Using Ostrom's common-pool resource theory to build toward an integrated ecosystem-based sustainable cetacean tourism system in Hawai'i. *Journal of Sustainable Tourism* 23: 536-556. [WhaleWatch][Management]
98. Heenehan H.L., Van Parijs S.M., Bejder L., Tyne J.A. & Johnston D.W. (2017) Using acoustics to prioritize management decisions to protect coastal dolphins: A case study using Hawaiian spinner dolphins. *Marine Policy* 75: 84-90. [Management]
99. Heiler, J., Elwen, S. H., Kriesell, H. J., and Gridley, T. (2016). "Changes in bottlenose dolphin whistle parameters related to vessel presence, surface behaviour and group composition," *Anim. Behav.* 117, 167-177. [Communication][Vessels]
100. Heimlich-Boran, J. R. (1988). Behavioral ecology of killer whales (*Orcinus orca*) in the Pacific Northwest. *Canadian Journal of zoology*, 66(3), 565-578.
101. Heise, K. (2016, January). The Effects of Underwater Noise on Marine Animals. In SNAME Maritime Convention. The Society of Naval Architects and Marine Engineers. [NPR]
102. Heise, K., Barrett-Lennard, L., Chapman, R., Dakin, T., Erbe, C., Hannay, D. E, Merchant, N.D., Pilkington, J.S., Thornton, S.J., Tollit, D.J., Vagle, S., Veirs, V.R., Vergara, V., Wood, J.D., Wright, B.M., Yurk, H.. (2017). Proposed metrics for the management of underwater noise for southern resident killer whales. *Coastal Ocean Report Series*, Ocean Wise, Vancouver [Orca][NPR]
103. Higham J.E.S., Bejder L., Allen S.J., Corkeron P.J. & Lusseau D. (2016) Managing whale-watching as a non-lethal consumptive activity. *Journal of Sustainable Tourism* 24: 73-90. [WhaleWatch][Management]
104. Hildebrand, J.A. 2009. Anthropogenic and natural sources of ambient noise in the ocean. *Marine Ecology Progress Series* 395:5-20.

105. Hill, H.M., Guarino, S., Dietrich, S., St. Leger, J., (2016) An Inventory of Peer-reviewed Articles on Killer Whales (*Orcinus orca*) with a Comparison to Bottlenose Dolphins (*Tursiops truncatus*). *Animal Behavior and Cognition*. 3:3 p135-149 [Comparative][Orca]
106. Hoelzel, A. R. (1993). Foraging behaviour and social group dynamics in Puget Sound killer whales. *Animal Behaviour*, 45(3), 581-591.
107. Holt M.M., Noren D.P., Emmons C.K. (2011) The effects of noise levels and call types on the source levels of killer whale calls. *Journal of the Acoustical Society of America* 130:3100-3106. [Orca] [Acoustics][Communication]
108. Holt M.M., Noren D.P., Emmons C.K. (2012) Does vessel noise affect the use of sound by foraging *Orcinus orca* (killer whales)? In: Anthony Hawkins and Arthur N. Popper, Eds. *The Effects of Noise on Aquatic Life*, pages 327-330. [Communication][Vessel][NPR]
109. Holt, B. Hanson, C. Emmons, J. Houghton, D. Giles, R. Baird and J. Hogan, Using acoustic recording tags to investigate anthropogenic sound exposure and effects on behavior in endangered killer whales (*Orcinus orca*), 2018. [Boats] [Orca] [Behavior]
110. Holt, D. Noren and C. Emmons (2012) "Does vessel noise affect the use of sound by foraging *Orcinus orca* (killer whales)?," *Adv Exp Med Biol*, pp. 730: 327-30. doi: 10.1007/978-1-4419-7311-5_73. [Vessel] [Orca] [Communication]
111. Holt, M. B. Hanson, D. A. Giles, C. K. Emmons and J. T. Hogan, "Noise levels received by endangered killer whales (*Orcinus orca*) before and after the implementation of vessel regulations," *Endangered Species Research*, pp. 15-26, 2017. [Orca] [Vessel]
112. Holt, M. M. (2008). Sound exposure and Southern Resident killer whales (*Orcinus orca*): A review of current knowledge and data gaps. NOAA Technical Memorandum NMFS-NWFSC-89 [Orca][NPR]
113. Holt, M. M., Hanson, M. B., Emmons, C. K., Haas, D. K., Giles, D. A., & Hogan, J. T. (2019). Sounds associated with foraging and prey capture in individual fish-eating killer whales, *Orcinus orca*. *The Journal of the Acoustical Society of America*, 146(5), 3475-3486. [Orca][Communication]
114. Holt, M. M., Tennessen, J. B., Hanson, B., Emmons, C., Giles, D., Hogan, J., Wright, B.M. & Thornton, S. (2019). How acoustics informs understanding of foraging behavior and effects of vessels and noise on killer whales. *The Journal of the Acoustical Society of America*, 146(4), 2897-2897. [NPR][Acoustics][Vessels][Orca]
115. Holt, M. M., Veirs, V., and Veirs, S. (2008). "Noise effects on the call amplitude of southern resident killer whales (*Orcinus orca*)," *Bioacoustics*. 17, 164-166. [Orca][Communication]
116. Holt, M.M., D.P. Noren, R.C. Dunkin, and T.M. Williams. 2015. Vocal performance affects metabolic rate in dolphins: Implications for animals communicating in noisy environments. *Journal of Experimental Biology* 218:1647-1654. [Physiology][Communication]
117. Holt, M.M., D.P. Noren, V. Veirs, C.K. Emmons, and S. Veirs. 2009. Speaking up: Killer whales (*Orcinus orca*) increase their call amplitude in response to vessel noise. *Journal of the Acoustical Society of America* 125:EL27-32. [Orca] [Communication] [Vessel]
118. Holt, M.M., Hanson, B., Emmons, C. (2018) Effects of vessels and noise on the subsurface behavior of endangered killer whales (*Orcinus orca*). *Journal of the Acoustical Society of America* 144:p 1886 [Orca][Vessels][Behavior][NPR]
119. Honjo K. & Kubo T. (2020) Social Dilemmas in Nature-Based Tourism Depend on Social Value Orientations. *Scientific Reports* 10: art. 3730 [WhaleWatch]
120. Houghton, M. M. Holt, D. A. Giles, M. B. Hanson, C. K. Emmons and J. T. Hogan, "The relationship between vessel traffic and noise levels received by killer whales (*Orcinus orca*)," *PLoS ONE*, vol. 10, no. 12, 2015. [Orca] [Vessel] [Boats]
121. Hovem, J. M., Vågsholm, R., Sørheim, H., & Haukebø, B. (2015, May). Measurements and analysis of underwater acoustic noise of fishing vessels. In *OCEANS 2015-Genova* (pp. 1-6). IEEE. [Vessels][Acoustics]

122. Hoyt, E. (1995). The worldwide value and extent of whale watching 1995. Bath, UK: Whale and Dolphin Conservation Society.[WhaleWatch][NPR]
123. Hoyt, E. (2005). Sustainable ecotourism on Atlantic islands, with special reference to whale watching, marine protected areas and sanctuaries for cetaceans. In *Biology and environment: proceedings of the Royal Irish Academy* (pp. 141-154). Royal Irish Academy.[WhaleWatch]
124. ICES. 1995. Underwater noise of research vessels: review and recommendations. ICES Cooperative Research Report No. 209. pp. 61. <https://doi.org/10.17895/ices.pub.5317> [Boats][Acoustics]
125. International Whaling Commission. *Whalewatching handbook*. International Whaling Commission Secretariat. <https://wwhandbook.iwc.int/en/>
126. Jacobs, M., Harms, M. (2014) Influence of interpretation on conservation intentions of whale tourists. *Tourism Management*, 42: p 123-131. [WhaleWatch]
127. Janik, V. M., "Source levels and the estimated active space of bottlenose dolphin (*Tursiops truncatus*) whistles in the Moray Firth, Scotland," *Journal of Comparative Physiology A*, pp. Volume 186, Issue 7-8, pp 673-680, 2000.
128. Jelinski, D.E., Krueger, C.C., Duffus, D.A. (2002) Geostatistical analyses of interactions between killer whales (*Orcinus orca*) and recreational whale-watching boats. *Applied Geography* 22 (2002) 393-411. [Orca][Boats],
129. Jensen, F. H., Bejder, L., Wahlberg, M., Soto, N. A., Johnson, M., & Madsen, P. T. (2009). Vessel noise effects on delphinid communication. *Marine Ecology Progress Series*, 395, 161-175. [Vessel][Acoustics][Communication]
130. Jessica I. Lundin, Gina M. Ylitalo, Rebecca K. Booth, Bernadita Anulacion, Jennifer A. Hempelmann, Kim M. Parsons, M. Bradley Hanson, and Samuel K. Wasser (2016). Modulation in Persistent Organic Pollutant Concentration and Profile by Prey Availability and Reproductive Status in Southern Resident Killer Whale Scat Samples. *Environmental Science & Technology*. 50 (12), 6506-6516 DOI: 10.1021/acs.est.6b00825 [Cumulative][Orca]
131. Joy, R., Tollit, D. J., Wood, J., MacGillivray, A., Li, Z. L., Trounce, K., & Robinson, O. (2019). Potential benefits of vessel slowdowns on endangered southern resident killer whales. *Frontiers in Marine Science*, 6, 344. [Orca]
132. Kassamali-Fox, A., Christiansen, F., May-Collado, L. J., Ramos, E. A., & Kaplin, B. A. (2020). Tour boats affect the activity patterns of bottlenose dolphins (*Tursiops truncatus*) in Bocas del Toro, Panama. *PeerJ*, 8, e8804. [WhaleWatch]
133. Ketten, D. R. (1998). Marine mammal auditory systems: a summary of audiometric and anatomical data and its implications for underwater acoustic impacts. NOAA NMFSC-256. [NPR]
134. Kight, C. R., & Swaddle, J. P. (2011). How and why environmental noise impacts animals: an integrative, mechanistic review. *Ecology letters*, 14(10), 1052-1061. [Comparative]
135. King, S.L., R.S. Schick, C. Donovan, C.G. Booth, M. Burgman, L. Thomas, and J. Harwood. 2015. An interim framework for assessing the population consequences of disturbance. *Methods in Ecology and Evolution* 6:1150-1158. [Disturbance]
136. Kleist, N. J., Guralnick, R. P., Cruz, A., Lowry, C. A., & Francis, C. D. (2018). Chronic anthropogenic noise disrupts glucocorticoid signaling and has multiple effects on fitness in an avian community. *Proceedings of the national academy of sciences*, 115(4), E648-E657. [Physiology]
137. Kok, Engelberts., Kastelein., Helder-Hoek, Van de Voorde, Visser and Slabbekoorn, "Spatial avoidance to experimental increase of intermittent and continuous sound in two captive harbour porpoises," *Environmental Pollution*, pp. Volume 233, Pages 1024-1036, 2018. [Behavior]
138. Kragh, I. M., McHugh, K., Wells, R. S., Sayigh, L. S., Janik, V. M., Tyack, P. L., & Jensen, F. H. (2019). Signal-specific amplitude adjustment to noise in common bottlenose dolphins (*Tursiops truncatus*). *Journal of Experimental Biology*, 222(23). [Communication]

139. Kruse, S. (1991). “The interactions between killer whales and boats in Johnstone Strait, B.C.” in *Dolphin Societies: Discoveries and Puzzles*, edited by K. S. Norris and K. Pryor (University of California Press, Berkeley, CA), pp. 149-159. [Orca][Vessels][NPR]
140. Kudryavtsev, A. A., Luginets, K. P., & Mashoshin, A. I. (2003). Amplitude modulation of underwater noise produced by seagoing vessels. *Acoustical Physics*, 49(2), 184-188. [Vessels][Acoustics]
141. Lachmuth CL, Barrett-Lennard LG, Steyn DQ, Milsom WK. Estimation of southern resident killer whale exposure to exhaust emissions from whale-watching vessels and potential adverse health effects and toxicity thresholds. *Mar Pollut Bull.* 2011;62(4):792-805. doi:10.1016/j.marpolbul.2011.01.002 [Cumulative][Orca]
142. Lacy, R.C., Williams, R., Ashe, E., Balcomb III, K.C., Brent, L.J., Clark, C.W., Croft, D.P., Giles, D.A., MacDuffee, M. and Paquet, P.C., 2017. Evaluating anthropogenic threats to endangered killer whales to inform effective recovery plans. *Scientific reports*, 7(1), pp.1-12. [Orca][Cumulative]
143. Lemon, M., Cato, D., Lynch, T., and Harcourt, R. (2008). “Short-term behavioural response of bottlenose dolphins *Tursiops aduncus* to recreational powerboats,” *Bioacoustics*. 17, 171-173. [Vessels][Behavior]
144. Lemon, M., Lynch, T. P., Cato, D. H., and Harcourt, R. G. (2006). “Response of travelling bottlenose dolphins (*Tursiops truncatus*) to experimental approaches by a powerboat in Jervis Bay, New South Wales, Australia,” *Biol. Conserv.* 127, 363-372. [Vessels][Behavior]
145. Lindenmayer, D.B., and G.E. Likens. 2009. Adaptive monitoring: A new paradigm for long-term research and monitoring. *Trends in Ecology & Evolution* 24:482-486.
146. Lopez, G; Pearson, H. C. (2017) Can Whale Watching Be a Conduit for Spreading Educational and Conservation Messages? A Case Study in Juneau, Alaska. *Tourism in Marine Environments*, 12:2 p95-104 [WhaleWatch]
147. Luís, A. R., Couchinho, M. N., and dos Santos, M. E. (2014). “Changes in acoustic behavior of resident bottlenose dolphins near operating vessels,” *Mar. Mammal Sci.* 30, 1417-1426. [Communication][Vessels]
148. Luksenburg, J.A., Parsons, E.C.M., (2013) Attitudes towards marine mammal conservation issues before the introduction of whale-watching: a case study in Aruba (southern Caribbean). *Aquatic Conservation* 24:1 p135-146. [WhaleWatch]
149. Lundin et al., 2018. Pre-oil spill baseline profiling for contaminants in Southern Resident killer whale fecal samples indicates possible exposure to vessel exhaust. *Marine Poll. Bull.* 136:448-453 [Orca]
150. Lusseau D. & Higham J.E.S. (2004) Managing the impacts of dolphin-based tourism through the definition of critical habitats: the case of bottlenose dolphins in Doubtful Sound, New Zealand. *Tourism Management* 25: 657-667. [WhaleWatch][Management]
151. Lusseau, Bain, Williams and Smith, (2009) Vessel traffic disrupts the foraging behavior of southern resident killer whales *Orcinus orca*, *Endangered Species Research*, pp. Vol 6: 211-221., [Vessel] [Orca]
152. Lusseau, D. (2003). “Effects of tour boats on the behavior of bottlenose dolphins: using Markov chains to model anthropogenic impacts,” *Conserv. Biol.* 17, 1785-1793. [Behavior][Vessels]
153. Lusseau, D. (2003). “Male and female bottlenose dolphins *Tursiops* spp. have different strategies to avoid interactions with tour boats in Doubtful Sound, New Zealand,” *Mar. Ecol. Prog. Ser.* 257, 267-274. [Behavior][Vessel]Lusseau, D., and L. Bejder. 2007. The long-term consequences of short term responses to disturbance experiences from whalewatching impact assessment. *International Journal of Comparative Psychology* 20:228-236. [Disturbance] [WhaleWatch]
154. Lusseau, D. (2006). “The short-term behavioral reactions of bottlenose dolphins to interactions with boats in Doubtful Sound, New Zealand,” *Mar. Mammal Sci.* 22, 802-818. [Behavior] [Vessel]
155. Lusseau, D., E. Slooten, and R.J.C. Currey. 2006. Unsustainable dolphin watching tourism in Fiordland, New Zealand. *Tourism in Marine Environments* 3:173-178. [WhaleWatch]

156. Lusseau, D., L. New, C. Donovan, B. Cheney, G. Hastie, and J. Harwood. 2012. The Development of a Framework to Understand and Predict the Population Consequences of Disturbances for the Moray Firth Bottlenose Dolphin Population. Scottish Natural Heritage Commissioned Report No. 468. Available at http://www.snh.org.uk/pdfs/publications/commissioned_reports/468.pdf. [NPR]
157. Lusseau, David. 2005. Residency pattern of bottlenose dolphins *Tursiops* spp. in Milford Sound, New Zealand, is related to boat traffic. *Marine Ecology Progress Series* 295:265-272 [Vessels][Behavior]
158. Malcolm C.D., Chávez Dagostino R.M. & Cornejo Ortega J.L. (2017) Experiential and Learning Desires of Whale Watching Guides Versus Tourists in Bahía de Banderas, Puerto Vallarta, Mexico. *Human Dimensions of Wildlife* 22(6): 524-537. [WhaleWatch][Customers]
159. Malinowski, S. J., & Gloza, I. (2002). Underwater noise characteristics of small ships. *Acta Acustica United with Acustica*, 88(5), 718-721. [Vessels][Noise]
160. Mancini F., Coghill G.M. & Lusseau D. (2017) Using qualitative models to define sustainable management for the commons in data poor conditions. *Environmental Science & Policy* 67: 52-60. [Management]
161. Mancini F., Leyshon B., Manson F., Coghill G.M. & Lusseau D.(revised) Monitoring tourist specialisation and implementing adaptive governance is necessary to avoid failure of the wildlife tourism commons. *Tourism Management* [NPR][WhaleWatch][Management]
162. Mancini, Francesca; Lusseau, David. (2015) Policy Brief: Sustainable management of wildlife tourism targeting the bottlenose dolphin interest of the Moray Firth Special Area of Conservation. [Management] [WhaleWatch] [NPR]
163. Marine Mammal Commission (2006) Advisory Committee on Acoustic Impacts on Marine Mammals Report to the Marine Mammal Commission. [NPR][Acoustics][Behavior]
164. Marine Mammal Commission (2007) Marine Mammals and Noise: A Sound Approach to Research and Management. [NPR] [Management]
165. Marley, S.A., Salgado Kent, C.P., Erbe, C., Parnum, I.M.. Effects of vessel traffic and underwater noise on the movement, behaviour and vocalisations of bottlenose dolphins in an urbanised estuary. *Sci Rep* 7, 13437 (2017). <https://doi.org/10.1038/s41598-017-13252-z> [Vessels][Behavior][Communication]
166. Mattson, M. C., Thomas, J. A., and St. Aubin, D. (2005). “Effects of boat activity on the behavior of bottlenose dolphins (*Tursiops truncatus*) in waters surrounding Hilton Head Island, South Carolina,” *Aquat. Mamm.* 31, 133-140. [Vessels][Behavior]
167. Matzner, S., Maxwell, A., Myers, J., Caviggia, K., Elster, J., Foley, M., Jones, M., Ogdenz, G., Sorensenz, E., Zurkz, L. and Tagestady, J., 2010, September. Small vessel contribution to underwater noise. In *OCEANS 2010 MTS/IEEE SEATTLE* (pp. 1-7). IEEE. [Vessels][Acoustics]
168. Maxwell, S.M., E.L. Hazen, S.J. Bograd, B.S. Halpern, G.A. Breed, B. Nickel, N.M. Teutschel, L.B. Crowder, S. Benson, P.H. Dutton, H. Bailey, M.A. Kappes, C.E. Kuhn, M.J. Weise, B. Mate, S.A. Shaffer, J.L. Hassrick, R.W. Henry, L. Irvine, B.I. McDonald, P.W. Robinson, and D.P. Costa. 2013. Cumulative human impacts on marine predators. *Nature Communications* 4:2688 [Cumulative]
169. Mayer M., Brenner L., Schauss B., Stadler C., Arnegger J. & Job H. (2018) The nexus between governance and the economic impact of whale-watching. The case of the coastal lagoons in the El Vizcaíno Biosphere Reserve, Baja California, Mexico. *Ocean & Coastal Management* 162: 46-59. [WhaleWatch][Management]
170. McCauley, R. D., & Cato, D. H. (2001). The underwater noise of vessels in the Hervey Bay (Queensland) whale watch fleet and its impact on humpback whales. *The Journal of the Acoustical Society of America*, 109(5), 2455-2455. [Vessels][Acoustics][NPR]
171. McCluskey, S. M. (2006). Space use patterns and population trends of southern resident killer whales (*Orcinus orca*) in relation to distribution and abundance of Pacific salmon (*Oncorhynchus*

- spp.) in the inland marine waters of Washington state and British Columbia (Unpublished master's thesis). University of Washington, Seattle. [NPR]
172. McKenna, M. F., Ross, D., Wiggins, S. M., & Hildebrand, J. A. (2012). Underwater radiated noise from modern commercial ships. *The Journal of the Acoustical Society of America*, 131(1), 92-103. [Vessels][Noise]
 173. McKenna, M., Wiggins, S. & Hildebrand, J. Relationship between container ship underwater noise levels and ship design, operational and oceanographic conditions. *Sci Rep* 3, 1760 (2013). <https://doi.org/10.1038/srep01760> [Vessels][Acoustics]
 174. Melcón, Mariana L., Amanda J. Cummins, Sara M. Kerosky, Lauren K. Roche, Sean M. Wiggins, John A. Hildebrand (2012). Blue Whales Respond to Anthropogenic Noise. *PLoS ONE* 7(2): e32681. doi:10.1371/journal.pone.0032681 [Communication]
 175. Merchant, N. D., Pirotta, E., Barton, T. R., & Thompson, P. M. (2014). Monitoring ship noise to assess the impact of coastal developments on marine mammals. *Marine Pollution Bulletin*, 78(1-2), 85-95. [Vessels][Acoustics]
 176. Merchant, N.D., Fristrup, K.M., Johnson, M.P., Tyack, P.L., Witt, M.J., Blondel, P. and Parks, S.E., 2015. Measuring acoustic habitats. *Methods in Ecology and Evolution*, 6(3), pp.257-265. [Acoustics]
 177. Miksis-Olds, J.L., and S.M. Nichols. 2016. Is low frequency ocean sound increasing globally? *Journal of the Acoustical Society of America* 139(1):501-511. [Acoustics]
 178. Miller, J. H., Nystuen, J. A., & Bradley, D. L. (2008). Ocean noise budgets. *Bioacoustics*, 17(1-3), 133-136. [Acoustics]
 179. Miller, L. J., Solangi, M., and Kuczaj, S. A. II. (2008). "Immediate response of Atlantic bottlenose dolphins to highspeed personal watercraft in the Mississippi Sound," *J. Mar. Biol. Assoc. UK*. 88, 1139-1143. [Vessels][Behavior]
 180. Miller, P. J. O. (2002). Mixed-directionality of killer whale stereotyped calls: A direction of movement cue? *Behavioral Ecology and Sociobiology*, 52(3), 262–270. [Orca][Acoustics][Communication]
 181. Miller, P.J.O. Diversity in sound pressure levels and estimated active space of resident killer whale vocalizations. *J Comp Physiol A* 192, 449 (2006). <https://doi.org/10.1007/s00359-005-0085-2> [Orca][Communication][Acoustics]
 182. Miller, P.J.O., N. Biassoni, A. Samuels, and P.L. Tyack. 2000. Whale songs lengthen in response to sonar. *Nature* 405:903. [Communication]
 183. Miller, P.J.O., P.H. Kvasdheim, F.P.A. Lam, P.J. Wensveen, R. Antunes, A.C. Alves, F. Visser, L. Kleivane, P.L. Tyack, and L. Doksæter. 2012. The severity of behavioral changes observed during experimental exposures of killer (*Orcinus orca*), long-finned pilot (*Globicephala melas*), and sperm (*Physeter macrocephalus*) whales to naval sonar. *Aquatic Mammals* 38(4):362-401. [Orca][Behavior]
 184. Miller, P.J.O., R.N. Antunes, P.J. Wensveen, F.I.P. Samarra, A.C. Alves, P.L. Tyack, P.H. Kvasdheim, L. Kleivane, F.-P.A. Lam, M.A. Ainslie, and L. Thomas. 2014. Dose-response relationships for the onset of avoidance of sonar by free-ranging killer whales. *Journal of the Acoustical Society of America* 135:975-993. [Behavior]
 185. Mooney, T.A., M. Yamato, and B.K. Branstetter. 2012. Hearing in cetaceans: From natural history to experimental biology. *Advances in Marine Biology* 63:197-246. [Acoustics]
 186. Moore, Sue E, Randall R. Reeves, Brandon L. Southall, Timothy J. Ragen, Robert S. Suydam, Christopher W. Clark, A New Framework for Assessing the Effects of Anthropogenic Sound on Marine Mammals in a Rapidly Changing Arctic, *BioScience*, Volume 62, Issue 3, March 2012, Pages 289–295, <https://doi.org/10.1525/bio.2012.62.3.10> [Comparative] [Acoustics]
 187. Murray, C.C., Hannah, L.C., Doniol-Valcroze, T., Wright, B., Stredulinsky, E., Locke, A., and R. Lacy. 2019. Cumulative Effects Assessment for Northern and Southern Resident Killer Whale

- Populations in the Northeast Pacific. DFO Can. Sci. Advis. Sec. Res. Doc. 2019/056. x. + 88 p
[Cumulative] [Orca][NPR]
188. National Academies of Sciences, Engineering, and Medicine. 2017. Approaches to Understanding the Cumulative Effects of Stressors on Marine Mammals. Washington, DC: The National Academies
 189. National Marine Fisheries Service, "Southern Resident killer whales (*Orcinus orca*) 5-year review: Summary and evaluation," 2016 [Orca]
 190. National Research Council, "Ocean noise and marine mammals," National Research Council (US) Committee on Potential Impacts of Ambient Noise in the Ocean on Marine Mammals, Washington (DC), 2003.
 191. New, L.F., A.J. Hall, R. Harcourt, G. Kaufman, E.C.M. Parsons, H.C. Pearson, A.M. Cosentino, and R.S. Schick. 2015. The modeling and assessment of whale-watching impacts. *Ocean and Coastal Management* 115:10-16. [WhaleWatch]
 192. New, L.F., J. Harwood, L. Thomas, C. Donovan, J.S. Clark, G. Hastie, P.M. Thompson, B. Cheney, L. Scott-Hayward, and D. Lusseau. 2013a. Modeling the biological significance of behavioural change in coastal bottlenose dolphins in response to disturbance. *Functional Ecology* 27:314-322. [Behavior] [Disturbance]
 193. Nichol, L.M (1985) Seasonal Movements and Foraging Behavior of Resident Killer Whales (*Orcinus orca*) In Relation to the Inshore Distribution of Salmon (*Oncorhynchus* spp.) in British Columbia. University of British Columbia (Thesis) [Orca][NPR]
 194. Noren D.P. and Hauser, D.D.W. (2016) Surface-based observations can be used to assess behavior and fine-scale habitat use by an endangered killer whale (*Orcinus orca*) population. *Aquatic Mammals* 42:168-183.[Orca]
 195. Noren D.P., Holt M.M., Dunkin R.C., Williams T.M. (2013) The metabolic cost of communicative sound production in bottlenose dolphins (*Tursiops truncatus*). *The Journal of Experimental Biology* 216:1624-1629. [Physiology][Behavior][Communication]
 196. Noren D.P., Holt M.M., Dunkin R.C., Williams T.M. (2017) Echolocation is cheap for some mammals: Dolphins conserve oxygen while producing high-intensity clicks. *Journal of Experimental Marine Biology and Ecology* 495:103-109. [Physiology][Behavior][Communication]
 197. Noren D.P., Johnson A.H., Rehder D., Larson A. (2009) Close approaches by vessels elicit surface active behaviors by Southern Resident killer whales. *Endangered Species Research* 8:179-192. [Behavior][Orca][Vessel]
 198. Noren DP, Holt MM, Dunkin RC, Thometz NM, Williams TM (2016) Comparative and cumulative energetic costs of odontocete responses to anthropogenic disturbance. *Proc. Mtgs. Acoust.* 27, 040011 (2016); <https://doi.org/10.1121/2.0000357>. [Comparative] [Disturbance] [Physiology]
 199. Noren, D. P., R. C. Dunkin, T. M. Williams, and M. M. Holt. 2012. Energetic cost of behaviors performed in response to vessel disturbance: one link in the population consequences of acoustic disturbance model. In: Anthony Hawkins and Arthur N. Popper, Eds. *The Effects of Noise on Aquatic Life*, pp. 427–430. [Physiology][NPR]
 200. Nowacek, D.P., L.H. Thorne, D.W. Johnston, and P.L. Tyack. 2007. Responses of cetaceans to anthropogenic noise. *Mammal Review* 37:81-115. doi: 10.1111/j.1365-2907.2007.00104.x. [Behavior][Communication]
 201. Nowacek, S.M., R.S. Wells, and A.R. Solow. 2001. Short-term effects of boat traffic on bottlenose dolphins, *Tursiops truncatus*, in Sarasota Bay, Florida. *Marine Mammal Science* 17(4):673-688. [Vessel]
 202. Nowacek, Thorne, Johnston and Tyack, "Responses of cetaceans to anthropogenic noise," *Mammal Review*, pp. Volume 37, No. 2, Pages 81-115, 2007.
 203. NRC (National Research Council). 1994. *Low-Frequency Sound and Marine Mammals: Current Knowledge and Research Needs*. Washington, DC: National Academy Press.
 204. NRC. 2000. *Marine Mammals and Low-Frequency Sound: Progress Since 1994*. Washington, DC: National Academy Press.

205. NRC. 2003a. Ocean Noise and Marine Mammals. Washington, DC: The National Academies Press.
206. NRC. 2005. Marine Mammal Populations and Ocean Noise: Determining When Noise Causes Biologically Significant Effects. Washington, DC: The National Academies Press
207. Ohlberger, J., Schindler, D. E., Ward, E. J., Walsworth, T. E., & Essington, T. E. (2019). Resurgence of an apex marine predator and the decline in prey body size. *Proceedings of the National Academy of Sciences*, 116(52), 26682-26689. [Cumulative]
208. Olesiuk, P.F., L.M. Nicol, M.J. Sowden, and J.B. Ford. 2002. Effects of the sound generated by an acoustic harassment device on the relative abundance and distribution of harbor porpoises (*Phocoena phocoena*) in Retreat Passage, British Columbia. *Marine Mammal Science* 18(4):843-862. [Behavior]
209. Olson, J. K., Wood, J., Osborne, R. W., Barrett-Lennard, L., & Larson, S. (2018). Sightings of southern resident killer whales in the Salish Sea 1976–2014: the importance of a long-term opportunistic dataset. *Endangered Species Research*, 37, 105-118. [Orca]
210. Orams, M.B. (2000) Tourists getting close to whales, is it what whale-watching is all about? *Tourism Management* 21:6 p561-569. [Customers]
211. OSPAR. 2009. Overview of the Impacts of Anthropogenic Underwater Sound in the Marine Environment. OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic. Available at www.ospar.org. 133 pp. [NPR]
212. Otis, R. E and Osborne, R. W. 2001. Historical trends in vessel-based killer whale watching in Haro Strait along the boundary of British Columbia and Washington State: 1976-2001. Poster presented to the Society for Marine Mammalogy Conference. Vancouver, BC.
213. Pacific Whale Watch Association (Jan 2020). Southern Resident Killer Whale Recovery: 2019 Report and Policy Recommendations. [NPR][Boats][WhaleWatch]
214. Papale, E., Azzolin, M., and Giacoma, C. (2012). “Vessel traffic affects bottlenose dolphin (*Tursiops truncatus*) behaviour in waters surrounding Lampedusa Island, south Italy,” *J. Mar. Biol. Assoc. UK*. 92, 1877-1885. [Vessels] [Behavior]
215. Parks, S. E., Urazghildiiev, I., & Clark, C. W. (2009). Variability in ambient noise levels and call parameters of North Atlantic right whales in three habitat areas. *The Journal of the Acoustical Society of America*, 125(2), 1230-1239. [Communication]
216. Parks, S.E., C.W. Clark, and P.L. Tyack. 2007a. Short- and long-term changes in right whale calling behavior: The potential effects of noise on acoustic communication. *Journal of the Acoustical Society of America* 122:3725-3731. [Communication]
217. Parks, S.E., M. Johnson, D. Nowacek, and P.L. Tyack. 2010. Individual right whales call louder in increased environmental noise. *Biology Letters* 7:33-35. [Communication]
218. Parsons, K. M., Balcomb Iii, K. C., Ford, J. K. B., & Durban, J. W. (2009). The social dynamics of southern resident killer whales and conservation implications for this endangered population. *Animal Behaviour*, 77(4), 963-971. [Orca]
219. Parsons, M. J., Duncan, A. J., Parsons, S. K., & Erbe, C. (2020). Reducing vessel noise: An example of a solar-electric passenger ferry. *The Journal of the Acoustical Society of America*, 147(5), 3575-3583.
220. Patterson, A. M., Spence, J. H., & Fischer, R. W. (2013, July). Evaluation of underwater noise from vessels and marine activities. In 2013 IEEE/OES Acoustics in Underwater Geosciences Symposium (pp. 1-9). IEEE. [Vessels][Acoustics]
221. Peake, S., Innes, P., Dyer, P., (2009) Ecotourism and conservation: factors influencing effective conservation messages. *Journal of Sustainable Tourism* 17:1 p 107-127. [WhaleWatch]
222. Phillips, Bruce and Kendrick, Andrew. “Echolocation Devices and Marine Mammal Impact Mitigation” Jan 2020. Report prepared for Innovation Centre of Transport Canada by Vard Marine Inc.; accompanied by presentation [NPR]

223. Pine, M. K., Jeffs, A. G., Wang, D., & Radford, C. A. (2016). The potential for vessel noise to mask biologically important sounds within ecologically significant embayments. *Ocean & Coastal Management*, 127, 63-73. [Vessels][Acoustics]
224. Pirotta E. & Lusseau D. (2015) Managing the wildlife tourism commons. *Ecological Applications* 25(3): 729-741. [WhaleWatch][Management]
225. Pirotta, E., N.D. Merchant, P.M. Thompson, T.R. Barton, and D. Lusseau. 2015a. Quantifying the effect of boat disturbance on bottlenose dolphin foraging activity. *Biological Conservation* 181:82-89. [Disturbance] [Behavior]
226. Pirotta, E., P.M. Thompson, B. Cheney, C.R. Donovan, and D. Lusseau. 2015c. Estimating spatial, temporal and individual variability in dolphin cumulative exposure to boat traffic using spatially explicit capture–recapture methods. *Animal Conservation* 18:20-31. [Boats]
227. Polagye, B., Wood, J., Bassett, C., Tollit, D., & Thomson, J. (2011). Behavioral response of harbor porpoises to vessel noise in a tidal strait. *The Journal of the Acoustical Society of America*, 129(4), 2368-2368. [Behavior][Vessel]
228. Press. doi: <https://doi.org/10.17226/23479>. [Cumulative]
229. Quick, L. Scott-Hayward, D. Sadykova, D. Nowacek and A. Read, "Effects of a scientific echo sounder on the behavior of short-finned pilot whales (*Globicephala macrohynchus*)," *Can. J. Fish. Aquat. Sci.*, 2016. [Behavior]
230. Richardson, W.J., B. Würsig, and C.R. Greene, Jr. 1986. Reactions of bowhead whales, *Balaena mysticetus*, to seismic exploration in the Canadian Beaufort Sea. *Journal of the Acoustical Society of America* 79(4):1117-1128.
231. Riera, A., James F Pilkington, John KB Ford, Eva H Stredulinsky, N Ross Chapman. (2019) Passive acoustic monitoring off Vancouver Island reveals extensive use by at-risk Resident killer whale (*Orcinus orca*) populations. *Endangered Species Research* 39:p 221-234 [Orca]
232. Rolland, R.M., S.E. Parks, K.E. Hunt, M. Castellote, P.J. Corkeron, D.P. Nowacek, S.K. Wasser, and S.D. Kraus. 2012. Evidence that ship noise increases stress in right whales. *Proceedings of the Royal Society B: Biological Sciences*. 279(1737):2363-2368. [Vessel] [Physiology]
233. Romano, T.A., M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.E. Schlundt, D.A. Carder, and J.J. Finneran. 2004. Anthropogenic sound and marine mammal health: Measures of the nervous and immune systems before and after intense sound exposure. *Canadian Journal of Fisheries and Aquatic Sciences* 61(7):1124-1134. [Physiology]
234. Rosa and N. Koper, "Integrating multiple disciplines to understand effects of anthropogenic noise on animal communication," *Ecosphere*, p. 9(2):e02127. 10.1002/ecs2.2127, 2018. [Communication]
235. Scarpaci, C., Bigger, S. W., Corkeron, P. J., and Nugegoda, D. (2000). "Bottlenose dolphins (*Tursiops truncatus*) increase whistling in the presence of 'swim-with-dolphin' tour operations," *J. Cetacean Res. Manage.* 2, 183-185. [Communication][Disturbance]
236. Schevill WE, Watkins WA (1966) Sound structure and directionality in *Orcinus* (killer whale). *Zoologica* 51:71-76. [Orca][Acoustics][Communication]
237. Seely, Osborne, Koski and Larson, "Soundwatch: Eighteen years of monitoring whale watch vessel activities in the Salish Sea," *PLOS One*, <https://doi.org/10.1371/journal.pone.0189764>, 2017. [WhaleWatch] [Boats]
238. Senigaglia V., Christiansen F., Bejder L., Gendron D., Lundquist D., Noren D.P., Schaffar A., Smith J.C., Williams R., Martinez E., Stockin K., Lusseau D. (2016) Meta-analyses of whale-watching impact studies: comparisons of cetacean responses to disturbance. *Marine Ecology Progress Series* 542:251-263. [Disturbance][Comparative]
239. Shannon, G., M.F. McKenna, L.M. Angeloni, K.R. Crooks, K.M. Fristrup, E. Brown, K.A. Warner, M.D. Nelson, C. White, and J. Briggs. 2015. A synthesis of two decades of research documenting the effects of noise on wildlife. *Biological Reviews* 91(4):982-1005. doi: 10.1111/brv.12207

240. Shedd, T., Northey, A., Newely, J., Casellas, E., McCaughey, E., & Wold, K. (2019) 2019 Soundwatch Program Annual Contract Report. The Whale Museum.
<https://whalemuseum.org/pages/soundwatch-boater-education-program> [Boats]
241. Shedd, T., Seely, E., Osborne, R., Olson, J., Northey, A., Adams, D., Yuodelis, L. (2018) 2018 Soundwatch Program Annual Contract Report. The Whale Museum.
<https://whalemuseum.org/pages/soundwatch-boater-education-program> [Boats]
242. Siemers, B.M., and A. Schaub. 2011. Hunting at the highway: Traffic noise reduces foraging efficiency in acoustic predators. *Proceedings of the Royal Society B: Biological Sciences* 278:1646-1652.
243. Slabbekoorn, H., Bouton, N., van Opzeeland, I., Coers, A., ten Cate, C., & Popper, A. N. (2010). A noisy spring: the impact of globally rising underwater sound levels on fish. *Trends in ecology & evolution*, 25(7), 419-427. [Acoustics]
244. SMRU Canada and Hemmera Envirochem Inc. (2014) Roberts Bank Terminal 2 Technical Data Report; Marine Mammal Habitat Use Studies (1: SRKW Relative Density and Distribution Network Sighting Synthesis; 2: SRKW Acoustic Detection Study; 3: Shore-based Marine Mammal Observations). Prepared for Port Metro Vancouver. [Orca][NPR]
245. Southall, B. L., Moretti, D., Abraham, B., Calambokidis, J., DeRuiter, S. L., & Tyack, P. L. (2012). Marine mammal behavioral response studies in southern California: advances in technology and experimental methods. *Marine Technology Society Journal*, 46(4), 48-59. [Behavior]
246. Southall, B.L., A.E. Bowles, W.T. Ellison, J.J. Finneran, R.L. Gentry, C.R. Greene, Jr., D. Kastak, D.R. Ketten, J.H. Miller, P.E. Nachtigall, W.J. Richardson, J.A. Thomas, and P.L. Tyack. 2007. Marine mammal noise exposure criteria: Initial scientific recommendations. *Aquatic Mammals* 33:411-521. [can't find]
247. Southall, B.L., Bowles, A.E., Ellison, W.T., Finneran, J.J., Gentry, R.L., Greene Jr, C.R., Kastak, D., Ketten, D.R., Miller, J.H., Nachtigall, P.E. and Richardson, W.J., 2008. Marine mammal noise-exposure criteria: initial scientific recommendations. *Bioacoustics*, 17(1-3), pp.273-275.
248. Southall, Brandon L., James J. Finneran, Colleen Reichmuth, Paul E. Nachtigall, Darlene R. Ketten, Ann E. Bowles, William T. Ellison, Douglas P. Nowacek, Peter L. Tyack. Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects. *Aquatic Mammals*, 2019; 45 (2): 125 DOI: 10.1578/AM.45.2.2019.125
249. Southern Resident Orca Task Force Report and Recommendations. November 2018 [Orca] [NPR]
250. Southern Resident Orca Task Force Report and Recommendations. November 2019 [Orca] [NPR]
251. Spence, J.H. and R. W. Fischer, "Requirements for Reducing Underwater Noise From Ships," in *IEEE Journal of Oceanic Engineering*, vol. 42, no. 2, pp. 388-398, April 2017. [Vessels][Acoustics]
252. Stafford, Kate. (2013). Anthropogenic Sound and Marine Mammals in the Arctic. Prepared for The Pew Charitable Trusts' U.S. Arctic Program [NPR]
253. Stamation, K., Croft, D., Shaughnessy, P., Waples, K., Briggs, S. (2007) Educational and conservation value of whale watching. *Tourism in Marine Environments*, Vol 4:1. [WhaleWatch]
254. Stamation, K.A., D.B. Croft, and P.D. Shaughnessy. 2009. Behavioral responses of humpback whales (*Megaptera novaeangliae*) to whalewatching vessels on the southeastern coast of Australia. *Marine Mammal Science* 26(1):98-122. doi: 10.1111/j.1748-7692.2009.00320.x [Behavior] [Vessel]
255. Steckenreuter, A., Möller, L., and Harcourt, R. (2012). "How does Australia's largest dolphin-watching industry affect the behaviour of a small and resident population of Indo-Pacific bottlenose dolphins?" *J. Environ. Manage.* 97, 14-21. [Vessels][Behavior]
256. Stensland, E., and Berggren, P. (2007). "Behavioural changes in female Indo-Pacific bottlenose dolphins in response to boat-based tourism," *Mar. Ecol. Prog. Ser.* 332, 225-234. [Vessels][Behavior]

257. Sullivan, F.A.(2017) Fine Scale Foraging Behavior of Gray Whales in Relation to Prey Fields and Vessel Disturbance Along the Oregon Coast. Oregon State University (Thesis) [Behavior][Vessel][NPR]
258. Swaddle, J.P., C.D. Francis, J.R. Barber, C.B. Cooper, C.M. Kyba, D.M. Dominoni, G. Shannon, E. Aschehoug, S.E. Goodwin, A.Y. Kawahara, D. Luther, K. Spoelstra, M. Voss, and T. Longcore. 2015. A framework to assess evolutionary responses to anthropogenic light and sound. *Trends in Ecology & Evolution* 30(9):550-560.
259. Symons, J., E. Pirotta, and D. Lusseau. 2014. Sex differences in risk perception in deep-diving bottlenose dolphins leads to decreased foraging efficiency when exposed to human disturbance. *Journal of Applied Ecology* 51:1584-1592. [Behavior]
260. Tasker, M.L., M. Amundin, M. Andre, A.D. Hawkins, W. Lang, T. Merck, A. Scholik-Schlomer, J. Teilman, F. Thomsen, S. Werner, and M. Zakharia. 2010. Marine Strategy Framework Directive: Task Group 11 Report: Underwater Noise and Other Forms of Energy. JRC Scientific and Technical Report No. EUR 24341 EN-2010, European Commission and International Council for the Exploration of the Sea, Luxembourg [NPR]
261. Tenan, S., Hernández, N., Fearnbach, H., de Stephanis, R., Verborgh, P., & Oro, D. (2020). Impact of maritime traffic and whale-watching on apparent survival of bottlenose dolphins in the Strait of Gibraltar. *Aquatic Conservation: Marine and Freshwater Ecosystems*. [Vessels][Behavior]
262. Tennessen, J. B., Parks, S. E., & Langkilde, T. (2014). Traffic noise causes physiological stress and impairs breeding migration behaviour in frogs. *Conservation Physiology*, 2(1). [Physiology] [Behavior]
263. Tennessen, J. B., Holt, M. M., Hanson, M. B., Emmons, C. K., Giles, D. A., & Hogan, J. T. (2019). Kinematic signatures of prey capture from archival tags reveal sex differences in killer whale foraging activity. *Journal of Experimental Biology*, 222(3), jeb191874.
264. Thompson, P.M., D. Lusseau, T. Barton, D. Simmons, J. Rusin, and H. Bailey. 2010. Assessing the responses of coastal cetaceans to the construction of offshore wind turbines. *Marine Pollution Bulletin* 60:1200-1208.
265. Thornton, S., Gavrilchuk, K., Towers, J., DeRoos, M., Identifying diel variation in Northern Resident killer whale vocal activity, call type, and temporal frequency of echolocation using digital acoustic recordings from DTAGs. Poster. World Marine Mammal Conference Dec 2019. Barcelona, Spain. [NPR]
266. Tollit, Joy and Wood, "Estimating the effects of noise from commercial vessels and whale watch boats on Southern Resident killer whales," SMRU Consulting NA, 2017. [Orca] [Vessel] [NPR]
267. Tollit, Joy, and Wood. "Advancing anthropogenic noise risk and noise mitigation assessments for endangered Southern Resident Killer Whales" SMRU Consulting. Poster WMMC 2019. [NPR]
268. Trickey, J.S., B.K. Branstetter, and J.J. Finneran. 2010. Auditory masking of a 10 kHz tone with environmental, comodulated, and Gaussian noise in bottlenose dolphins (*Tursiops truncatus*). *Journal of the Acoustical Society of America* 128:3799-3804. [Acoustics]
269. Tyack, P.L., and C.W. Clark. 1998. Quick-Look Report: Playback of Low-Frequency Sound to Gray Whales Migrating Past the Central California Coast. Woods Hole, MA: Woods Hole Oceanographic Institution. [NPR]
270. Tyack, P.L., and V.J. Janik. 2013. Effects of noise on acoustic signal production. Pp. 251-271 in *Animal Communication and Noise*, H. Brumm, ed. Berlin: Springer. [Communication]
271. Tyack, Peter L., Implications for Marine Mammals of Large-Scale Changes in the Marine Acoustic Environment, *Journal of Mammalogy*, Volume 89, Issue 3, 5 June 2008, Pages 549–558, <https://doi.org/10.1644/07-MAMM-S-307R.1> [Acoustics]
272. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-126, "The US Whale Watching Industry of Greater Puget Sound: A Description and Baseline Analysis" 2014. 199 pp. [Customers][WhaleWatch] [NPR]

273. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-OPR-55. “Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing: Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts”. 2016. [Acoustics] [NPR]
274. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-OPR-59, “2018 Revision to: Technical Guidance for Assessing the Effects on Anthropogenic Sound on Marine Mammal Hearing” 2016. 178 pp. [Acoustics] [NPR]
275. Vagle, S., & Burch, H. (2005). Acoustic measurements of the sound-speed profile in the bubbly wake formed by a small motor boat. *The Journal of the Acoustical Society of America*, 117(1), 153-163. [Acoustics][Vessels]
276. Vagle, S., O'Neill, C., Thornton, S., & Yurk, H. (2018). Soundscape characteristics in Southern Resident Killer Whale critical habitats. *The Journal of the Acoustical Society of America*, 144(3), 1846-1846. [Acoustics] [NPR]
277. Van der Graaf, A.J., M.A. Ainslie, M. André, K. Brensing, J. Dalen, R.P.A. Dekeling, S. Robinson, M.L. Tasker, F. Thomsen, and S. Werner. 2012. European Marine Strategy Framework Directive–Good Environmental Status (MSFD GES): Report of the Technical Subgroup on Underwater Noise and Other Forms of Energy. Available at http://ec.europa.eu/environment/marine/pdf/MSFD_reportTSG_Noise.pdf. [NPR]
278. van Dorp and J. W. Merrick, "Vessel traffic risk assessment 2015: Updating the VTRA 2010, a potential oil loss comparison of scenario analyses by four spill categories," 2017. [Boats] [NPR]
279. Vancouver Fraser Port Authority (June 2019) 2018 Voluntary vessel slowdown in Haro Strait: Summary findings. ECHO Program, Port of Vancouver. <https://www.flipsnack.com/portvancouver/2018-voluntary-vessel-slowdown-in-haro-strait/full-view.html> [NPR][
280. Veirs, S. R., & Veirs, V. R. (2011). Masking of southern resident killer whale signals by commercial ship noise. *The Journal of the Acoustical Society of America*, 129(4), 2606-2606. [Orca][Acoustics]
281. Veirs, S., et al., "A key to quieter seas: Half of ship noise comes from 15% of the fleet," PeerJ, 2018. [Boats]
282. Veirs, S., Veirs, V., and J. D. Wood, "Ship noise extends to frequencies used for echolocation by endangered killer whales," PeerJ, 2016. [Boats] [Orca] [Communication]
283. Veirs, V., & Veirs, S. (2005). One year of background underwater sound levels in Haro Strait, Puget Sound. *The Journal of the Acoustical Society of America*, 117(4), 2577-2578. [Acoustics][NPR]
284. Villegas-Amtmann, S., L.K. Schwarz, J.L. Sumich, and D.P. Costa. 2015. A bioenergetics model to evaluate demographic consequences of disturbance in marine mammals applied to gray whales. *Ecosphere* 6(10):183. [Physiology] [Disturbance]
285. WA SRKW Task Force Vessel Working Group (June 2018) Summary of the Existing Literature and NOAA Rulemaking: Vessel Impacts on Southern Resident Killer Whales. [NPR][Orca]
286. Ward, E. J., Holmes, E. E., & Balcomb, K. C. (2009). Quantifying the effects of prey abundance on killer whale reproduction. *Journal of Applied Ecology*, 46(3), 632-640. [Cumulative][Orca]
287. Ward, W.D., E.M. Cushing, and E.M. Burns. 1976. Effective quiet and moderate TTS: Implications for noise exposure standards. *Journal of the Acoustical Society of America* 59(1):160-165. [Acoustics]
288. Ware, H.E., C.J. McClure, J.D. Carlisle, and J.R. Barber. 2015. A phantom road experiment reveals traffic noise is an invisible source of habitat degradation. *Proceedings of the National Academy of Sciences of the United States of America* 112:12105-12109.
289. Wartzok, D., & Ketten, D. R. (1999). Marine mammal sensory systems. *Biology of marine mammals*, 1, 117. [NPR]

290. Wartzok, D., Popper, A.N., Gordon, J., Merrill, J. (2003) Factors affecting the responses of marine mammals to acoustic disturbance. *Marine Technology Society Journal* 37(4) 6-15 [Acoustic][Comparative]
291. Weilgart, L.S., (2007) A Brief Review of Known Effects of Noise on Marine Mammals. *International Journal of Comparative Psychology*, 20: p159-168 [Comparative]
292. Weilgart, L.S., (2007) The impacts of anthropogenic ocean noise on cetaceans and implications for management. *Canadian Journal of Zoology* 85(11): 1091-1116 [Behavior][Physiology]
293. Whale-watching: Sustainable Tourism and Ecological Management (2014), J. Higham, L. Bejder, R. Williams (Eds) Cambridge: Cambridge University Press. 387 pp. [WhaleWatch] [NPR]
294. Williams R, O'Hara P. (2010) Modelling ship strike risk to fin, humpback, and killer whales in British Columbia, Canada. *J Cetac Res Manag.*;11(1):1-8 [Orca][Cumulative]
295. Williams, D. Lusseau and P. Hammond, (2006) "Estimating relative energetic costs of human disturbance to killer whales (*Orcinus orca*)," *Biol. Conserv.*, pp. 301-311. [Orca] [Physiology]
296. Williams, E. Ashe and D. Sandilands (2011) "Stimulus-dependent response to disturbance affecting the activity of killer whales," Report SC/63/WW5 presented to the 63rd International Whaling Commission Scientific Committee Meeting, Tromso, Norway. [Orca] [Disturbance] [NPR]
297. Williams, R. Bain, D. E., Ford, J. K., & Trites, A. W. (2002a). Behavioural responses of male killer whales to a 'leapfrogging' vessel. *Journal of Cetacean Research and Management*, 4(3), 305-310. [Vessel][Behavior][Orca]
298. Williams, R., Ashe, E. (2006). Killer whale evasive tactics vary with boat number. *Journal of Zoology* doi:10.1111/j.1469-7998.2006.00280.x [Boat][Behavior][Orca]
299. Williams, R., Bain, D., Smith, J., Lusseau, D. (2009). Effects of vessels on behaviour patterns of individual southern resident killer whales *Orcinus orca*. *Endangered Species Research* 6:199-209. [Orca] [Vessels][Behavior]
300. Williams, R., C. Erbe, E. Ashe, and C.W. Clark. (2015). Quiet(er) marine protected areas. *Marine Pollution Bulletin* 100:154-161.
301. Williams, R., Clark, C. W., Ponirakis, D., & Ashe, E. (2014). Acoustic quality of critical habitats for three threatened whale populations. *Animal conservation*, 17(2), 174-185. [Comparative][Acoustics]
302. Williams, R., E. Ashe, D. Sandilands, and D. Lusseau, (2010) "Killer whale activity budgets under no-boat, kayak-only, and power-boat conditions." Final report presented to NOAA. [Boat][Behavior] [NPR]
303. Williams, R., E. Ashe, L. Bright, M. Jasny, and L. Nowlan. (2014a). Viewpoint: Marine mammals and ocean noise: Future directions and information needs with respect to science, policy and law in Canada. *Marine Pollution Bulletin* 86:29-38.
304. Williams, R., Erbe, C., Ashe, E., Beerman, A., & Smith, J. (2014b). Severity of killer whale behavioral responses to ship noise: a dose-response study. *Marine pollution bulletin*, 79(1-2), 254-260. [Behavior][Orca]
305. Williams, R., Thomas, L., Ashe, E., Clark, C.W. and Hammond, P.S., (2016). Gauging allowable harm limits to cumulative, sub-lethal effects of human activities on wildlife: A case-study approach using two whale populations. *Marine Policy*, 70, pp.58-64. [Orca][Cumulative]
306. Williams, R., Trites, A., Bain, D. (2002b). Behavioral responses of killer whales (*Orcinus orca*) to whale-watching boats: opportunistic observations and experimental approaches. *J. Zool., Lond.* 256: 255-270. [Behavior][Orca][WhaleWatch][Vessel]
307. Williams, R., Wright, A.J., Ashe, E., Blight, L.K., Bruintjes, R., Canessa, R., Clark, C.W., Cullis-Suzuki, S., Dakin, D.T., Erbe, C. and Hammond, P.S., (2015). Impacts of anthropogenic noise on marine life: Publication patterns, new discoveries, and future directions in research and management. *Ocean & Coastal Management*, 115, pp.17-24.
308. Williams, S. Veirs, V. Veirs, E. Ashe and N. Mastick, (2018) "Approaches to reduce noise from ships operating in important killer whale habitats," *Marine Pollution Bulletin*. [Boat sounds] [Boats]

309. Wilson, C. and Tisdell, C., (2003) Conservation and Economic Benefits of Wildlife-Based Marine Tourism: Sea Turtles and Whales as Case Studies. *Human Dimensions of Wildlife* 8: 1, p 49-58. [WhaleWatch]
310. Wittekind, D. K. (2014). A simple model for the underwater noise source level of ships. *Journal of Ship production and design*, 30(1), 7-14.[Vessels][Acoustics]
311. Wladichuk, J., D. Hannay, A. MacGillivray, Z. Li. 2018. *Whale Watch and Small Vessel Underwater Noise Measurements Study: Final Report*. Document 01522, Version 3.0. Technical report by JASCO Applied Sciences for Vancouver Fraser Port Authority ECHO Program. [Vessels][Acoustics][NPR]
312. Wladichuk, JL, Hannay, DE, MacGillivray, AO, Li, Z, Thornton, S. 2019. Systematic source level measurements of whale watching vessels and other small boats. *The Journal of Ocean Technology*: 14, 3. [Vessels][Acoustics][WhaleWatch]
313. Wood, J., Tollit, D., Joy, R., Koshure, N., MacGillivray, A., Trounce, K., & Robinson, O. (2018). Commercial ship versus whale watch boat noise: relative effects on Southern Resident killer whales. *Salish Sea Ecosystem Conference [Orca]* [NPR]
314. Wright, A. J., & Robertson, F. C. (2015). New mitigation methods and evolving acoustic exposure guidelines. *ECS Special Publication Series*, (59). [NPR]
315. Wright, A.J., and L.A. Kyhn. 2015. Practical management of cumulative anthropogenic impacts with working marine examples. *Conservation Biology* 29:333-340. [Cumulative]
316. Wright, A.J., Deak, T., Parsons, E.C.M., (2011) Size matters: Management of stress responses and chronic stress in beaked whales and other marine mammals may require larger exclusion zones. *Marine Pollution Bulletin* 63:p5-9 [Physiology]
317. Wright, A.J., Soto, N.A., Baldwin A.L, Bateson, M., Beale, C. M., Clark, C., Deak, T., Edwards, E. F., Fernández, A, Godinho, A., Hatch, L.T., Kakuschke, A., Lusseau, D., Martineau, D., Romero, M. L., Weilgart, L.S., Wintle, B.A., Notarbartolo-di-Sciara, G., Martin, V. (2007) Do Marine Mammals Experience Stress Related to Anthropogenic Noise? *International Journal of Comparative Psychology* 20:2. [Comparative][Physiology][Behavior]
318. Wright, A.J., Soto, N.A., Baldwin A.L, Bateson, M., Beale, C. M., Clark, C., Deak, T., Edwards, E. F., Fernández, A, Godinho, A., Hatch, L.T., Kakuschke, A., Lusseau, D., Martineau, D., Romero, M. L., Weilgart, L.S., Wintle, B.A., Notarbartolo-di-Sciara, G., Martin, V. (2007) Anthropogenic Noise as a Stressor in Animals: A Multidisciplinary Perspective. *International Journal of Comparative Psychology* 20:2. [Comparative][Physiology][Behavior]
319. Yazdi, P. (2007). “Impact of tour boats on the behaviour and energetics of bottlenose dolphins (*Tursiops truncatus*) off Choros Island, Chile.” *International Whaling Commission SC/59/WW20* [Vessels][Behavior][Physiology][NPR]
320. Zeppel, H. & Muloin, S. (2008) Conservation benefits of interpretation on marine wildlife tours. *Human Dimensions of Wildlife*, 13:4 p 280-294. [WhaleWatch]