

## **BENJAMIN S. HALPERN**

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Director, National Center for Ecological Analysis & Synthesis  
Professor, Bren School of Environmental Science & Management  
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### **POSITIONS**

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**Jul 2016 – present:** Director, National Center for Ecological Analysis & Synthesis (NCEAS)  
**Jul 2013 – present:** Professor, Bren School of Environmental Science & Management; UCSB  
**Sept 2013 – present:** Chair in Marine Conservation, Imperial College London  
**Apr 2011 – present:** Director, Center for Marine Assessment and Planning; UCSB  
**Jan 2016 – Jun 2016:** Deputy Director, National Center for Ecological Analysis & Synthesis (NCEAS)  
**Jan 2005 – Dec 2015:** Center Associate, National Center for Ecological Analysis & Synthesis (NCEAS)  
**Jul 2010 – Jul 2013:** Research Biologist, Marine Science Institute; UCSB  
**Jan 2005 – Feb 2012:** Project Coordinator, NCEAS; UC Santa Barbara  
**Jul 2008 – Jun 2010:** Associate Research Biologist, Marine Science Institute; UCSB  
**Jan 2007 – Jun 2008:** Assistant Research Biologist, Marine Science Institute; UCSB  
**Aug 2003 – Dec 2003:** Adjunct Faculty, Antioch College, Santa Barbara  
**Sept 2003 – Dec 2004:** TNC/Smith Postdoctoral Fellow, UC Santa Cruz  
Postdoctoral Fellow, NCEAS, UC Santa Barbara

### **EDUCATION**

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**Ph.D.** “Habitat as a limiting resource for stage-structured populations”  
Department of Ecology, Evolution, and Marine Biology, University of California, Santa Barbara,  
Graduate Advisor: Robert Warner, 2003

**B.A.**, Biology, Carleton College, Magna Cum Laude, 1995

### **HONORS, AWARDS AND BOARDS**

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**Visiting Scholar**, University of Tasmania, 2017  
**Technical Advisory Board**, Ocean Conservancy, 2016-present  
**Board of Directors**, Science for Nature and People Partnership, 2016-present  
**Board of Directors**, Canadian Healthy Oceans Network II, 2015 - present  
**Chair, Board of Directors**, Rafe Sagarin Fund for Innovative Ecology, 2016 - present  
**A.G Huntsman Award for Excellence in the Marine Sciences**, Royal Society of Canada, 2016  
**Senior Fellow**, UN Environment Program, World Conservation Monitoring Center, 2011–present  
**Board of Advisors**, IEUD, 2013-2015  
**Outstanding teacher of the year**, Bren School, UCSB, 2015  
**One of World’s Most Influential Scientific Minds**, Thomson Reuters, 2014  
**Sawyer Seminar**, Environmental Studies, UCSB, Feb. 14, 2014  
**Anton Bruun Memorial Lecture**, IOC/UNESCO annual meeting, June 29, 2013  
**Best Presentation**, Science Board Symposium, PICES 2012, Oct. 2012  
**Contributing Author**, **IPCC AR5 report**, 2011-13  
**National Academies Keck Futures Initiative participant**, Nov 10-12, 2011  
**H. Burr Steinbach Visiting Scholar**, Woods Hole Oceanographic Institute, July 2009  
**David H. Smith Postdoctoral Fellowship**, The Nature Conservancy, 2003-05  
**Dissertation Fellowship**, Graduate Division, UC Santa Barbara, Summer 2003  
**Top Reviewer**, Ecology Letters, 2003  
**Departmental Regent’s Fellowship**, Dept. EEMB, UC Santa Barbara, Fall 2002

**National Science Foundation Graduate Research Fellowship**, 1999-2002  
**Regent's Fellowship**, UC Santa Barbara, 1998-2002  
**Summer Fellow**, Woods Hole Oceanographic Institute, 1995  
**Magna Cum Laude**, Carleton College, 1995  
**National Science Foundation Summer Fellow**, University of Delaware, 1994

### **RESEARCH GRANTS (5 YEAR WINDOW)**

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Sustainable Offshore Aquaculture, SNAP/NCEAS, 2015-2017	\$200,000
Regional and temporal assessment of the Ocean Health Index in two MCI planning regions, Gordon and Betty Moore Foundation, 2015-2017	\$1,534,725
Baltic Ocean Health Index, Johansson Family Foundation, 2015-2016	\$233,000
Modeling data poor fisheries, Conservation International	\$25,235
Reconciling the triple bottom line of social equity, economic return, and environmental benefits in conservation decision making, ARC, 2014-2016	AUS\$110,000
Center for the study of multiple drivers on marine socio-ecological systems (MUSELS). Chilean Millennium Initiative. 2014-2017	\$1,181,266
NSF Collaborative: Holistic integration for Arctic coastal-marine sustainability (Arctic Options). NSF ArcSEES program. 2013-2016	\$1,714,176
Arctic Ocean Health Index, Jepsen Family Foundation, 2013-2016	£107,500
Ecosystem thresholds and indicators for marine spatial planning Moore Foundation, 2012-2016	\$3,073,140
Exploring application of the OHI to US and Canadian geographies, Moore Foundation, 2013-2014	\$146,310
Ocean Health Index, Phase 3, Conservation International, 2016	\$383,016
Ocean Health Index, Phase 2, Conservation International, 2015	\$332,243
Ocean Health Index, Phase 2, Conservation International, 2013-2014	\$450,715
Transboundary Water Assessment Program, UN Environment Program, 2013-14	\$170,000
Ocean Health Index, supplement, Conservation International, 2012-2013	\$732,308
Prioritizing socially and economically viable land- and sea-based investments to protect coral reefs, Australian Research Council, 2011-13	\$325,000
Ocean Health Index, Conservation International, 2010-2012	\$711,000
Identifying thresholds, developing key indicators, and operationalizing their use in CMSP. Planning grant, Moore Foundation, 2012	\$40,535

### **PUBLICATIONS (N=159)**

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#### **In Press**

- Longo, C, M. Frazier, S.C. Doney, J.E. Rheuban, J. Macy and **B.S. Halpern**. In press. Using the Ocean Health Index to identify opportunities and challenges to improving Southern Ocean ecosystem health. *Frontiers in Marine Science*.
- Burgess, M.J., E. Nicholson, **B.S. Halpern** and E.J. Millner-Gulland. In press. Navigating uncertainty in environmental composite indicators. *Ecological Indicators*
- Froehlich, H.E., R.R. Gentry, M.B. Rust, D. Grimm, and **B.S. Halpern**. In press. Public perceptions of aquaculture: evaluating spatiotemporal patterns of sentiment around the world. *PLoS ONE*
- Hampton, S.E., **B.S. Halpern**, M. Winter, J.K. Balch, J.N. Parker, J.S. Baron, M. Palmer, M.P. Schildauer, P. Bishop, T.R. Meagher, and A. Specht. In press. Best practices for virtual participation in meetings: lessons from synthesis centers. *Bulletin of the Ecological Society of America*.
- Cabral, R.B., **B.S. Halpern**, C. Costello, S.D. Gaines. In press. Unexpected management choices when accounting for uncertainty in ecosystem service tradeoff analyses. *Conservation Letters*

## 2017

- Lynham, J., **B.S. Halpern**, T. Blenckner, T. Essington, J. Estes, M. Hunsicker, C. Kappel, A. Salomon, C. Scarborough, K.A. Selkoe, and A. Stier. 2017. Costly stakeholder participation creates inertia in marine ecosystems. *Marine Policy* 76: 122-129.
- Balvanera, P., S. Quijas, D.S. Karp, N. Ash, E.M. Bennett, R. Boumans, C. Brown, K.M.A. Chan, R. Chaplin-Kramer, **B.S. Halpern**, J. Honey-Roses, C.K. Kim, W. Cramer, M.J. Martinez-Harms, H. Mooney, T. Mwampamba, J. Nel, S. Polasky, B. Reyers, J. Roman, W. Turner, R.J. Scholes, H. Tallis, K. Thonicke, F. Villa, M. Walpole and A. Walz. 2017. Ecosystem Services. *in* The GEO Handbook on Biodiversity Observation Networks, M. Walters and R.J. Scholes, eds. Springer International Publishing, Cham, Switzerland. 40pgs.

## 2016

- Fredston-Hermann, A., C.J. Brown, S. Albert, C.J. Klein, S. Mangubhai, J.L. Nelson, L. Teneva, A. Wenger, S.D. Gaines and **B.S. Halpern**. 2016. Where does river runoff matter for coastal marine conservation? *Frontiers in Marine Science*, Vol.3, article 273; doi: 10.3389/fmars.2016.00273
- McCauley, D.J., M. Hardesty-Moore, **B.S. Halpern**, H.S. Young. 2016. A mammoth undertaking: harnessing insight from functional ecology to shape de-extinction priority setting. *Functional Ecology* DOI: 10.1111/1365-2435.12728.
- Frazier, M., C. Longo, **B.S. Halpern**. 2016. Mapping uncertainty due to gapfilling in the global Ocean Health Index. *PLoS ONE* 11(8): e0160377. doi:10.1371/journal.pone.0160377
- Stier, A.C., J.F. Samhouri, S. Gray, R. Martone, M. Mach, **B.S. Halpern**, C. Kappel, C. Scarborough, and P.S. Levin. 2016. Integrating expert opinion into food web conservation and management. *Conservation Letters*. doi: 10.1111/conl.12245
- Poloczanska, E.S., M.T. Burrows, C.J. Brown, J. Garcia Molinos, **B.S. Halpern**, O. Hoegh-Guldberg, C.V. Kappel, P.J. Moore, A.J. Richardson, D.S. Schoeman, W.J. Sydeman. 2016. Responses of marine organisms to climate change across oceans. *Frontiers in Marine Science* 3: article 62.
- Froelich, H.E., R. Gentry, **B.S. Halpern**. 2016. Synthesis and comparative analysis of physiological tolerance and life-history growth traits of marine aquaculture species. *Aquaculture* 460: 75-82.
- Borja, A.M., **B.S. Halpern**, P. Archambault. 2016. Assessing marine ecosystem health, in an integrative way. *Continental Shelf Research* 121: 1-2.
- Borja, A.M. Elliott, J.H. Andersen, T. Berg, J. Carstensen, **B.S. Halpern**, A.-S. Heiskanen, S. Korpinen, J.S.S. Lowndes, G. Martin, N. Rodriguez-Ezpeleta. 2016. Overview of integrative assessment of marine systems: the Ecosystem Approach in practice. *Frontiers in Marine Science* 3: article 20.
- Golden, C.D., E.H. Allison, W.W.L. Cheung, M.M. Dey, **B.S. Halpern**, D.J. McCauley, M. Smith, B. Vaitla, D. Zeller, S.S. Myers. 2016. Fall in fish catch threatens human health. *Nature* 534: 317-319.
- Joppa, L., B. O'Connor, P. Visconti, C. Smith, J. Geldmann, M. Hoffmann, J.E.M. Watson, S.H.M. Butchart, M. Virah-Sawmy, **B.S. Halpern**, S.E. Ahmed, A. Balmford, W.J. Sutherland, M. Harfoot, C. Hilton-Taylor, W. Foden, E. Di Minin, S. Pagad, P. Genovesi, J. Hutton, N.D. Burgess. 2016. Global threats to biodiversity. *Science* 352: 416-418
- Brown, C.J., M.I. O'Connor, E.S. Polaczanska, D.S. Schoeman, L.B. Buckley, M.T. Burrows, C.M. Duarte, **B.S. Halpern**, J.M. Pandolfi, C. Parmesan, and A.J. Richardson. 2016. Ecological and methodological drivers of variation in estimates of species' distribution and phenology responses to climate change. *Global Change Biology* 22: 1548-1560.
- van den Belt, M., Granek, E. Gaill, F., **Halpern, B.**, and Thordyck, M. 2016. Chapter 3, 'Scientific understanding of Ecosystem Services' in the first United Nations World Oceans Assessment, United Nations, New York.

Simcock, A., **B.Halpern**, R. Kirubakaran, M.M. Hossain, M. Polette, E. Smith, and J. Wang. 2016. Chapter 20, 'Coastal, Riverine and Atmospheric Inputs from Land' in the first United Nations World Oceans Assessment, United Nations, New York.

Molinos-Garcia, J., **B.S. Halpern**, D.S. Schoeman, C.J. Brown, W. Keissling, P.J. Moore, J.M. Pandolfi, E.S. Poloczanska, A.J. Richardson, and M.T. Burrows. 2016. Climate velocity and the future global redistribution of marine biodiversity. *Nature Climate Change* 6: 83-88; doi: 10.1038/nclimate2769.

Hunsicker, M.E., C.V. Kappel, K.A. Selkoe, **B.S. Halpern**, C. Scarborough, L. Mease and A. Armhein. 2016. Characterizing driver-response relationships in marine pelagic ecosystems for improved ocean management. *Ecological Applications* 26: 651-663.

Abelson, A., **B.S. Halpern**, D.C. Reed, R.J. Orth, G.A. Kendrick, M.W. Beck, J. Belmaker, G. Krause, G.J. Edgar, L. Airoidi, E. Brokovich, R. France, N. Shahar, A. de Blaeij, N. Stambler, M. Shechter, and P.A. Nelson. 2016. Upgrading Marine Ecosystem Restoration using Ecological-Social Concepts. *BioScience* 66: 156-163.

## 2015

Foley, M.M., R.G. Martone, M.D. Fox, C.V. Kappel, A.L. Erickson, **B.S. Halpern**, K.A. Selkoe, P. Taylor, and C. Scarborough. 2015. Using ecological thresholds to inform resource management: current options and future possibilities. *Frontiers in Marine Science* 2, article 95; doi: 10.3389/fmars.2015.00095

Lowndes, J.S., E.J. Pacheco, B.D. Best, C. Scarborough, C. Longo, S.K. Katona, and **B.S. Halpern**. 2015. Best practices for assessing ocean health in multiple contexts using tailorable frameworks. *PeerJ* 3:e1503; doi: 10.7717/peerj.1503

Klein, C.J., C.J. Brown, **B.S. Halpern**, D.B. Segan, J. McGowan, M. Beger, and J.E.M Watson. 2015. Shortfalls in the global protected area network at representing marine biodiversity. *Nature Scientific Reports* 5: 17539.

Longo C. and **B.S. Halpern**. 2015. Building indicators for coupled marine socio-ecological systems. In *Indicators and surrogates of biodiversity and environmental change* (D. Lindenmayer, P. Barton, J. Pierson, eds.). pgs. 137-148.

Klein, C.J., M.C. Bottrill, R.T. Wright, H.P. Possingham, and **B.S. Halpern**. Social equity and the probability of success of biodiversity conservation. 2015. *Global Environmental Change* 35: 299-306.

Brown, C.J., C. White, M. Beger, H.S. Grantham, **B.S. Halpern**, C.J. Klein, P.J. Mumby, V. Tulloch, M. Ruckelshaus, and H.P. Possingham. 2015. Fisheries and biodiversity benefits of using static versus dynamic models for designing marine reserve networks. *Ecosphere* 6: article 182

Selkoe, K.A., T. Blenckner, M.R. Caldwell, L. Crowder, A. Erickson, T. Essington, J. Estes, R. Fujita, **B.S. Halpern**, M. Hunsicker, C.V. Kappel, R. Kelly, J.N. Kittinger, P.S. Levin, J. Lynham, M. Mach, R. Martone, L. Mease, A. Salomon, J. Samhoury, C. Scarborough, A. Stier, C. White and J. Zedler. 2015. Principles for managing marine ecosystems prone to tipping points. *Ecosystem Health and Sustainability* 1: 17.

**Halpern, B.S.**, M. Frazier, J. Potapenko, K.S. Casey, K. Koenig, C. Longo, J.S. Lowndes, R.C. Rockwood, E.R. Selig, K.A. Selkoe and S. Walbridge. 2015. Spatial and temporal changes in cumulative human impacts on the world's ocean. *Nature Communications* 6:7615.

Karp, D.S., H. Tallis, R. Sachse, B.S. Halpern, K. Thonicke, W. Cramer, H. Mooney, S. Polasky, B. Tietjen, K. Waha, A. Walz, and S. Wolny. 2015. National indicators for observing ecosystem service change. *Global Environmental Change* 35: 12-21.

Anderson, J.H., **B.S. Halpern**, S. Korpinen, C. Murray and J. Reker. 2015. Baltic Sea biodiversity status relates to cumulative human pressures: implications for ecosystem-based management. *Estuarine, Coastal and Shelf Science* 161: 88-92.

- Halpern, B.S.**, C. Longo, J.S. Stewart Lowndes, B.D. Best, M. Frazier, S.K. Katona, K.M. Kleisner, A.A. Rosenberg, C. Scarborough, and E.R. Selig. 2015. Patterns and emerging trends in global ocean health. *PLoS ONE* doi:10.1371/journal.pone.0117863
- Selig, E.R., M. Frazier, J.K. O'Leary, S.D. Jupiter, **B.S. Halpern**, C. Longo, K.L. Kleisner, L. Sivo, and M. Ranelletti. 2015. Measuring indicators of ocean health for an island nation: the Ocean Health Index for Fiji. *Ecosystem Services* doi:10.1016/j.ecoser.2014.11.007
- Giakoumi, S., **B.S. Halpern**, L.N. Michel, S. Gobert, M. Sini, C.-F. Boudouresque, M.-C. Gambi, S. Katsanevakis, P. Lejeune, M. Montefalcone, G. Pergent, C. Pergent-Martini, P. Sanchez-Jerez, B. Velimirov, S. Vizzini, A. Abadie, M. Coll, P. Guidetti, F. Micheli, H.P. Possingham. 2015. Towards a framework for assessment and management of cumulative human impacts on marine food webs. *Conservation Biology* doi:10.1111/cobi.12468
- Karr, K.A., R. Fujita, **B.S. Halpern**, C.V. Kappel, L. Crowder, K.A. Selkoe, P.M. Alcolado, and D. Rader. 2015. Thresholds in Caribbean coral reefs: implications for ecosystem-based fishery management. *Journal of Applied Ecology* 52: 402-412.
- Smith, S.D.P., P.B. McIntyre, **B.S. Halpern**, R.M. Cooke, A.L. Marino, G.L. Boyer, A. Buchsbaum, G.A. Burton, L.M. Campbell, J.J.H. Ciborowski, P.J. Doran, D.M. Infante, L.B. Johnson, J.G. Read, J.B. Rose, E.S. Rutherford, A.D. Steinman, and J.D. Allan. 2015. Rating impacts in a multi-stressor world: a quantitative assessment of 50 stressors affecting the Great Lakes. *Ecological Applications* 25: 717-728
- Tulloch, V.J.D., A.I.T. Tulloch, P. Visconti, **B.S. Halpern**, J.E.M. Watson, M.C. Evans, N.A. Auerbach, M. Barnes, M. Beger, I. Chades, S. Giakoumi, E. McDonald-Madden, N.J. Murray, J. Ringma, and H.P. Possingham. 2015. Why do we map threats? Linking threat mapping with actions to make good decisions for biodiversity conservation. *Frontiers in Ecology and the Environment* 13: 91-99.
- O'Connor, M.I., J. Holding, C.V. Kappel, C.M. Duarte, K. Brander, C.J. Brown, J.F. Bruno, L. Buckley, M.T. Burrows, **B.S. Halpern**, W. Kiessling, P. Moore, J.M. Pandolfi, C. Parmesan, E.S. Poloczanska, D.S. Schoeman, W.J. Sydeman, A.J. Richardson. 2015. Strengthening detection and attribution in biological impacts of climate change. *Global Ecology and Biogeography* 24: 64-76.
- 2014**
- Tallis, H and 200 others. 2014. Towards a diverse conservation ethic. *Nature* 515: 27-28
- Halpern, B.S.**, C. Longo, C. Scarborough, D. Hardy, B.D. Best, S.C. Doney, S.K. Katona, K.L. McLeod, A.A. Rosenberg, and J.F. Samhuri. 2014. Assessing the health of the U.S. west coast with a regional-scale application of the Ocean Health Index. *PLoS ONE* 9: e98995
- Elfes, C., C. Longo, **B.S. Halpern**, D. Hardy, C. Scarborough, B. Best, T. Pinheiro, and G. Dutra. 2014. A regional-scale ocean health index for Brazil. *PLoS One* 9(4): e92589.
- Blasiak, R., K. Fuyura, H. Kurokura, N. Yagi, A. Minohara, J.L. Anderson, P. Bridgewater, **B.S. Halpern**, J. Morishita. 2014. Paradigms in sustainable ocean management. *Marine Policy* doi: 10.1016/j.marpol.2014.03.021
- Selig, E.R., W.R. Turner, S. Troeng, B.P. Wallace, **B.S. Halpern**, K. Kaschner, B.G. Lascelles, K.E. Carpenter and R.A. Mittermeir. 2014. Global priorities for marine biodiversity conservation. *PLoS One* 9: e89298.
- Halpern, B.S.** 2014. Making marine protected areas work. *Nature* doi:10.1038/nature13053.
- Burrows, M.T., D.S. Schoeman, A.J. Richardson, J.G. Molinos, A. Hoffman, L.B. Buckley, P. Moore, C. Brown, J.F. Bruno, C.M. Duarte, **B.S. Halpern**, O. Hoegh-Guldberg, C.V. Kappel, W. Kiessling, M.I. O'Connor, J.M. Pandolfi, C. Parmesan, W.J. Sydeman, S. Ferrier, K.J. Williams, and E.S. Poloczanska. 2014. Climate velocity and geographical limits to shifts in species distribution. *Nature* 507: 492- 495.

**2013**

- Micheli, F., **B.S. Halpern**, S. Walbridge, S. Ciraco, F. Ferretti, S. Frascchetti, R. Lewison, L. Nykjaer, and A. Rosenberg. 2013. Cumulative human impacts on Mediterranean and Black Sea marine ecosystems. *PLoS One* 8: 379889
- Kleisner, K.M., C. Longo, M. Coll, **B.S. Halpern**, D. Hardy, S.K. Katona, F. Le Manach, D. Pauly, A. A. Rosenberg, J. F. Samhuri, C. Scarborough, U. R. Sumaila, R. Watson, and D. Zeller. 2013. Exploring patterns of seafood provision revealed in the global Ocean Health Index. *Ambio* 42: 910-922.
- Halpern, B.S.** and R. Fujita. 2013. Assumptions, challenges, and future directions in cumulative impact analysis. *Ecosphere* 4: article 131.
- Jacobsen, K.I., S.E. Lester and **B.S. Halpern**. 2013. A global synthesis of the economic multiplier effects of marine sectors. *Marine Policy* doi: dx.doi.org/10.1016/j.marpol.2013.09.019
- Maxwell, S.M., E.L. Hazen, S.J. Bograd, **B.S. Halpern**, B. Nickel, G. Breed, N.M. Teutschel, B. Block, S. Benson, H. Bailey, M. A. Kappes, C. Kuhn, M.J. Weise, B. Mate, S.A. Shaffer, J. Hassrick, W. Henry, L. Irvine, B. McDonald, P. Robinson, S. Simmons and D.P. Costa. 2013. Cumulative human impacts on marine predators. *Nature Communications* 4: doi:10/1038/ncomms3688
- Howard, J. and 66 others. 2013. Oceans and Marine Resources in a Changing Climate. *Oceanography and Marine Biology: An Annual Review* 51: 71-192.
- Poloczanska, E.S., C.J. Brown, W.J. Sydeman, W. Kiessling, P.J. Moore, J.F. Bruno, L. Buckley, M.T. Burrows, C.M. Duarte, **B.S. Halpern**, J. Holding, C.V. Kappel, M.I. O'Connor, J.M. Pandolfi, C. Parmesan, D.S. Schoeman, F. Schwing, S.A. Thompson and A.J. Richardson. 2013. Climate change imprints on marine life from long-term observations. *Nature Climate Change* DOI: 10.1038/NCLIMATE1958
- Petes, L., R. Griffis, J. Diamond, B. Fisher, **B. Halpern**, L. Hansen, A. Mace, K. Mengerink, and J. Quintrell. 2013. Management challenges, adaptations, approaches, and opportunities. In *Oceans and marine resources in a changing climate: a technical input to the 2013 National Climate Assessment*. R. Griggs and J. Howard (eds.). Island Press, Washington, DC, 285 pp.
- Selig, E.R., C. Longo, **B.S. Halpern**, B.D. Best, D. Hardy, C.T. Elfes, C. Scarborough, K.M. Kleisner and S. Katona. 2013. Assessing global marine biodiversity status within a coupled socio-ecological perspective. *PLoS One* 8(4): e60284.
- Halpern, B.S.**, S.D. Gaines, K. Kleisner, C. Longo, D. Pauly, A.A. Rosenberg, J.F. Samhuri, and D. Zeller. 2013. Reply to Branch et al. 'Is the ocean food provision index biased?' *Nature* 495: E7
- Halpern, B.S.**, C.J. Klein, C.J. Brown, M. Berger, H.S. Grantham, M. Ruckelshaus, V. Tulloch, M. Watts, C. White and H.P. Possingham. 2013. Achieving the triple bottom line: inherent tradeoffs among social equity, economic return and conservation. *Proc. Nat. Acad. Sci. USA* 110: 6229-6234.
- Halpern, B.S.**, C. Longo, K.L. McLeod, R. Cooke, B. Fischhoff, J.F. Samhuri, and C. Scarborough. 2013. Elicited preferences for components of ocean health in the California Current. *Marine Policy* 42: 68-73
- Satz, D., K.M. A. Chan, A. Guerry, B. Norton, T. Satterfield, R.K. Gould, **B.S. Halpern**, J. Levine, U. Woodside, N. Hannahs, X. Basurto and S. Klain. 2013. The challenges of incorporating cultural ecosystem services into environmental assessment. *Ambio* DOI: 10.1007/s13280-013-0386-6
- Rochman, C.M., M.A. Browne, **B.S. Halpern**, B.T. Hentschel, E. Hoh, H.K. Karapanagioti, L.M. Rios, H. Takada, S. The and R.C. Thompson. 2013. Classify plastic waste as hazardous. *Nature* 494: 169-171
- Klinger, D.H., M. Turnipseed, J.I. Anderson, F. Asche, L. Crowder, A. Guttormson, **B.S. Halpern**, M.I. O'Conner, R. Sagarin, K. Selkoe, G. Shester, M.D. Smith, and P. Tyedmers. 2013. Moving beyond the fished or farmed dichotomy. *Marine Policy* 38: 369-374.
- Lester, S.E., C. Costello, **B.S. Halpern**, S.D. Gaines, C. White, and J.A. Barth. 2012. Evaluating tradeoffs among ecosystem services to inform marine spatial planning. *Marine Policy* 38: 80-89

Klein, C., V. Tulloch, **B.S. Halpern**, K.A. Selkoe, M. Watts, C. Steinbeck, A. Scholz, and H.P. Possingham. 2013. Trade-offs in marine reserve design: habitat condition, representation, and socioeconomic costs. *Conservation Letters* DOI: 10.1111/conl.12005

Lauer, M., S. Albert, S. Aswani, **B.S. Halpern**, L. Campanella and D. La Rose. 2013. Globalization, Pacific islands, and the paradox of resilience. *Global Environmental Change* 23: 40-50

Allan, J.D., P.B. McIntyre, S.D.P. Smith, **B.S. Halpern**, G.L. Boyer, A. Buschsbaum, G.A. Burton Jr., L.M. Campbell, W.L. Chadderton, J.J.H. Ciborowski, P.J. Doran, T. Eder, D.M. Infante, L.B. Johnson, C.A. Joseph, A.L. Marino, A. Prusevick, J. Read, J.B. Rose, E.S. Rutherford, S.P. Sowa and A.D. Steinman. 2013. Joint analysis of stressors and ecosystem services to enhance restoration effectiveness. *Proc. Nat. Acad. Sci. USA* 110: 372-377.

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- Roberts, C., S. Andelman, G. Branch, R. Bustamante, J.C. Castilla, J. Dugan, **B.S. Halpern**, H. Leslie, K. Lafferty, J. Lubchenco, D. McArdle, H. Possingham, M. Ruckelshaus, R. Warner. 2003. Ecological criteria for evaluating candidate sites for marine reserves. *Ecological Applications* 13: S199-S214.
- Roberts, C., G. Branch, R. Bustamante, J.C. Castilla, J. Dugan, **B.S. Halpern**, H. Leslie, K. Lafferty, J. Lubchenco, D. McArdle, M. Ruckelshaus, R. Warner. 2003. Application of ecological criteria in selecting marine reserves and developing reserve networks. *Ecological Applications* 13: S215-S228.
- Halpern, B.S.** 2003. The impact of marine reserves: do reserves work and does reserve size matter? *Ecological Applications* 13: S117-S137.

**2002**

- Borer, E.T., K. Anderson, C.A. Blanchette, B. Broitman, S.D. Cooper, **B.S. Halpern**, E.W. Seabloom, and J.B. Shurin. 2002. Topological approaches to food web analyses: a few modifications may improve our insights. *Oikos* 99: 397-401.
- Shurin, J.B., E.T. Borer, E.W. Seabloom, K. Anderson, C.A. Blanchette, B. Broitman, S.D. Cooper, and **B.S. Halpern**. 2002. A cross-ecosystem comparison of the strength of trophic cascades. *Ecology Letters* 5: 785-791.
- Halpern, B.S.** and R.R. Warner. 2002. Marine reserves have rapid and lasting effects. *Ecology Letters* 5: 361-66.

**2001**

- Roberts, C., **B.S. Halpern**, S.R. Palumbi, and R.R. Warner. 2001. Designing marine reserve networks: why small, isolated protected areas are not enough. *Conservation Biology in Practice*. Summer: 10-17.
- Beck, M.W., K.L. Heck, Jr., K. Able, D. Childers, D. Eggleston, B.M. Gillanders, **B.S. Halpern**, C. Hays, K. Hoshino, T. Minello, R. Orth, P. Sheridan, M. Weinstein. 2001. The identification, conservation and management of estuarine and marine nurseries for fish and invertebrates. *Bioscience* 51: 633-641.

**1998**

- Garrettson M., Stetzel J.F., **Halpern B.S.**, Hearn D.J., Lucey B.T., and McKone M.J. 1998. Diversity and abundance of understorey plants on active and abandoned nests of leaf-cutting ants (*Atta cephalotes*) in a Costa Rican rain forest. *Journal of Tropical Ecology* 14: 17-26.

**GENERAL AUDIENCE PUBLICATIONS**

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- Halpern B. S.** and H.E. Froehlich. 2016. The case for ocean farming. *The Marine Biologist*. Nov. 3.
- Halpern, B.S.** 2012. A new goal for nature: healthy, but not pristine. *Scientific American*, Aug. 16.
- Halpern, B.S.**, J. Samhuri, and K. McLeod. 2012. Is the global ocean healthy? We can answer that now. *Pacific Standard*. Aug. 15, 2012.
- Samhuri, J., K. McLeod, and **B.S. Halpern**. 2011. Ocean Health Index: the audacity of necessity. *Pacific Standard*. Dec. 13, 2011.
- McLeod, K., J. Samhuri and **B.S. Halpern**. 2011. Ocean Health Index accounts for human benefits. *Pacific Standard*. Nov. 8, 2011.
- Halpern, B.S.**, K. McLeod and J. Samhuri. 2011. Three reasons for creating a single Ocean Health Index. *Pacific Standard*. Oct. 11, 2011.
- Samhuri, J., K. McLeod, and **B.S. Halpern**. 2011. Setting targets in the Ocean Health Index. *Pacific Standard*. Sept. 13, 2011.
- McLeod, K., J. Samhuri and **B.S. Halpern**. 2011. Ocean index navigates between the politic, the pristine. *Pacific Standard*. Aug. 8, 2011.
- Halpern, B.S.**, K. McLeod and J. Samhuri. 2011. The Making of the Ocean Health Index. *Pacific Standard*. July 12, 2011.
- Halpern, B.S.** 2005. Scientific opinion on promises of increased fishery yields. *MPA News* 6(9): 3
- Pyke, C. and **B. Halpern** 2005. Global conservation spending. *Conservation in Practice* 6(2): 25
- Halpern, B.S.**, S.D. Gaines, and R.R. Warner. 2004. Moving the discussion about marine reserve science forward: a response to Willis et al. *MPA News* 5(7): 1-2.
- Beck, M.W., K.L. Heck, K.W. Able, D.L. Childers, D.B. Eggleston, B.M. Gillanders, **B.S. Halpern**, C.G. Hays, K. Hoshino, T.J. Minello, R.J. Orth, P.F. Sheridan, and M.P. Weinstein. 2003. The role of nearshore ecosystems as fish and shellfish nurseries. *Issues in Ecology*, Spring, Issue 11:1-12.

**Halpern, B.S.**, R.R. Warner, and S. Gaines. 2002. Letter to the Editor, MPA News 4(5): 5.

## **TEACHING EXPERIENCE**

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(I am currently on full teaching relief as Director of NCEAS)

### **Courses Developed and Taught**

Conservation Planning (ESM 270), UC Santa Barbara, 2013-2016  
Social equity in resource management (ESM296), UC Santa Barbara, 2015 - 2016  
Conservation Planning Practicum (ESM270P), UC Santa Barbara, 2015 - 2016  
Issues in Marine Conservation (EEMB 94), UC Santa Barbara, 2007 – 2009, 2011  
Ecosystem-based management in Marine Sanctuaries (EEMB 595T), UC Santa Barbara, 2008

### **Guest Lecturer**

Equity in conservation, Bren School of Environmental Science & Management, UCSB, Apr 2014  
Marine Conservation, Stanford Hopkins Marine Station, May 29, 2014  
Conservation Planning, Bren School of Environmental Science & Management, UCSB, Feb. 7, 2011.  
Marine Science Policy short-course, Oregon State University, Sept. 12-13, 2005  
Environmental Studies/Ecology, Antioch College, Fall 2001, 2002  
Marine Protected Areas, UC Santa Barbara, Spring 2001

## **ADVISORY ACTIVITIES**

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### *Postdoctoral Researcher*

Halley Froehlich, Sustainable Aquaculture, 2015-present  
Mary Hunsicker, Ocean Tipping Points project, 2013-2015  
Katherine Longo, Ocean Health Index project, 2010-2015  
Jennifer O’Leary, Ocean Health Index project, 2010-2011  
Crow White, Ecosystem service tradeoffs, MA Ocean Project, 2009-2011  
Caitlin Crain, Cumulative effects of multiple stressors, 2008-2009

### *Graduate Students*

Sebastian Tapia (Bren at UCSB; current)  
Molly Wilson (Bren at UCSB; current)  
Alexa Fredston-Hermann (Bren at UCSB; current)  
Patricia Faundez Baez (Bren at UCSB; current)  
Michael Burgass (Silwood Park at Imperial College London; current)  
Cris Elfes (EEMB at UCSB; graduated 2014), co-supervisor for M.S.  
Shaun Walbridge (EEMB at UCSB; graduated 2013), co-supervisor for M.Sc.  
Rowan Trebilco (Rhodes Scholar, Oxford University, UK; graduated 2007); co-supervisor for M.Sc.

### *Group Masters Projects*

Informing biodiversity conservation and water quality management in the Morro Bay watershed, 2015;  
Heather Dennis, Stephanie Falzone, Hilary Walecka, Kari Zajac, Ashley Zavagno  
A spatial and feasibility analysis of wolf-livestock conflict reduction strategies, 2016; Sarah Antonelli,  
Kristen Boysen, Charlie Piechowski, Michael Smith and Geoff Willard.

### *Research Staff*

Casey O’Hara, Ocean Health Index project, 2014-present  
Jamie Afflerbach, Arctic Options and Ocean Health Index projects, 2015-present  
Julie Lowndes, Ocean Health Index project, 2013-present  
Courtney Scarborough, Ocean Health Index project, 2010-present  
Melanie Frazier, Ocean Health Index project, 2013-present  
Ning Jiang, Ocean Health Index project, 2015-present  
Omar Malik, Ocean Health Index project, 2015-2016

Dan Yocum, Arctic Options project, 2015-2016  
Ben Best, Ocean Health Index project, 2012-2015  
Darren Hardy, Ocean Health Index project, 2010-2012  
Marla Ranalletti, Ocean Health Index project, 2010-2012  
Shaun Walbridge, Database and informatics manager, EBM project, 2004-2009  
Caitlin Kongis, GIS technician, CA Current Threats project, 2008-2009  
Colin Ebert, GIS technician, Global Threats project, 2006-2008

#### *Graduate Interns*

Sara Denka, data intern Arctic Options project  
Jamie Afflerbach, data intern OHI project  
Sean Benison, GIS intern for NCEAS working group  
Matthew Perry, GIS intern for NCEAS working group  
Rima Wahab-Twibell, GIS intern for NCEAS working group  
Sarah Teck, intern for CA Current Threats project  
Christine Shearer, intern for CA Current Threats project

#### *Undergraduate Interns/Volunteers*

Noah Morales, NSF-REU intern  
Samuel McNally, research project assistant  
Kira Withy-Allen, research project assistant  
Leslie Longabach, research project volunteer  
Christy Bowles, assistant for Ph.D. thesis  
Meghan Faerber, volunteer for Ph.D. thesis

### **PROFESSIONAL DEVELOPMENT**

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COMPASS: communicating with media and via new media. Training workshop, 2006, 2008, 2009.  
Science in US federal agencies. Training workshop, Smith Program, April 19-22, 2005.  
Legal context for conservation in the United States. Training workshop, Smith Program, Oct. 13-15, 2004.  
Negotiation strategies and techniques. National Conservation Training Center, Jun. 6-8, 2004.  
Resolving complex environmental issues with stakeholders through collaboration. National Conservation Training Center, Feb. 2-6, 2004.  
Communicating with the Media. Training workshop, Smith Program, Jan. 7-9, 2004.  
Publishing for the Lay Audience. Training workshop, Smith Program, Oct. 1-4, 2003

### **INVITED SPEAKER (5 YEAR WINDOW)**

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#### **Academic**

Dalhousie, Department of Biology, Nov 18, 2016  
ThinkSpatial seminar, Geography, UCSB, Nov.1, 2016  
British Ecological Society Aquatic Ecology, Keynote talk, July 22, 2016  
Oxford, Department of Zoology, July 20, 2016  
Wadden Academy, Keynote, Texel, Netherlands, July 1, 2016  
Dept Fisheries Oceans seminar, Nanaimo, Canada, June 30, 2016  
UC Santa Cruz, Ecology & Evolutionary Biology, Mar. 9, 2016  
Stanford, Hopkins Marine Station seminar, May 30, 2014  
Sawyer Seminar, Environmental Studies, UCSB, Feb. 14, 2014  
University of Tokyo, International Conference on Sustainable Oceans, Tokyo, Japan, Oct. 1, 2013  
UNESCO, IOC biannual meeting, Paris, France, June 28, 2013  
UNEP-WCMC, Cambridge, UK, June 27, 2013  
UCSB, Bren School of Environmental Science and Management, Santa Barbara, CA, April 25, 2013  
Duke University, Nicholas School of the Environment, Beaufort, NC, Apr. 10, 2013  
Imperial College, Silwood Park, UK, Mar. 14, 2013

Second International Congress: World's Future and Frontiers of Science, Technology, Humanities and Citizenship, Keynote Speaker, Santiago, Chile, Jan. 18, 2013  
GEOBON (Global Earth Observing, Biodiversity Observing Network), Keynote speaker, Carmel, CA, Dec. 11, 2012  
ESRI Oceans Summit, Opening plenary, Redlands, CA, Nov. 7, 2012  
Canada Healthy Oceans Network (CHONe), Keynote Speaker, Ottawa, Canada, Oct 25, 2012  
PICES/ICES (North Pacific Marine Science Organization), Plenary Symposium Speaker, Hiroshima, Japan, Oct 15, 2012  
CSIRO, Brisbane, Australia, July 3, 2012  
Center of Excellence for Environmental Decision-making, U. Queensland, Brisbane, June 22, 2012  
Global Change Institute, U. Queensland, Brisbane, Australia, June 21, 2012  
EU Maritime Strategy, plenary speaker, Copenhagen, Denmark, May 16, 2012  
Northwest Fisheries Science Center, Monster JAM, Seattle, WA, April 19, 2012  
UC Santa Barbara, Geography departmental seminar, Santa Barbara, CA, Apr. 12, 2012  
National Center for Ecological Analysis & Synthesis, EcoLunch, Santa Barbara, CA, Mar. 8, 2012  
Scripps Institute of Oceanography, Biological Oceanography speaker, Nov. 9, 2011

### **Policy Briefings**

Our Ocean (U.S. Secretary of State conference), June 16, 2014  
US Senate Oceans Caucus briefing, Dec. 10, 2012

### **General Audience**

Imperial College London, July 1, 2014  
New England Aquarium, May 9, 2013

## **WORKING GROUPS**

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I have been a member of nearly 25 working groups at the National Center for Ecological Analysis & Synthesis (NCEAS) and nearly ten other working groups sponsored elsewhere that have covered a wide range of ecological, socio-economic, and conservation topics. I was the lead PI for two NCEAS groups.

## **SELECTED PROFESSIONAL EXPERIENCE/SERVICE**

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**Editor**, Collaboration for Environmental Evidence Library of Systematic Reviews, 2010 – 2013  
**Nominator, Heinz Awards**, Selected to nominate candidates for the prestigious Heinz Award, 2010, 2011  
**Member, Technical Committee**, The Nature Conservancy, U.S. Northeast Shelf Ecoregion Planning process, 2011 –2012  
**Member, Review Panel**, WWF Kathryn Fuller Fellowship Awards, 2011  
**Member, Group of Experts**, United Nations Environment Program/UNESCO Transboundary Waters Assessment Program, 2010  
**Member, Scientific Advisory Committee**, Beyond 2010, Census of Marine Life, 2010 – 2011  
**Member, Steering Committee**, Ocean Health Index, Conservation International, New England Aquarium, and National Geographic, 2008 – 2010  
**Guest Editor**, Journal of Marine Biology, 2009 –2010  
**Member, Scientific Advisory Committee** California Current ecosystem-based management initiative, Packard-funded project co-led by UCSC and COMPASS, 2007 –2008  
**Faculty Science Advisor**, Digital Oceans, Vulcan-funded project; 2007 –2010  
**Scientific Advisor**, The Science of Marine Reserves overview booklets, 2006 – 2007  
**Member, Steering Committee**, Case studies in marine ecosystem-based management, COMPASS project, 2006 –2007  
**Member, Steering Committee**, Update of Marine Reserves booklet, PISCO/COMPASS joint project, 2006 –2007



**Member, Steering Committee**, The roles of marine and coastal biodiversity in maintaining ecosystem services, Consortium for Oceanographic Research Education; Washington, DC; Sept. 11-13, 2006

**Member, Steering Committee**, Implementing Marine EBM: Integrating Perspectives from Science and Management, COMPASS-sponsored meeting; Monterey, CA; Dec. 12-13, 2005

**Member, Planning Committee**, Developing the 5-year plan for the David H. Smith Fellowship Program, 2003 – 2004

**Member, Planning Committee**, Integrating Marine Reserve Science and Fisheries Management, National Fisheries Conservation Center, Nov. 20-21, 2003

**Scientific Advisor**, Northern California Marine Ecoregional Plan review, Santa Cruz, CA, Nov. 15, 2004

**Scientific Advisor**, TNC marine management plan for St. Croix, USVI, Oct. 2001

#### **PROFESSIONAL SOCIETY MEMBERSHIP**

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Society for Conservation Biology

Ecological Society of America

Western Society of Naturalists

International Coral Reef Society