

Carl Folke

Professor in Natural Resource Management and Sustainability Science

Date of Birth: 26 June 1955, Nationality: Swedish.

Married, three children

Short resumé

Carl Folke is a systems thinker in integrative science for sustainability, recognized internationally as leading scientist in research on social-ecological systems and resilience thinking¹. His work emphasizes that humans and our diverse societies and cultures are embedded within and intertwined with the biosphere, fundamentally dependent on its life-supporting ecosystems, while simultaneously being the major force shaping our unique planet from local to global scales and from the past into the future. His biosphere-based sustainability science makes clear that whether humanity has the collective wisdom to navigate the Anthropocene to sustain a livable biosphere for people and civilizations, as well as for the rest of life with which we share the planet, is the most formidable challenge facing humanity.

Since the mid-1980s he has broken new ground in understanding the dynamic interplay of humans and nature, of economy and ecology, from management and governance of ecosystem services in the seas and on the land to global sustainability. His work has illustrated how progress, prosperity and wellbeing will benefit from reconnecting development to the biosphere foundation and how to adaptively govern and manage resilience and transformations for improved stewardship of diverse social-ecological systems, ecosystem services, natural capital, and sustainability in the Anthropocene.

Carl has more than 35 years of experience in collaborating across disciplines. He has strategically contributed to fostering new generations of sustainability science scholars with a focus on social-ecological systems, ecological economics, and resilience thinking internationally and in Sweden, founded and built internationally leading research centres and institutes, and worked with many scholars across the natural and social sciences and the humanities.

He has also a long record of science, policy and practice collaboration, working with key actors from local landscapes in Sweden to international bodies and transnational corporations. Notable examples are the Kristianstad Vattenrike landscape and biosphere reserve in Southern Sweden and the keystone dialogues and the SeaBOS initiative (Seafood Business for Ocean Stewardship) shifting the world's largest seafood corporation towards ocean stewardship.

His curiosity-driven and problem-oriented work ranges from the role of biological diversity in resilience to human behavior in the Anthropocene, from stewardship of open oceans to governance of urban areas, with a focus on intertwined social-ecological systems and predominantly through understanding the world as complex adaptive systems. He has produced more than three-hundred publications, including fourteen books, and is recognized as highly cited researcher by Thompson Reuters (2014-2022) and Google Scholar Citations.

Carl has created inter- and transdisciplinary collaborative platforms and contributed to the development of new areas of research (e.g. resilience science, social-ecological systems, ecological economics, sustainability science, complex adaptive systems), new concepts (e.g. resilience, transformation, regime shifts, response diversity, ecosystem services, ecological footprints, biosphere stewardship, earth stewardship, traditional and local ecological knowledge, planetary boundaries, reconnecting to the biosphere, Anthropocene risk, keystone actors, corporate biosphere stewardship) and approaches (e.g. social-ecological systems and resilience thinking, adaptive governance, transdisciplinary collaboration and science for change) that have spread in science, education, policy, and practice and more recently into the business community.

¹ Janssen, M.A. 2007. An update on the scholarly networks on resilience, vulnerability, and adaptation within the human dimensions of global environmental change. *Ecology and Society* 12(2): 9. [online] URL: <http://www.ecologyandsociety.org/vol12/iss2/art9/>

Xu, L., D. Marinova. 2013. Resilience thinking: A bibliometric analysis of socio-ecological research. *Scientometrics* 96:911–927 DOI 10.1007/s11192-013-0957-0

Meerow, S., J.P. Newell. 2015. Resilience and complexity: A bibliometric review and prospects for industrial ecology. *Journal of Industrial Ecology* 19:236-251 DOI: 10.1111/jiec.12252

Xue, X., L. Wang, R.J. Yang. 2018. Exploring the science of resilience: critical review and bibliometric analysis. *Natural Hazards* 90:477-510 doi.org/10.1007/s11069-017-3040-y

Lade, S.J., G.D. Peterson. 2019. Comment on Resilience of Complex Systems: State of the Art and Directions for Future Research. *Complexity: Article ID 6343545, doi.org/10.1155/2019/6343545*

Carl serves on scientific committees and boards and as advisor to policy and practice from local to international actors. His contributions have been recognised through awards, memberships in academies, honorary doctorates, and fellowships. He started an institute for science communication in the late 1990s and is genuinely engaged in the arts-science interface.

Current positions

- 2007- Director of the Beijer Institute of Ecological Economics, Royal Swedish Academy of Sciences.
- 2023- Founding Director, Professor, Chairman of the Board (since 2019) of the Stockholm Resilience Centre, Stockholm University. Strategic advisor to the leadership.
- 2023- Founder and Chair of the Scientific Committee of the Anthropocene Laboratory of the Royal Swedish Academy of Sciences.

Previous positions

- 2007-2022 Founder, Science Director, leadership of the Stockholm Resilience Centre.
- 1997-2007 Chair, Natural Resource Management, Dept. Systems Ecology, Stockholm University.
- 1999-2006 Director, Centre for Transdisciplinary Environmental Research (CTM), Stockholm Univ.
- 1991-1996 Deputy Director, Beijer Institute, Royal Swedish Academy of Sciences.

Academic titles and education

- 1996 Professor in Natural Resource Management, Stockholm University.
- 1994 Docent (Associate prof.) in Natural Resource Management, Stockholm University.
- 1990 Ph.D. Department of Systems Ecology, focus on ecological economics, Stockholm University.
- 1981 BBA/MBA in business, economics, administration, 1983 university degree in biology/ecology.

Academy membership

- Elected Member of the Royal Swedish Academy of Sciences 2002.
- Elected International Member of the U.S. National Academy of Sciences 2017.
- Elected Member of the Royal Norwegian Society of Sciences and Letters (DKNVS) 2017.
- Elected Member of the Royal Swedish Academy of Agriculture and Forestry (KSLA) 2017.

Honorary doctorates

- Honorary doctorate, Wageningen University and Research, the Netherlands 2018 on the occasion of the 100 anniversary celebration. <https://www.wur.nl/en/About-Wageningen/100years/show/100-year-old-university-awards-honorary-doctorates-to-four-top-researchers-1.htm>
- Honorary doctorate of science, Michigan State University, East Lansing, USA 2017. <http://msutoday.msu.edu/news/2017/more-than-2700-spartans-graduate-this-weekend/>
- Honorary doctorate, KU Leuven, Belgium 2015. <https://nieuws.kuleuven.be/en/content/2015/psd2015-interview-carl-folke>

Selected awards, honours, and fellowships

- The 2023 Sustainability Science Award of the Ecological Society of America (Elmqvist et al. 2019, Nature Sustainability)
- Dr A.H. Heineken Prize for Environmental Sciences, 2022. <https://www.heinekenprizes.org/list-of-laureates/>
- Grand Officer of the Order of Orange-Nassau, The Netherlands, 2022.
- Grande Médaille Albert Ier, Science, Institut Océanographique de Monaco, 2021. <https://www.oceano.org/prix-et-medailles/>
- HM The King's Medal 8th size with the ribbon of the Order of the Seraphim, 2018.
- Gunnerus Award in Sustainability Science, 2017 of The Royal Norwegian Society of Sciences and Letters (DKNVS) and the Norwegian University of Science and Technology (NTNU) <https://www.ntnu.edu/gunnerus-award2017>
- International Geographical Union's Planet and Humanity Medal, 2016. <http://igu-online.org/carl-folke-receives-igu-planet-and-humanity-award/>
- Ebba and Sven Schwartz Scientific Award, 2016.
- Social Capitalist of the Year award (with J. Rockström), 2010, for contributing to a mind shift on environmental issues among business, by Veckans Affärer (Swedish weekly business newspaper).
- The Zayed International Prize for the Environment as a member of the Millennium Ecosystem Assessment, 2005
- The 2004 Sustainability Science Award of the Ecological Society of America (Scheffer et al. 2001, Nature).
- The Centre Party's Environmental Prize (a Swedish political party), 1998, "for his pioneering work with ecosystem services and ecological footprints."
- Pew Scholar in Conservation and the Environment, 1995.

- Resilience Alliance (RA) Fellow 2018.
- Honorary Fellow, the South American Institute for Resilience and Sustainability Studies (SARAS) 2018.
- Senior Fellow IHOPE, Integrated History and future of People on Earth 2015.
- Fellow STIAS, Stellenbosch Institute for Advanced Study, South Africa 2014.
- Fellow the Synergy Program on Resilience and Critical TransitionS (SparcS), Wageningen, the Netherlands 2012.
- Member of the Ralph Yorque Society 1997.
- Post-Doctoral Fellow Boston University, spring 1991.
- Nordic stipendiary in Marine Biology Nordland College, Bodö, Norway, August 1985.

Current scientific commissions

- Principal investigator (w. Gretchen Daily, Stanford) of the Wallenberg Foundation research collaboration program Advancing the research frontier of biosphere stewardship.
- Principal investigator (w. Gretchen Daily, Stanford) of the Wallenberg Foundation research collaboration program Fundamental Research in Biosphere-based Sustainability Science.
- Co-director (w Beatrice Crona) of the Erling-Persson Family Academy Programme, New Approaches to the Grand Challenge: Global Finance, Global Health and the Biosphere, The Royal Swedish Academy of Sciences.
- Partnership Committee of the Natural Capital Project, Stanford
- Member of the Earth Commission, Future Earth, 2023-2026.
- Member Academic Advisory Board of STIAS, Stellenbosch Institute for Advanced Study, South Africa.
- Scientific Advisory Board, Max Planck Institute for Geoanthropology, Jena, Germany 2023-2028.
- Member of the Monaco Ocean Science Federation
- Member of the Misum Center Board, Stockholm School of Economics.
- External Member of the International Scientific Advisory Council of the Waterloo Institute for Complexity and Innovation (WICI), University of Waterloo, Canada.
- Advisory Board to the International Network of Research on Coupled Human and Natural Systems.
- Lead Faculty of the Earth System Governance Project.
- Member of the High Council of Trustees of the Nobel Foundation (Nobelfullmäktige).
- Advisory and Editorial Boards of scientific journals: Ambio, the Anthropocene Review, Anthropocene Science, Ecology and Society, Environment and Development Economics, Environmental Innovation and Societal Transitions, Geography and Sustainability, Global Sustainability, One Earth, Proceeding of the National Academy of Sciences USA (PNAS), Sustainability Science.

Examples of previous scientific commissions

- Founding member, Chair of the Executive Committee (2008-2010) and member Board of Directors of the Resilience Alliance 1999-2015.
- Editor in Chief of the scientific journal Ecology and Society (with Lance Gunderson) 2002-2019.
- Scientific Advisory Board and engaged in the development of SARAS (South American Institute for Resilience and Sustainability Studies), Maldonado, Uruguay 2007-2016.
- Science Council of the International Human Dimensions Programme on Global Environmental Change (IHDP) 2002-2007.
- Scientific Advisory Board of the National Center for Ecological Analysis and Synthesis (NCEAS), Santa Barbara, California 2000-2003.
- Board member, United Nations University's Institute for the Advanced Study of Sustainability (IAS), and sustainability science, Tokyo, Japan 2014-2019.
- International Scientific Advisory Board, Helsinki Institute of Sustainability Science, HELSUS, University of Helsinki, Finland 2018-2023.
- Principal investigator (w. Gretchen Daily, Stanford) of the Wallenberg Foundation research exchange program Advancing Fundamental Knowledge of Natural Capital, Resilience and Biosphere Stewardship.
- SIGHT Advisory Committee (The Swedish Institute for Global Health Transformation), Royal Swedish Academy of Sciences 2017-2022.
- Partner investigator, The ARC Centre of Excellence for Coral Reef Studies, JCU, Australia 2005-2013.
- Partner Investigator Nereus Program, Predicting the Future Ocean, UBC, Canada.
- Active in the start of the International Society for Ecological Economics (ISEE) and served as elected officer 1993-96, 1998-99.
- Member of the Environment Research Committee of the Royal Swedish Academy of Sciences.
- Member, Science Advisory Committee, IIASA 2009-2010.
- Member, Scientific Advisory Board, the STEPS Centre, Brighton, UK 2010-2015.

- Member, Committee of the Centre for Climate Change Economics and Policy, Leeds University/London School of Economics 2009-2013.
- Steering Committee of the US National Academy of Sciences workshop on sustainability science 2020.
- Steering Committee for the US-UK Scientific Forum on the Valuation of Biodiversity, National Academy of Sciences, USA and Royal Society, UK, 2021-2022.
- Advisory Board, Swedish Secretariat for Environmental Earth System Sciences (SSEESS) 2010-2014.
- Millennium Ecosystem Assessment (MA), in particular the development of the subglobal assessments, participated in the assessment, and been involved in follow-up processes.
- Advisory Board, ICSU follow-up of the MA, leading to the Programme on Ecosystem Change and Society (PECS) with links to Future Earth. First Director of the IPO, Programme on Ecosystem Change and Society (PECS) located at Stockholm Resilience Centre.
- Member of the Swedish National Committees for Biology and for Global Environmental Change.
- Editorial Board of seventeen scientific journals incl. Conservation Biology, Ecological Economics, Ecosystems, Environment, Frontiers in Ecology and the Environment, Global Environmental Change.
- Book Review Editor of Ecological Economics 1989-2002.
- Reviewer for e.g. Nature, Science, PNAS, Trends in Ecology and Evolution, American Anthropologist, American Naturalist, Ecology Letters, Ecological Applications, Human Organization, Human Ecology, Environmental Values, Journal of Environmental Economics and Management, Environmental and Resource Economics, Journal of Theoretical Politics, Marine Ecology Progress Series, Progress in Oceanography, Philosophical Transactions of the Royal Society London, Plos One.
- Swedish Research Council engagements, board FORMAS 2001-2003, 2004-2006, evaluation committees Sida/SAREC 2000-2003, SJFR 1994-2000, Swedish Environmental Protection Agency (NV) 1997-1998, FRN 1993-1999.
- Board member, Vice Chairman, Beijer International Institute of Ecological Economics 2005-2006. Board member, Center for Transdisciplinary Environmental Research, 2003-2006. Board member, Department of Systems Ecology, 1997-2006. Board member, the Natural Resources and Environmental Research Center (CNM), Stockholm University, 1993-1997, 1998-2003.

Publications

- More than 365 publications, including 14 books, more than 85 book chapters and >265 scientific articles (>20 in Nature and Science).
- Google Scholar Citations >225 000 citations, h-index >160, ISI cited in >88 000 journal articles, h-index >105.
- Recognized as Highly Cited Researcher by Thompson Reuters (among the top 1% of researchers for most cited documents in their specific field) 2014-2022. Highly Cited Researchers worldwide in Google Scholar Citations (scholars with an h-index >100). Among the 2.5% most cited in ResearchGate and among the very top cited scientists in Sweden across all fields.
- Papers have been reprinted >40 times in books and journals; 10 articles among the top 5 most cited in the scientific journals *Ambio* (2), *Annual Review of the Environment and Resources*, *Annual Review of Ecology, Evolution and Systematics*, *Ecology and Society* (2), *Environmental Management*, *Frontiers in Ecology and the Environment*, *Global Environmental Change* (2); 2 articles among the most notable papers published in ESA journals (*Ecological Applications*, *Frontiers in Ecology and the Environment*) as part of the Centennial celebration of the Ecological Society of America 2015.
- Fourteen articles have been listed as Hot Papers (among the top 0.1% most cited during the last two years), 65 articles as Highly Cited (among the top 1% during the last ten years) and 18 as Research Fronts (ESI). Several articles are in the top 5% of all research outputs scored by Altmetric and one was no 4 among the Top 100 research papers in terms of media impact in 2018 according to Altmetric, which tracks about 10 million research outputs.

Brief summary of research

- Performing (1983) one of the first analyses of environmental functions/*ecosystem services*, quantifying and valuing the life-supporting functions of a Swedish wetland landscape subject to exploitation, and emphasized the humans-as-part-of-nature view introducing new analyses using concepts like appropriated ecosystem areas or *ecological footprints* (late 1980s early 1990s) applied to *aquaculture* and seafood.
- Advancing *ecological economics* with novel work on the significance of ecosystem dynamics, *natural capital*, *biodiversity* and *ecosystem services for human wellbeing* from local to global scales and in the context of rapidly globalizing human societies (1990s).
- Pioneering and advancing research on *resilience*, *regime shifts*, *tipping points* and complex *social-ecological systems* (emerged in the 1990s), the interplay between agency/actors, social networks, organizations and institutions as part of the challenge of multilevel and *adaptive governance and transformations toward stewardship of landscapes and seascapes*, local, indigenous, and *traditional*

knowledge systems, adaptive learning and adaptive co-management, values and belief systems in shaping social-ecological dynamics, true uncertainty and the challenge of dealing with the non-computable as part of resilience thinking.

- Played a central role (since 1991) in advancing the Beijer Institute's research programmes on the Ecology and Economics of Biodiversity Loss, Property Rights and the Performance of Natural Systems, Baltic Sea programme, the Resilience Network that later developed into the Resilience Alliance. This contributions at the Beijer with colleagues internationally, like in the Resilience Alliance, provided the *intellectual legacy and foundation for the establishment of the Stockholm Resilience Centre* in 2007.
- Contributed in proposing and advancing concepts and approaches such as *adaptive governance, bridging organizations, response diversity, social-ecological memory* and the *planetary boundaries and safe operating space* framework and recently *keystone actors, contagious resource exploitation, global production ecosystem, Earth System trajectories*, and the necessity of *reconnecting development to the biosphere*, and *biosphere stewardship and Earth stewardship*, clarifying how the *human scale, connectivity, spread, and speed interplay with ecosystem dynamics* from local levels to the biosphere as a whole, i.e. *intertwined social-ecological systems of the Anthropocene* and synergies, risks and opportunities in this context. Recent work include human behaviour as *enculturated and enearthed* as well as the role of *humans* as a central force in *shaping evolution* in the Anthropocene.
- Advancing understanding of social-ecological systems in relation to *marine ecosystems* and regimes shifts from the Baltic Sea to *coral reef resilience*, from small-scale *fisheries* to the role of *global keystone actors*, and *aquaculture development* as part of sustainable food production and security, *wetland services, water resilience, ecohydrological landscape management, biosphere reserves, urban green areas, local stewards*, and *urban resilience, law and resilience, trade, finance, multilevel and polycentric governance* and globalization.
- Methods span from inductive and empirical work to conceptual models and theory development in *basic and applied sustainability science and ecological economics*. Using the lens of complex adaptive systems, his work is problem-oriented and when transdisciplinary integrates science and practice and coproduces knowledge and understanding.

Examples of science for change

- Played a key role in *the first Nobel Prize Summit* April 2021, hosted by the Nobel Foundation and organised by the National Academy of Sciences, USA, Potsdam institute for Climate Impact Research, Germany and Stockholm Resilience Centre/Beijer Institute. Served on the Executive team and the Steering Committee, organised the Academic Science Sessions and was lead author of the White Paper for the Summit (Folke et al. 2021. Our future in the Anthropocene Biosphere, Ambio).
- Co-organizer of *Keystone Actors dialogues* (Nov 2016, May 2017, May 2018, Sept 2018, May 2019, Sept 2019, May 2020, Oct 2020, May 2021, Oct 2021, May 2022) for *ocean stewardship with leading multinational seafood businesses* and the SeaBOS initiative and organisation (<http://keystonedialogues.earth/>). On the board of the SeaBOS Foundation and in the Scientific Steering Committee of SeaBOS.
- Scientific Director for the CEO Executive Programme in *Resilience Thinking: Transformative Business Leadership for a Prosperous Planet*, Stockholm Resilience Centre. >45 high-level participants predominantly CEOs have been part of the programme, including Alecta, Atlas Copco, Axel Johnson, Electrolux, Epiroc, Handelsbanken, H&M, Industrivärlden, Investor, Kinnevik, Lindéngruppen, Semcon, Scania, SEB, Skanska, Stena Line, Stora Enso, Swedbank, and Volvo.
- Core knowledge partner, TNFD (Taskforce on Nature-related Financial Disclosures).
- Senior Advisor, Temasek Sustainability Advisory Panel (TSAP), (previously Ecosperity Advisory Group 2019-2022), Temasek, Singapore.
- Member of the SEB External Sustainability Advisory Board (SESAB), Stockholm, Sweden.
- Member of the Ethics Advisory Council to Axel Johnson, Stockholm, Sweden.
- Member of international McKinsey Sustainability Advisory Council.
- Sustainability Committee member to promote resilience thinking in catastrophe insurance, Entropics 2018-2020.
- Co-organized (w G.Daily, Stanford) the Summit on Natural Capital, May 2015, Stockholm, with fifty business executives and scientists convened under Chatham house rules, representing institutions situated in contrasting, high-leverage contexts for driving innovation and systemic change.
- Advisory Board EAT (food, health, sustainability), and Stockholm EAT Forum.
- Engaged with the Global Resilience Partnership (GRP) for experimenting with new approaches to development aid and help build more resilient futures for billions of people.
- Board member, Stockholm Environment Institute, 2004-2013.

- Leadership Council of the Sustainable Development Solution Network (SDSN) Northern Europe 2018-2019.
- Advisor to the Swedish Government Commission on ecosystem services 2012-2013 and the Swedish Government Official Report - Making the Value of Ecosystem Services Visible - (SOU 2013:68) providing direction for the implementation of ecosystem services management in Swedish landscapes.
- Chairing the Scientific Committee and developing the three scientific background documents of the 3rd Nobel Laureate Symposium on Global Sustainability, May 2011, Royal Swedish Academy of Sciences with participation by the UN Secretary General's High Level Panel on Global Sustainability that released "Resilient People, Resilient Planet: A Future Worth Choosing" as input to the Rio+20 meeting, 2012.
- Together with colleagues of the Stockholm Resilience Centre wrote in 2009 the report Resilience and Sustainable Development 2.0 for the Swedish Government's Commission on Sustainable Development.
- Lead author of the Swedish Government report to the World Summit on Sustainable Development, 2002 in Johannesburg (Folke, C., et al. 2002. Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations. *Report for the Swedish Environmental Advisory Council 2002:1*. Ministry of the Environment, Stockholm) also released by ICSU.
- Author of a Swedish Government Official Report in 1993 on trade and the environment, translated and published as a book in the UK and translated into Chinese and published in China.
- Member, Environmental Advisory Council to the Swedish Government, 1991-1994, and various roles as advisor over the years.
- Swedish Scientific Committee on Biological Diversity, of the Swedish Government, 1994-1996.
- Foresight Science Expert Panel to UNEP 2010-2011.
- Several functions with UNEP in relation to the Convention on Biological Diversity.
- Collaborated with and written reports to organizations like FAO, UNESCO on issues like freshwater management, sustainable cities, and biosphere reserves.
- Contributor to the 2012 IPCC report Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.
- Collaboration with stakeholders and practitioners of the landscapes and seascapes in focus, e.g. Kristianstad Vattenrike Biosphere Reserve, Sweden, PECS cases, bridging organizations.
- Scientific Committee, Volvo Environment Prize, 2008 and Chair since 2013.
- Scientific Committee, Kenneth E. Boulding Memorial Award, ISEE, since 2013.
- Jury 100, Frontiers Planet Prize, Frontiers Research Foundation, since 2022.
- Member Kommittén Gustavianska Parkens Vänner, Stockholm, 2001-2010.
- Scientific advisor to The Swedish Society for Nature Conservation 1998-2000.
- In 1998 founded Albaeco, an institute devoted to communicating the latest in sustainability science with a focus on Nature's importance to society and the economy. Served on the board 1998-2004.

Teaching, conferences, presentations

- Developing undergraduate and graduate courses in sustainability science at Stockholm University.
- Participating in numerous courses at undergraduate and graduate levels in biology/ecology, economics, political sciences, environmental law, engineering, interdisciplinary at various Swedish universities, including two MOOC (Massive Open Online Courses), part of the SDG Academy.
- Lecturing at several international courses abroad and participated in teaching workshops and research seminars on environment and development in developing regions.
- Supervised 25 PhD-students; main supervisor for 11 (e.g. Line Gordon, Johan Colding, Stephan Barthel, Per Olsson, Lisen Schultz), has advised many Master-theses.
- Initiating, building and supporting multiple platforms for young scientists e.g. Eco-Eco Group, 1984-1991, Interdisciplinary PhD-Group of the Centre for Transdisciplinary Environmental Research, 1997-2009; CART Group of the Resilience Alliance (2000) shifting into RAYS - The Resilience Alliance Young Scholars Group (ongoing); BYS – The Beijer Young Scholars (ongoing since 2012).
- Many conference committees, organized international conferences and workshops, including two major conferences in Stockholm – Investing in Natural Capital: A Prerequisite for Sustainability 1992 (second symposium of the International Society for Ecological Economics); and Resilience 2008 – Resilience, Adaptation, and Transformation in Turbulent Times (first symposium of the Resilience Alliance).
- In 2000 founded the Stockholm Seminars: Frontiers in Sustainability Science and Policy, held at the Royal Swedish Academy of Sciences with well over 125 talks by renowned scholars.
- About 200 scientific presentations including keynote speaker presentations and invited lectures worldwide e.g. at universities of Cambridge, Oxford, Stanford, Princeton, Harvard, Indiana, Tokyo, Bonn, Wageningen, Cape Town, Montevideo.
- Numerous public lectures and seminars for e.g. business leaders and business organisations, NGOs, government agencies, politicians, royal families, artists, school classes, television and media.

- Research reported in newspapers, radio and television, websites, in Sweden and internationally.
- Written popular science pieces and articles in media.
- Examples of webpresentations Molecular Frontiers May 2019
<https://www.youtube.com/watch?v=mBmXL6CuL5E>

Science and art

- Organized “Changing Matters – The Resilience Art Exhibition”, the Swedish Royal Academy of Fine Arts and the Royal Swedish Academy of Sciences, shown at the Swedish Museum of Natural History 2008.
- “Reflections – On People and the Biosphere” (Folke and Hall 2014 Langenskiolds). The book shown as an installation at the art venue Artipelag outside Stockholm summer 2014, shown outdoors as an exhibition at the Raoul Wallenberg Square, Nybroplan April-May 2015, the Transformations conference October 2015, Stockholm, Freiburg, Germany November 2015, Nordic politicians January 2016, Resilience 2017 conference August 2017, Stockholm etc.
- Co-developed the exhibition “Patterns of the Biosphere” at Svenskt Tenn, Stockholm, April-June 2015, also shown at the Resilience conference August 2017, Kulturhuset 2017, Stockholm, and Läckö Slott/Naturrum, Lidköping, summer 2018.
- Served as scientific advisor for the exhibition “Welcome to the Biosphere” at Svenskt Tenn, Stockholm, August-October 2019.
- Serve as advisor to the collaboration between Beckman’s College of Design, the Beijer Institute, and Svenskt Tenn, where science findings are interpreted by Beckman students and exhibited as Svenskt Tenn.
- Engaged in the ArtScience dialogues of the South American Institute for Resilience and Sustainability Studies, SARAS, Uruguay, including the installation ‘Reconnecting with the Ark’ 2013 with Francisco Gazitua and the sculpture ‘Nature, Society, Economy’ by Tone Björdam, exhibited at the Resilience 2017 conference in Stockholm.
- Continuously engaged in ArtScience projects.

Grants

Have led and received funding for

- Centre-of-Excellences in Sweden (Formas) and the Nordic countries (Nordforsk).
- Major research grants from the Strategic Environmental Fund-Mistra, The Kjell and Märta Beijer Foundation, The Wallenberg Foundations, The Erling-Persson Family Foundation, The Swedish International Development Cooperation Agency-Sida, The European Commission, and Swedish research councils and foundations.

Have been engaged in grants from e.g.

- MacArthur Foundation, The Rockefeller Foundation, The Christensen Fund, The David and Lucile Packard Foundation, Packard Foundation, Nippon Foundation, Australian Research Council, The Walton Family Foundation, The Gordon and Betty Moore Foundation.

A selection of publications

- Adger, W.N., T. Hughes, C. Folke, S.R. Carpenter and J. Rockström. 2005. Social-Ecological Resilience to Coastal Disasters. *Science* 309:1036-1039.
- Adger, W.N., A.-S. Crepin, C. Folke, D. Ospina Medina, F.S. Chapin III, K. Segerson, K. Seto, J.M. Anderies, S. Barrett, E.M. Bennett, G. Daily, T. Elmqvist, J. Fischer, N. Kautsky, S.A. Levin, J.F. Shogren, J. van den Bergh, B. Walker, and A. de Zeeuw. 2020. Urbanisation, Migration, and Adaptation to Climate Change. *One Earth* 3(4): 396-399.
- Anderies, J.M., C. Folke, B.H. Walker, and E. Ostrom. 2013. Aligning Key Concepts for Global Change Policy: Robustness, Resilience, and Sustainability. *Ecology and Society*. 18(2):8.
- Andersson, E., S. Barthel, S. Borgström, J. Colding, T. Elmqvist, C. Folke, and Å. Gren. 2014. Reconnecting Cities to the Biosphere: Stewardship of Green Infrastructure and Urban Ecosystem Services. *Ambio* 43:445-453.
- Arrow, K., B. Bolin, R. Costanza, P. Dasgupta, C. Folke, C.S. Holling, B.-O. Jansson, S. Levin, K.-G. Mäler, C. Perrings, D. Pimentel. 1995. Economic Growth, Carrying Capacity, and the Environment. *Science* 268:520-521.
- Barbier, E.B., J. Burgess and C. Folke. 1994. *Paradise Lost? The Ecological Economics of Biodiversity*. Earthscan, London. 267 pp.
- Barthel, S., C. Folke and J. Colding. 2010. Social-Ecological Memory in Urban Gardens: Retaining the Capacity for Management of Ecosystem Services. *Global Environmental Change* 20:255-265.
- Barrett, S., T.M. Lenton, A. Millner, A. Tavoni, J. Anderies, S.R. Carpenter, F.S. Chapin III, G. Daily, C. Folke, V. Galaz, et al. 2014. Climate Engineering Reconsidered. *Nature Climate Change* 4:527-529.

- Barrett, S., A. Dasgupta, P. Dasgupta, W.N. Adger, J. Anderies, J. van den Bergh, C. Bledsoe, J. Bongaarts, S.R. Carpenter, F.S. Chapin III, A.-S. Crepin, G. Daily, P. Ehrlich, C. Folke, N. Kautsky, E.F. Lambin, S.A. Levin, K.-G. Mäler, R. Naylor, K. Nyborg, S. Polasky, M. Scheffer, J. Shogren, P.S. Jørgensen, B. Walker, and J. Wilen. 2020. Social Dimensions of Fertility Behavior and Consumption Patterns in the Anthropocene. *Proceedings of the National Academy of Sciences, USA* 117: 6300-6307.
- Bellwood, D., T. Hughes, C. Folke and M. Nyström. 2004. Confronting the Coral Reef Crisis. *Nature* 429:827-833.
- Berkes, F. and C. Folke. 1992. A Systems Perspective on the Interrelations between Natural, Human-made and Cultural Capital. *Ecological Economics* 5:1-8.
- Berkes, F. and C. Folke (eds.). 1998. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge University Press, Cambridge UK. 459 pp.
- Berkes, F., C. Folke and J. Colding. 2000. Rediscovery of Traditional Ecological Knowledge as Adaptive Management. *Ecological Applications* 10:1251-1262.
- Berkes, F., J. Colding and C. Folke (eds.). 2003. *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. Cambridge University Press, Cambridge UK. 393 pp.
- Berkes, F., T.P. Hughes, R.S. Steneck, J.A. Wilson, D.R. Bellwood, B. Crona, C. Folke, et al. 2006. Globalization, Roving Bandits, and Marine Resources. *Science* 311:1557-1558.
- Biermann, F., K. Abbott, S. Andresen, K. Bäckstrand, S. Bernstein, M.M. Betsill, H. Bulkeley, B. Cashore, J. Clapp, C. Folke, et al. 2012. Navigating the Anthropocene: Improving Earth System Governance. *Science* 335:1306-1307.
- Biggs, O., T. Blenckner, C. Folke, L. Gordon, A. Norström, M. Nyström, and G. Peterson. 2012. Regime Shifts. In: Hastings, A. and L. Gross (eds.). *Encyclopedia in Theoretical Ecology*. University of California Press, Berkeley, CA.
- Blasiak, R., A. Dauriach, J.-B. Jouffray, C. Folke, H. Österblom, J. Bebbington, F. Bengtsson, A. Causevic, B. Geerts, W. Grønbrekk, P. Henriksson, S. Käll, D. Leadbitter, D. McBain, G. Ortuno Crespo, H. Packer, I. Sakaguchi, L. Schultz, E. Selig, M. Troell, J. Villalón, C. Wabnitz, E. Wassénus, R. Watson, N. Yagi, and B.E. Crona. 2021. Evolving Perspectives of Stewardship in the Seafood Industry. *Frontiers in Marine Science* 8:671837.
- Boyd, E. and C. Folke (eds.). 2012. *Adapting Institutions: Governance, Complexity and Social-Ecological Resilience*. Cambridge University Press, Cambridge, UK. 290 pp.
- Carpenter, S.R. and C. Folke. 2006. Ecology for Transformation. *Trends in Ecology and Evolution* 21: 309-315.
- Carpenter, S.R., C. Folke, M. Scheffer and F. Westley. 2009. Resilience-Accounting for the Noncomputable. *Ecology and Society* 14(1):13.
- Carpenter, S.R., C. Folke, M. Scheffer, and F. Westley. 2019. Dancing on the Volcano: Social Exploration in Times of Discontent. *Ecology and Society* 24(1):23. <https://doi.org/10.5751/ES-10839-240123>
- Carpenter, S.R., C. Folke, A. Norström, O. Olsson, L. Schultz, B. Agarwal, P. Balvanera, B. Campbell, J.C. Castilla, W. Cramer, R. DeFries, P. Eyzaguirre, T. Hughes, S. Polasky, Z. Sanusi, R. Scholes, and M. Spierenburg. 2012. Program on Ecosystem Change and Society: An International Research Strategy for Integrated Social-Ecological Systems. *Current Opinion in Environmental Sustainability* 4:134-138.
- Carpenter, S.R., K.J. Arrow, S. Barrett, R. Biggs, W.A. Brock, A.-S. Crépin, G. Engström, C. Folke, et al. 2011. General Resilience to Cope With Extreme Events. *Sustainability* 4:3248-3259.
- Carpenter, S.R., W. Brocks, C. Folke, E. van der Nees, and M. Scheffer. 2015. Allowing Variance may Enlarge the Safe Operating Space for Exploited Ecosystems. *Proceedings of the National Academy of Sciences, USA* 112:14384-14389.
- Chapin, F.S. III, G.P. Kofinas and C. Folke (eds.). 2009. *Principles of Ecosystem Stewardship: Resilience-Based Natural Resource Management in a Changing World*. Springer Verlag, New York. 401 pp.
- Chapin, III, F.S., S.R. Carpenter, G. P. Kofinas, C. Folke, N. Abel, W.C. Clark, P. Olsson, D.M. Stafford Smith, B.H. Walker, O.R. Young, F. Berkes, R. Biggs, J.M. Grove, R.L. Naylor, E. Pinkerton, W. Steffen, F.J. Swanson. 2010. Ecosystem Stewardship: Sustainability Strategies for a Rapidly Changing Planet. *Trends in Ecology and Evolution* 25:241-249.
- Chapin III, F.S., E. Weber, E. Bennett, R. Biggs, J. van den Bergh, W.N. Adger, A.-S. Crepin, S. Polasky, C. Folke, M. Scheffer, K. Segerson, J. Anderies, S. Barrett, J.C. Cardenas, S.R. Carpenter, J. Fischer, N. Kautsky, S.A. Levin, J. Shogren, B.H. Walker, J. Wilen, and A. de Zeeuw. 2022. Earth Stewardship: Shaping a Sustainable Future through Interacting Policy and Norm Shifts. *Ambio* 51:1907-1920.
- Colding, J. and C. Folke. 2001. Social taboos: "Invisible" Systems of Local Resource Management and Biological Conservation. *Ecological Applications* 11:584-600.
- Colding, J., J. Lundberg and C. Folke. 2006. Incorporating Green-area User Groups in Urban Ecosystem Management. *Ambio* 35:237-244.

- Colding, J. and C. Folke. 2009. The Role of Golf Courses in Biodiversity Conservation and Ecosystem Management. *Ecosystems* 12:191-206.
- Costanza, R., L. Waigener, C. Folke and K.-G. Mäler. 1993. Modeling Complex Ecological Economic Systems: Toward an Evolutionary Dynamic Understanding of People and Nature. *BioScience* 43:545-555.
- Crepin, A.-S., and C. Folke. 2015. The Economy, the Biosphere, and Planetary Boundaries: Towards Biosphere Economics. *International Review of Environmental and Resource Economics* 8: 57-100.
- Crona, B.I., E. Wassenius, K. Lillepold, R. Watson, L. Selig, C. Hicks, H. Österblom, C. Folke, J.-B. Jouffray, and R. Blasiak. 2021. Sharing the Seas: A Review and Analysis of Ocean Sector Interactions. *Environmental Research Letters* 16:063005.
- Crona, B.I., C. Folke, and V. Galaz. 2021. The Anthropocene Reality of Financial Risk. *One Earth* 4(5): 619-628.
- Crona, B., T. Daw, W. Swartz, A. Norström, M. Nyström, M. Thyresson, C. Folke, et al. 2016. Masked, Diluted, Drowned Out: Global Seafood Trade Weakens Signals from Marine Ecosystems. *Fish and Fisheries* 17:1175-1182.
- Daily, G., T. Söderqvist, S. Aniyar, K. Arrow, P. Dasgupta, P.R. Ehrlich, C. Folke, et al. 2000. The Value of Nature and the Nature of Value? *Science* 289:395-396.
- Dasgupta, P., C. Folke and K.-G. Mäler. 1994. The Environmental Resource Base and Human Welfare. In: Lindahl-Kiesling, K. and H. Landberg (eds.). *Population, Economic Development and the Environment*. Oxford University Press, Oxford. pp 25-50.
- Deutsch, L., S. Gräslund, C. Folke, M. Huitric, N. Kautsky, M. Troell and L. Lebel. 2007. Feeding Aquaculture Growth through Globalization; Exploitation of Marine Ecosystems for Fishmeal. *Global Environmental Change* 17:238-249.
- Ekins, P., C. Folke and R. Costanza. 1994. Trade, Environment and Development: The Issues in Perspective. *Ecological Economics* 9:1-12.
- Elmqvist, T., N. Frantzeskaki, E. Andersson, T. McPhearson, C. Folke, P. Olsson, O. Gaffney, and K. Takeuchi. 2019. Sustainability, Resilience and Transformation in the Urban Century. *Nature Sustainability* 2:267-273. doi.org/10.1038/s41893-019-0250-1
- Elmqvist, T., C. Folke, M. Nyström, G. Peterson, J. Bengtsson, B. Walker and J. Norberg. 2003. Response Diversity and Ecosystem Resilience. *Frontiers in Ecology and the Environment* 1:488-494.
- Eriksson, H., H. Österblom, B. Crona, M. Troell, N. Andrew, J. Wilen, and C. Folke. 2015. Contagious Exploitation of Marine Resources. *Frontiers in Ecology and the Environment*. 13:435-440.
- Fischer, J., T.A. Gardner, E.B. Bennett, P. Balvanera, R. Biggs, S.R. Carpenter, T. Daw, C. Folke, et al. 2015. Advancing Sustainability through Mainstreaming a Social-Ecological Systems Perspective. *Current Opinion in Environmental Sustainability* 14:144-149.
- Folke, C., and N. Kautsky. 1989. The Role of Ecosystems for a Sustainable Development of Aquaculture. *Ambio* 18:234-243.
- Folke, C. 1991. The Societal Value of Wetland Life-Support. In: Folke, C. and T. Kåberger (eds.). *Linking the Natural Environment and the Economy: Essays from the Eco-Eco Group*. Kluwer Academic Publishers. pp. 141-171.
- Folke, C., M. Hammer, R. Costanza, and A.M. Jansson. 1994. Investing in Natural Capital: Why, What and How. In: Jansson, A.M., M. Hammer, C. Folke, and R. Costanza (eds.). *Investing in Natural Capital: The Ecological Economics Approach to Sustainability*. ISEE Press/Island Press, Washington. pp. 1-20.
- Folke, C., C.S. Holling, C.A. Perrings. 1996. Biological Diversity, Ecosystems and the Human Scale. *Ecological Applications* 6:1018-1024.
- Folke, C., Å. Jansson, J. Larsson and R. Costanza. 1997. Ecosystem Appropriation by Cities. *Ambio* 26:167-172.
- Folke, C., S. Carpenter, T. Elmqvist, L. Gunderson, C.S. Holling, and B. Walker. 2002. Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations. *Ambio* 31:437-440.
- Folke, C., J. Colding and F. Berkes. 2003. Synthesis: Building Resilience and Adaptive Capacity in Social-Ecological Systems. In: Berkes, F., J. Colding and C. Folke (eds.). *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. Cambridge University Press, Cambridge. pp 352-387.
- Folke, C. 2003. Freshwater for Resilience: A Shift in Thinking. *Philosophical Transactions of the Royal Society London, Biological Sciences*. 358:2027-2036.
- Folke, C. 2003. Social-Ecological Resilience and Behavioural Responses. In: Biel, A, B. Hansson and M. Mårtensson (eds.). *Individual and Structural Determinants of Environmental Practice*. Ashgate Publishers, London, pp. 226-242.
- Folke, C., S.R. Carpenter, B. Walker, M. Scheffer, T. Elmqvist, L. Gunderson and C.S. Holling. 2004. Regime Shifts, Resilience and Biodiversity in Ecosystem Management. *Annual Review of Ecology, Evolution and Systematics* 35:557-581.
- Folke, C., T. Hahn, P. Olsson and J. Norberg. 2005. Adaptive Governance of Social-Ecological Systems. *Annual Review of Environment and Resources* 30:441-473.

- Folke, C. 2006. Resilience: Emergence of a Perspective for Social-Ecological Systems Analyses. *Global Environmental Change* 16: 253-267.
- Folke, C., C. Fabricius, G. Cundill and L. Schultz with contributing authors. 2006. Communities, Ecosystems and Livelihoods. In: Millennium Ecosystem Assessment (eds.). *Ecosystems and Human Well-Being: Multiscale Assessments: Findings of the Sub-global Assessments Working Group*, Millennium Ecosystem Assessment Series, Chapter 11: 261-277. Island Press, Washington, D.C.
- Folke, C., L. Pritchard, F. Berkes, J. Colding and U. Svedin. 2007. The Problem of Fit Between Ecosystems and Institutions: Ten Years Later. *Ecology and Society* 12(1): 30.
- Folke, C., J. Colding, P. Olsson and T. Hahn. 2007. Integrated Social-Ecological Systems and Adaptive Governance of Ecosystem Services. In: Pretty, J., A. Ball, T. Benton, J. Guivant, D. Lee, D. Orr, M. Pfeffer and H. Ward (eds). *Sage Handbook on Environment and Society*, Chapter 37: 536-552. Sage Publications, London.
- Folke, C., S.R. Carpenter, B.H. Walker, M. Scheffer, F.S. Chapin III, and J. Rockström. 2010. Resilience Thinking: Integrating Resilience, Adaptability and Transformability. *Ecology and Society* 15(4): 20.
- Folke, C., Å. Jansson, J. Rockström, P. Olsson, S.R. Carpenter, F.S. Chapin, A.-S. Crépin, G. Daily, K. Danell, J. Ebbesson, T. Elmqvist, V. Galaz, F. Moberg, M. Nilsson, H. Österblom, E. Ostrom, et al. 2011. Reconnecting to the Biosphere. *Ambio* 40:719-738.
- Folke, C., and L. Hall. 2014. *Reflections: On People and the Biosphere* (Speglingar: om Människan och Biosfären). Bokförlaget Langenskiöld, Stockholm, Sweden (ArtScience)
- Folke, C. 2016. Resilience (Republished). *Ecology and Society* 21(4):44.
- Folke, C., R. Biggs, A. Norström, B. Reyers, and J. Rockström. 2016. Social-Ecological Resilience and Biosphere-Based Sustainability Science. *Ecology and Society* 21(3):41.
- Folke, C., H. Österblom, J.-B. Jouffray, E. Lambin, M. Scheffer, B.I. Crona, M. Nyström, S.A. Levin, S.R. Carpenter, W.N. Adger, J.M. Anderies, F.S. III Chapin, A.-S. Crépin, A. Dauriach, V. Galaz, L.J. Gordon, N. Kautsky, B.H. Walker, J.R. Watson, J. Wilen, and A. de Zeeuw. 2019. Transnational Corporations and the Challenge of Biosphere Stewardship. *Nature Ecology & Evolution* 3:1396–1403.
- Folke, C., S. Polasky, J. Rockström, V. Galaz, F. Westley, M. Lamont, M. Scheffer, H. Österblom, S.R. Carpenter, F.S. Chapin III, K.C. Seto, E.U. Weber, B.I. Crona, G.C. Daily, P. Dasgupta, O. Gaffney, L.J. Gordon, H. Hoff, S.A. Levin, J. Lubchenco, W. Steffen, and B.H. Walker. 2021. Our Future in the Anthropocene Biosphere. *Ambio* 50: 834-869.
- Folke, C., J. Haider, S. Lade, A. Norström, and J. Rocha. 2021. Resilience in Social-Ecological Systems: A Handful of Frontiers. *Global Environmental Change* 71: 102400
- Gadgil, M., F. Berkes, and C. Folke. 1993. Indigenous Knowledge for Biodiversity Conservation. *Ambio* 22:151-156.
- Galaz, V., T. Hahn, P. Olsson, C. Folke and U. Svedin. 2008. The Problem of Fit among Biophysical Systems, Environmental Regimes and Broader Governance Systems: Insights and Emerging Challenges. In: Young, O., L.A. King and H. Schroeder (eds). *Institutions and Environmental Change: Principal Findings, Applications, and Research Frontiers*. MIT Press, Cambridge, Boston, pp. 147-186.
- Gelcich, S., T.P. Hughes, P. Olsson, C. Folke, et al. 2010. Navigating Transformations in Governance of Chilean Marine Coastal Resources. *Proceedings of the National Academy of Sciences, USA* 107:16794-16799.
- Gordon, L.J., V. Bignet, B. Crona, P. Henriksson, T. van Holt, M. Jonell, T. Lindahl, M. Troell, S. Barthel, L. Deutsch, C. Folke, J. Haider, J. Rockström, and C. Queiroz. 2017. Rewiring Food Systems to Enhance Human Health and Biosphere Stewardship. *Environmental Research Letters* 12, 100201.
- Guerry, A.D, S. Polasky, J. Lubchenco, R. Chaplin-Kramer, G.C. Daily, R. Griffin, M.H. Ruckelshaus, I. Bateman, A. Duraiappah, T. Elmqvist, C. Folke, et al. 2015. Natural Capital Informing Decisions: From Promise to Practice. *Proceedings of the National Academy of Sciences, USA*. 112: 7348-7355.
- Hahn, T., P. Olsson, C. Folke and K. Johansson. 2006. Trust Building, Knowledge Generation and Organizational Innovations: The Role of a Bridging Organization for Adaptive Co-Management of a Wetland Landscape around Kristianstad, Sweden. *Human Ecology* 34:573–592.
- Hahn, T., G. Sioen, A. Gasparatos, T. Elmqvist, E. Brondizio, E. Gómez-Baggethun, C. Folke, M. Jarzebski, K. Takeuchi, K. Fukushi, M. Setiawati, E. Arini, and T. Atmaja. 2023. Insurance Value of Biodiversity in the Anthropocene is the Resilience Value? *Ecological Economics* 208: 107799
<https://doi.org/10.1016/j.ecolecon.2023.107799>
- Haider, L.J., M. Schlüter, C. Folke, and B. Reyers. 2021. Fundamentally Redefining Resilience and Development: A Coevolutionary Perspective. *Ambio* 50: 1304-1312.
- Herrfährdt-Pähle, E., M. Schlüter, P. Olsson, C. Folke, S. Gelcich, and C. Pahl-Wostl. Sustainability Transformations: Socio-Political Shocks as Opportunities for Governance Transitions. *Global Environmental Change* 63:102097

- Homer-Dixon, T., B. Walker, R. Biggs, A.-S. Crepin, C. Folke, E. Lambin, G. Peterson, J. Rockström, M. Scheffer, W. Steffen, and M. Troell. Synchronous Failure: The Emerging Causal Architecture of Global Crisis. *Ecology and Society* 20 (3): 6.
- Hughes, T.P., A.H. Baird, D.R. Bellwood, M. Card, S.R. Connolly, C. Folke, et al. 2003. Climate Change, Human Impacts, and the Resilience of Coral Reefs. *Science* 301:929-933.
- Hughes, T., D. Bellwood, C. Folke, R. Steneck and J. Wilson. 2005. New Paradigms for Supporting the Resilience of Marine Ecosystems. *Trends in Ecology and Evolution* 20:380-386.
- Jørgensen, P.S., R.E.V. Jansen, D.I.A. Ortega, L. Wang Erlandsson, J. Donges, H. Österblom, P. Olsson, M. Nyström, S. Lade, T. Hahn, C. Folke, G.D. Peterson, and A.-S. Crepin. Evolution of the Polycrisis: Anthropocene Traps that Challenge Global Sustainability. *Philosophical Transactions of the Royal Society London, Biological Sciences* 378: 20220261. <https://doi.org/10.1098/rstb.2022.0261>
- Jørgensen, P.S., C. Folke, and S.C. Carroll. 2019. Evolution in the Anthropocene: Informing Governance and Policy. *Annual Review of Ecology, Evolution and Systematics* 50: 527-546
- Jørgensen, P.S, D. Wernli, C. Folke, and S.C. Carroll. 2017. Changing Antibiotic Resistance: Sustainability Transformation to a Pro-Microbial Planet. *Current Opinion in Environmental Sustainability* 25:66–76.
- Keys, P., V. Galaz, M. Dyer, N. Matthews, C. Folke, M. Nyström, and S. Cornell. 2019. Anthropocene Risk. *Nature Sustainability* 2:667-673.
- Lebel, L., J.M. Anderies, B. Campbell, C. Folke, S. Hatfield-Dodds, T.P. Hughes and J. Wilson. 2006. Governance and the Capacity to Manage Resilience in Regional Social-Ecological Systems. *Ecology and Society* 11(1): 19.
- Levin, S., T. Xepapadeas, A.-S. Crepin, J. Norberg, A. de Zeeuw, C. Folke, et al. 2013. Social-Ecological Systems as Complex Adaptive Systems: Modeling and Policy Implications? *Environment and Development Economics* 18:111–132.
- Liu, J., T. Dietz, S.R. Carpenter, M. Alberti, C. Folke, E. Moran, A.C. Pell, P. Deadman, T. Kratz, J. Lubchenco, E. Ostrom, et al. 2007. Complexity of Coupled Human and Natural Systems. *Science* 317:1513-1516.
- McMichael, A., B. Bolin, R. Costanza, G. Daily, C. Folke, K. Lindahl-Kiessling, E. Lindgren and B. Niklasson. 1999. Globalization and the Sustainability of Human Health: An Ecological Perspective. *BioScience* 49:205-210.
- Moberg, F. and C. Folke. 1999. Ecological Services of Coral Reef Ecosystems. *Ecological Economics* 29:215-233.
- Naylor, R., R. Goldberg, J. Primavera, N. Kautsky, M. Beveridge, J. Clay, C. Folke, J. Lubchenco, H. Mooney, and M. Troell. 2000. Effect of Aquaculture on World Fish Supplies. *Nature* 405:1017-1024.
- Norström A.V., M. Nyström, J.B., Jouffray, C. Folke, N. Graham, F. Moberg, P. Olsson, and G.J. Williams. 2016. Guiding Coral Reef Futures in the Anthropocene. *Frontiers in Ecology and the Environment* 14:490–498.
- Norström, A, M. Nyström, J. Lokrantz and C. Folke. 2009. Alternative States on Coral Reefs: Beyond Coral–Macroalgal Phase Shifts. *Marine Ecology Progress Series* 376: 295–306.
- Nyborg, K. J.M. Anderies, A. Dannenberg, T. Lindahl, C. Schill, M. Schlüter, N. Adger, K.J. Arrow, S. Barrett, S.R. Carpenter, F.S. Chapin III, A.-S. Crépin, G. Daily, P. Ehrlich, C. Folke, et al. 2016. Social Norms as Solutions. *Science* 354:42-43.
- Nyström, M., and C. Folke. 2001. Spatial Resilience of Coral Reefs. *Ecosystems* 4:406-417.
- Nyström, M., C. Folke and F. Moberg. 2000. Coral Reef Disturbance and Resilience in a Human Dominated Environment. *Trends in Ecology and Evolution* 15:413-417.
- Nyström M., J.-B. Jouffray, A. Norström, P. Sogaard-Jørgensen, V. Galaz, B.E. Crona, S.R. Carpenter, and C. Folke. 2019. Anatomy and Resilience of the Global Production Ecosystem. *Nature* 575: 98-108.
- Olsson, P. and C. Folke. 2001. Local Ecological Knowledge and Institutional Dynamics for Ecosystem Management: A Study of Lake Racken Watershed, Sweden. *Ecosystems* 4: 85-104.
- Olsson, P., C. Folke and T. Hahn. 2004. Social-Ecological Transformation for Ecosystem Management: The Development of Adaptive Co-Management of a Wetland Landscape in Southern Sweden. *Ecology and Society* 9(4): 2.
- Olsson, P., C. Folke and T.P. Hughes. 2008. Navigating the Transition to Ecosystem-Based Management of the Great Barrier Reef, Australia. *Proceedings National Academy of Sciences, USA* 105:9489-9494.
- Olsson, P., C. Folke and F. Berkes. 2004. Adaptive Co-Management for Building Resilience in Social-Ecological Systems. *Environmental Management* 34:75-90.
- Österblom, H. and C. Folke. 2015. Globalization, Marine Regime Shifts and the Soviet Union. *Philosophical Transactions of the Royal Society London, Biological Sciences*. 370: 20130278.
- Österblom, H., and C. Folke. 2013. Emergence of Global Adaptive Governance for Stewardship of Regional Marine Resources. *Ecology and Society* 18(2):4.
- Österblom, H., J.-B. Jouffray, C. Folke, B. Crona, M. Troell, A. Merrie, and J. Rockström. 2015. Transnational Corporations as Keystone Actors in Marine Ecosystem. *Plos One* 10(5): e0127533.

- Österblom, H., B.I. Crona, C. Folke, M. Nyström, and M. Troell. 2017. Marine Ecosystem Science on an Intertwined Planet. 20th Anniversary Paper. *Ecosystems* 20:54-61
- Österblom, H., C. Folke, J.-B. Jouffray, and J. Rockström. 2017. Emergence of a Global Science-Business Initiative for Ocean Stewardship. *Proceedings of the National Academy of Sciences, USA*.
- Österblom, H. C. Folke, J. Rocha, J. Bebbington, R. Blasiak, J.-B. Jouffray, E.R. Selig, C.C.C. Wabnitz, F. Bengtsson, B. Crona, R. Gupta, P.J.G. Henriksson, K.A. Johansson, A. Merrie, S. Nakayama, G. Ortuno Crespo, J. Rockström L. Schultz, M. Sobkowiak, P.S. Jørgensen, J. Spijkers, M. Troell, P. Villarubia-Gómez, and J. Lubchenco. 2022. Scientific Mobilization of Keystone Actors for Biosphere Stewardship. *Scientific Reports* 12:3802. <https://doi.org/10.1038/s41598-022-07023-8>
- Österblom, H., J. Bebbington, R. Blasiak, M. Sobkowiak, and C. Folke. 2022. Transnational Corporations, Biosphere Stewardship, and Sustainable Futures. *Annual Review of Environment and Resources* 47:609-635. <https://doi.org/10.1146/annurev-environ-120120-052845>
- Perrings, C.A., C. Folke, K.-G. Mäler. 1992. The Ecology and Economics of Biodiversity Loss: The Research Agenda. *Ambio* 21:201-211.
- Polasky, S., S.R. Carpenter, C. Folke, and B. Keeler. 2011. Decision-Making under Great Uncertainty: Environmental Management in an Era of Global Change. *Trends in Ecology and Evolution* 26:398-404.
- Reyers, B., C. Folke, M.-L. Moore, R. Biggs, and V. Galaz. 2018. Social-Ecological Systems Resilience for Navigating the Dynamics of the Anthropocene. *Annual Review of Environment and Resources* 43:267-289.
- Rockström, J., L. Gordon, C. Folke, M. Falkenmark and M. Engvall. 1999. Linkages between Water Vapor Flows, Food Production and Terrestrial Ecosystem Services. *Conservation Ecology* vol. 3: issue 2: article 5.
- Rockström, J. W. Steffen, K. Noone, Å. Persson, F.S. Chapin III, E.F. Lambin, T.M. Lenton, M. Scheffer, C. Folke, et al.. 2009. A Safe Operating Space for Humanity. *Nature* 461:472-475.
- Rockström, J., M. Falkenmark, C. Folke, M. Lannerstad, J. Barron, E. Enfors, L. Gordon, J. Heinke, H. Hoff, and C. Pahl-Wostl. 2014. *Water Resilience for Human Prosperity*. Cambridge University Press, Cambridge, UK. 292 pp.
- Rockström, J., T. Beringer, D. Hole, B. Griscom, M. Mascia, C. Folke, and F. Creutzig. 2021. We need Biosphere Stewardship that Protects Carbon Sinks and Builds Resilience. *Proceedings of the National Academy of Sciences, USA* 118 No. 38 e2115218118.
- Rockström, J., A.V. Norström, N. Matthews, R. Biggs, C. Folke, A. Harikishun, S. Huq, N. Krishnan, L. Warszawski, and D. Nel. Reshaping a Resilient Future in Response to COVID-19. *Nature Sustainability* 6:897-907 <https://doi.org/10.1038/s41893-023-01105-9>
- Scheffer, M., Carpenter, S., Foley, J., Folke, C. and Walker, B. 2001. Catastrophic Shifts in Ecosystems. *Nature* 413:591-596.
- Scheffer, M., S. Barrett, S. Carpenter, C. Folke, et al. 2015. Creating a Safe Operating Space for the World's Iconic Ecosystems. *Science* 347:1317-1319.
- Schill, C., J.M. Anderies, T. Lindahl, C. Folke, S. Polasky, J.-C. Cárdenas, A.-S. Crépin, M. Jansen, J. Norberg, and M. Schlüter. 2019. A More Dynamic Understanding of Human Behaviour for the Anthropocene. *Nature Sustainability*
- Schlüter, M., L.J. Haider, S. Lade, E. Lindkvist, R. Martin, K. Orach, N. Wijermans, and C. Folke. 2019. Capturing Emergent Phenomena in Social-Ecological Systems: An Analytical Framework. *Ecology and Society* 24(3):11. doi.org/10.5751/ES-11012-240311
- Schultz, L., C. Folke and P. Olsson. 2007. Enhancing Ecosystem Management through Social-Ecological Inventories: Lessons from Kristianstads Vattenrike, Sweden. *Environmental Conservation* 34: 140-152.
- Schultz, L., C. Folke, H. Österblom, and P. Olsson. 2015. Adaptive Governance, Ecosystem Management and Natural Capital. *Proceedings of the National Academy of Sciences, USA* 112: 7369-7374.
- Steffen, W., Å. Persson, L. Deutsch, J. Zalasiewicz, M. Williams, K. Richardson, C. Crumley, P. Crutzen, C. Folke, et al. 2011. The Anthropocene: From Global Change to Planetary Stewardship. *Ambio* 40:739-761.
- Steffen, W., K. Richardson, J. Rockström, S. Cornell, I. Fetzer, E. Bennett, R. Biggs, S.R. Carpenter, W. de Vries, C.A. de Wit, C. Folke, et al. 2015. Planetary Boundaries: Guiding Human Development on a Changing Planet. *Science* 347:736, 1259855 1-10.
- Steffen, W., J. Rockström, K. Richardson, T.M. Lenton, C. Folke, D. Liverman, C.P. Summerhayes, A.D. Barnosky, S.E. Cornell, M. Crucifix, J.F. Donges, I. Fetzer, S.J. Lade, M. Scheffer, R. Winkelmann, and H.J. Schellnhuber. 2018. Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences, USA*, 115:8252-8259. <https://doi.org/10.1073/pnas.1810141115>
- Steneck, R.S., T.P. Hughes, J.E. Cinner, W.N. Adger, S.N. Arnold, S.A. Boudreau, K. Brown, F. Berkes, C. Folke, et al. 2011. Creation of a Gilded Trap by the High Economic Value of the Maine Lobster Fishery. *Conservation Biology* 25:904-912.
- Tengö, M., R. Hill, P. Malmer, C.M. Raymond, M. Spierenburg, F. Danielsen, T. Elmqvist, and C. Folke. 2017. Weaving Knowledge Systems in IPBES, CBD and Beyond: Lessons Learned for Sustainability. *Current Opinion in Environmental Sustainability* 26-27:17-25.

- Troell, M., R. Naylor, M. Metian, M. Beveridge, P. Tyedmers, C. Folke, et al. 2014. Does Aquaculture add Resilience to the Global Food System? *Proceedings of the National Academy of Sciences, USA* 111:13257–13263.
- von Heland, J., and C. Folke. 2014. A Social Contract with the Ancestors – Culture and Ecosystem Services in Southern Madagascar. *Global Environmental Change* 24:251-264.
- Walker, B.H., S. Barrett, S. Polasky, V. Galaz, C. Folke, et al. 2009. Looming Global-Scale Failures and Missing Institutions. *Science* 325:1345-1346.
- Walker, B., A.-S. Crepin, M. Nyström, J.M. Anderies, E. Andersson, T. Elmqvist, C. Queiroz, S. Barrett, E. Bennett, J.C. Cardenas, S.R. Carpenter, F.S. Chapin III, A. de Zeeuw, J. Fischer, C. Folke, S. Levin, K. Nyborg, S. Polasky, K. Segerson, K. Seto, M. Scheffer, J.F. Shogren, A. Tavoni, J. van den Bergh, E.U. Weber, and J.R. Vincent. 2023. Response Diversity as a Sustainability Strategy. *Nature Sustainability* <https://doi.org/10.1038/s41893-022-01048-7>
- Westley, F., P. Olsson, C. Folke, T. Homer-Dixon, et al. 2011. Tipping Towards Sustainability: Emerging Pathways of Transformation. *Ambio* 40:762-780.
- Westley, F., O. Tjörnbo, L. Schultz, P. Olsson, C. Folke, B. Crona, and Ö. Bodin. 2013. A Theory of Transformative Agency in Linked Social-Ecological Systems. *Ecology and Society* 18(3):27.
- Worm, B., E.B. Barbier, N. Beaumont, J.E. Duffy, C. Folke, B.S. Halpern, J.B.C. Jackson, H.K. Lotze, F. Micheli, S.R. Palumbi, E. Sala, K.A. Selkoe, J.J. Stachowicz and R. Watson. 2006. Impacts of Biodiversity Loss on Ocean Ecosystem Services. *Science* 314:787-790.

<https://scholar.google.com/citations?user=MAc53iIAAAAJ>

<https://orcid.org/0000-0002-4050-3281>