

# Nature-based Solutions Library Guide

This USFWS Library guide connects our partner users with select resources related to nature-based solutions that can help you to become familiar with the field, develop your existing knowledge, and perform research.

## Start Here

### *Where do I search?*

- [USFWS Library Catalog](#): One stop shop for articles, books, eBooks, and media
- [Web of Science](#): Global citation database indexing 1.7 billion cited references from over 159 million records, including articles and conference proceedings from 1985 to present.

### *How do I search?*

[View our Super Search Tips video tutorial](#) from our Every Question Answered microlearning series to learn how to search more effectively across many platforms.

## Research Resources

Subscription databases and journals where you can find high quality, peer-reviewed external research, as well as free and/or open access research resources such as repositories, digital libraries, and data aggregators.

### Library Databases

- [BioOne](#): 200 subscribed and open-access titles in the biological, ecological, and environmental sciences.
- [Birds of the World](#): Premier in-depth, science-based life histories of birds and bird families.
- [EBSCO Environment Complete](#): Full-text database for environmental studies, ecology, and related topics.

### Select Journals

- [Climatic Change](#)
- [Climate Dynamics](#)
- [Global Change Biology](#)
- [Journal of Climate](#)
- [Nature Climate Change](#)

- [Science](#)

[\*Access more related journals\*](#)

## Open or Free Research Resources

- [Biodiversity Heritage Library](#)
- [BioRxiv](#)
- [EarthArXiv](#)
- [Encyclopedia of Life](#)
- [IUCN Redlist of Endangered Species](#)
- [NatureServe Explorer](#)
- [USGS Publications Warehouse](#)
- [USFWS ServCat](#)

## Literature Search Service

The USFWS Library offers a Literature Search service to help you find citations and full text resources relevant to your research.

We'll perform up to **five** searches per year for you, providing references and full text access to articles. Email [library@fws.gov](mailto:library@fws.gov) with the following to get started:

- Your research topic- as simple or complex as you need!
- Any constraints (limits on publication year, publisher, etc.)
- This service typically requires a 3–4-week turnaround time.

## Training

- [NCTC Course Guide](#)
- [NCTC Microlearning Videos](#)
- [Staying Up to Date on the Latest Research: Web of Science Alert](#)
- [Three-Part Webinar Series on Accelerating Deployment of Nature-based Solutions: A White House Road Map](#)
- [NASA ARSET Fundamentals of Remote Sensing](#): Free, on demand training from NASA's Applied Remote Sensing Training Program.

## Select Resources

## Nature-based Solutions

- [DOI Nature-Based Solutions Roadmap](#)
- [DOI Nature-Based Solutions Strategy Documents and Fact Sheets](#)
- [DOI Department Manual 600 DM 7 Nature-based Solutions](#)
- [Nature Based Solutions, IUCN](#)
- Special series of *Integrated Environmental Assessment and Management*: [Incorporating Nature-based Solutions to the Built Environment](#)
- [Core principles for successfully implementing and upscaling Nature-based Solutions](#), *Environmental Science & Policy* by Emmanuelle Cohen-Shacham, et al., 2019.
- [A framework for evaluating island restoration performance: A case study from the Chesapeake Bay](#), *Integrated Environmental Assessment and Management*, by Jenny Davis, Paula Whitfield, Danielle Szimanski, Becky R. Golden, Matt Whitbeck, et al., 2022.

## RAD (Resist-Accept-Direct)

- [Special RAD section of \*BioScience\*](#)
- [Special RAD issue of \*Fisheries Management and Ecology\*](#)
- [How to Respond to Changing Ecosystems: Resist, Accept, or Direct?:](#) Publication by American Fisheries Society and the Wildlife Society's Climate Change and Wildlife Working Group
- [A Multi-Scale Blueprint for Building the Decision Context to Implement Climate Change Adaptation on National Wildlife Refuges in the United States](#), *Earth*, by Dawn Magness, Ella Wagener, Emily Yurcich, Ryan Mollnow, Diane Granfors, and Jennifer L. Wilkening, 2022.
- [Balancing multiple management objectives as climate change transforms ecosystems](#), *Trends in Ecology and Evolution*, by Katherine J. Siegel, Kyle C. Cavanaugh, Laura E. Dee, 2024.

## Data

- [Climate at Data.gov](#): Home of the U.S. Government's open data
- [Global Change Information System](#): Centralized catalog of all materials and data used for U.S. Global Change Research Program (USGCRP)
- [Knowledge Network for Biocomplexity](#): Open environmental and ecological data sets
- [National Center for Atmosphere Research Climate Data Guide](#)
- [NOAA National Centers for Environmental Information](#)
- [USA Phenology Network](#): Explore phenology data, models, and maps recorded by volunteer observers.
- [USGS ScienceBase](#): Collaborative scientific data and information management platform

## Tools

- [American Conservation and Stewardship Atlas](#): Illustrates and documents locally led, partnership-driven conservation and restoration work that is underway in communities across America.
- [Climate Mapping for Resilience and Adaptation](#): Designed for people working with community organizations and in local, Tribal, state, and Federal government offices who wish to pursue grants through the Bipartisan Infrastructure Law, CMRA Tool helps people assess local exposure to climate-related hazards. CMRA Tool is part of the [U.S. Climate Resilience Toolkit](#).
- [The Climate Toolbox](#): Collection of web tools for visualizing past and projected (1979-yesterday) climate and hydrology of the contiguous United States. It provides short-term climate forecasts and climate projections (2030-2099).
- [National Climate Change Viewer \(NCCV\), USGS](#): Web application for visualizing climate projections (air temperature, precipitation, water balance) for any state, county, or USGS Hydrologic Unit in the contiguous United States from the Climate Model Intercomparison Program.
- [NOAA State Climate Summaries](#): Updated for 2022, provides a summary for each state with observed changes in climate, including long-term trends and extreme weather events.

## Books and Publications

### Government Reports

- [The Fifth National Climate Assessment](#): the U.S. Government's preeminent report on climate change impacts, risks, and responses for 2023.
- [Intergovernmental Panel on Climate Change \(IPCC\)](#) reports: the Intergovernmental Panel on Climate Change's comprehensive reports designed to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options.

### Books

#### Science

- [Wildlife Conservation in a Changing Climate](#) edited by Jedediah F. Brodie, Eric Post, and Daniel F. Doak, 2012
- [Fire Ecology and Management: Past, Present, and Future of US Forested Ecosystems](#) edited by Cathryn H. Greenberg and Beverly Collins, 2021
- [Conservation Planning: Informed Decisions for a Healthier Planet](#) by Craig R. Groves and Edward T. Game, 2016
- [Traditional Ecological Knowledge: Practical Roles in Climate Change Adaptation and Conservation](#), edited by Jerome M. Harrington, 2015

- [Anticipating Future Environments: Climate Change, Adaptive Restoration, and the Columbia River Basin](#) by Shana Lee Hirsch, 2020
- [Biodiversity and Climate Change: Transforming the Biosphere](#) edited by Thomas E. Lovejoy and Lee Jay Hannah, 2019
- [Biodiversity in a Changing Climate: Linking Science and Management in Conservation](#), edited by Terry L. Root, Kimberly R. Hall, Mark P. Herzog, Christine A. Howell, 2015

#### Non-fiction

- [The Hidden Universe: Adventures in Biodiversity](#) by Alexandre Antonelli, 2022
- [Hurricane Lizards and Plastic Squid: The Fraught and Fascinating Biology of Climate Change](#) by Thor Hanson, 2021
- [The End of Ice](#) by Dahr Jamail, 2019
- [Under a White Sky](#) by Elizabeth Kolbert, 2021
- [Climate Ghosts: Migratory Species in the Anthropocene](#) by Nancy Langston, 2021
- [Tenacious Beasts](#) by Christopher J. Preston, 2023
- [The Quickening: Creation and Community at the Ends of the Earth](#) by Elizabeth A. Rush, 2023

#### Fiction

- [Blue Skies](#) by T.C. Boyle, 2023
- [Parable of the Sower](#) by Octavia E. Butler, 1993
- [Afterglow: Climate Fiction for Future Ancestors](#) edited by Grist, 2023
- [Flight Behavior](#) by Barbara Kingsolver, 2013
- [New York 2140](#) by Kim Stanley Robinson, 2018
- [Ministry of the Future](#) by Kim Stanley Robinson, 2020
- [Annihilation](#) by Jeff Vandermeer, 2014

[\*Access more eBooks and books\*](#)