

Resources for Climate Change Vulnerability Analysis



Compiled
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Background Information & Resources:

Glick et al. (2011): Scanning the Conservation Horizon - A Guide to Climate Change Vulnerability Assessment.

<http://www.nwf.org/~media/PDFs/Global-Warming/Climate-Smart-Conservation/NWFScanningtheConservationHorizonFINAL92311.ashx>

Skeptical Science website: glossary of climate terms, arguments, myths, and other resources.

<https://skepticalscience.com/>

US National Climate Assessment website: the national assessment summarizes current and future impacts of climate change by region.

<http://nca2014.globalchange.gov/>

Intergovernmental Panel on Climate Change (IPCC) Reports, available here for all assessments. IPCC is the international body for assessing the science related to climate change. Working Group I: the Physical Science Basis; Working Group II: Impacts, Adaptation and Vulnerability; and Working Group III: Mitigation of Climate Change. Assessment Reports cover the full scientific, technical and socio-economic assessment of climate change, with reports for each working group and a synthesis report.

http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml

USFWS training: Climate Change Vulnerability Analysis

<https://training.fws.gov/NCTCWeb/catalog/CourseDetail.aspx?CourseCodeLong=FWS-ALC3184>

Wade et al. (2016) Assessments of species' vulnerability to climate change: from pseudo to science. *Biodiversity and Conservation* 26:223-229.

<http://link.springer.com/article/10.1007%2Fs10531-016-1232-5>

Lukas et al. (2014) *Climate Change in Colorado. A synthesis to support water resources management and adaptation.* 2nd edition.

cwb.state.co.us/environment/climate-change/

Methods:

NatureServe CCVI: A spreadsheet tool to score the vulnerability of plant and animal species.

<http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index>

NatureServe CCVI for ecosystems and habitats (HCCVI): Report detailing methods developed for use in rapid ecological assessments for the Mojave and Sonoran Desert regions

<http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index-ecosystems-and-habitats>

USFS SAVS: A System for Assessing Vulnerability of Species. An online form for generating vulnerability scores for individual species.

<https://www.fs.fed.us/rm/grassland-shrubland-desert/products/species-vulnerability/savs-climate-change-tool/>

Massachusetts Wildlife Climate Action Tool

<https://climateactiontool.org/>

MANOMET 3-volume report: Climate Change and Massachusetts Fish and Wildlife

<https://www.manomet.org/publications-tools/climate-services>

Johnson KA (2014) Climate Change Vulnerability Assessment for Natural Resources Management: Toolbox of Methods with Case Studies, Version 2.0. An annotated bibliography providing links to many completed vulnerability assessments.

<http://www.fws.gov/home/climatechange/pdf/Guide-to-Vulnerability-Assessment%20Methods-Version-2-0.pdf>

NOAA: U.S. Climate Resilience Toolkit. Links to many resources

<https://toolkit.climate.gov/tools>

Bioclimate models:

Crookston et al: Plant Species and Climate Profile Predictions. Historic and projected distributions of major forest tree species under four CMIP3 scenarios (A1B, A2, B1, B2) and three GCMs (CGCM3, GFDLCM21, HADCM3) Maps and rasters are available for years 2030, 2060, and 2090.

<http://charcoal.cnre.vt.edu/climate/species/>

Rehfeldt, Gerald E.; Worrall, James J.; Marchetti, Suzanne B.; Crookston, Nicholas L. 2015. Adapting forest management to climate change using bioclimate models with topographic drivers. Forestry. doi: 10.1093/forestry/cpv019.

http://www.fs.fed.us/rm/pubs_journals/2015/rmrs_2015_rehfeldt_f001.pdf

Still, Shannon M. ; Richardson, Bryce A. (2015) Climate niche modeling of Wyoming big sagebrush for contemporary and future climates

<https://www.fs.fed.us/rmrs/projects/climate-niche-modeling-wyoming-big-sagebrush-contemporary-and-future-climates>

Finch, Deborah M., ed. 2012. Climate change in grasslands, shrublands, and deserts of the interior American West: a review and needs assessment. Gen. Tech. Rep. RMRS-GTR-285. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

https://www.fs.fed.us/rm/pubs/rmrs_gtr285.pdf

Thompson, RS et al. (2000) Atlas of relations between climatic parameters and distributions of important trees and shrubs in North America. USGS Professional Paper 1650-A.

<https://pubs.usgs.gov/pp/p1650-b/>

Climate data:

Climate projections:

USGS: Geo Data Portal	https://www.sciencebase.gov/catalog/item/54dd2326e4b08de9379b2fb1
TNC: ClimateWizard	http://www.climatewizard.org/
Data.gov catalog	https://www.data.gov/climate
NOAA: Climate.gov	https://www.climate.gov/maps-data

Current/historic:

Western Water Assessment	http://www.colorado.edu/index.html
PRISM Climate Group	http://www.prism.oregonstate.edu/
TopoWx	http://www.ntsg.umt.edu/project/TopoWx
Daymet	https://daymet.ornl.gov/
NOAA: NCEI	https://www.ncdc.noaa.gov/
Western Regional Climate Center	http://www.wrcc.dri.edu/climatedata/climsum/