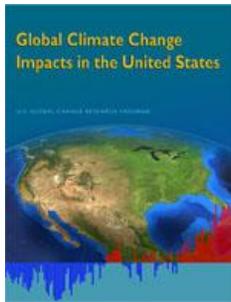


This list of resources represents a sample of background material that can be used as a reference for understanding basic climate change science, impacts, and issues relevant to conservation planning, outreach, and partnerships. References specifically mentioned in the Climate Café series are indicated with an asterisk.

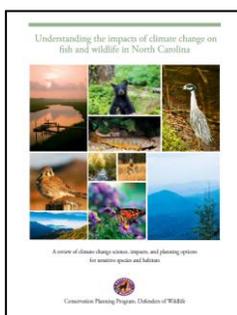
## Climate Change and Impacts



**\*Karl, T. R., J. M. Melillo, and T.C. Peterson (Eds.). 2009. Global Climate Change Impacts in the United States. Cambridge University Press.**

*Excerpt from Cambridge University Press website:* This book is the most comprehensive report to date on the wide range of impacts of climate change in the United States. It is written in plain language to better inform members of the public and policymakers. The report finds that global warming is unequivocal, primarily human-induced, and its impacts are already apparent in transportation, agriculture, health, and water and energy supplies. These impacts are expected to grow with continued climate change – the higher the levels of greenhouse gas emissions, the greater the impacts. The report illustrates how these impacts can be kept to a minimum if greenhouse gas emissions are reduced. The choices we make now will determine the severity of climate change impacts in the future. This book will help citizens, business leaders, and policymakers at all levels to make informed decisions about responding to climate change and its impacts. <http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf>

- A highlights brochure is available here: <http://www.globalchange.gov/images/cir/pdf/20page-highlights-brochure.pdf>
- A factsheet specific to the Southeast is available here: <http://www.globalchange.gov/images/cir/region-pdf/SoutheastFactSheet.pdf>

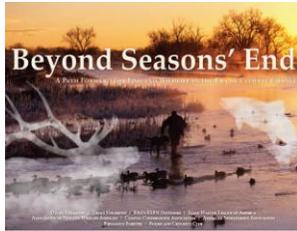


**\*DeWan, A. N. Dubois, K. Theoharides, and J. Boshoven. 2010. Understanding the impacts of climate change on fish and wildlife in North Carolina. Defenders of Wildlife, Washington, D.C.**

This report was developed with input from the WRC Wildlife Action Plan Workshop Steering Committee and serves as a reference for understanding basic climate change science, identifying how climate changes impact fish and wildlife, reviewing potential impacts on species and habitats in North Carolina, and highlighting management and planning options to consider with an emphasis on updating the North Carolina Wildlife Action Plan to address

impacts on fish and wildlife due to climate change.

[http://www.defenders.org/climatechange/NC\\_Wildlife](http://www.defenders.org/climatechange/NC_Wildlife)



**Wildlife Management Institute and the Theodore Roosevelt Conservation Partnership. 2009. *Beyond Seasons' End: A Path Forward for Fish and Wildlife in the Era of Climate Change*. Bipartisan Policy Center, Washington, D.C.**

*Beyond Seasons' End* presents ideas of fish and wildlife professionals about actions that the human community can take to assist the wild community adapting to climate change. Impacts, recommendations and case studies are provided for coldwater fish, warm water fish, big game, upland birds, and saltwater.

[http://www.seasonsend.org/pdfs/Beyond\\_Seasons\\_End.pdf](http://www.seasonsend.org/pdfs/Beyond_Seasons_End.pdf)

**USFWS. 2009. *Climate Change: Possible Impacts on Fish and Wildlife in the United States. Understanding Attacks on Climate Science*.** This fact sheet provides a short summary based on the IPCC Assessment Reports. <http://www.fws.gov/home/climatechange/pdf/ClimateIPCC.pdf>

- If you would like more information, the IPCC reports and summaries are available online: [http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.htm](http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm)



**North American Bird Conservation Initiative, U.S. Committee. 2010. *The State of the Birds 2010 Report on Climate Change, United States of America*. U.S. Department of the Interior, Washington, D.C.**

A report addressing how the impacts of climate change will influence bird populations and their associated habitats.

[http://www.stateofthebirds.org/pdf\\_files/State\\_of\\_the\\_Birds\\_FINAL.pdf](http://www.stateofthebirds.org/pdf_files/State_of_the_Birds_FINAL.pdf)

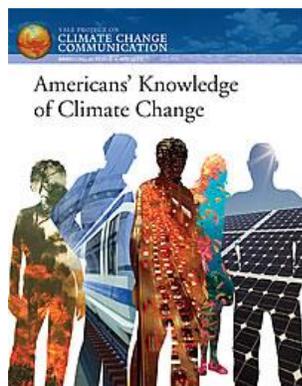


**Schiermeier, Q. 2010. *The real holes in climate science*. *Nature* 263: 284-287.** This article discusses some of the unresolved issues in climate science, which are generally not the issues touted by climate skeptics. The pdf version includes responses to some common climate myths. <http://www.nature.com/news/2010/100120/full/463284a.html>



RealClimate is a blog about climate science from climate scientists. The associated wiki contains scientific rebuttals to common claims made by climate skeptics. <http://www.realclimate.org/>

## Communication and Public Perceptions of Climate Change

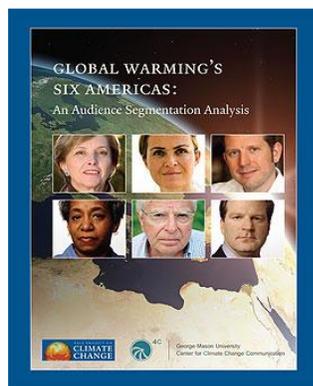


**\*Leiserowitz, A., N. Smith, and J. R. Marlon. 2010. American's Knowledge of Climate Change. Yale Project on Climate Change Communication. Yale University, Yale Project on Climate Change Communication, New Haven, CT.**

*Excerpt from the Executive Summary: Americans' Knowledge of Climate Change* reports results from a national study of what Americans understand about how the climate system works, and the causes, impacts, and potential solutions to global warming. The study found that 63 percent of Americans believe that global warming is happening, but many do not understand why ... The study also

found important gaps in knowledge and common misconceptions about climate change and the earth system. These misconceptions lead some people to doubt that global warming is happening or that human activities are a major contributor, to misunderstand the causes and therefore the solutions, and to be unaware of the risks. Thus many Americans lack some of the knowledge needed for informed decision-making in a democratic society.

<http://environment.yale.edu/climate/files/ClimateChangeKnowledge2010.pdf>



**\*Maibach, E., C. Roser-Renouf, and A. Leiserowitz. 2009. Global Warming's Six Americas 2009: An Audience Segmentation Analysis. Yale Project on Climate Change and the George Mason University Center for Climate Change Communication.**

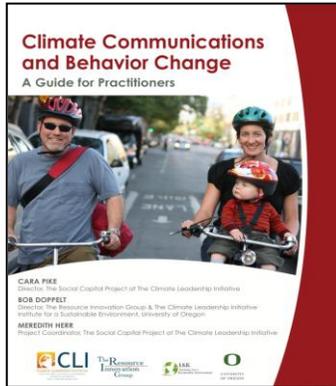
*Excerpt from the Executive Summary:* One of the first rules of effective communication is to “know thy audience.” Climate change public communication and engagement efforts must start with the fundamental recognition that people are different and have different psychological, cultural, and political reasons for acting – or not acting – to reduce greenhouse gas emissions. This report identifies Global Warming’s Six Americas: six unique audiences within the American public that each

responds to the issue in their own distinct way. The six audiences were identified using a large nationally representative survey of American adults conducted in the fall of 2008. The survey questionnaire included extensive, in-depth measures of the public’s climate change beliefs, attitudes, risk perceptions, motivations, values, policy preferences, behaviors, and underlying barriers to action. The Six Americas are distinguishable on all these dimensions, and display very different levels of engagement with the issue. <http://environment.yale.edu/uploads/6Americas2009.pdf>

➤ *Updates to this project are also available:*

**Leiserowitz, A., E. Maibach, C. Roser-Renouf, and N. Smith. 2010. Global Warming's Six Americas, June 2010. Yale University and George Mason University, Yale Project on Climate Change, New Haven, CT.**

<http://environment.yale.edu/climate/files/SixAmericasJune2010.pdf>



**\*Pike, C., B. Doppelt, and M. Herr. 2010. Climate Communications and Behavior Change: A Guide for Practitioners. The Climate Leadership Initiative.**

*Excerpt from the preface:* In order to motivate people to alter their views and behaviors related to global warming, leaders within all levels of government, the private sector, non-profits and communities must become aware of and utilize the fundamentals of effective climate communications, outreach, and behavioral change mechanisms. To address this need, the Social Capital Project of the Climate Leadership Initiative has developed this guidebook, which draws on extensive global warming, behavior change and communications research

completed by our organization and others as well as from practitioner expertise. The guide distills this information into tools and recommendations that climate leaders can easily apply. It includes talking points that have been tested with the public as well as quotes from focus group participants that reflect the attitudes of many Americans about global warming.

[http://climlead.uoregon.edu/sites/climlead.uoregon.edu/files/uploads/ClimCommBehaviorChangeGuide\\_1.pdf](http://climlead.uoregon.edu/sites/climlead.uoregon.edu/files/uploads/ClimCommBehaviorChangeGuide_1.pdf)



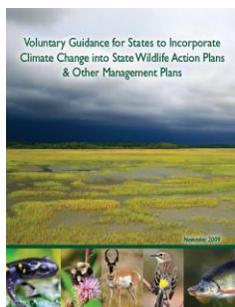
**U.S. Climate Change Science Program. 2009. Climate Literacy: The Essential Principles of Climate Sciences. U.S. Global Change Research Program, Washington, D.C.**

*Excerpt from the website:* [This guide] presents important information for individuals and communities to understand Earth's climate, impacts of climate change, and approaches for adapting and mitigating change. Principles in the guide can serve as discussion starters or launching points for scientific inquiry.

<http://www.climatescience.gov/Library/Literacy/>

**Kaufman, L. 2010. In Kansas, Climate Skeptics Embrace Cleaner Energy. New York Times (October 18, 2010).** An example of how messaging can lead to common ground on climate issues.  
[http://www.nytimes.com/2010/10/19/science/earth/19fossil.html?\\_r=3&pagewanted=1&sq=kansas%20green%20energy&st=cse&scp=1](http://www.nytimes.com/2010/10/19/science/earth/19fossil.html?_r=3&pagewanted=1&sq=kansas%20green%20energy&st=cse&scp=1)

## Planning Resources and Tools



**AFWA. 2009. Voluntary Guidance for States to Incorporate Climate Change into State Wildlife Action Plans and Other Management Plans.**

*Excerpt from the Executive Summary:* The Climate Change Wildlife Action Plan Guidance Document provides voluntary guidance for state fish and wildlife agencies wanting to better incorporate the impacts of climate change on wildlife and their habitats into Wildlife Action Plans. The approaches and techniques described in this document will also be useful in modifying other wildlife plans (e.g. big game/upland game/migratory bird plans, joint venture implementation plans, national fish habitat action plan, etc.) to address climate

change. The document provides an overview of the information currently available on climate change, tools that can be used to plan for and implement climate change adaptation, voluntary guidance and case studies.

[http://www.fishwildlife.org/pdfs/ClimateChangeGuidance%20Document\\_Final\\_reduced%20size.pdf](http://www.fishwildlife.org/pdfs/ClimateChangeGuidance%20Document_Final_reduced%20size.pdf)



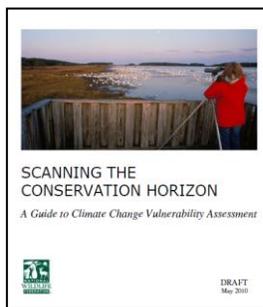
**The Nature Conservancy (TNC). 2009. Conservation Action Planning Guidelines for Developing Strategies in the Face of Climate Change.**

*Excerpt from the web page:* The guidance is intended to help conservation practitioners more systematically and explicitly take into consideration the potential impacts of climate change on their conservation strategies and actions. The methods were originally written for and tested by projects that already had a basic Conservation Action Plan but that did not adequately consider the potential impacts of climate change in their original plan. Thus, the guidance is best applied to existing projects that have some understanding of the conservation challenges and opportunities they face but that have not yet systematically considered climate change – these guidelines will help practitioners consider the potential effects of climate change and adjust their strategies and actions accordingly. <http://conserveonline.org/workspaces/climateadaptation/documents/climate-clinic/documents/climate-change-project-level-guidance>

**Theoharides, K.A., G. Barnhart, and P. Glick. 2009. Climate change adaptation across the landscape: a survey of federal and state agencies, conservation organization and academic institutions in the United States. Survey Synthesis, The Association of Fish and Wildlife Agencies, Defenders of Wildlife, The Nature Conservancy, and The National Wildlife Federation.**

*Excerpt from the Executive Summary:* To develop a clear definition and statement of need for adaptation we conducted 68 interviews of federal and state agency staff, non-governmental organization conservationists, and academic scientists who are thinking about or working on climate change adaptation. We asked these experts to define climate change adaptation, to discuss ongoing adaptation planning efforts, to provide us with examples of adaptation techniques and practices, and to list costs associated with these techniques. We also asked participants to discuss the challenges to planning for and implementing adaptation, the metrics associated with adaptation project monitoring, partnership opportunities, and communication strategies.

[http://www.defendersofwildlife.org/resources/publications/programs\\_and\\_policy/gw/climate\\_change\\_adaptation\\_across\\_the\\_landscape.pdf](http://www.defendersofwildlife.org/resources/publications/programs_and_policy/gw/climate_change_adaptation_across_the_landscape.pdf)



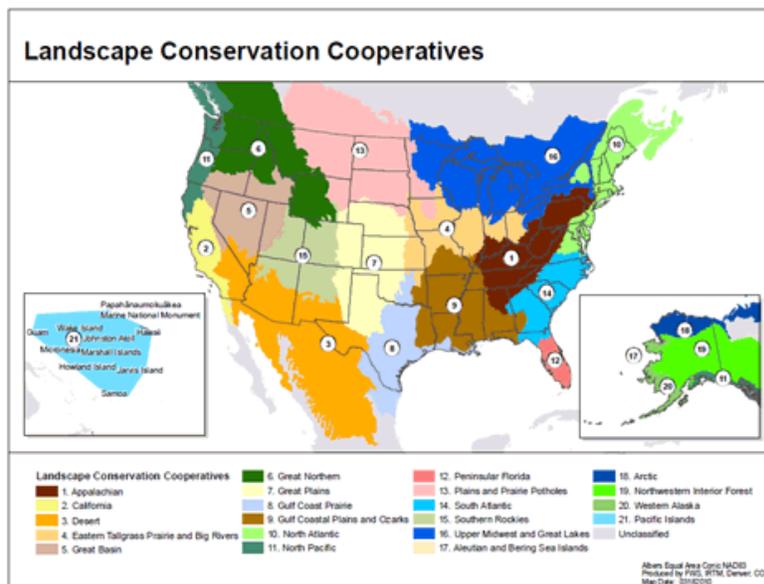
**Glick, P. and B. A. Stein (Eds.). 2010. Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment. Draft. National Wildlife Federation, Washington, D.C.**

*Excerpt from Executive Summary:* Developing and implementing effective adaptation strategies requires an understanding of the potential impacts of climate change on our natural world. To provide the best possible chance for conserving species and ecosystems in a rapidly changing climate, it is essential that managers have the ability to both identify what we need to do differently in the future, as well as which existing strategies and activities continue to

make sense from a climate adaptation perspective. Vulnerability assessments are a key tool for informing adaptation planning and enabling resource managers to make such judgments. *Scanning the Conservation Horizon* is designed to assist fish and wildlife managers and other conservation and resource professionals to better plan, execute, and interpret climate change vulnerability assessments. [http://www.nwf.org/Global-Warming/Climate-Smart-Conservation/Safeguarding-Wildlife/~media/PDFs/Global%20Warming/NWF\\_Scanning\\_the\\_Consevation\\_Horizon.ashx](http://www.nwf.org/Global-Warming/Climate-Smart-Conservation/Safeguarding-Wildlife/~media/PDFs/Global%20Warming/NWF_Scanning_the_Consevation_Horizon.ashx)

## Federal and State Initiatives

\***Landscape Conservation Cooperatives (LCCs)** are a network of applied conservation science partnerships that will support regional conservation planning and management, link science and on the ground conservation efforts, and provide opportunities for stakeholder engagement, building capacity, and funding for projects with an emphasis on integrating climate change into conservation. <http://www.fws.gov/science/shc/lcc.html>



LCCs in the Southeast:

- **North Atlantic LCC** <http://www.fws.gov/northeast/science/nalcc.html>
- **South Atlantic LCC** <http://southatlanticlcc.org>
- **Appalachian LCC** <http://www.fws.gov/northeast/science/alcc.html>
- **Gulf Coastal Plains and Ozarks LCC** <http://gcpolcc.ning.com>
- **Gulf Coast Prairie LCC**
- **Peninsular Florida LCC**  
<http://www.fws.gov/science/shc/pdf/DoIFloridaLCCNarrative.pdf>
- Link to list of LCC coordinators and contacts  
<http://www.fws.gov/science/shc/lccinfocontacts.html>

\*The DOI **Regional Climate Science Centers** (CSCs) deliver basic climate change impact science, such as downscaled climate data and ecosystem response and forecasting. The CSCs will partner with the LCCs to assist development of science-based adaptation strategies. The Southeast CSC has just been awarded to North Carolina State University. Find out more at the National Climate Change and Wildlife Center web site <http://nccwsc.usgs.gov/>

- The **Southeast Regional Assessment Project** is already underway. <http://serap.er.usgs.gov/>

\*The **Digital Coast** is a partnership led by NOAA Coastal Services Center that addresses coastal management issues, including land use, coastal conservation, hazards, marine spatial planning, and climate change. Digital Coast provides access to data, training, tools, and application examples relevant to coastal resource management. <http://www.csc.noaa.gov/digitalcoast/>

\*US EPA **Climate Ready Estuaries** program works with the National Estuary Programs and other coastal managers to assess climate change vulnerabilities, develop and implement adaptation strategies, engage and educate stakeholders, and share the lessons learned with other coastal managers. The website offers information on climate change impacts to different estuary regions, access to tools and resources to monitor changes, and information to help managers develop adaptation plans for estuaries and coastal communities. <http://www.epa.gov/climatereadyestuaries/>

\*A number of states are engaging partners in the process of updating their state **Wildlife Action Plans** to address the impacts of climate change on wildlife and habitats. You can learn more about your state's Wildlife Action Plan at <http://www.wildlifeactionplans.org/>

Some recent efforts include:

- In North Carolina, a recent workshop on **Incorporating Climate Change Into North Carolina's Wildlife Action Plan** brought together partners and stakeholders in a first step towards revising the Wildlife Action Plan to include climate change impacts on fish and wildlife in North Carolina. Additional workshops are planned over a five year time line as part of this effort. <http://www.ncwildlife.org/plan/climatechange/information.htm>
- Read **Virginia's Strategy for Safeguarding Species of Greatest Conservation Need from the Effects of Climate Change** <http://bewildvirginia.org/climate-change/>
- Read Tennessee's update on **Climate Change and Potential Impacts to Wildlife in Tennessee** <http://www.state.tn.us/twra/climate.html>

\*Many states are undertaking efforts to assess the potential impacts of climate change on their natural resources through the use of vulnerability assessments. For example:

- The North Carolina Natural Heritage Program has developed a **Climate Change Ecosystem Assessment**. This database is an excellent resource for assessing the vulnerability of North Carolina habitats and associated species to climate change. Downloadable reports identify the threats, impacts and potential adaptation strategies and intervention strategies. [http://www.climatechange.nc.gov/pages/ClimateChange/CC\\_Ecosystem\\_Assessment.html](http://www.climatechange.nc.gov/pages/ClimateChange/CC_Ecosystem_Assessment.html)

## Other Online Resources

The **NOAA Coastal Climate Change Adaptation Clearinghouse** provides resources by category or state including adaptation and action plans, case studies and strategies, climate change communication, climate change science and impacts, policies and legislation, risk and vulnerability assessments, and stakeholder engagement. <http://collaborate.csc.noaa.gov/climateadaptation/>

The **USDA Forest Service Climate Change Resource Center** provides information and tools related to climate change for land managers, including a short course on adapting to climate change. <http://www.fs.fed.us/ccrc/>

The **Climate Change Exchange Network (CAKE)** is a joint project of Island Press and EcoAdapt intended to help build an innovative community of practice around climate change adaptation issues for natural systems. <http://www.cakex.org/>

The **Conservation Registry** tracks and maps on-the-ground conservation projects, including projects addressing climate change adaptation and mitigation. The purpose of the Registry is to help users understand the context, distribution, and effectiveness of our collective efforts to protect and restore ecosystems. <http://www.conservationregistry.org/>

**LandScope America** is an online resource for the land-protection community and the public that brings together maps, data, photos, and stories about America's natural places and open spaces. <http://www.landscape.org/>

The **Living Lands Program** at Defenders of Wildlife supports land trusts in their efforts to protect, enhance and restore native wildlife habitat and biodiversity. Recent newsletters have focused on climate change issues as they relate to land trusts. <http://www.defenders.org/livinglands/>

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