

DFG Climate College

Lecture #2



Title: Climate 101; understanding the basics of climate science and what we can do about it
Speaker: Ellie Cohen, President and CEO, PRBO Conservation Science
Date: October 15, 2012 (Monday)
Time: 1:30 – 2:30PM
Location: DFG headquarters in Sacramento, Natural Resources Agency building Auditorium
WebEx: Lecture also available to view via WebEx. We encourage DFG staff participating remotely to watch the lectures together by reserving a conference room with DSL. The powerpoint presentation will be posted in advance to minimize interruption for remote users due to WebEx or bandwidth complications. Because of a limit to the number of WebEx participants, we encourage those in the Sacramento area to attend in person.

Registration for Lecture #2

[DFG STAFF CLICK HERE TO REGISTER](#)

ALL OTHER PARTICIPANTS: If you are not a DFG staff member please email

Registrar@DFG.ca.gov with your name, email address, organization, and whether or not you intend to participate in-person or via WebEx.

*Note: Please register at least two days prior to the lecture. If you would like to be registered for ALL classes at once, please submit a request to Registrar@DFG.ca.gov.

Suggested reading materials recommended by the speaker

- EPA : www.epa.gov/climatechange - excellent overview
- Skeptical Science: www.skepticalscience.com/ - rebuttals to common arguments with excellent information and citations
- Climate-Smart Adaptation Principles. National Wildlife Federation.
www.nwf.org/Global-Warming/Climate-Smart-Conservation/Adaptation-Principles.aspx
- California Governor's Office of Planning and Research: [Climate Change: Just the Facts](#)

See additional resources in the "Climate Change, Ecosystems and Adaptation Resources List" provided below.

Speaker Biography

Ellie M. Cohen has served as President and CEO of PRBO Conservation Science (www.prbo.org) since 1999. Born and raised in Baltimore, Maryland, Ms. Cohen received her undergraduate degree with honors in Botany (focus on ecology) from Duke University. Field studies in butterfly ecology brought her to California in 1979.

She later received her Master in Public Policy degree from Harvard University's Kennedy School of Government, where she was honored with the Policy Analysis Exercise Award for highly

distinguished performance and the first annual Robert F. Kennedy Public Service Award. In 2001, she was awarded a fellowship to Stanford University's Executive Program for Non-profit Leaders at the Graduate School of Business.

Ellie co-founded the Bay Area Ecosystem Climate Change Consortium, bringing together scientists and natural resource managers to cooperatively conserve nature's benefits in the face of accelerating extremes, for wildlife and our communities. Ellie is an invited member of the National Wildlife Federation's Climate-Smart Conservation Team, serves as Vice Chair of the California Landscape Conservation Cooperative, chairs the Central Valley Joint Venture and is an Executive Committee member of the SF Bay Joint Venture. She is an invited contributor to the US Global Change office's National Climate Assessment Coastal Update.

Ellie was honored to receive the BayNature 2012 Environmental Hero for Conservation Advocacy Award. In 2009, she was named one of the "100 Women Taking the Lead to Save Our Planet" in the United States as part of National Women's History Month, recognizing her contributions to catalyzing conservation solutions to the impacts of rapidly accelerating environmental change on nature.

Optional additional companion webinars from the National Climate Academy



- [Adaptation 101](#), Jennie Hoffman, EcoAdapt
- [Introduction to Climate Change Adaptation](#), Bruce Stein, National Wildlife Federation
- [Some Thoughts on Landscape and Seascape Conservation Approaches](#), Roger Griffis, NOAA Fisheries Service



Climate Change, Ecosystems and Adaptation Resource List

On-line Resources (some of my favorites of the many excellent free web-based resources):

- EPA : www.epa.gov/climatechange - excellent overview
- Skeptical Science: www.skepticalscience.com/ - rebuttals to common arguments with excellent information and citations
- Climate-Smart Adaptation Principles. National Wildlife Federation. www.nwf.org/Global-Warming/Climate-Smart-Conservation/Adaptation-Principles.aspx
- US Global Change Office: www.globalchange.gov -- publications can be found at: <http://library.globalchange.gov/> (e.g., search “ecosystems” or “agriculture”)
- NOAA ocean acidification: <http://www.pmel.noaa.gov/co2/story/Ocean%2BAcidification>
- NOAA climate watch: <http://www.climate.gov/#climateWatch>
- www.realclimate.org -“climate science by real scientists” - search for your interest area
- UN Intergovernmental Panel on Climate Change www.ipcc.ch/
- UN’s Millennium Ecosystem Assessment – ecosystem services and more www.millenniumassessment.org/en/index.aspx ; see also www.greenfacts.org/en/ecosystems/index.htm
- NASA lead climatologist Jim Hansen’s website: www.columbia.edu/~jeh1/
- California’s climate change portal: www.climatechange.ca.gov/
- PRBO- for projections about climate change, birds and habitats as well as management recommendations in California: www.prbo.org/data

Science News Updates:

- www.sciencedaily.com/ for the latest on current science publications
 - Search by topic: e.g., climate, sea level rise, plants, birds, climate triage, acidification
 - Sign up for free daily and/or weekly email updates in areas of interest
- www.californialcc.org- CA Landscape Conservation Cooperative—addressing impacts of climate change and other stressors on ecosystems with resource managers and scientists;
 - sign up for listserv to receive regular updates with news, webinars and more
- <http://www.climatecentral.org/news> - regular climate news updates
- www.climateprogress.org/ for a daily blog by Physicist Joe Romm on the latest climate science and news [NOTE: *this blog is partisan- but the science summaries by Romm are worth reading*]
- www.google.com- personalize your news

Selected Books, Reports and Guides:

- Bowen, Mark. *Thin Ice: Unlocking the Secrets of Climate in the World’s Highest Mountains*. 2005. Henry Holt.

- Cook, John and Sephan Lewandowsky. *The Debunking Handbook*. <http://www.skepticalscience.com/Debunking-Handbook-now-freely-available-download.html>
- Climate Central. *Global Weirdness: Severe Storms, Deadly Heat Waves, Relentless Drought, Rising Seas, and the Weather of the Future*. 2012. Random House.
- Flannery, Tim. *Now or Never: Why We Must Act Now to End Climate Change and Create a Sustainable Future*. 2009. Atlantic Monthly Press.
- Hansen, Laura J., and Jennifer R. Hoffman, *Climate Savvy: Adapting Conservation and Resource Management to a Changing World*. Island Press. October 2010.
- IPCC, 2012: *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* [Field, C.B., et al (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 1-19. *Summary for policymakers*:
<https://docs.google.com/file/d/0B1gFp6Ioo3akYklZcWkwWHJud00/edit?pli=1>
 - *Full Report*: http://www.ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf
- Peterson, David L., et. al. *Responding to climate change in national forests: a guidebook for developing adaptation options*. www.treearch.fs.fed.us/pubs/39884 USDA Forest Service. 2011.
- Linden, Eugene. *The Winds of Change: Climate, Weather & the Destruction of Civilizations*. 2006. Simon & Schuster.
- Mann, Michael E. *The Hockey Stick and the Climate Wars*. Columbia University Press, March, 2012.
- National Oceanic and Atmospheric Administration (NOAA). 2010. *Adapting to Climate Change: A Planning Guide for State Coastal Managers*. NOAA Office of Ocean and Coastal Resource Management.
<http://coastalmanagement.noaa.gov/climate/adaptation.html>
- Stein, Bruce. *Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment*. National Wildlife Federation. www.nwf.org/Global-Warming/Climate-Smart-Conservation/Adaptation-Reports.aspx2011.
- Wilson, E.O. *The Creation: An Appeal to Save Life on Earth*. 2006. W. W. Norton, N.Y.

For Educators and Students of All Ages:

- www.globalchange.gov/resources/educators/toolkit
- oceanservice.noaa.gov/education/literacy.html **School Solutions**
- www.nwf.org/Global-Warming/School-Solutions.aspx - National Wildlife Federation's- climate change curriculum and how K-12 schools are [becoming "Eco-Schools."](#)

Actions You Can Take- a sampling:

“The average American generates about 15,000 pounds of carbon dioxide every year from personal transportation, home energy use and from the energy used to produce all of the products and services we consume.” www.climatecrisis.net

- To calculate your personal impact and ideas for reducing it at <http://www.coolcalifornia.org/>

- Do an energy audit of your home, workplace, and mode of transportation; identify where you can save energy: www.eere.energy.gov/consumer/your_home/energy_audits/
- Replace all light bulbs with compact fluorescents- 3 bulbs save 300 lbs. of carbon dioxide and \$60/yr (for recycling www.epa.gov/bulbrecycling/). Caulk & weather-strip doorways & windows. Save 1,700 lbs. of CO2 & \$274/yr. Switch to low-e, double pane windows & save 10,000 lbs. of CO2 & \$436/yr.
- Compost (<http://www.cawrecycles.org/issues/ghg/compost>). Plant natives. Avoid rapidly spreading invasive plants. Plant to retain water, support ecological and hydrological function.
- Landscape for birds and other wildlife (<http://www.prbo.org/cms/183>). Connect neighborhood yards and gardens. Use hand equipment (not gas or electric powered). Set up roof water catchments & grey water landscape recycling (www.greywateralliance.org, www.watersprout.org).
- Purchase eco-friendly renewable power.
- *12 Simple Ways to Live A Greener Lifestyle*. ScienceDaily. January, 2008. www.sciencedaily.com/releases/2008/01/080109111927.htm