

Climate Change in Narragansett Bay: What's the Story?

URI Feinstein Campus, Providence, RI
March 12, 2015

Resources List

All links retrieved on 3/4/2015 unless otherwise noted

Data Visualization Resources

"Collections." *The Why Axis*. The Why Axis.

Data viz tools, lectures, charts, open source codes, and print + web companions

<http://thewhyaxis.info/collections/>

"Data Experiences." *Knight Foundation*. John S. and James L. Knight Foundation.

<http://www.knightfoundation.org/grants/201347713/>

"Data Stories #40: Narrative Visualization Research W/ Jessica Hullman." *Data Stories*. Data Stories.

<http://datastori.es/ds40-narrative-vis-research-w-jessica-hullman/>

Eleanor, Lutz. *Tabletop Whale*. Tabletop Whale LLC. A science illustration blog created by designer with a molecular biology degree. Examples and tutorials can be found.

<http://tabletopwhale.com/index.html>

Green, Matthew. Sept. 2014. "Visualizing the Inequities of Climate Change." *The Lowdown*. KQED News.

<http://blogs.kqed.org/lowdown/2014/09/26/the-inequalities-of-climate-change-visualized-in-one-fascinating-map-and-6-other-great-interactive-resources/>

"How Can an Online Mapping Tool Help Us Better Understand Climate Change?" Mar. 2014. *CartoDB*. CartoDB.

<http://cartodb.pr.co/72521-how-can-an-online-mapping-tool-help-us-better-understand-climate-change>

Kostis, Helen-Nicole, and Don Cohen. Jul. 2012. "Scientific Visualization: Where Art Meets Science and Technology." *APPEL Academy of Program Project Engineering Leadership*. NASA.

http://appel.nasa.gov/2012/07/17/47s_art_sci_tech-html/

Krum, Randy. "Randy's Appearances & Presentations." *Cool Infographics*.

<http://www.coolinfographics.com/appearances/>

Krum, Randy. "Infographic Posters." *Cool Infographics*.

<http://www.coolinfographics.com/cool-posters/>

Lau, Georgan, and Lei Pan. Jan. 2015. "A 5-step Guide to Data Visualization." *Elsevier Connect*. Elsevier BV.

<http://www.elsevier.com/connect/a-5-step-guide-to-data-visualization>

"Making Climate Change Visual." Feb. 2014. *Visualizing.org*.

<http://visualizing.org/galleries/making-climate-change-visual>

Nocke, Thomas, Till Sterzel, Michael Böttinger, and Markus Wrobel. "Visualization of Climate and Climate Change Data: An Overview." PDF file.

<http://www.pik-potsdam.de/members/nocke/.personal/NockeSterzelBoettingerWrobel06.pdf>

Poulson, David. Jul. 2014. "Upending the Basin: Making Data Dance." *Great Lakes Echo*.

<http://greatlakesecho.org/2014/07/16/upending-the-basin-making-data-dance/>

"Prof. Cairo on Storytelling with Data Visualization: Platforms vs. Craft at the Computation Journalism Symposium 2013." Feb. 2013. *Interactive Media*. University of Miami.

<http://interactive.miami.edu/prof-cairo-on-storytelling-with-data-visualization-platforms-vs-craft-at-the-computationjournalism-symposium-2013>

Rosling, Hans. Feb. 2006. "The best stats you've ever seen." Online video. *Ted*. TED Conferences,

http://www.ted.com/talks/hans_rosling_shows_the_best_stats_you_ve_ever_seen

Ahlenius, Hugo, and Marianne Fernagut. June 2012. "Survey Results - Using Graphics to Communicate Environmental Information." *Nordpil*. Nordpil.

https://nordpil.com/static/downloads/surveyresults_graphics_for_environment.pdf

UW Interactive Data Lab. University of Washington Interactive Data Lab.

<http://idl.cs.washington.edu/>

"Visualizing Climate Change." 24 Jul. 2014. *Talking Climate*.

<http://talkingclimate.org/visualising-climate-change/>

Yau, Nathan. "FlowingData Tutorials." *Flowingdata*. <http://flowingdata.com/category/tutorials/>

Zoss, Angela. "Introduction to Data Visualization." *Duke University Libraries*. Duke University.

<http://guides.library.duke.edu/content.php?pid=355157&sid=2976256>

Data Accessibility Resources

"Area Drought Information." *U.S. Drought Portal*. National Integrated Drought Information System.

<http://www.drought.gov/drought/content/tools/area-drought-information>

"Climate at a Glance." *National Climatic Data Center*. National Oceanic and Atmospheric Administration.

<http://www.ncdc.noaa.gov/cag/>

"Climate Inspector." *Climate Change Scenarios*. University Corporation for Atmospheric Research.

<https://gisclimatechange.ucar.edu/inspector>

Data.gov Climate Data

Data sets relating to coastal flooding, food resilience, and water and ecosystem vulnerability, with additional resources to be added.

<http://www.data.gov/climate/>

"Exploring California's Climate Change Research." *Cal-Adapt*. California Energy Commission.

<http://cal-adapt.org/>

"Global Sensor Web." *Knight Foundation*. John S. and James L. Knight Foundation.

<http://www.knightfoundation.org/grants/201347663/>

"Kids Making Sense." *Knight Foundation*. John S. and James L. Knight Foundation.

<http://www.knightfoundation.org/grants/201347645/>

Data Narrative Resources

Art & Science Journal

Website and biannual journal that emphasizes art pertaining to nature, science, and technology

<http://www.artandsciencejournal.com/>

Beaudoin, Jamie L. Summer 2014. "Narrative Data: An interview with Matthew DiClement." *Creative Non-Fiction*. Creative Nonfiction Foundation.

<https://www.creativenonfiction.org/online-reading/narrative-data>

Bushong, Anthony. 2013. "Case Study: The Triumphs and Pitfalls of Data Visualization as Narrative."

Introduction to Digital Humanities. UCLA Center for Digital Humanities.

http://dh101.humanities.ucla.edu/?page_id=216

Center for Research on Environmental Decisions and ecoAmerica. (2014). "Connecting on Climate: A Guide to Effective Climate Change Communication." New York and Washington, D.C. 96pp.

<http://ecoamerica.org/research/>

De Sherbinin, Alex. 2013. "Climate Change Hotspots Mapping: What Have We Learned?" *Climatic Change* 123.1: 23-37. Springer Link. <http://link.springer.com/article/10.1007%2Fs10584-013-0900-7>

(unformatted post-print version available at:

http://www.columbia.edu/~amd155/deSherbinin_2013_CCHotspots_ClimaticChange.pdf)

Front and Center. 2014. "After Water" WBEZ, Chicago Public Radio.

An exploration of climate change through science, journalism, and art.

<http://www.wbez.org/series/front-center/after-water-science-art-and-journalism-around-climate-change-110544>

Maeda, John. Jul. 2013. "Artists and Scientists: More Alike Than Different." *Guest Blog*. Scientific American.

<http://blogs.scientificamerican.com/guest-blog/2013/07/11/artists-and-scientists-more-alike-than-different/>

Mediomix. Nov. 2013. "The Ocean Sampling Day - Call to Action" Online video. *Youtube*. Youtube.

<https://www.youtube.com/watch?v=N34Tpr68qHk>

Morgan, M.G. January 2009. Best practice approaches for characterizing, communicating, and incorporating scientific uncertainty in climate decision making. Synthesis Assessment Product 5.2, Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. U.S. Climate Change Science Program. 96pp. <http://www.globalchange.gov/browse/reports/best-practice-approaches-characterizing-communicating-and-incorporating-scientific>

Segel, Edward, and Jeffrey Heer. 2010. "Narrative Visualization: Telling Stories with Data." *IEEE Trans. Visualization & Comp. Graphics (Proc. InfoVis)*, PDF file.

<http://vis.stanford.edu/files/2010-Narrative-InfoVis.pdf>

Simon, A., et al. February 2014. The Value of Explanation: Using values and causal explanations to reframe climate and ocean change. A FrameWorks Research Report. FrameWorks Institute. 23 pp.

<http://www.frameworksinstitute.org/climate-change-and-oceans.html>

van der Linden, S.L., et al. 2014. How to communicate the scientific consensus on climate change: plain facts, pie charts or metaphors? *Climatic Change*, 126: 255-262.

<http://link.springer.com/article/10.1007%2Fs10584-014-1190-4>

Climate Change Communication via Art Resources

"Can Art Help Us Understand Climate Change?" Feb. 2015. *World Economic Forum Agenda*. World Economic Forum.

<https://agenda.weforum.org/2015/02/can-art-help-us-understand-climate-change/>

"Introducing the Audubon Mural Project." Jan. 2015. *Audubon*. National Audubon Society.

<http://www.audubon.org/news/introducing-audubon-mural-project>

"True to Science, Engaging Senses, Clear in Language, Surprising!" *About*. Living Data.

<http://www.livingdata.net.au/content/about/about.php>

Other Useful Tools, Products, and Examples

Boehnert, Joanna J. May 2014. "Mapping Climate Communication Timeline Poster." *EcoLabs*.

<http://ecolabsblog.wordpress.com/2014/05/08/mapping-climate-communication-timeline-poster-version-no-1>

Gapminder. "Gapminder is a non-profit venture promoting sustainable global development and achievement of the United Nations Millennium Development Goals by increased use and understanding of statistics and other information about social, economic and environmental development at local, national and global levels. We are a modern "museum" that helps making the world understandable, using the Internet."

<http://www.gapminder.org>

Haapoja, Terike., Institute of Atmospheric Research and Earth System Science, Department of Forest Ecology of University of Helsinki, Simosol Oy. "Carbon Tree." *Carbon Tree*.

<http://www.hiilipuu.fi/>

iSeeChange: The Almanac. "iSeeChange is a groundbreaking environmental reporting project that combines citizen science, participatory public media, and cutting-edge satellite and sensor monitoring of environmental conditions." The iSeeChange Almanac is a crowd-sourced reporting platform that allows users to submit their own observations about local and/or regional weather patterns and climate change.

<http://thealmanac.org/year.php>

See related: Badore, Margaret. Jan. 2014. "iSeeChange Turns Climate Reporting on Its Head." *TreeHugger*. MNN Holding Company.

<http://www.treehugger.com/climate-change/iseechange-turns-climate-reporting-its-head.html>

Mapping Globalization. Global Mapping.

A collection of maps and infographics detailing different aspects of globalization

<http://globalmapping.tumblr.com>

Marinexplore.org. This intelligent platform weaves data together from multiple sources to develop a wide variety of data visualization products for ocean science.

<http://marinexplore.org/features/>

National Science Foundation. "The 2015 Vizzies." *National Science Foundation*.

http://www.nsf.gov/news/special_reports/scivis/winners_2014.jsp

Peek, Katie. *Projects*. Portfolio of data visualizations made by a science journalist working for Popular Science magazine

<http://portfolio.katiepeek.com/>

"WaterViz for Hubbard Brook." *WaterViz*. The U.S. Forest Service. "WaterViz for Hubbard Brook represents the nexus between the hydrologic sciences, visual arts, music, and computer design." Hydrologic data from environmental sensors at the Hubbard Brook Experimental Forest in the White Mountains is "used to drive a computer model that calculates all components of the water cycle for the catchment *in real time*. These data, in

turn, drive an artistic simulation and sonification of the water cycle, reflecting the hydrologic processes occurring at that moment in time.”

<http://smartforests.org/waterviz/>

See Related: Rustad, Lindsey. Dec. 2014 "WaterViz for Hubbard Brook: A New Water Cycle Visualization and Sonification Tool." *LTER Databits*. Long Term Ecological Research Network.

<http://databits.lternet.edu/fall-2014/waterviz-hubbard-brook-new-water-cycle-visualization-and-sonification-tool-0>

What Is Missing? “The mission of the What is Missing? Foundation is to create, through science-based artworks, an awareness about [the sixth mass extinction], connecting the disappearance of species to the primary causes – habitat degradation and loss.”

<http://whatissing.net/#/home>

Wind Map. Hint.fm.

Live updating wind map of the United States

<http://hint.fm/wind/>

Resources from Today’s Presenters

Rafael Attias

<http://www.rafaelattias.com/>

Center for Environmental Visualization, University of Washington

<http://www.cev.washington.edu/>

Cynthia Beth Rubin

<http://www.cbrubin.net/>

Edna Lawrence Nature Lab, Rhode Island School of Design

<http://naturelab.risd.edu/>

EXPspace@RISD (and elsewhere)

<http://expspace.risd.edu/> (Retrieved 3/10/15)

Meanderers

<http://meanderers.tumblr.com/>

Susanne Menden-Deuer Lab

<http://www.gso.uri.edu/smdlal/>

Nathalie Miebach. Jul. 2011. “Art made of storms.” TED Conferences.

https://www.ted.com/talks/nathalie_miebach#t-152998

Nathalie Miebach. *Nathalie Miebach: Sculpture*.

<http://nathaliemiebach.com>

National Audubon Society’s Birds and Climate Change Report

<http://climate.audubon.org/>

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