

Sources & Suggested Reading for Global Climate Change and Sustainability

Suggested Overview

Doyle, Rodger “*The Lion’s Share: Measuring the Human Impact on Global Resources*” **Scientific American**, April 2005, p. 30.

Glick, Daniel and Fen Montaigne and Virginia Morell “*Signs from Earth*” a series of consecutive articles in one issue: “*The Big Thaw*” (pp. 12-33) and “*No Room to Run*” (pp. 34-55) and “*Now What?*” (pp.56-75) **National Geographic**, September 2004.

Levinson, D.H. ed. “*State of the Climate in 2004*” **Bull. Amer. Meteorol. Society**, 86 (2005).

Popper, Steven W., Robert J. Lempert, and Steven C. Bankes “*Shaping the Future*” **Scientific American**, April 2005, pp. 66-71.

“*U.K. Climate Impacts Programme*” www.ukcip.org.uk/scenarios/marine/marine.html.

.....

Specific Articles

Allenby, B. R. 1992. *Design for Environment: Implementing Industrial Ecology*. Ph.D. dissertation, Rutgers University, New Brunswick, NJ.

Allenby, B. R. 1999. *Industrial Ecology: Policy Framework and Implementation* (Upper Saddle River, NJ: Prentice-Hall).

“*Asia: China and Its Trading Partners*”, Texas A&M University, College Station, TX, 12-14 February 1998.

Ayres, R. U. and L. W. Ayres, eds. 2002. *A Handbook of Industrial Ecology* (Cheltenham, UK: Edward Elgar).

Bare, J. C. et al. “*TRACI: The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts.*” **Journal of Industrial Ecology**, 6(3-4), 49-78, (2003).

Bare, J. C. et al. Life Cycle Impact Assessment Workshop Summary; Midpoints versus Endpoints: The Sacrifices and Benefits. **International Journal of Life Cycle Assessment**, 5(6), 319-326 (2000).

Beaver, Earl R. “*A Fresh Approach to Being Sustainable,*” *Clean Products and Processes*, 2 (2000) 76. Springer-Verlag.

Beaver, Earl “*LCA and Total Cost Assessment,*” **Environmental Progress**, Vol. 19, No. 2, Summer 2000.

Beaver, Earl & Beth Beloff “*Sustainability Indicators and Metrics of Industrial Performance,*” **Proceedings of Society of Petroleum Engineers Meeting**, Stavanger, Norway, June 2000.

Beaver, E. R., et. al. “*Designing Pollution Prevention into the Process,*” Chemical Manufacturers Association, April 1993.

Beloff, Beth, Earl Beaver and Heidi Massin, “*Assessing Societal Costs Associated with Environmental Impacts*” **Environmental Quality Management Journal**, Winter 2000.

Bowlin, Mike R. “*Clean Energy: Preparing Today for Tomorrow's Challenges,*” presented at Cambridge Energy Research Associates 18th Annual Executive Conference: Globality & Energy: Strategies for the New Millennium, Houston, TX, 9 February 1999.

Bossel, H. (1999). Indicators for Sustainable Development: Theory, Method, Applications- A Report to the Balaton Group. International Institute for Sustainable Development.

Braejer, Victor and Jane V. Hall “*Changes in the Distribution of Air Pollution Exposure in the Los Angeles Basin from 1990 to 1999*” **Contemporary Economic Policy**, Vol. 23, No. 1, January 2005, pp. 50-58. ISSN 1074-3529.

Bryant, Dirk, Daniel Nielsen, and Laura Tangley, “*The Last Frontier Forests, Ecosystems and Economies on the Edge*” (Washington, DC: World Resources Institute, 1997).

Cabezas, H. and Fath B. D. “*Towards a Theory of Sustainable Systems*”, Fluid Phase Equilibria, 197-194, 3-14, (2002).

Campbell, Colin J. and Jean H. Laherrere, "The End of Cheap Oil," **Scientific American**, March 1998.

Carbon Dioxide Information Analysis Center, Trends: A Compendium of Data on Global Change (Oak Ridge, TN: Oak Ridge National Laboratory, 1998), <cdiac.esd.ornl.gov>, viewed 25 October 1999.

Chuangdong, Wang “*Logging Ban to Transform Timber Industry,*” **China Daily**, 7 September 1998; “*Forestry Cuts Down on Logging,*” **China Daily**, 26 May 1998.

Characklis, G. W. and Richards, D. I. (1999). “The Evolution of Industrial Environmental Performance Metrics: Trends and Challenges.” **Corporate Environmental Strategy**, 6(3), 3-13.

Culaba, A. B. and Purvis, M. R. I. (1999). A Methodology for the Life Cycle and Sustainability Analysis of Manufacturing Processes. **Journal of Cleaner Production**, 7, 435-445.

Davis, Curt H., Yonghong Li, Joseph R. McConnell, Markus M. Frey and Edward Hanna “*Snowfall-Driven Growth in East Antarctic Sheet Mitigates Recent Sea-Level Rise*” **Science**, Vol. 308, June 24, 2005 pp.1898-1901.

Eaton, R. J. “*Getting the Most Out of Environmental Metrics.*” *The Bridge*, 29 (1) (1999).

Edwards, A. R. Sustainability Today: A Compass for the Future.
<http://www.tew.org/publications/st.toc.html> (2000).

Electric Power Research Institute, Renewable Energy Technology Characterizations (Palo Alto, CA: 1997).

Elkington, John. *Cannibals with Folks: the Triple Bottom Line of 21st Century Business*, New Society Publishers (1997).

Elliott, D.L., L.L. Windell, and G.L. Gower, "An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States" (Richland, WA: Pacific Northwest Laboratory, 1991).

Epstein, Paul et al., "*Marine Ecosystems: Emerging Diseases as Indicators of Change, Health, Ecological and Economic Dimensions of the Global Change Program*" (Boston: Center for Health and Global Environment, Harvard Medical School, December 1998).

Frosch, R. A. and N. E. Gallopoulos. Strategies for manufacturing. *Scientific American* 261(3):144-153 (September 1989).

Frosch, R A. Sustainability Engineering (editorial). *The Bridge*, 29(1), (1999).

Goedkoop, M. and Spriensma, R. "*The Eco-indicator 99: A Damage Oriented Method for Life Cycle Impact Assessment- Methodology Report.*" <http://www.pre.nt> (2000).

George, C. "*Test for Sustainable Development through Environmental Assessment*", **Environmental Impact Assessment Review**, 19, 175-200 (1999).

Hansen, James et al., Goddard Institute for Space Studies, Surface Air Temperature Analyses, "Global Land-Ocean Temperature Index," <www.giss.nasa.gov/update/gistemp>.

Hart, S. L. "*Strategies for a Sustainable World*", **Harvard Business Review**, Jan-Feb, 67-76 (1997).

Hersh, M. A. "*Sustainable Decision Making: The Role of Decision Support Systems*", **IEEE Transactions on Systems, Man, and Cybernetics - Part C: Applications and Reviews**, 29 (30), 395-408 (1999).

Hileman, Bette "*Protecting Ozone Helps Protect Climate*" **C&ENews**, May 2, 2005, pp.28 & 29
www.CEN-Online.org.

Hileman, Bette "*Stark Effects from Global Warming*" **C&ENews**, March 21, 2005, pp.47 & 48
www.CEN-Online.org

Houghton, J.T., et.al. "*Climate Change 2001: The Scientific Basis*" **Cambridge University Press** (2001).

ICCA. (2002). *On the Road to Sustainability: A Summary of ICCA Chemical Sector*. A Report to UNEP. <http://www.icca-at-wssd.org/publications.html>.

International Institute of Sustainable Development. “*Compendium of Sustainable Development Indicator Initiatives*”, <http://www.iisd.org/measure/compensium> (2000).

Keeling, C. D. and T.P. Whorf, “*Atmospheric CO₂ Concentrations (ppmv) Derived From In Situ Air Samples Collected at Mauna Loa Observatory, Hawaii*,” Scripps Institution of Oceanography, La Jolla, CA, July 1999.

Kenworthy, Tom “Major Change Sought in Forest Regulations,” **Washington Post**, 1 October 1999.

Kohlhaas, Michael “Ecological Tax Reform in Germany: Impact and Implications,” presentation at American Institute for Contemporary German Studies, Washington, DC, 21 April 1999.

Kruijf, H. A. M. De and Vuuren, D. P. V. “*Following Sustainable Development in Relation to the North-South Dialogue: Ecosystem Health and Sustainability Indicators*,” **Ecotoxicology and Environmental Safety**, 40, 4-14 (1998).

Kuhn, Thomas “*The Structure of Scientific Revolutions*”, 3rd ed. (Chicago, IL: University of Chicago Press, 1996).

Lankey, R. L. and Anastas, P. T. “*Life-Cycle Approaches for Assessing Green Chemistry Technologies*” **Industrial Engineering Chemistry Research**, 41, 4498-4502, (2002).

Maddison, Angus “*Monitoring the World Economy 1820-1992*” (Paris: Organisation for Economic Co-operation and Development, 1995).

Malkina-Pykh, I. G. (2002). “Integrated Assessment Models and Response Function Models: Pros and Cons for Sustainable Development Indices Design.” **Ecological Modeling**, 2, pp. 93-108.

Mankiw, N. Gregory “Gas Tax Now!” **Fortune**, 24 May 1999.

Martin, Niall “First Commercial Wind Farm in China,” **Windpower Monthly**, September 1998.

Maycock, Paul “Italian 10,000 Roofs Program Takes Shape,” **PV News**, July 1998.

Merkle, A. and Kaupenjohann, M. (2000). *Derivation of Ecosystemic Effect Indicators-Method*. **Ecological Modeling**, 130, pp. 39-46.

Mebratu, D. (1998). *Sustainability and Sustainable Development: Historical and Conceptual Review*. **Environmental Impact Assessment Review**, 18, pp. 493-520.

Monastersky, Richard “Sea Change in the Arctic,” **Science News**, 13 February 1999;

National Academy of Engineering & National Research Council. (1999). *Industrial Environmental Performance Metrics: Challenges and Opportunities*, National Academy Press, Washington D.C.

Parris, T. M. and Kates R W. (2003). *Characterizing and Measuring Sustainable Development*. *Annual Review in Environment and Resource*, 28, 559-586.

Pearce, Fred “Iceland's Power Game,” **New Scientist**, 1 May 1999.

Perry, Allison L. Paula J. Low, Jim R. Ellis, John D. Reynolds "Climate Change and Distribution Shifts in Marine Fishes" **Science**, Vol. 308, June 24, 2005 pp. 1912-1915.

Pykh, Y. A. et al. (2000). An Overview of Systems Analysis Methods in Delineating Environmental Quality Indices. **Ecological Modeling**, 130, 25-38.

Retoske, Matthew and Earl Beaver, "Climate Change; What Does it Mean to the Process Engineer?" **Environmental Progress**, October 2002.

Road moratorium from USDA, Forest Service, "Forest Service Limits New Road Construction in Most National Forests," press release (Washington, DC: 11 February 1999).

Roodman, David Malin "Building a Sustainable Society," in Lester R Brown et al., State of the World 1999 (New York: W.W. Norton & Company, 1999);

Schmidheiny, S. (and the Business Council for Sustainable Development). *Changing Course* (Cambridge, MA: The MIT Press) 1992.

Schwarz, Jeanette, Beth Beloff, Earl Beaver and Dickson Tanzil, "Practical Minimum Energy Requirements for Chemical Product Manufacturing," **Environmental Quality Management Journal**, Winter 2001.

Schwarz, Jeanette, Beth Beloff and Earl Beaver, "Use Sustainability Metrics to Guide Decision-Making," **Chemical Engineering Progress**, July 2002.

SETAC-Europe. "Life Cycle Assessment and Conceptually Related Programmes", (1997).

SETAC-Europe. "Best Available Practice Regarding Impact Categories and Category Indicators in Life Cycle Assessment", **International Journal of LCA**, 4(2), 66-74 & 4(3), 167-174. (1999).

Socolow, R., C. Andrews, F. Berkhout, and V. Thomas, eds. *Industrial Ecology and Global Change* (Cambridge, England: Cambridge University Press). Pages 3-18 (1994).

Stevens, William K. "Dead Trees and Shriveling Glaciers as Alaska Melts," **New York Times**, 18 August 1998; U.S. and British report from "Melting of Antarctic Ice Shelves Accelerates," **Environment News Service**, 9 April 1999.

Trenberth, Kevin, "Uncertainty in Hurricanes and Global Warming" **Science**, Vol. 308, June 17, 2005, pp. 1753 & 1754.

Tyteca, D. (1996). On the Measurement of the Environmental Performance of Firms - A Literature Review and a Productive Efficiency Perspective. **Journal of Environmental Management**, 46, 281-308.

United Nations, World Population Prospects: The 1998 Revision (New York: December 1998).

U.N. Population Fund (UNFPA), The State of World Population (New York: 1999); UNFPA, "Executive Director's Statement on Withdrawal of U.S. Funding from UNFPA," New York, 20 October 1998.

U.S. President's Council on Sustainable Development. (1994). *A Vision for a Sustainable U.S. and Principles of Sustainable Development*. Washington D.C.

Vaughan, David G. "How Does the Antarctic Ice Sheet Affect SeaLevel Rise?" **Science**, Vol. 308, June 24, 2005 pp. 1877 & 1878.

Warrick, Joby "As Glaciers Melt, Talks on Warming Face Chill," **Washington Post**, 2 November 1998.

Watkins, K. J. (2002). *Sustainability Takes Center Stage*. **Chemical & Engineering News**, 80(16), 15-22.

Wenzel, H. et al. (1997). *Environmental Assessment of Products*. v. 1 & 2. Chapman & Hall, London.

Wigley, Tom M.L. "The Science of Climate Change: Global and U.S. Perspective" (Arlington, VA: Pew Center on Global Climate Change, June 1999).

Wilford, John Noble, "Move Over, Iceman! New Star From the Andes," **New York Times**, 25 October 1995; Yukon discovery from James Brooke, "Remains of Ancient Man Discovered in Melting Canadian Glacier," **New York Times**, 25 August 1999.

World Commission on Environment and Development (also known as the Brundtland Commission). 1987. *Our Common Future* (Oxford: Oxford University Press).

World Conservation Union, United Nations Environmental Programme, and World Wide Fund for Nature. (1991). "Caring for the Earth: A Strategy for Sustainable living." Gland, Switzerland.

Earl R Beaver – Rev. April 4, 2006