

General Background – 12 references

The Little Earth Book

Bruges, James 2001

A glossary of terms and issues related to global warming and sustainability. Light, amusing and quite informative. Good for encapsulating the essence of the data and arguments.

A Time Like No Other - Boston Indicators Report 2004-2006

Boston Foundation, 2007 June
<http://www.bostonindicators.org/>

Good demographic, economic and social data with emphasis on global warming in New England.

The Rough Guide to Climate Change

Henson, Robert 2006

Good overview of the science and politics of climate change including the Debates and Solutions (Part 4). Also an excellent summary of Resources (Part 5).

An Inconvenient Truth

Gore, Al 2006

An effective blockbuster written by the US Vice President, an evangelizing work that has succeeded in raising public consciousness to the causes and perils of global warming. Terrific graphics. Somewhat short on solutions. The book is the companion to the movie and the DVD

It's Not Too Late

July, 2006 Technology Review

Special Issue of MIT's Technology Review containing articles by Mark Bowen: The Messenger (about Jim Hansen of NASA); Bryan Urstadt: The Oil Frontier; David Talbot: The Dirty Secret (coal); Matthew Wald: The Best Nuclear Option; Stephan Herrera: Brazil's Bounty (ethanol); Jamie Shreeve: Redesigning Life to Make Ethanol; Marty Hoffert: It's Not Too Early (i.e. we have to act now).

Climate as a Driver of Change

Hacker, Jake 2007 The Arup Journal 42(1)
January

Excellent, data-rich analysis of greenhouse gases as the chief cause of climate change. Also a good source of references.

Design for Rising Sea Levels

Barnett, Jonathan 2007 Harvard Design Magazine Fall
hdm@gsd.harvard.edu

Excellent article on the threat to the US eastern seaboard from rising sea levels - and what to do about it.

Yelling Fire on a Hot Planet

Revkin, Andrew C. 2006 New York Times
April 23, <http://www.nytimes.com/>

The politics of addressing global warming and climate change in the U.S.

Driver of Change

Chris Luebke, ARUP

This series comes in a package of unbound cards. Topics include Water, Energy, Climate Change, Urbanisation, Demographics and Waste. Each topic-pack contains cards headed by a question, followed by a series of factoids. Each pack also has a fairly extensive bibliography. Very informative and accessible, excellent for professionals and practitioners new to the subject. Superb as an example of interdisciplinary, holistic, synthesis.

The Way We Live Now: Our Decrepit Food Factories

Pollan, Michael 2007 New York Times December 16
<http://www.nytimes.com/2007/12/16/magazine/16wwln-lede-t.html?emc=eta1>

Sharp analysis of the use of pesticides, antibiotics, and chemicals in our food supply, pointing to MSRA and the collapse of the bee population as unintended consequences of this unhealthy, unsustainable practice. Concludes that we sacrifice biological resiliency for factory efficiency, resulting in unstable and unhealthy biological systems.

An Uncertain Future: Law Enforcement, National Security, and Climate Change

Abbott, Chris 2008 January
http://www.oxfordresearchgroup.org.uk/publications/briefing_papers/uncertainfuture.php

Explores these social and security consequences of climate change and argues that they will present new challenges to governments trying to maintain stability. Mass migration, increase and variation in the types of crime, stress and strain on law enforcement groups, etc. Argues that a new approach is required to prepare for these governance possibilities.

Abrupt Climate Change: Should We Be Worried?

Gagosian, Robert 2003 Woods Hole Oceanographic Institute
<http://www.whoi.edu/page.do?pid=12455&tid=282&cid=9986>

Describes in detailed terms the science of abrupt climate change, arguing that if ice caps melt faster than predicted (as they appear to be), then there is a real possibility of rapid shifts in the ocean current, resulting in large scale global cooling over a period of 10 to 15 years. Discusses the possible social and economic impacts.

Building the Zero Carbon City – 11 references

Brookings Institution: Shrinking the Carbon Footprint of Metropolitan America

Brookings, 2008

Quantifies the most significant sources of carbon emitted by the 100 largest U.S. metropolitan areas in 2000 and 2005. Found that residents of the largest metros have a smaller per-person carbon footprint than citizens in the nation as a whole. Although carbon emissions from urban centers continue to climb, the carbon footprint of someone living in a large metro area is 14 percent smaller than the average American's and, in recent years, has expanded by only half as much.

Building the 21st Century Home: The Sustainable Urban Neighborhood

Falk, Nicholas 1999

Excellent primer for re-thinking neighborhood scale in terms of urban sustainability. Mainly U.K. case studies.

***Sustainable construction -
Holcim Awards 2005/2006***

Schwartz, Edward 2006

The Holcim Awards - a compendium of the first cycle of the regional and global competition for sustainable construction projects. This is a radical program for encouraging sustainable projects at building, city and regional scale with entries from all over the world. Founded and sponsored by the Holcim Foundation.

***Adapting Buildings and Cities
for Climate Change***

Roaf, Sue 2005

An excellent primer on the role of building and city design on climate change. Goes from first principles on the environment, building and system design, city planning. Numerous examples of low impact, low energy buildings and building systems. Not as much on cities as one might expect from the title.

Combating Climate Change

Royal Institute of British Architects,
<http://www.architecture.com/>

The RIBA has published a number of documents in hard copy and online under the general rubric of Combating Climate Change - The RIBA's response to Global Warming. Five key documents have been produced: A climate Change Briefing; A Guide to Low Carbon Design Tools; A Guide to Low-Carbon Performance Standards and Assessment Methods; A Carbon Literacy Briefing; A Guide to the Principles of Low-Carbon Design and Refurbishment; A Guide to Low-Carbon Skills and Training.

Contraction and Convergence

Global Commons Institute,
<http://www.gci.org.uk>

The Global Commons Institute has been operating since 1990 and is a great repository of research. The Contraction and Convergence tab on their website forms the basis for the RIBA policy on climate change.

Grounded Resources

Palmer, Thomas, *Boston Globe* March
5, 2007
<http://www.boston.com>

Article - with diagrams - on geothermal system planned for Monarch on the Merrimack, an 88 residential unit redevelopment of an historic mill complex in Lawrence, MA. This will be the largest such application in the United States.

Carbon Confusion

Daley, Beth, *Boston Globe*, March 13,
2007
<http://www.boston.com>

One in a series of articles titled "The 45th Parallel: Warming Where We Live". This concentrates on the emerging carbon offset business and some of the difficulties encountered in implementation.

***7 World Trade Center and
Hearst Building: New York's
Test Cases for Environmentally
Aware Office Towers***

Pogrebin, Robin, *New York Times*,
April 16, 2006
<http://www.nytimes.com/>

An evaluation of two of NY's latest high rise towers, assessing their claims to be "green". Also a good lay introduction to the LEED rating system.

Sustainability is a Cultural Problem

Wang, Wilfred (2003) Harvard Design Magazine Spring
hdm@gsd.harvard.edu

Author suggests that building sustainably is more than an exercise in technology; It requires a major transformation in lifestyle. Presents a powerful and realistic assessment of the contradictions between our goals of sustainability and our ambitions of growth and development.

Green Manhattan

Owen, David, New Yorker, October 18, 2004

Excellent article analyzing energy efficiency of Manhattan versus suburbs, concluding that urban environments are more efficient per capita than rural and suburban models.

SOM: Pearl River Tower, Guangzhong, China

Architectural Record, December, 2006

Discusses the techniques and strategies used in creating the "net-zero-energy" Pearl River Tower by SOM. General overview for new readers into the kinds of approaches used in corporate architecture to reduce building impacts.

Low Impact High Energy Cities – 8 references

Cities for a Small Planet

Rogers, Richard 1997

A path breaking book by one of the world's leading modern architects who manages to embrace modern progressive urban solutions while preserving the environment and, rare for a modernist architect, the social and cultural life that has been the essence of urban life for centuries

Future Forms and Design for Sustainable Cities

Jencks, Mike 2005

Collection of articles addressing Cities and Regions (Section 1); Sustainable Urban Form at High and Low Densities (Section 2); Designing for Sustainable Urban Form (Section 3). Excellent coverage with case studies worldwide.

Efficient energy for Sustainable Development Partnership

Dobriansky, Larisa
larisa.dobriansky@hq.doe.gov

Position paper from US Government Efficient Energy for Sustainable Development Partnership (EESD), part of the US Clean Energy Initiative launched at the 2002 World Summit on Sustainable Development in Johannesburg.

Energy as a Driver of Change

Roberts, S. The Arup Journal 41(3)
February, 2006

Global energy demand is increasing, fossil fuels are running out, energy prices are likely to rise, technology will improve, painful cost transitions may occur, political leadership needs to transcend the election cycle to take a more long term view.

It's Way Too Easy Being Green

Brook, Daniel 2007 Slate Online
December 26
http://www.slate.com/id/2180862/pagenum/all/#page_start

Very clear overview of LEED "green building" ranking system, one of the world's standards for ecological construction. Clearly explains how buildings are scored, the political implications of the scoring process, and challenges and opportunities for certification.

What's Your Consumption Factor?

Diamond, Jared, New York Times
January 2, 2008
<http://www.nytimes.com/>

Shocking editorial by Jared Diamond about the large consumption gap between developed and developing world citizens. The average rates at which people consume resources like oil and metals, and produce wastes like plastics and greenhouse gases, are about 32 times higher in North America, Western Europe, Japan and Australia than they are in the developing world, with big consequences for the future.

Don't Let the Green Grass Fool You

Williams, Alex New York Times
February 10, 2008
<http://www.nytimes.com/>

Article on growing awareness of carbon footprint consequences in suburbia.

China Grabs West's Spewing Factories

Kahn, Joseph, New York Times
December 21, 2007

Details how China is re-using many of Europe's most dirty steel mills and industrial facilities, contributing major sources of sulfur dioxide and carbon dioxide to the atmosphere. Intelligently reflects on the role of China's industry in world trade, and suggests that if America had continued to make it's goods, it too would have up to 30% higher emissions. Concludes with the thought that wealthy countries must reduce their consumption if China is to reduce its emissions.

Low Impact High Mobility Cities – 6 references

Growing Cooler

Ewing, Reed, Urban Land Institute September 1, 2007

Extraordinarily rich and lucid account of America's addiction to driving and its impact on emissions, fuel use, and travel patterns. Recommends a three-prong approach to reducing emissions by travel, including increased fuel efficiency, tougher standards, and more sustainable growth patterns.

A Better Way to Go

US Public Interest Research Group
<http://www.uspirg.org/home/reports/report-archives/transportation/transportation2/a-better-way-to-go>

Details the social, economic, and environmental benefits of public transportation investment for American cities. Reveals the US Federal government's over investment in highway construction and advocates a balancing of the Federal budget to provide more and better transit options for America.

On The Right Track

Pollack, Stephanie 2006 May

Report on metropolitan Boston's transit and land use challenges. Published by Urban Land Institute / Boston District Council.

The Affordability Index

Center for Neighborhood Technology
<http://www.cnt.org/repository/AffordabilityIndexBrief.pdf>

Describes the economic & transportation benefits derived from living in transit oriented, compact developments. Uses national data to argue that living in such neighborhoods provides more spending money for the local economy, reduces vehicle miles travelled, and produces more energy efficient transportation patterns.

Smart Cities

MIT Media Lab
<http://cities.media.mit.edu/>

Inspiring overview of the Smart Cities work from Bill Mitchell and the Design Lab. Covers the City Car, foldable electric scooters, digitally enhanced public spaces, and new methods of production and manufacturing.

The City That Never Walks

Sullivan, Robert, New York Times January 29, 2007

Article on the suburbanization of New York.

Scaling up: Creating a Sustainable City Region – 10 references

BioRegional Solutions

Desai, Pooran 2002

Desai and Riddlestone are founders of the BioRegional Group, responsible for the program of BedZed, the Beddington Zero Energy Development built in the south London suburbs. They argue the case for a specific application of McDonough and Baumgarten's 'Cradle-to-Cradle' philosophy.

Metro Future

Boston Metropolitan Area Planning Council
<http://www.metrofuture.org/>

Describes the use of community participation, GIS, simulation, and scenario planning to address regional sustainability concerns. A landmark study of this kind for the region and an excellent application of cutting edge practice.

Sustainability and the Build Environment at and beyond the City Scale

Doughty, Mark Elsevier Science Direct
March 2004
<http://www.sciencedirect.com>

Environmental footprint analysis using the city of Bath in SW England as a case study. Proposition that sustainability assessment can only be applied in a wider geophysical perspective.

Understanding Urban Ecosystems: An Ecological Economics Perspective

Rees, William 2003

Chapter in Understanding Urban Ecosystems, Alan Berkowitz et al. (eds.) New York, Springer-Verlag (2003). Good article outlining the approach of understanding cities as a matrix of systems - an ecosystem.

How Green Is My State?

Boston Globe, November 1, 2006
<http://www.boston.com>

Article on Environmental League of Massachusetts report card on the state's environmental record.

Boutique Farming

Allis, Sam, Boston Globe, February 4, 2007
<http://www.boston.com>

Interesting short article on the balance of urban density and agricultural land that constitute a productive and sustainable regional symbiosis in metropolitan Boston. Compare this with Marcial Echenique's article: Forecasting the sustainability of alternative Plans - the Cambridge Futures Experience (Jenks and Dempse)

The Green Collar Solution

Friedman, Thomas, New York Times
October 17, 2007

Profile of Van Jones and Ella Baker Center for Human Rights in Oakland, California.

Water as a Driver of Change

Wilkie, Peter The Arup Journal 42(1)
January, 2007

Careful management is required to balance the ever increasing demands of the world's water supply. Advocates a multi-scale management approach and concludes that the water crises already being felt around the world are actually governance crises. Recommends proper valuation of water and water management in the logistics chain.

Vision of the future

Harvey, Justine A2 Magazine No.1 (Arup), 2006

Short article on Dontan city in China, designed by Arup, proposed to be a low ecological footprint development outside of Shanghai.

Translation and Implementation – 11 references

A Road Map for Natural Capitalism

Lovins, Amory, 1999 Harvard Business Review
Reprint #99309, May/June

Business Strategies built around the radically more productive use of natural resources can solve many environmental problems at a profit. This is a distillation of the authors' book, Natural Capitalism.

From Cradle to Cradle: Remaking the Way We Make Things

McDonough, William and Braungart, Michael, 2002
http://www.mcdonough.com/cradle_to_cradle.htm

McDonough and Braungart argue that our present environmental calamity is the result of bad design. Beautifully written, they argue that by taking advantage of the "intelligence of natural systems", we can create products, industrial systems, building that allow us to continue to expand and flourish. A beautiful, positive vision of a future that isn't pinched by resource limitation, yet doesn't kill the planet.

Plan B 2.0

Brown, Lester R. 2006

Written by the president of the Earth Policy Institute, this book argues the case for sustainable technologies to replace the fossil fuel based throwaway economy. Covers environmental analysis, technological solutions, economic restructuring, mobilizing and reforming policy.

Confronting Climate Change: Science, Impacts and Solutions

Frumhoff, Peter, July, 2007

Compiled by a team of a team of more than fifty independent experts to develop and communicate a new assessment of climate change, impacts on climate-sensitive sectors, and solutions in the northeastern United States. Provides detailed analysis of the possible ecological and social impacts of different emissions scenarios on the Northeast.

Budgets Failing in Race to Fight Global Warming

Revkin, Andrew C, New York Times October 30, 2006
http://www.nytimes.com/energy_challenge

One in a series of articles in the NYT on "The Energy Challenge". This article references the federal budget for R&D on energy.

Stern Review on the Economics of Climate Change

Stern, Sir Nicholas 2006

UK Government report on the economics of combating climate change.

The Business of Green

Various, New York Times, May 17, 2006
<http://www.nytimes.com/green>

Special section of the NYT highlighting the economic benefits of sustainable technologies.

PlaNYC: A Greener Greater New York

City of New York, 2007
<http://www.nyc.gov/html/planyc2030/html/home/home.shtml>

New York's plan, including the objective to reduce carbon emissions by 30% by 2030.

Getting Smarter on Energy

Marzilli, Jim, Boston Globe, January 12, 2007

Op-Ed article on sustainable projects in China and Germany and what Massachusetts would have to do to catch up. The author is a Massachusetts State Representative and co-author of the Massachusetts Energy, Climate and Economic Security Act.

Cities are the Answer

Douglas Foy, Robert Healy, Boston Globe, April 4, 2007
<http://www.boston.com>

Energy efficiency program in Cambridge, MA.

Prepare for Tomorrow's Breakdown

Homer-Dixon, Thomas
<http://www.homerdixon.com/>

Clear and approachable summary of the conditions which cause societal collapse and how and if those conditions are present in our own society. Argues that we are mostly unprepared for social and environmental change, but that "the vast majority of us... can work together now to create networks among ourselves and to develop plans for different future scenarios."