

# 1) CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION

The call for a just, sustainable, humane world food system has never been louder. Scientific writings and popular media link our food production and distribution systems to climate change and the energy crisis, and uncover deep-seated problems with our agricultural infrastructure. As a result, many Unitarian Universalists are coming to perceive intricate connections between environmental concerns, economic justice, social justice, and food. We're not alone. Leaders from progressive and conservative faith traditions alike are now calling for politicians, business leaders, the agriculture industry, and religious institutions to assume more responsibility for the planet's health. Ordinary people—not just environmentalists or those working for social justice and rights issues, but people who are busy balancing issues of everyday living—are recognizing that the true cost of food is far greater than what we pay at the register. Costs include global warming, pollution, destruction of ecosystems, degradation of the fresh water supply, and degradation of arable land.

**Global Warming:** While estimates vary, there is no argument among scientists that food production and distribution contribute dramatically to greenhouse gases, up to 37 percent of all emissions. The worst offenders are animal farms, and the most

prevalent farm animal-produced greenhouse gases are methane and nitrous oxide. All livestock emit methane gas; cattle alone are responsible for nineteen percent (19%) of all methane gases released into the atmosphere. Industrialized animal farms also contribute dramatically to levels of nitrous oxide (another greenhouse gas) in two ways: the animal waste itself and the ever-increasing use of fertilizer to grow food for animals.

**Pollution:** Industrial farming releases toxic chemicals into the atmosphere, including nitric oxide, hydrogen sulfide, ammonia, and volatile organic compounds. The current techniques of industrial agriculture depend on vast amounts of energy inputs from fossil fuel. In many cases, more energy goes into producing food than the food itself provides. In a similarly inefficient use of resources, the energy used to make the 22 billion pounds of fertilizer used to grow animal feed in the US alone could support 1 million people for one year. It takes up to 16 pound of grain to produce one pound of meat, and about 20 percent of the world's population

Let us bless the source of life that brings forth bread from the Earth. Let our lives be a blessing to the Earth that sustains us, and to all the creatures who, like us, call this planet home – John Robbins

could be fed with the grain and soybeans fed to U.S. cattle alone.

**Destruction of Ecosystems:** Vast amounts of manure and urine from confined animal feeding operations (CAFOs) leak from lagoons into groundwater and streams, suffocating aquatic life and devastating ecosystems. A substantial amount of animal waste, fertilizer and pesticide from the central US makes its way into the Gulf of Mexico, where it has created a “dead zone” where bottom dwelling sea life cannot live. In 2002 this dead zone measured 8,500 square miles, the size of New Jersey. Many species native to the that area have perished. In healthier

ocean areas, overfishing further contributes to species disruption and endangerment.

The spread of monoculture techniques and genetically modified seeds into developing countries threaten both plant and animal species. As current methods of industrialized agriculture upset the natural environmental balance, invasive predators enter areas and compete for food, further upsetting the balance.

**Degradation of the Fresh Water Supply:** Industrial agriculture's contributions to climate change as well as its high consumption of fresh water have contributed significantly to the growing clean water crisis worldwide. Changes in weather and flood-drought patterns threaten crop production globally. (The UUA's 2006 CSAI addresses additional impacts of climate change in greater detail.)

The United States's centralized, industrial agricultural crop irrigation systems create enormously high water displacement from natural watersheds demand in many regions. Farm animals alone consume 2.3 billion gallons of water daily. Who decides which water goes where? Given that it takes five times as much irrigation to grow grain for beef as to raise vegetables and fruits, what are the justice implications for our own consumption? How do we balance water demands of agriculture, fisheries, and domestic interests? We are beginning to find some answers in solutions like recycling water, better definition of water use standards, and efforts like the Great Lakes compact, but more work is needed.

**Degradation of Arable Land:** Arable land, too, is a finite resource (and it may become more finite as glaciers melt and ocean levels rise in the coming decades, particularly impacting low-lying

## Questions for Individual/Group Reflection

1. In what ways is my relationship with food part of my spiritual practice?
2. What was the environmental cost of getting my most recent meal to my table (production, distribution, and purchase)? e.g. What is my food footprint? See <<http://www.nature.org/initiatives/climatechange/calculator/>>.
3. Where should I look in our community for the most sustainable, humane food. Do I consider seasonal availability when making a food choice? Can I get this product through a fair trade co-op, farmers' market, or local producer or retailer?
4. How do my food choices impact those who produce and distribute it? What are their working and living conditions? Was land that previously was used to raise food for indigenous people converted to raising food for Western countries?
5. Do I consider packaging when making purchases and choose that with the least environmental impact?
6. What support do I need to move toward a more just, environmentally friendly diet?

impoverished communities.). Current industrial practices such as monoculture farming and intensive use of pesticides and fertilizers have led to dramatic erosion of topsoil. Even if we set about restoring the majority of the US's eroded soil now, it would take decades for it to return to its natural state, nutrient balance, and capacity to absorb rainwater like a sponge (thus preventing further erosion).

Obviously, this brief introduction has only touched on a few of the food issues directly related to climate change and environmental degradation. Hopefully, it has stoked your curiosity to learn more. The resources that follow provide a wealth of practical, inspiring information about how we can help the planet get back on track.

Our Unitarian Universalist faith calls us to respond now to this crisis. We cannot continue to rely on a food system that uses more fossil fuel than any sector of the economy, and emits more greenhouse gases than anything else we do. Nor can we support an inequitable system that does preventable harm to our planet and those who inhabit it. To do so when we could reasonably do otherwise would counter the principles at the heart of our faith.



# 1) CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION, cont'd

## HIGHLY RECOMMENDED RESOURCES

### Books and Articles

Jacobson, Michael F, and the Staff of the Center for Science in the Public Interest. *Six Arguments for a Greener Diet: How a More Plant-Based Diet Could Save Your Health and the Environment*. Washington: Center for Science in the Public Interest, 2006. There is a tremendous amount of well-researched, well-documented, accessible information in this book that points the way to a more environmentally friendly diet. With a strong focus on environmental issues, the authors seek to protect our planet and our health as they address the costs of our current system of agriculture to the environment, our health, and to animals. The well reasoned, fact-based, non-emotional arguments focus on better soil, more and cleaner water, cleaner air, less food-borne illness, compassionate treatment of animals, less chronic disease and over-all better health. It clearly illustrates that concerns about the most efficient use of resources, food safety, human costs rights, and animal mistreatment cannot be separated from the environmental issues. The book is particularly useful because it dedicates two chapters to making change: changing our diets and changing the government policies that promote the current unsustainable industrial agricultural system on which most of us depend for our food.

Singer, Peter, and Jim Mason. *The Ethics of What We Eat: Why Our Food Choices Matter*. New York: St. Martin's Press, 2007. This easily readable discussion of the impact of our food choices examines the grocery shopping habits of three very different American families and the ethical issues their choices raise. Without preaching, the authors explore issues of the environment, social justice, cruelty and corporate deception. Clear analysis of the environmental concerns created by current industrialized food production and distribution practices make these issues easy to navigate. Of particular interest is the discussion of the environmental impact of food production on climate change, and on the health of our land and water resources. Careful attention is paid to the human cost of our food – including treatment of employees, child labor, forced labor, and cultural disruption. The enlightening discussion of food labels such as “Animal Care Certified” and “Organic” is very helpful, as well. The complicated issues of whether to buy “farmed” or wild fish, “local” or “organic”, and “fair trade” or “free trade” are adeptly managed.

Pollan, Michael. “Farmer in Chief.” *New York Times Magazine*, 12 October 2008. 62-71, 92. <<http://www.nytimes.com/2008/10/12/magazine/12policy-t.html>>. In an open letter to the next president, Pollan lays out a policy to decrease the dependence of the food industry on oil, decentralize the food system and make more secure the food, and rebuilding America's food culture. A comprehensive summary of how our food system was derailed, damaging our environment, our health and our economy. It's an excellent catalyst for discussion.

### Course

North West Earth Institute. *A Menu for the Future*. <[http://www.nwei.org/discussion\\_courses/course-offerings/menu-for-the-future](http://www.nwei.org/discussion_courses/course-offerings/menu-for-the-future)>. Six-session course focusing on the connection between food and sustainability. In addition, Menu for the Future course books are available through a partnership with UU Ministry for Earth and help to support the work of UUMFE <<http://www.uuministryforearth.org>>.

## RECOMMENDED SUPPORTING RESOURCES

### Books and Articles

Bartlett, Andrew Kang. “Energy, Food and You: On the Path to Reconciliation.” *Church and Society*. March/April 2004: 17 – 30. <<http://www.pcusa.org/food/downloads/ff-energy.pdf>>. Written by an Associate for National Hunger Concerns for the Presbyterian Hunger Program, this engaging article addresses the huge cost to our planet of the current industrial agricultural system. It offers sound arguments for a sustainable global (and local) food system. The system he advocates provides an excellent point from which to start a meaningful discussion of the whys and hows of sustainable, ethical ways to meet food demands with less impact on the planet and its inhabitants.

Brown, Lester. *Plan B 3.0.*, Chapter 2. “Deteriorating Oil and Food Security,” Earthly Policy Institute, 2008. The author relates how in the 20<sup>th</sup> century, a “fast growing supply of cheap oil led to an explosive worldwide growth in food production, population, urbanization, and human mobility.” In years to come, “Food will become more costly as higher oil prices drive up production and transport costs... Diets will thus become more attuned to local products and more seasonal in nature.”

Co-op America. “Good Food: The Joy, Health, and Security of It” *Co-op America Quarterly*. Summer 2003 (60). 3-18. This issue focuses on food choices for change as it examines how we can create a more sustainable food economy and a healthy environment. It provides highly practical information including how to help low income families access good food, get healthy food in to our schools, and eat lower on the food chain. The benefits of organic and/or local food and food labeling are addressed.

Energy Bulletin <<http://energybulletin.net>>. This clearinghouse for information regarding the peak in global energy supply publishes news, research and analysis concerning energy production, articles regarding implications of peak oil, and a range of information about preparedness for peak energy.

Fritz, Hull, editor, *Earth and Spirit: The Spiritual Dimension of the Environmental Crisis*, Continuum, NY, 1993. This is a collection of essays, including one by Miriam Therese MacGillis on “Food as Sacrament” (p. 159-166) that helps us to view environmental issues through a spiritual lens.

Heinberg, Richard, *Peak Everything*, Chapter 2. “Fifty Million Farmers.” New Society Publishers, 2007. The author suggests that the future may be like “a time not long ago when famine was an expected, if not accepted, part of life.” In a future with diminishing fossil fuels, “we will need far more knowledge and muscle power devoted to food production... [which] could mean the revitalization not only of democracy, but of the family and of authentic, place-based culture.”

Heinberg, Richard, “Threats of Peak Oil to the Global Food Supply.” 2005 Conference paper. <<http://www.richardheinberg.com/archive/159.html>>. “Food is energy. And it takes energy to get food. These two facts, taken together, have always established the biological limits to the human population.... The transition to a fossil-fuel-free food system ... is an immense challenge and will call for unprecedented levels of creativity at all levels of society. But in the end it is the only rational option for averting human calamity on a scale never before seen.”

Heinberg, Richard, “Will the End of Oil Be the End Of Food?” <<http://www.alternet.org/environment/41023/>>. Richard Heinberg, peak oil expert discusses what he calls our “fatal dependence on oil” and discusses directions toward sustainability that some farmers are taking. With comments.

National Council of Churches of Christ Eco Justice Programs. *Sacred Food: Sunday School and Group Activities for Youth*. A resource for use in religious education classes or other youth group activities, this book examines the miracle of our food and the interference of all God's creation. Available at <<http://www.ncecojustice.org/resources.html#foodandfarmingresources>>

Nestle, Marion. *What to Eat*. New York: North Point Press. 2006. A nutritionist guides the reader through the labeling labyrinth and addresses many of the practical conundrums we face when trying to make healthy, sustainable and compassionate food choices.

# 1) CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION, cont'd

Pearce, Fred. *Confessions of an Eco Sinner: Travels to Find Where My Stuff Comes From*. 25 Feb 2008. Boston: Beacon Press. On his travels, Pearce examines the environmental, social, and economic costs of his "stuff."

Roberts, Paul. *The End of Food*. Houghton Mifflin, 2008. The author extensively investigates and reports on the origins, operating procedures, and critics of the current industrialized food system. He advocates creating regional food supply systems separate from supermarket supply chains (as in Asia) and recommends science-based, non-political approaches to investigating genetically modified foods.

Ronald, Pamela C. and Raoul W. Adamchak. *Tomorrow's Table: Organic Farming, Genetics, and the Future of Food*. Oxford University Press, 2008. This well-reviewed book suggests that merging genetic engineering and organic farming offers our best shot at truly sustainable agriculture. The authors have a strong sense of both the wonder of the natural world and awareness that if treated with respect and carefully managed, it can remain a source of inspiration and provision of our daily needs.

Sierra Club. "2008 Faith Report: Faith in Action: Communities of Faith Bring Hope for the Planet." Sierra Club presents its first national report on the environmental engagement of communities of faith. The inspiring report highlights one exceptional faith based environmental initiative from each of the fifty states, the District of Columbia and Puerto Rico. Several UU congregations are mentioned.

Schut, Michael (ed.). *Food & Faith: Justice, Joy and Daily Bread*. Denver: Church Publishing Incorporated. 2006. A broad perspective from an ecumenical, Christian, environmental non-profit group, this anthology of essays and wisdom comes from many thoughtful people including Wendell Berry, Vandana Shiva, John Robbins, Thomas Moore, and Donella Meadows. Diverse and relevant topics as spirituality and food, genetically modified food, the industrialization of agriculture and its impact on the economy and the environment, food politics and hunger are discussed. It has a useful study guide.

United Nations Food and Agriculture Organization (FAO). "Livestock's Long Shadow: Environmental Issues and Options." *FAO Magazine*. Nov. 2006 <<http://www.fao.org/ag/magazine/0612sp1.htm>>. This summary of a longer report discusses the complex impact of livestock on the environment and discusses its role as a major cause of serious environmental concerns including global warming, land degradation, air and water pollution, cultural disruption and loss of biodiversity. It addresses the challenge of reconciling the rapidly increasing global demand for animal food products with finite environmental resources. The full report is available at <<http://www.fao.org/docrep/010/a0701e/a0701e00.htm>>

Well-Fed World. "Issues: World Bank and IFIs" <<http://www.wellfedworld.org/worldbank.htm>> Discusses the threats of the Bertin Project in Brazil in which acres of rainforest will be cut down to graze more beef cattle.

## DVDs and Videos

*A Life Connected*. Nonviolence United. <<http://www.nonviolenceunited.org/veganvideo.html>>. Gently describes impact of animal agriculture on the planet, its people and its animals. 12 minutes.

*The Future of Food*. <<http://www.thefutureoffood.com>>. Documentary investigating the implications of unlabeled, patented, genetically engineered food for consumer health, small farmers worldwide, and the environment. Shot in the U.S., Canada, and Mexico, argues for organic, sustainable agriculture as an alternative to producing food through multinational corporations.

*King Corn*. Documentary about corn subsidies, two friends and one acre of corn. 90 minutes. Available from <<http://www.bullfrogfilms.com>> 1-800-543-3764

"*The Meatrix I*", "*The Meatrix II*", and "*The Meatrix II 1/2*." This award-winning animated trilogy discusses factory farming, the dairy industry, and sustainability. Each piece is a fairly short 2 to 5 minutes. Includes cartoon violence. <<http://www.meatrix.com>>

*Beyond Organic*. Documentary about a farm and its long battle to survive in the face of rapid suburban development. It contrasts community supported agriculture and conventional chemical farming, and reviews principles of organic farming including fair labor practices, as their farms grow in size and power. 33 minutes From <<http://www.bullfrogfilms.com>> 1-800-543-3764

Sierra Club Sustainable Consumption Committee. *The True Cost of Food*. Sierra Club. San Francisco. 2004. <<http://www.truecostoffood.org>> 15 minutes. This animated DVD examines environmental, social, compassion, health and other issues related to the cost, ethical and otherwise, of how we produce and buy our food. It is appropriate for children.

*We Feed the World*. Vividly reveals the profound problems of the industrialized world food system. 96 minutes. Available from <<http://www.bullfrogfilms.com>> 1-800-543-3764

*The Power of Community: How Cuba Survived Peak Oil*. <<http://www.powerofcommunity.org>>. 2 hours, 7 minutes. Focuses on responses to the depletion of fossil fuels, including discussion of sustainable agriculture as an alternative to the fossil fuel intense methods of "conventional" farming.

*Broken Limbs: Apples, Agriculture and the New American Farmer* <<http://www.brokenlimbs.org>>. 60 minutes. Emmy-nominated. Second-generation apple farmers spend two years documenting how American small and family owned orchards have been overcome by "increasingly untrustworthy" corporations, and the hope to be found in sustainable agriculture. An ultimately upbeat film, it outlines ways in which any individual can play a role in saving America's small, local farmers.

## *Web Resources*

**Center for Science in the Public Interest**. <<http://www.cspinet.org/>>. Since 1971, the Center for Science in the Public Interest has been a watchdog and strong advocate for nutrition and health, accurate labeling and food safety.

**Coop America**. <<http://www.coopamerica.org>>. Focused on economic action for a just planet, this organization sponsors a Climate Action Campaign that includes reducing one's food footprint. Many other resources at this site.

**Eat Your Greens** <[www.grist.org/cgi-bin/signmeup.pl](http://www.grist.org/cgi-bin/signmeup.pl)> A weekly e-newsletter with a focus on environmental politics and policy.

**FEED (Food & Environment Electronic Digest)** <[www.ucsusa.org/food\\_and\\_agriculture/feed/](http://www.ucsusa.org/food_and_agriculture/feed/)>. A free monthly email newsletter designed to keep consumers up-to-date on food production and safety issues.

**Food Ethics Council**. <<http://www.foodethicscouncil.org>>. The non-profit Food Ethics Council, based in the United Kingdom, challenges government, business and society to make wise choices that lead to better food and farming. Of particular interest are links to innovation in agriculture, 11 October 2008; food distribution: an ethical agenda, 9 October 2008; and sustainable food distribution, 1 October 2008.

**The Food Project** <<http://www.thefoodproject.org/blast/internal1.asp?ID=422>>. Well-rounded list of films and videos for youth and young adults that focus on food and agriculture.

# 1) CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION, cont'd

**Grace Factory Farm Project** <<http://www.factoryfarm.org>>. Project of the Center for a Livable Future at Johns Hopkins University School of Public Health. Aims to replace factory farming in with a healthful, humane, ecologically viable, economically sound food production system.

**KC Food Circle.** <<http://www.kcfoodcircle.org/media/index-media.php>> A good list of online food, ecojustice and sustainability resources.

**New York Times Magazine: Food Fights.** 12 Oct. 2008. The focus of this issue of the magazine is food. Michael Pollan, Mark Bittman, Robert Kenner, and others address a wide variety of food issues, including remaking the way we eat, an emerging Jewish food movement that considers sustainability, and a controversial Gates Foundation effect to improve agriculture in Africa.

**Organic Bytes** <<http://www.organicconsumers.org/organicbytes.cfm>> A publication of the Organic Consumers Association, this twice-per-month email newsletter offers useful news related to justice, sustainability and health.

**Presbyterian Church (USA). "How Much Does Your Burger Cost?"** <<http://www.pcusa.org/food/issues.htm#burger>>. Discusses the water, grain and environmental cost of a hamburger. Has very useful links to resources about food and the environment.

**Prevent Climate Change: Farmers Markets.** <<http://www.preventclimatechange.co.uk/farmers-markets.html>>. Provides insight into the importance of supporting your local environment and shopping at farmers' markets including low food miles and less CO2 emissions.

**Sierra Club.** <[http://www.sierraclub.org/sustainable\\_consumption/](http://www.sierraclub.org/sustainable_consumption/)>. Resources for reducing impact of food choices on the environment, Activist Toolkit, SCC Book Reviews, Bibliography, Food and Energy Factsheets, Articles, Links, and Environmental Resources.

**Sustainable Table.** <[www.sustainabletable.org/issues/environment/](http://www.sustainabletable.org/issues/environment/)>. Reviews problems resulting from corporate agriculture and the impact on our environment including climate change, pollution, soil depletion, and water contamination. outlined (pollution, effects of certain farming techniques, etc).

Unitarian Universalist Ministry for Earth. **"Beyond Science: Ethical and Religious Dimensions of Global Warming. June 2006.** <<http://uuministryforearth.org/globalwarming/BeyondScienceGA2006.pdf>>. Donald Brown, Director of the Pennsylvania Consortium for Interdisciplinary Environmental Study, examines the ethical implications of climate change. Presented at UUU General Assembly June 2006.

**"Global Warming."** Well-fed World. <[www.wellfedworld.org/globalwarming.htm](http://www.wellfedworld.org/globalwarming.htm)>. Summary of UNFAO Report on the impact of animal agriculture climate change and anticipated effects on global hunger.

# 2) HUMAN RIGHTS, SOCIAL INEQUITY, AND ENVIRONMENTAL JUSTICE

## 2.A. HUNGER AND MALNUTRITION



A severely malnourished boy in his mother's arms at the Gordils Health Center in north eastern Central African Republic, near Chad.

mental development, learning and productivity, physical and psychological health, and on family and community life.

For the year 2006, the U.S. Department of Agriculture reported that 35.5 million Americans lived in households considered to be "food insecure." Of these people, 22.9 million were adults (10% of all adults) and 12.6 million were children (17% of all children.) Black and Hispanic households experienced "food insecurity" at far higher rates than the national average: 22% and 20%, respectively. The problem persists on many Indian reservations as well. The ten states with the highest rates of "food insecurity" in 2006 were Mississippi, New Mexico, Texas, South Carolina, Oklahoma, Utah, Louisiana, Arkansas, Kentucky, and Arizona.

**Women are often more vulnerable** to nutritional problems because of their lower economic and social status and their physiological needs. Younger women bear and feed children with their bodies, and at the same time are often expected to work more than men. Women who outlive their economic productivity are sometimes isolated and given little support from the community.

The Universal Declaration of Human Rights recognizes the human right to food, to secure personal health and well-being. (Article 25.) The United Nations member states have agreed to achieve eight international development "Millennium Goals" by the year 2015. The first Millennium Goal calls for major reductions in poverty and hunger.

Globally, 4.3 pounds of food are produced daily for every woman, man, and child on earth--enough to make all of us fat. Yet every year, six million children across the globe die as a result of hunger and malnutrition—one child dying of starvation or malnutrition every five seconds. For the year 2003, Action Against Hunger estimated that 852 million people in the world do not have enough to eat—more than the total population of Japan, Europe, Canada, and the US. **Hunger and malnutrition are responsible for more deaths in the world than AIDS, malaria, and tuberculosis combined.**

In the developing nations, isolated North American communities, and populations like the urban homeless and rural elderly, hunger may appear as severe and very visible clinical malnutrition. However, in most regions the major food-related problems are poverty and chronic "undernutrition." Poor nutrition has a harmful effect on physical and

If a brother or sister has nothing to wear and has no food for the day, and one of you says to them, 'Go in peace, keep warm, and eat well,' but you do not give them the necessities of the body, what good is it?

So also faith of itself, if it does not have works, is dead.

-James 2:15-17, New American Bible