

QUAKER ECO-BULLETIN

*Information and Action Addressing Public Policy
for an Ecologically Sustainable World*

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It's the Economy, Friend

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Clearly, the Earth is in trouble. Undesirable or disastrous climate outcomes from global warming are now rated by scientists as “virtually certain.” Almost every day the news features serious problems that are now being traced to a decline in the quality of global ecosystems. We know we use too much electricity, burn too much fossil fuel, and produce and consume far too many goods. Human activity is quickly bringing an end to numerous species, including a few that humans rely on for food. This transformation of the world is caused by human actions, actions arising in large part from the way we have organized our economies.

In fact, our economies have become too successful for the world to endure. For two or three centuries, humans have experimented with a new sort of economy. The changes have been organizational and technological but, most fundamentally, they are energy-based. When we took more coal out of the mines, it was based on steam-powered pumps that kept the mines free of water. When we developed machine-made fabric and clothing, it was mechanical machines powered by water or coal-fired steam that made it possible. Fossil-fuel-based industrial economies have been dirty, chaotic, and dramatically inequitable. In addition, wars have often been fought over how the industrial economy should be organized or who should control it. Two things happened over the past century: (1) the market economy won the battle of how to organize the economy, and (2) corporate elites control much of its operation.

It may be difficult to admit, but the market-based economy has been a huge success. It has produced and distributed goods and services to more people, to wider areas of the globe, and at a faster rate than could have been imagined less than a century ago. The results are not particularly equitable, but the quantities are large and the qualities of goods are very high. The industrial system now seems to have left almost no portion of the globe untouched. People all over the world have felt the pull of the economy to “better themselves.”

Economy and Ecosystems

But it is the same economy that is now failing the whole Earth. And it is failing for a simple reason. It has filled up the whole earth. In its early years, the bad effects of the industrial economy were limited and localized. Steel production may have polluted a particular river valley, or an oil refinery or paper mill may have killed all the fish in a local stream or lake, but those were seen as economic externalities that could be mitigated. There was a simple solution. According to economist Ronald Coase, the process of business contracting needed to be refined so that these negative effects did not expand to the point that large segments of the population were affected. The Mississippi River and the Great Lakes today are cleaner because of these earlier pollution control efforts. Forests have returned to the South and West, and wild animals that were largely gone fifty years ago are often present in abundance today. These past destructions were seen as normal externalities of the industrial economy. They were problems, but problems that were easy to cope with once those social classes in control were cajoled into action.

The problem today is that we never guessed that the industrial world would just fill up the Earth with economy and there would be no room left for anything else. Buying and selling became so important and so successful that the Earth has become consumed just like the products we buy each day at the store.

Two things have happened that are larger and more dangerous than the old-fashioned pollution we know how to deal with. First, so many resources—from ores to water to animals—are transformed into goods, which are used for a time and then thrown away, often creating unrecyclable, unusable waste. Since we have so many products, we throw them away; since technology makes so many things obsolete, we trade them in; and since we make so many things out of man-made materials, they don't rot, dissolve or get eaten by other species.

Quaker Eco-Bulletin (QEB) is published bi-monthly by Quaker Earthcare Witness (formerly FCUN) as an insert in *BeFriending Creation*.

The vision of **Quaker Earthcare Witness (QEW)** includes integrating into the beliefs and practices of the Society of Friends the Truths that God's Creation is to be held in reverence in its own right, and that human aspirations for peace and justice depend upon restoring the Earth's ecological integrity. As a member organization of Friends Committee on National Legislation, QEW seeks to strengthen Friends' support for FCNL's witness in Washington DC for peace, justice, and an Earth restored.

QEB's purpose is to advance Friends' witness on public and institutional policies that affect the Earth's capacity to support life. QEB articles aim to inform Friends about public and corporate policies that have an impact on society's relationship to Earth, and to provide analysis and critique of societal trends and institutions that threaten the health of the planet.

Friends are invited to contact us about writing an article for **QEB**. Submissions are subject to editing and should:

- Explain why the issue is a Friends' concern.
- Provide accurate, documented background information that reflects the complexity of the issue and is respectful toward other points of view.
- Relate the issue to legislation or corporate policy.
- List what Friends can do.
- Provide references and sources for additional information.

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Secondly, we have used fossil fuels to make this whole thing work. Teamsters no longer beat their horses to death to pull wagons; we use trucks. Owners, in general, no longer work their employees to death—for then they could not consume. Machines fueled by oil, gas and coal do the jobs that humans and beasts of burden used to do. And the machines do it better and they do it faster. But they destroy the Earth as they do it.

In economic terms, we are using up our natural capital. As the economy grows and grows, it acts in a very imperial manner. What used to belong to other species turns into property; what used to be scenery becomes new subdivisions; and what used to be considered “useless” land, is transformed into useable farmland. But modern industrial economies have largely operated on the assumption that these portions of the Earth were just free. And, sadly, they were. There were no natural courts enforcing payment for use of the air, the land or the seas.

A Full World

The industrial economy has filled up the natural world without so much as a “thank you.” Indeed, the industrial economy hardly noticed how much it needed that natural world to make all the goods that producers and consumers demanded. Even where natural resources were priced, e.g. iron ore, coal and petroleum, the revenue from the sale didn't go to replenish the lost resources or to clean up the waste. Indeed, the revenue was usually privately held and just became a private demand for even more production and consumption.

Our current industrial system is a major obstacle to the goal of an Earth restored. It is technology, markets, and general modern material acquisitiveness that are destroying Earth. The economic system has filled up the world, displacing everything else—the nature that feeds our souls and the natural systems that sustain our economies. But if we have to rid ourselves of modern technology, the distributive power of markets, and the material well-being of an affluent world, then current beneficiaries of the bounties of the industrial system will vote “no” to changing it. Most of us in the industrialized world see our lives as totally dependent on current modes of production and consumption and many in developing countries are seeking to emulate our affluence. What can we do given this reality? We need to start from where we are, not where we wish to be or where a better world would have been. An essential first step is to introduce into our existing economic models the idea of natural capital and to create economic incentives to use our natural capital sustainably.

Building Natural Capital

Regular industrial capital is a normal feature of capitalist economies. Commonly understood, it is made up of the machines, the buildings, and the financial investments that make capitalism work. In today's world, capital is owned and controlled by the giant corporations that dominate the economic landscape. Capital is usually backed by the securities—stocks and bonds—that are parts of our everyday lives. Capital is expected to grow in value over time and to pay dividends to its owners. Most of us also think of

education and training as human capital—an investment that pays off during the rest of our lives in better jobs and higher incomes. Natural capital is the environmental equivalent of regular industrial and human capital.

The modern economy is all about organization and property. In a world full of economy, one approach may be to give the ecosystems of the world value within the dominant social organization of Earth—its economy. Capital is the dominant form of property. It has several properties: (1) it has laws and accounting rules to help it be self-renewing (depreciation funds), (2) it earns a profit (interest) for its services, and (3) it is perpetual (maintains value) if well-managed.

We need to change our approach to the use of natural ecosystems, that is, we need to create a system of natural capital. Once we restructure our legal system so that ecosystems are given the characteristics of property, corporate owners will respect natural capital within the public domain. Right now, we allow property owners to receive income without paying fees to the rest of society for their use of the environment. With natural capital, society has the right to demand payment for ecosystem services or depreciation.

It is important to note that, at the moment, there really is no such thing as natural capital. There are important eco-subsystems. There are forests that help regulate the amounts of greenhouse gases, hold the soil in place, and are sources of life for other plants and animals. There are winds, rainfall, cloud formations and other climatic processes that help regulate the climate. There is the whole water waste recycling system made up of evaporation, soil, and plants. These services provided by natural ecosystems are so many that listing them would take pages. And these ecosystem services are only the beginning. In addition, there are mineral, plant and animal resources that exist within or as part of the natural ecosystems.

Calling these things “natural capital” is important because it will make them visible in the economy. Natural capital is a way to make all the natural ecosystems part of the buying and selling that is integral to the modern industrial economy of the twentieth-first century. The economy—with its very focused material worldliness—is already far too dominant a component of the Earth that we live on. To turn the rest of the Earth into natural capital may seem like just the wrong step. But as long as the natural world is outside our economic system, it will continue to be free and that will just continue its destruction. Creating

natural capital within our current economic system could be a first step toward overhauling the entire economic system into one that is sustainable on a finite Earth.

Changing the Economy

Any change in the economy will require considerable juggling of spiritual insight with the economic and material needs of the modern world. The problems of the natural Earth have been created recently and in a fairly straightforward manner. Except for occasional periods of human ecosystem destruction brought about by the destruction of war, the decline in the quality of Earth’s ecosystems is a clear product of the industrial economy.

The modern economy is highly organized over large geographic distances. To produce, distribute and consume, we use planning, administrative rules and market transactions. In addition, property, whether social (public) or private (corporate) in origin, is at the heart of the economic enterprise. And property always earns a financial return, one which is payment based, either on its productivity in production or consumption, or on its scarcity.

Right now there is a furious debate over the unwillingness of the United States to engage with the rest of the world in its program of “cap and trade” on greenhouse gases, particularly carbon dioxide. The problem is property. If you cap the quantity of carbon dioxide that can be emitted, you are creating property in carbon dioxide emissions out of the system that produces it. The fixed quantities of carbon dioxide that are allowed into the climate system can then be traded to anyone who needs or wants them, just like any other commodity or good.

Thus, there is a form of natural capital that controls carbon dioxide emissions. An administrative council (made up of scientists) decides the optimal amount to be produced; the units are then sold off (with the revenues used for environmental clean-up) and these units are purchased by companies that really need them. In addition, consumers can purchase units so that overall carbon emissions available are reduced. The reason the United States resists joining the cap-and-trade system is that current property owners don’t want new claimants lined up for a portion of the income stream produced by natural capital (now stolen from or provided free by the ecosystem).

Cap and trade is the method clearly preferred by the dominant groups of ecologists in the world today, but it has its problems. By analogy, we humans used to go to school to become better citizens. Now we go to school to

become better workers (actually, better units of human capital). We have lost something essential about education by turning it into human capital, but we have convinced ourselves that more people should be educated because of the need for vast amounts of human capital to fuel a high technology economy. The same process will be true of implementing a regime of natural capital. Ecosystems will be maintained, renewed and have value, but they will have value because the economy needs them, not because they have any inherent value.

Creating a world of natural capital will mean a world of new environmental rules and regulations: improved federal government Corporate Average Fuel Economy (CAFE) standards to increase automobile/truck miles per gallon, subsidies for alternative fuels (ethanol, solar and wind power) for machines and buildings, limitations on various polluting economic activities, less sprawl and more public transportation, and various cap-and-trade regimes related to greenhouse gases for protecting the air, the forests and the fisheries. The first steps toward this world are being taken—largely outside the United States.

What Friends Can Do

But this is also a solution that is being built within the context of the current economic institutions. It is a world that Microsoft, Wal-Mart, General Electric and, maybe even, Exxon Mobil could be happy in. It will still be a world where the distance between our high mass consumption society and marginalized peoples of the Third World will be vast. It will still be a world of social and economic inequalities like we live in today.

Beginning to think in terms of natural capital builds a process for ecological stability by accepting the fact that the Earth is full. The economy, with natural capital included, becomes the whole Earth. Ecosystems, animals and resources all are a subset of buying and selling. But they would be inside—valued, protected by property contracts, and preserved for the future benefit of the economy.

What is it that Friends really want out of an Earth restored? Friends want an Earth where the spiritual and material aspects of the Earth can co-exist in harmony. If we build a legal system that creates natural capital out of Earth's ecosystems, we can set in motion a set of processes that are improvements over today's world. However, as the great corporations of the economic world slowly come to recognize the necessity of rehabilitating the natural world, the traditional Friends' commitment to social justice will be needed even more. Building an economy that pays for the maintenance of natural capital means that income

must be redistributed to pay for ecosystem services. The system must be constructed so that this income redistribution does not take from the poor, the powerless and the marginalized people of the world, but rather enriches and empowers them.

Building an Earth restored in an industrial economy is not an easy task. It asks several things of Friends. We must live our lives in a manner that sets an example. Creating a simple and ecological community among ourselves that is also viable for the larger society remains a great challenge. We can be part of the international movements to move national economies toward the creation of natural capital and the structures required to collect and manage the resulting fees for the restoration of the Earth. But the economic world in which we live is not ecologically sound. Consequently, the institutions that shape current economic behavior need to be recast fundamentally. Even when catastrophe seems eminent, it is extremely difficult to ask for great changes in key social structures. Because of our history of long-range foresight that has resulted in the creation of such social institutions as public schools, Friends are called upon to seriously consider the question, "What will an economy based on Earth restored look like?"

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For More Information

Herman Daly and Joshua Farley. *Ecological Economics: Principles and Applications*. Island Press, 2004. This is the text I use in class. It is excellent, but only for people who really like economics. I strongly recommend Chapters 2 and 7 that discuss how the economy filled up the world.

Paul Hawken, et al. *Natural Capitalism: Creating the Next Industrial Revolution*. Little, Brown and Company, 1999. This very important book is also difficult to read. I recommend going to the Index under natural capital and ecosystems for reading short segments of the book.

Lester Brown. *Plan B 2.0: Rescuing a Planet under Stress and a Civilization in Trouble*. WW Norton and Company, 2006. This is probably one of the best books around on ecosystems, particularly on the problems of overuse of water. It is the second edition.

Eric A. Davidson. *You Can't Eat GNP: Economics as if Ecology Mattered*. Perseus Publishing, 2000. This is a very enjoyable and short read, in spite of being about economics.

Bill McKibben. *Deep Economy: The Wealth of Communities and the Durable Future*. Times Books, Henry Holt and Company, 2007. This is a book that I found very utopian. But it is very well written and argued. The book argues for the potential of sustainable and efficient local economies to counter the destructiveness of globalization.