Towards a Green Food System

How food sovereignty can
save the environment and *feed the world*

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From a banner hanging at Nyéléni 2007
Forum for Food Sovereignty in Mali:

- For an agriculture with peasants
- For fishing with fisherfolk
- For livestock with pastoralists
- For territories with indigenous people
- For wholesome food for all consumers
- For labor with workers' rights
- For a future with youth in the countryside
- For food sovereignty with women
- For a healthy environment for all

Towards a Green Food System

How Food Sovereignty Can Save the Environment and *Feed the World*

By Corrina Steward and Maria Aguiar, Nikhil Aziz, Jonathan Leaning and Daniel Moss

FOREWORD

Maria Aguiar, Grassroots International

The health of our environment is directly connected to the quality of our food. What happens when the food supply is controlled by a handful of multinational corporations and based on an environmentally unsustainable model? Just look at the headlines: contaminated spinach, lettuce, peanut butter, fish, beef, and even pet food made with tainted ingredients from halfway around the world. Throw in the looming threat of cloned animals and genetically modified organisms and it's no wonder that many consumers, family farmers and environmentalists are ready for a change.

The Declaration from the Nyéléni 2007 Forum for Food Sovereignty affirms that we are long overdue for a food system that "puts those who produce, distribute, and consume food at the heart of food systems and policies rather than the demands of markets and corporations." It is time to gain control of the food system that is poisoning our food and environment. It's time for food sovereignty!

Decades of bad farm policies have driven family farmers out of business, prioritized "free trade" above all else, and dismantled the relationship between food producers and consumers. When it comes to protecting the environment, our health and ensuring clean water, land and air for future generations—a desire we all share—we're stuck having to trust the same agencies and policy makers that sold our farm policies out to corporate interests. And food producers are caught in the predicament of producing more—using unsustainable practices—or getting out of farming all together. U.S. consumers may not know which corporations or trade agreements are responsible for the sorry state of the industrialized food system, but they do know that the food they're eating isn't good for them or the environment.

Through this report, Grassroots International and Food and Water Watch seek to share the message that food sovereignty will not only benefit small producers all over the world, but will also give environmentalists and consumers what the "free trade" agenda has failed to deliver. The stakes are high and the agenda is clear—the right to have a say in how our food is produced (for example, agroecologically such that soil, water and forests are protected and harmful pesticides and genetically modified seeds are banned), the right to have our food honestly labeled, and the right to offer public support to family farmers to grow more nutritious, environmentally-sound food grown locally instead of subsidizing production of food shipped halfway around the planet.

As the United States Congress grapples with global warming, the next Farm Bill, new trade agreements, and the aftermath of our latest food safety scandals, please join us in telling them to take a new approach—one that will give us food sovereignty!

Wenonah Hauter, Executive Director
Food and Water Watch

EXECUTIVE SUMMARY

An intriguing new global environmental movement is emerging. It is stretching across the globe from the northern reaches of Japan to the southern tip of Africa, with a growing force of millions. But ask the average person about the Food Sovereignty Movement, and the answer is likely to be "Food sover… what?"

Perhaps one, not entirely surprising, place to start is with Earl Butz, Richard Nixon's 'food man' and chief architect of the modern U.S. food system. He advised farmers to "get big or get out." He then proceeded to reshape how the United States and 'everyone else' gets—and eats—its food. Healthy or not.

So now, in 2007, a small handful of corporations dominate the world's food system. They got big. Meanwhile, hundreds of millions of the planet's farm families have lost their land, their livelihood, and they fight hunger and debt on an hourly basis. They were pushed out. The current food system has failed to feed the world's hungry, most of whom, tragically, are the very people who feed us: farmers, farmworkers, and other food producers. They are also the hardest hit by the massive environmental problems created by the industrial model—deforestation, greenhouse gas emissions, and the poisoning of the environment by pesticides and chemical fertilizers.

"Enough is enough" is the sane response to this abuse, and it's the inspiration behind the rapid growth of the Food Sovereignty Movement. Its adherents care about the environment because their lives depend upon it.

One might call it a people's environmental movement, with the accent on 'people.' Food sovereignty's principles resonate with those of the Slow Food movement and the emphasis on 'buying and eating locally.' It finds common cause with Community-supported Agriculture and the Sustainable Agriculture movements. There is a very strong 'beyond organic' approach, but most importantly, its supporters are pushing governments across the globe for fair trade policies and sustainable eco-economies—so that the women, children and men who produce the food that sustains us can sustain themselves.

The historic Nyéléni Forum for Food Sovereignty in Sélingué, Mali, galvanized the movement by holding high a crucial conviction: it is entirely possible to both save the environment *and* feed the planet. It pointed to three essential ways to achieve this:

Sustainable use and management of natural resources. Agriculture must work with nature, not against it. Food sovereignty advocates believe that yields high enough to feed the planet can be accomplished through agroecology rather than chemical additives; emphasizing biodiversity, intercropping, local markets, organic cultivation; and prioritizing agriculture for food over fuel production.

Promotion of eco-friendly technologies. Instead of promoting genetically modified crops, the emphasis should be on preserving our abundant biodiversity. In particular, seeds—the very lifeblood of agriculture—must remain biodiverse and ecologically appropriate, controlled not by corporations but by family farmers.

Building the eco-economy. 'Pay for services' approaches such as carbon sinks often treat farmers as paid employees rather than sustain their livelihood as farmers. Food sovereignty sees small producers as stewards of the environment, supported holistically through fair pricing, preservation of local markets and economies, and fair access to natural resources such as land and water.

With millions of supporters, the Food Sovereignty Movement constitutes a vast global network of on-the-ground environmental watchdogs, caring for the planet, and developing innovative methods for doing so. Combining U.S. environmentalism's active networks and rich campaigning experience with food sovereignty's world-wide people power and global perspective adds up to tremendous potential for growing the Food Sovereignty Movement, protecting the environment and feeding the world. In this report, you will find out more about this remarkable movement, how bridges can be built, and why the time to work together has arrived.

Jered Lawson

Nikhil Aziz, Executive Director
Grassroots International

Towards a Food System that Protects Rather Than Degrades the Environment

In a dusty savannah landscape in West Africa hundreds of the world's citizens gathered to change the world. Their challenge: reclaiming the land and food system from environmentally destructive factory farms, big agricultural corporations, and the governments that collude with them. Delegates from the North and the South came from every continent and more than 80 countries to participate in Nyéléni 2007: Forum for Food Sovereignty in Sélingué, Mali. The vision put forth by the attending farmers, farmworkers, indigenous peoples, pastoralists, fishers, consumers, and environmentalists is to build sustainable communities and dignified lives. We can, they said, both feed the world *and* protect the environment. This report explores what steps are being taken in that direction and if indeed it is an achievable vision.

Consider: The current industrialized food system, with its emphasis on large-scale production and use of chemicals, has contributed to many of today's most pressing environmental challenges.

- Agricultural fertilizers pollute our waters. "Dead zones" are found throughout the world where chemical fertilizer run-off deprives both land and marine organisms of oxygen. A dead zone created from fertilizers draining from major agricultural states in the United States develops periodically where the Mississippi River drains into the Gulf of Mexico.[1]

"The flow of immigrants north from Mexico since NAFTA is inextricably linked to the flow of American corn in the opposite direction, a flood of subsidized grain that the Mexican government estimates has thrown two million Mexican farmers and other agricultural workers off the land since the mid-90s."

MICHAEL POLLAN, "YOU ARE WHAT YOU GROW."
NEW YORK TIMES MAGAZINE, APRIL 22, 2007

Ken Hammond, USDA

Spraying toxics on fields

- Agriculture contributes to climate change. Twenty percent of total greenhouse gas emissions released in the atmosphere are from agricultural activities. Land conversion (from forests and vegetation to agricultural land) is largely responsible for agriculture's share of climate change.[2]
- Pesticides kill wildlife. Fifty years ago, Rachel Carson's seminal book *A Silent Spring* was an environmental siren that documented the ecological destruction wrought by careless pesticide use. The Environmental Protection Agency reports that 67 million birds are killed each year in the United States from chemical pesticide poisoning.[3]
- Land conversion for food production of a few commodity crops contributes to biodiversity loss. In the last 100 years, 75 percent of crop diversity has been lost. Today, just three food crops—rice, wheat, and corn—provide 60 percent of our plant-based diet.[4]

Equally important is the food system's human impact. Today's broken system fails to feed the world's hungry; one person dies from starvation every 3.6 seconds. Children, women and, most ironically, farmers are among the world's most hungry. Yet, for the well-fed as well as for many low income communities, obesity rates are high and climbing.

At Nyéléni, the delegates saw that a radically different approach is needed, particularly in the face of global climate change. They held up a hopeful vision of bountiful, healthy food; environmental sustainability; and a global commons that is worth inheriting.

Doug Wilson, USDA

Spraying pesticides by plane on large commodity farm

Their vision is summed up in the concept of "food sovereignty." This idea began as a way to expand the struggle against trade agreements threatening small farmers' livelihoods and local food systems. In recent years, food sovereignty has matured into an environmental ethic and political ideal shared by millions of farmers, consumers, and environmentalists around the globe. The environmental message in the Nyéléni Declaration is:

> *[We are fighting for] a world where we are able to conserve and rehabilitate rural environments, fish populations, landscapes and food traditions based on ecologically sustainable management of land, soils, water, seas, seeds, livestock and all other biodiversity.*

It may be surprising to some how strong the environmental current is within the Food Sovereignty Movement. Yet the motive is simple: small family farmers and food producers are often the ones hardest hit by climate change and environmental degradation. They have much to gain by preserving the environment. They are well placed to be on-the-ground stewards and watchdogs of the environment around the globe.

The concept of food sovereignty was first articulated by La Via Campesina, a global alliance of farmers', farmworkers', and rural peoples' movements, at the Rome World Food Summit in 1996. Their members, particularly in the global South, had been steadily losing their natural resources to industrial agriculture, foreign investment, and trade policies. Change was needed. They argued that the right of peoples and countries to shape their food systems, food markets, and use of natural resources, rather than being left to corporations and market forces, was crucial to food sovereignty. The movement began to view environmental stewardship as inseparably linked to political sovereignty.

Food Sovereignty: The Link Between Environmentalism and Bountiful, Healthy Food

Only in the last few years has food sovereignty begun to be discussed in U.S. agricultural policy circles. Several family farmer, farmworker, environmental, and consumer membership organizations such as the National Family Farm Coalition, Border Agricultural Workers, the Coalition of Immokalee Workers, United Students for Fair Trade, Food and Water Watch, and Friends of the Earth are taking the lead in introducing food sovereignty to the fair trade, farmworker justice, environmental, and climate change campaigns. In the United States their efforts are invaluable in pushing for policies that support family farming and promote the rights of those who produce the food we eat. And, the vision fleshed out at Nyéléni calls for a much more robust involvement from environmentalists in the global sustainable agriculture and fair trade movement.

Over the decades, the U.S. environmental movement has successfully developed important strategies for building sustainable communities and dignified lives. Some of the most innovative grassroots initiatives embody the tenets of food sovereignty, such as ecological community design and watershed conservation planning. The growth of food sovereignty means that today the opportunities to expand these successes are increasing.

Courtesy of Nyeleni2007.org

Forum for Food Sovereignty in Sélingué, Mali, February 2007

The conceptual work completed at Nyéléni offers a framework for the U.S. environmental community to engage with food sovereignty advocates and strengthen their environmental vision. However, some translation is needed to understand how the two perspectives connect. There are common environmental approaches that both food sovereignty and U.S. environmentalism share: managing natural resources sustainably, promoting environment-friendly technology, and building the eco-economy. In the global South, many rural communities are already using these tools as a means to achieve food sovereignty. Sustainable livelihoods, environmental justice, a healthy global commons, and local control lie at the heart of environmental stewardship and are the movement's core building blocks.

Corrina Steward, Grassroots International

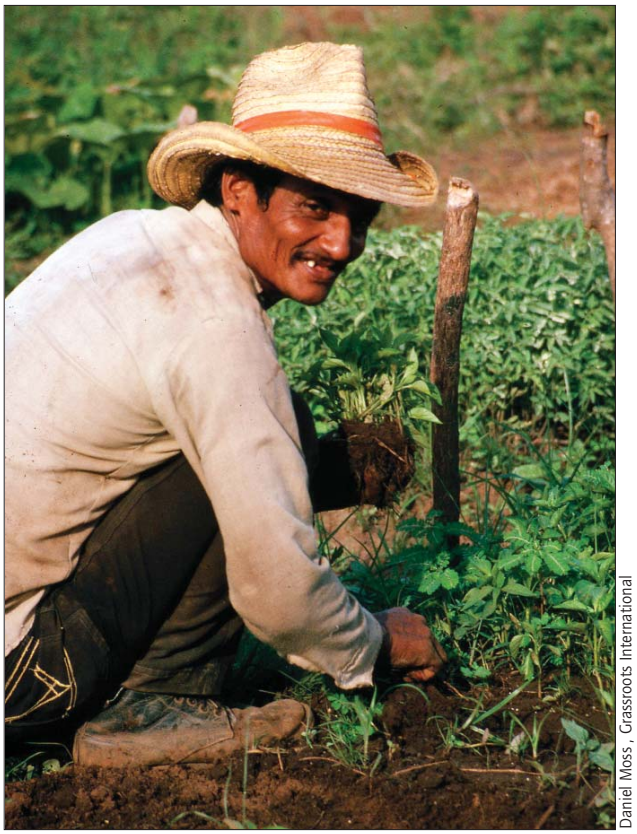
Building alliances and solidarity across borders and cultures at Nyéléni 2007 Forum for Food Sovereignty

■ Environmental Justice: A Common Thread that Can Unite the Food Sovereignty, Climate Justice and Environmental Movements

The term 'Environmental Justice' was first articulated in 1991 when the first People of Color Environmental Leadership Summit adopted the "Principles of Environmental Justice."[5] However, the concept and the U.S. environmental justice movement itself had emerged much earlier in the 1970s and 80s. Grassroots groups from communities of color, and low income and rural communities had seized on the fact that it wasn't just the wilderness that needed protection. Urban waste dumps and industrial hog farms are also matters of environmental justice.

Outside the United States, particularly in the global South, rural and indigenous activists since the 1970s have framed their work as environmental justice struggles. It was clear for example, that large hydro-electric dams not only destroyed ecosystems but displaced millions of people in countries like India, Brazil, Mozambique and China. In 2002, when environmental justice movements from around the world united to forge the "Bali Principles of Climate Justice", the Principles of Environmental Justice were their blueprint.[6]

The Bali Principles enunciate many of the tenets of food sovereignty. They affirm the need for "socio economic models that safeguard the fundamental rights to clean air, land, water, food and healthy ecosystems." They assert "the right to self-determination of Indigenous Peoples, and their right to control their lands, including sub-surface land, territories and resources..." Most notably, the Bali Principles recognize that "the impacts of climate change threaten food sovereignty and the security of livelihoods of natural resource-based local economies."



Daniel Moss , Grassroots International

Farming with agroecological techniques

Working with Nature, Not Against It

Governments and non-profits are using the tools of natural resource management to protect our air, water, soils, and landscapes through carefully crafted interventions (e.g., wetlands protection) and responsibility allocations (e.g., division of responsibility between landowners, agencies, etc.). Where uncontrolled human activity would otherwise destroy ecological health and resilience, these plans seek to restore them.

Similarly, food sovereignty emphasizes that natural resource management and agriculture must work with nature, not against it. This principle is explained in the Nyéléni Synthesis Report:

> *Food sovereignty uses the contributions of nature in diverse, low external input agroecological production and harvesting methods that maximize the contribution of ecosystems and improve resilience and adaptation, especially in the face of climate change; it seeks to heal the planet…and rejects methods that harm beneficial ecosystem functions…*

Agroecological farming is growing fast and is widely embraced by small producers' movements in the global South and some U.S. organic farmers. It not only includes management interventions but works with the richness and complexity of nature to make agriculture productive without synthetic inputs. Around the globe, family farmers have reclaimed land previously used for monocultures (defined as growing one crop on large land parcels) and other activities like intensive ranching which degrade soils and ecosystem health. In some cases, farmers have led massive reforestation campaigns. In Haiti, for example, a recipient of the Goldman Environmental Prize, Chavannes Jean-Baptiste, led a remarkable community effort to plant one million fruit trees in the Central Plateau. Indigenous Mixtec farmers have successfully led a similar reforestation project in Mexico. In the same nation, Oaxacan groups have created what they call a 'Green Oasis' out of previously deforested hills. In all three campaigns, they used only organic fertilizers and pesticides, and prioritized the cultivation of traditional food crops adapted to the local ecology.

Daniel Moss, Grassroots International

Deforestation and extreme erosion in Haiti

Alarmingly, many governments and agricultural corporations are going in exactly the opposite direction. The current push for the massive expansion of monoculture-style fuel crops is a powerful example. Not surprisingly there is significant opposition among small farmers, environmentalists, and social movements in South America, particularly Brazil, to these mono-cropped 'agrofuels'. These opponents fear that industrial cultivation of fuel crops is creating 'Green Deserts': vast landscapes of a single plant variety heavily dependent on toxic chemicals and devoid of any ecological resilience or sustainability.

Douglas Mansur

Cooperativa União Dionísio Cerqueira, Brazil

Jake Miller, Grassroots International

Tree nursery for reforestation campaign, Haiti

■ Ethanol's Dirty Secret: Crops for Fuel or for Food?

"You have a 'clean' fuel produced in a dirty way, besides being environmentally unsustainable in its production and socially perverse in the way that it treats its workers."

–FREI SERGIO OF THE PASTORAL LAND COMMISSION, ALLY OF BRAZIL'S LANDLESS WORKERS MOVEMENT (MST).

A vast green carpet stretches across the land toward the horizon. But this bucolic view in this part of Brazil's northeast is deceptive. The rainforest that used to be there—the lungs of the planet—is gone. In its place is a single, industrial mega crop—sugar cane. Vulnerable to disease and sudden crisis, its precarious life is maintained by heavy doses of fertilizers and chemicals that steadily leach toxins into the air, ground, and water.

João Roberto Ripper

Industrial-scale sugar cane farms are frequently accused of slave labor abuses

This is the face of the new 'biofuel' boom being presented by governments and corporations as a way to wean the world off petroleum and reduce global warming. But the costs could be tremendous. The large-scale industrial production of ethanol fuel from food crops threatens to poison the environment and workers, concentrate control away from small farmers to large agricultural corporations, and divert precious food to feed cars instead of humans.

In another part of Brazil, Rio Grande do Sul, there is a very different approach. Cooperbio is an agricultural cooperative of 25,000 family farmers linked to the Landless Workers Movement (MST). Here they practice agroecology: farming by planting a wide range of local crops using organic methods. They prioritize food production and combine a variety of energy crops with their regular crops. This is preserving biodiversity and it is providing a good income: they currently produce 400 thousand liters of biofuels per day. It stands as proof that there are other safer and greener alternatives to the industrial model.

For the MST and many in the food sovereignty movement, there is a place for ethanol production if done right, using sustainable, agroecological techniques. It could provide the world with greener ethanol while fostering the growth of more ecology-oriented farming. Agrofuels should not, they warn, be grown at the expense of the environment and human rights.

João Roberto Ripper

Industrial cultivation of sugar cane where forests once stood

Understanding the human impact of 'Green Deserts' is critical for environmental justice. In current practice, energy crops not only degrade the environment, they are squeezing food production off of good agricultural lands. For nations where hunger is a daily reality for millions of people, the growth of agrofuels has become a major threat to their food supply. From the perspective of food sovereignty, feeding people must come before feeding gas tanks. Agroecological farming is seen, therefore, as a means for achieving both food security and food sovereignty. "Fuel Sovereignty" was also established as a goal at Nyéléni, but only if attained without sacrificing a healthy and just food system.

In Brazil, the Landless Workers' Movement (MST) is countering the industrial agrofuel expansion by prioritizing biodiversity and food security. They cultivate and distribute native, organic seeds for family agriculture in Brazil and are offering assistance to similar seed programs in other Latin American nations. The MST does not reject agrofuels outright. They see a place for energy crops, but only when mixed with a diverse variety of food crops using ecologically sustainable techniques—a model that industrial agriculture cannot replicate. The MST's more localized and holistic model ensures greater community control and protects the ecosystem.

Appropriate Environmental Technology Based on Local Knowledge

Environmental technologies based on ecological design such as water purification and waste management systems integrate natural processes and are designed to be closed systems. Under these systems, waste is recycled and reused. They take into account the life cycle of inputs (e.g., the length of time it takes plastic to decompose) and strive for the least environmental impact over time. Closed system designs are often rooted in local and traditional knowledge that can better match technologies to local ecological conditions.

Food sovereignty embraces many environmental technologies, especially those based on life cycle considerations and local knowledge. The Nyéléni Synthesis Report explains:

> *Food sovereignty builds on the skills and local knowledge of food providers and their local organizations that conserve, develop and manage localized food production and harvesting systems,*

Daniel Moss, Grassroots International

Animal traction is appropriate technology for many small farmers and cuts petroleum dependence

■ Resisting Genetically Modified (GM) Corn in Mexico with Environmental Law

International laws and conventions have long served environmentalists as invaluable tools for protecting the environment. Although implementation is weak, the *Convention on Biological Diversity*,[7] for instance, has helped activists not only protect wildlife and forests, but also the livelihoods of small farmers. Consider the case of Mexican corn:

Mexico is the birthplace of maize, one of the world's most important food crops. Maize varieties abound in that nation, developed over millennia by natural selection and the actions of indigenous farmers. This country has gifted to the world one of the planet's most valuable sources of genetic material for plant breeding—the very foundation for global food security.

Yet today, Mexico is in the tragic and ironic predicament of importing corn—millions of tons of it each year. Coming mostly from the United States, the imports include GM varieties although the labels on the American corn sacks reveal no hint of their GM content.[8] Some of the corn has unfortunately ended up being planted in Mexican soil—thus introducing a GM Trojan Horse into the environment and Mexico's culture and heritage. In a few short years, corn imports have threatened the survival of Mexico's corn diversity that has evolved over thousands of years.

In 2001, when a research team discovered traces of GM contaminated corn in Oaxaca, Monsanto moved quickly to cover the damage by hiring a Washington PR firm to discredit the team's findings. It was too late; word had gotten out. Armed with the Biodiversity Convention, to which Mexico is a signatory, and national laws, Mexican environmental and farming groups have mounted strong public resistance to genetically modified organisms. Although GM corn continues to pour into Mexico, the future may look different. The Convention has served as an important leveraging tool to hold government accountable, and to protect Mexico's environmental sovereignty.

developing appropriate research systems to support this and passing on this wisdom to future generations; and rejects technologies that undermine, threaten or contaminate these, e.g., genetic engineering.

From a food sovereignty perspective, agricultural systems must consider the long-term impact on future generations—an entire life cycle—by relying on those closest to the system, the food producers themselves. The ownership and use of seeds, one of our most ancient technologies, has become a crucial struggle in the Food Sovereignty Movement. At Nyéléni there was consensus that:

We must force governments either to apply existing international laws and agreements, or design national laws, that guarantee the rights of access to the resources to which people are entitled and prevent the privatization of common resources and the actions of transnational corporations, which limit our access to the natural resources we need to realize food sovereignty.

Genetically modified (GM) crops such as those that produce infertile seeds (e.g., "terminator" seeds) have encountered strong resistance from small farmers, environmentalists and even some governments.

"Five companies control 75 percent of the global vegetable seed market, and their grip on the market is tightening.... As a former Monsanto executive boasted not long ago, "What you are seeing is not just a consolidation of seed companies, it's really a consolidation of the entire food chain.... The first stop (and often the permanent stop) for displaced peasants is a cardboard box on the edge of the capital city."

BILL MCKIBBEN, *DEEP ECONOMY*

■ Seeds of Independence

Seeds have become one of agriculture's most controversial issues and a cornerstone in the struggle for biodiversity in the environment. Both unfair patents and GM technology have handed multinationals nearly monopolistic control over seeds. This in turn is pushing the world towards an agriculture based on fewer and fewer crop varieties—a loss to the environment that leaves us with a tenuous food system vulnerable to disease and crop failure.

Corrina Steward, Grassroots International

Seeds on display at Nyéléni Forum for Food Sovereignty brought by farmers from around the world

Preserving seed biodiversity and freeing farmers from corporate control are key goals for Brazil's Movement of Small Farmers (MPA). They work in Goiás, a state in Brazil known for high poverty rates as well as for being a prime target of agribusiness expansion. Working with small farmers, many forced off the best lands, the MPA helps them learn agroecological techniques to cultivate crops for the reproduction of native seeds. The seeds they produce—corn, beans, rice, manioc—are well suited to the local ecology and fetch a much better price than selling grain, allowing farmers to thrive while helping protect biodiversity.

Over one thousand peasant families in that region alone grow more than one hundred varieties of native seeds. The MPA has set up seed banks for regeneration of native seeds and distribution networks so that other small producers can be assured access to GMO-free native seeds. The organization is working hard to convince the Brazilian government to replicate this successful agricultural model elsewhere in the country. The MPA's model of supporting seed independence through small family farms could be a new step in the direction of a Brazilian food policy defined more by food sovereignty than by big business.

If the MPA succeeds in steering national policy towards seed biodiversity, tens of thousands of small farmers across the country could make a better living, offer better local produce to consumers, protect the environment and win independence from industrial agriculture.

Food sovereignty activists are particularly concerned that this technology is concentrating access to vital resources like seeds in corporate hands and shrinking open access to our common resources. The global moratorium on terminator seeds rests largely on the work of social movements from the global South that succeeded in forcing the United Nations to uphold the Convention on Biological Diversity. This international pressure has also resulted in strong opposition to the patenting by corporations of entire crop varieties (e.g., wheat, turmeric, neem).

Within the United States, Native American and family farmer organizations are leading the movement to protect seed sovereignty. In Missouri, for example, they are instrumental in pushing the legislature to stop the loss of local control over seeds. Leading these efforts is the Missouri Rural Crisis Center (MRCC) which has defeated two proposed bills in the past year

Daniel Moss, Grassroots International

Drip irrigation using inexpensive, readily available materials

An Eco-economy that Sustains Livelihoods

Environmental technologies are forward-looking in that they try to predict their environmental impact. Similarly, the concept of the eco-economy requires assessing the environmental impacts of economic development, including those due to new markets and products, with the goal of reducing damage to our air, water, biodiversity and landscapes. One recent approach is the practice of putting a price on services that actually improve the environment. Take the case, for example, of carbon sinks—vegetative mass such as forests, crops and grasses that sequester carbon dioxide from the atmosphere to stabilize the changing climate. Or planting trees in watersheds to reduce soil erosion and protect clean water sources. In traditional economics, no one individual entity tends to want to pay for these services since they are for the benefit of the wider community. Ecosystem service markets attempt to quantify the value of a healthy ecosystem to society and investors, governments and businesses and offer a mechanism to pay someone to make these environmental improvements.

The Nyéléni Synthesis Report explains that the eco-economy should value food providers since they are the primary stewards of our ecosystems and are actively engaged in cultivating biodiversity:

that would have compromised local seed sovereignty.

It is advocacy efforts like MRCC's that are ensuring the survival of wild crop varieties and beneficial technologies across the United States. Led by Winona LaDuke, the White Earth Land Recovery Project in Minnesota has revived the tradition of cultivating wild rice through indigenous 'canoe and pole' methods. Unsuited for field cultivation, wild rice grows in fresh water ways and now Minnesota law requires that it only be harvested using this traditional technique. This is a good example of food sovereignty in action—the use of an environment-friendly technology rooted in local knowledge.

Jake Miller, Grassroots International

Installing a cistern to capture rain for irrigation and drinking water in Brazil's arid Northeast

■ A Wall That Hurts Both the Environment and Food Supply

Through much of the West Bank, Israel is erecting an illegal 450 mile Separation Wall. Cutting indiscriminately across private property and agricultural lands, the Wall leaves a trail of destruction in its wake—both socially and environmentally. It separates Palestinians from their jobs, their farmlands, and their water, significantly debilitating their economic survival. The environmental destruction along the 450 mile path is considerable (the parallels are stunning in the projected impacts of a similar wall along the Mexican border). Tens of thousands of olive trees have been removed, watersheds have been degraded and topsoil has washed away.

Christoph Cocke

Israel's military uprooting olive trees on Palestinian farm lands

The Union of Agricultural Work Committees (UAWC) is one of the Palestinian organizations actively resisting the Wall while seeking to repair the damage it has wrought. With the goal of fostering self-reliance and food independence for Palestinians, it has helped establish a wide-reaching network of farming and food production projects, many in the path of the Wall.

One tremendous challenge is that many Palestinian farmers can no longer get to their fields which now lie on the other side of the Wall. The UAWC has partnered with several Palestinian and Israeli organizations to form a network of solidarity work brigades—those that can reach the crops do the tasks that their neighbors are prevented from doing. Another challenge is to prevent land confiscation—Israeli land law permits confiscation if land is not cultivated. The UAWC does tree-planting and terracing projects to bring life back to the arid land, to stop erosion and to stop a land grab. By preserving and promoting local farming, the UAWC members protect Palestinians' ability to feed themselves rather than rely upon costly imported food.

This is what environmental food sovereignty looks like in a conflict situation. As Palestinian activist Jamal Juma' puts it: "If we are not building a self-sufficient economy then we are simply sustaining the occupation."

Jennifer Lemire, Grassroots International

The Separation Wall severs Palestinians' access to their own farming lands and water

Food Sovereignty values and supports the contributions, and respects the rights, of women and men, peasants and small scale family farmers, pastoralists, artisanal fisherfolk, forest dwellers, indigenous peoples and agricultural and fisheries workers, including migrants, who cultivate, grow, harvest and process food; and rejects those policies, actions and programmes that undervalue them, threaten their livelihoods and eliminate them.

The ecosystem services market approach tends to treat the small farmer as a sort of environmental employee paid to perform environmental functions with little thought given to sustaining their livelihood. A food sovereignty approach to ecosystems services would view the farmer holistically—as both a food producer and environmental steward (the way many farmers see themselves). The objective would be to offer these producers not only payments to conserve land but also fair prices, adequate land, water and seeds, technical assistance, and credit through public institutions such as the Department of Agriculture in the United States or corresponding governmental agencies in other nations.

At best, environmental services payments, as currently practiced, are a band-aid solution. The 'services' market system does not ensure the survival of small producers or the complex dynamics of our ecosystems. If nature is divided into tradable assets like tracts of reforested land, then artisanal food systems, which have no traditional monetary value, may be overlooked even though they can protect biodiversity. Perhaps more detrimental, environmental payments to large producers can end up putting a 'green' stamp on industrial cultivation of feed crops like corn and soy when they are allowed to compensate for damaging practices with token reforestation or watershed protection measures. In cases like this, these payments divert attention from the most destructive environmental culprit of all—massive over-production of subsidized grains which not only choke the environment but rob family farmers of a fair price for their harvest.

Jake Miller, Grassroots International

Making peanut butter, an income-generating local food product

"The health of the American soil, the purity of its water, the biodiversity and the very look of its landscape owe in no small part to impenetrable titles, programs and formulae buried deep in the [U.S.] farm bill.... The environmental community recognizes that as long as we have a farm bill that promotes chemical and feedlot agriculture, clean water will remain a pipe dream."

MICHAEL POLLAN, "YOU ARE WHAT YOU GROW."
NEW YORK TIMES MAGAZINE, APRIL 22, 2007

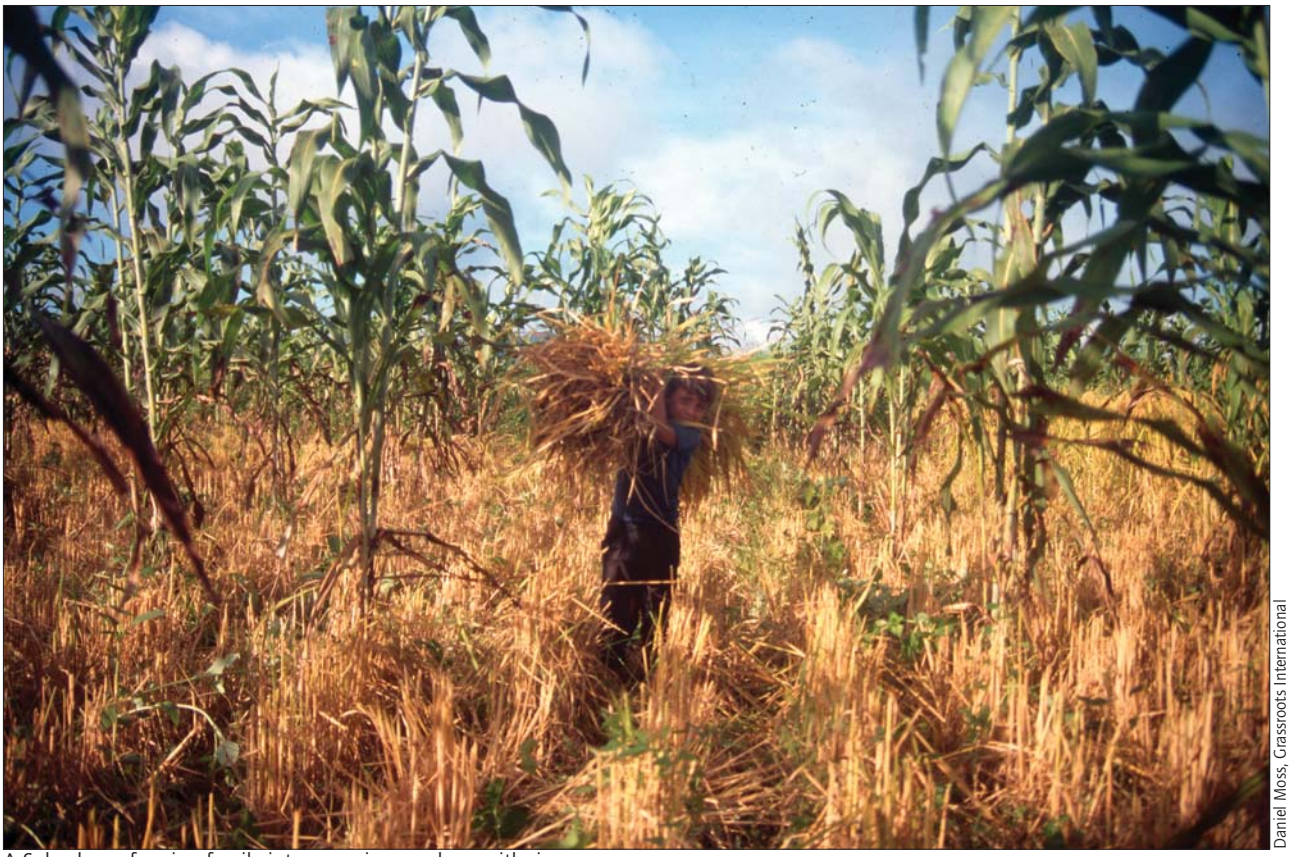
At Nyéléni the delegates questioned "the utility and effectiveness of carbon markets to reduce emissions and ensure climate justice." Carbon markets that pay for the 'service' of a carbon sink (a tract of eucalyptus forest, for example) do not fundamentally challenge the industrial agricultural sector, which is a

major emitter of carbon into the atmosphere. Food sovereignty supporters point out that climate change deals its heaviest blow to small food producers in the form of droughts and floods. Their livelihoods are often the most affected by environmental disasters and ecosystem changes at the local and global level.

Rather than rely on big market-driven solutions to pick up the tab for environmental damage, food sovereignty sees sustainable, sovereign local economies as a better solution. A more appropriate eco-economy model would make land available for small producers through land reform, improve degraded lands through agroecology and reforestation, and manage resources such as water and seeds for broad access and long term use. It would also prohibit 'dumping'—inundating nations with surplus food from the North, a practice which can destroy local food economies—by ensuring that thriving local agricultural markets are available to small producers. A number of interesting environmental campaigns in Indonesia, the Philippines, Mali, Palestine, and Brazil have succeeded in implementing land laws that nurture soil, producers, and local markets. They are experimenting with farm to cafeteria programs—providing public purchasers like schools and hospitals

Katherine Yih

Vibrant local market replete with local produce in Peru



Daniel Moss, Grassroots International

A Salvadoran farming family inter-cropping sorghum with rice

■ Indonesia's Push for Food Sovereignty and the Environment

Daniel Moss, Grassroots International

Food aid shipments and dumping of subsidized grains can undermine local economies

For Henry Saragih, general director of the Federation of Indonesian Peasant Unions (FSPI) and Via Campesina leader, protecting Indonesia's environment means protecting rural peoples' livelihoods in their fast disappearing forests. "The monoculture system in Indonesia," he says, "supports an economic model that exports palm oil, rubber and timber. These exports destroy the food system, the forests and our rivers." How land is managed and who supplies the local food market are now Indonesia's biggest environmental issues, Henry explains. Before land and markets were harnessed to serve the export economy, rural people didn't need money to buy food; they produced their own food and fished from their rivers.

But today, Henry says, "the forest is changing, the river is changing and fish are not available." FSPI is working to reclaim Indonesia's food market and its environment. Since 1998, the organization has campaigned to stop the massive importing of cheap food—'dumping'—which is decimating the ability of Indonesian farmers to survive. In 2004, they succeeded in passing legislation that limits rice imports. Their current goal is to stop the importation of all foods that Indonesia can produce on its own.

Preserving people's traditional rights to their own natural resources is another focus for FSPI. Indonesia's agrarian reform law requires—at least on paper—for land and water to be equitably distributed to Indonesia's people so that adequate production of food is ensured. By pressuring the government to actually implement the law, the FSPI has won land for its members. Through environmentally sound agroecological methods, farmers are now able to put local food back on the table—and fish are once again swimming in the rivers.

with local healthy foods—and providing local families with nutritious, culturally appropriate food.

The similarly modeled Community-supported Agriculture (CSA) programs in the United States are also an example of developing a food sovereign eco-economy. They are an important and creative way of building localized eco-economies that support diverse food production, family farmers' livelihoods, healthy food, and conservation of valuable farmland habitats.

"The Alliance for a Green Revolution in Africa is like a solution looking for a problem."

MAMADOU GOÏTA, INSTITUTE FOR RESEARCH AND THE PROMOTION OF ALTERNATIVES IN DEVELOPMENT, MALI

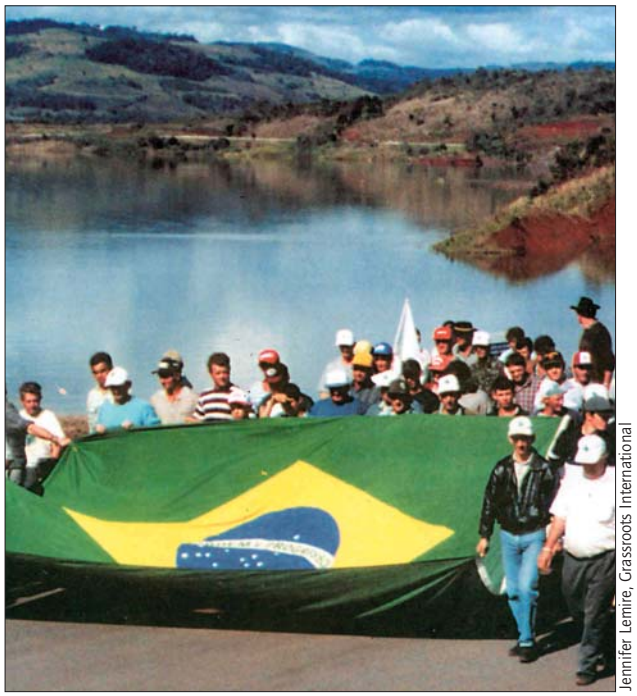
Conclusion

Today's environmental problems are global concerns: climate change, energy consumption and biodiversity loss are felt locally yet they can only be solved through collective, coordinated international action. The landmark Nyéléni Forum is just one more sign that the Food Sovereignty Movement is becoming a global player. The vital question at the forum was: how can environmentalists, food producers and consumers better work together to solve the linked problems of the broken food system and the environment?

The Food Sovereignty Movement has done a great service to environmentalism. By grappling with how to balance environmental sustainability and livelihood security under the most challenging conditions, communities around the world have tested (and often proven) greener solutions for long-term sustainability. And the movement has raised important questions that the environmental community needs to consider.

The U.S. environmental community could benefit enormously by joining hands with the growing Food Sovereignty Movement. Similarly, food sovereignty could benefit from the tools and political clout of the U.S. environmental movement. By putting food producers, the stewards of natural resources and rural livelihoods, squarely in the center of the environmental debate, food sovereignty offers the means for solid, on-the-ground environmental problem-solving across the globe. U.S. environmentalism has its own strengths to bring to the movement including the research tools and resources for validating food sovereignty approaches for environmental sustainability.

For today, the global Food Sovereignty Movement needs the U.S. environmental community to play an active role in creating more sensible agricultural, environmental, and trade policies in the United States. In its current configuration, the U.S. Farm Bill, in particular, is responsible for the destruction of rural livelihoods and environments throughout the world. Yet it could be an environmental legislation that truly supports sustainable livelihoods, protects our rural landscapes, and localizes food systems everywhere.



Jennifer Lemire, Grassroots International

Pólo Sindical leads a March to protest loss of land in Brazil

The mutual interest of the environmental and food sovereignty movements would be bolstered by U.S. environmentalists playing a more significant role in reshaping free trade agreements which harm rural communities and ecosystems around the world into policies and programs that "serve the rights of peoples

Carlos Morentes

Anti-globalization protest in Hong Kong organized by La Via Campesina

to food and to safe, healthy and ecologically sustainable production."[9] International trade organizations and governments must be made accountable for protecting the environment, labor rights and global food sovereignty rather than undermining them.

Working together to build the right alliances is key to the future of the Food Sovereignty Movement. A lot hangs in the balance. The Nyéléni Synthesis Report says it best: "In realizing food sovereignty, we will…ensure the survival of our cultures, our peoples and the Earth." Now is the time to strengthen links between U.S. environmentalists and the global Food Sovereignty Movement.

Andy Lin

Emergency meeting of farmers' group, Brazil

"You must not deal only with the symptoms. You have to get to the root causes by promoting environmental rehabilitation and empowering people to do things for themselves. What is done for the people without involving them cannot be sustained."

WANGARI MAATHAI, FOUNDER OF THE GREEN BELT MOVEMENT, KENYA; NOBLE PEACE PRIZE LAUREATE

Andy Lin

END NOTES

[1] www.landinstitute.org/vnews/display.v/ART/2002/08/23/439bd36c9acf1

[2] www.cait.wri.org/ (Climate Analysis Indicators Tool (CAIT) Version 4.0. (Washington, DC: World Resources Institute, 2007)

[3] www.landinstitute.org/vnews/display.v/ART/2002/08/23/439bd36c9acf1

[4] www.landinstitute.org/vnews/display.v/ART/2002/08/23/439bd36c9acf1

[5] www.ejnet.org/ej/principles.html

[6] Bali Principles of Climate Justice, www.ejnet.org/ej/bali.pdf

[7] The Convention is an international treaty adopted at the Earth Summit in Rio de Janiero in 1992. Mexico is a signatory.

[8] The Cartagena Protocol on Biosafety of the Biodiversity Convention says that transfer of new technologies, especially those moved across borders, must be based on the Precautionary Principle and allow developing nations to balance public health against economic benefits.

[9] Peoples' Food Sovereignty Network 2002

■ What *You* Can Do to Build a Food Sovereignty Movement

Social movements around the world have mobilized millions of people for food sovereignty. They've passed legislation to protect their food systems, brought food security to their communities, and protected their environment for future generations through legislation and community projects. Here are some ways you can help build the movement.

Spread the message of food sovereignty. Name the actions, projects and events that you do as 'food sovereignty-in-action.' You will be joining a growing number of organizations and communities in the United States that are embracing food sovereignty with initiatives such as Community-supported Agriculture, community gardens, farm-to-cafeteria programs, and municipal genetically engineered crop-free zones.

Build alliances. Today, the Food Sovereignty Movement includes food producers, farmworkers, consumers, environmentalists, faith communities and more. Reach out to the different constituencies and interest groups that have a stake in our food system—and we all have a stake. Environmentalists, for example, could seek alliances with wildlife organizations, demonstrating how a just food system could protect wildlife.

Educate and act. Changing the food system and protecting our environment means educating ourselves and others about the failings of today's food system and changing values, behavior and policies, even if it's one individual at a time. Through comprehensive education, people and communities can be moved to act from conscience.

In the resource section, you will find information about key food sovereignty organizations. Visit their websites.

Mobilize your community for food sovereignty. All around the world, individuals are engaging their community in town hall-style meetings, food policy councils and local government to establish municipal-level food sovereignty and genetically engineered crop-free zones. Others are saving their towns from water privatization, connecting water sovereignty to food sovereignty.

Join a food sovereignty campaign. There are many campaigns with a variety of approaches in which you can make a big difference. Here are just a few:

- The National Family Farm Coalition is leading a campaign to make the U.S. Farm Bill a citizens' bill for food sovereignty.
- The Alliance for Responsible Trade, an organization that works to stop trade agreements that hurt national and local food sovereignty and the environment, is mobilizing to preserve the ability of state governments to set their own environmental standards.
- Food and Water Watch, a citizens' watchdog group that challenges corporate control and abuse of our food and water resources, is calling for stronger regulations to protect consumers' rights to know how and where our food is produced. They are calling for food labels on dairy products with genetically engineered growth hormones and controls for factory farms.
- Pesticide Action Network of North America, an organization that works to replace pesticide use with ecologically sound and socially just alternatives, is pressuring the U.S. government to uphold the laws of the Stockholm Convention, an international treaty that calls for the elimination of the 12 worst persistent organic pollutants including agricultural pesticides that harm farmworkers, wildlife and pollute our waters.
- Friends of the Earth International leads several campaigns to stop climate change with an emphasis on food sovereignty. Their network is pushing to reduce energy consumption, penalize polluters and build a movement for climate justice.
- Organizations such as the Center for Food Safety, the Community Environmental Legal Defense Fund, and Rural Vermont are leading efforts at the local level to build legal and organizing capacity for food sovereignty initiatives.

ASSEMA

Members of the Union of Babaçu Coconut Breakers at work

RESOURCES

For more information on the environment and food sovereignty, visit these websites:

Action Aid USA, www.actionaidusa.org

Action Group on Erosion, Technology and Concentration (ETC), www.etcgroup.org

Alliance for Responsible Trade, www.art-us.org

Bali Declaration on Climate Justice, www.ejnet.org/ej/bali.pdf

Blue Planet, www.blueplanetproject.net

Border Agricultural Workers Project, www.farmworkers.org

Building Sustainable Futures for Farmers Globally, www.globalfarmer.org

Center for Food Safety, www.centerforfoodsafety.org

Center for International Environmental Law, www.ciel.org

Community Environmental Legal Defense Fund, www.celdf.org

Corporate Accountability International, www.stopcorporateabuse.org

Defenders of Wildlife, www.defenderswildlife.org

Federation of Southern Cooperatives, www.federationsoutherncoop.com

Food First, www.foodfirst.org

Food and Water Watch, www.foodandwaterwatch.org

Friends of the Earth USA, www.foe.org

Friends of the Earth International, www.foei.org

GRAIN, www.grain.org

Grassroots International, www.grassrootsonline.org

Institute for Agriculture and Trade Policy, www.iatp.org

Institute for Policy Studies, www.ips-dc.org

International Rivers Network, www.irn.org

La Via Campesina, www.viacampesina.org

National Family Farm Coalition, www.nffc.net

Nyéléni 2007, www.nyeleni2007.org

Nyéléni Synthesis Report, www.nyeleni2007.org/IMG/pdf/31Mar2007NyeleniSynthesisReport.pdf

Oakland Institute, www.oaklandinstitute.org

Pesticide Action Network of North America, www.panna.org

Rural Coalition, www.ruralco.org

Rural Vermont, www.ruralvermont.org

Andy Lin

Supporters of the Landless Workers Movement celebrating land reform victory in Brazil

ABOUT GRASSROOTS INTERNATIONAL

Grassroots International is an international development and human rights organization that works with social movements and progressive organizations to build a global movement for social justice. Through grant-making, education and advocacy, we support the initiatives of peasants and family farmers, women and indigenous groups to protect human rights to land, water and food.

Andy Lin

179 Boylston St. 4th Floor
Jamaica Plain, MA 02130, USA
(617) 524-1400

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FRONT COVER PHOTO: Daniel Moss, Grassroots International
BACK COVER PHOTO: Jake Miller, Grassroots International
GRAPHIC DESIGN: Hird Graphic Design

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