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STATE OF THE WORLD

*Innovations for a
Sustainable Economy*



THE WORLDWATCH INSTITUTE

Engaging Communities for a Sustainable World

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To the west is Vermont Avenue, one of the most congested traffic corridors in Los Angeles, tiled with a mosaic of fast-food chains, nail salons, and dollar stores, all nested in a half-dozen strip malls. To the east lie three auto repair shops, housing, and a giant concrete church that dominates the street. To the north, there are two more auto body shops, three overcrowded schools, and a couple of car dealerships. And to the south, just beyond the Bresee Community and Youth Center, are two giant supermarkets with equally gigantic parking lots, tailored to be one-stop shopping for people commuting along the Vermont Avenue corridor.¹

In the middle of this car-centric infrastructure—what some might call “sprawl”—lies a little green oasis: the Los Angeles Ecovillage (LAEV). This community, two small apartment buildings with about 55 residents, was started in 1993 as a demonstration project on how a community can transform its surroundings, helping to create a sustainable society.²

In its 15 years, the LA Ecovillage has had

many impressive victories. Within its grounds, LAEV has facilitated technology and lifestyle changes, such as installing solar panels and composting facilities, providing rent reductions for people who live car-free, and transforming its courtyard into a 7,000-square-foot garden that produces nine types of fruits and many more vegetables as well as a lush common area to sit and relax in. LAEV has also incubated businesses like the Bicycle Kitchen—a shop that repairs bikes and that trains neighborhood children in bicycle maintenance skills. And perhaps most important, the community has influenced the broader political process of Los Angeles, from lending support to “green” mayoral candidates to engaging in public planning processes, such as the restoration of the Los Angeles River, transportation planning, and local redevelopment—all while continuing to be an affordable, accessible place to live, located within a 10-minute walk of two subway stops and 20 bus lines.³

Through its built infrastructure, the social relationships it generates, and the way of life

it promotes, the LA Ecovillage highlights the powerful contributions that communities can make in helping to facilitate the transition to a sustainable society. (See Box 11–1 for the definition of community used in this chapter.)⁴

Community practices and choices about land use, technologies, and transportation can be used to model sustainable living. The production of social capital—the glue that holds communities together—can be tapped to help community members become leaders in sustainability and can provide the resilience that helps communities weather difficult times. Communities’ engagement in economic activities can help localize agriculture and the production of other essential goods. And their unique design can help stimulate new ways to finance sustainability. While national and global-level initiatives will be essential for building a sustainable world, community-level programs may prove indispensable in providing better models and the leadership to drive global-level change.

Modeling Sustainability

Perhaps most concretely, a community manifests its values through its physical design. Local gardens, solar panels on rooftops, and wind turbines spinning on a hilltop are typical signs of an ecologically minded community. Built primarily to reduce ecological and financial footprints of communities, these design features also play a strong role in modeling a sustainable way of living. Many are simple enough to be taken on by practically any community. No matter the size—whether a small town or a neighborhood block—there are immediate opportunities to retrofit a community’s design and thereby lower its environmental impact, save money, and model sustainability as well.

Often all that is needed to make these changes is a bit of social support and peer edu-

Box 11–1. What Is a Community?

Community typically refers to a wide range of groupings of people: a church, a city, a political party or other affiliation. But more fundamentally, a community suggests a group of geographically rooted people engaged in relationships with each other (though many of the examples of community discussed in this chapter have relevance to broader definitions of community as well). Through these relationships, members in a community have shared responsibilities—as the Latin roots of the word suggest: *com* (with) *munis* (duties).

Source: See endnote 4.

cation. This has proved to be the case in Lydney, England, where residents set up a Community Energy Club to help bring energy efficiency measures and small-scale renewable energy projects to the area. Since it started in 2001, the club has grown to 115 members who together have introduced about 500 energy efficiency measures. Altogether these efforts will save 3,865 tons of carbon dioxide (CO₂) emissions over the life of the projects—a significant amount considering that the average U.K. resident produces about 9 tons of CO₂ emissions each year.⁵

Other times, what is needed is not just social support but mobilization of a community’s resources—for example, to invest in a community-owned wind farm. In 2006, Findhorn Ecovillage in Scotland completed installation of four wind turbines that have a capacity of 750 kilowatts. Together these produce 40 percent more electricity than the community needs, allowing them to generate revenue by selling some back to the local utility through the broader grid system. Of course, this project took several years to plan and construct, but now the wind farm provides the community with both a source of clean electricity and revenue.⁶

Opportunities to enhance the sustain-

ability of a community when building or just renovating are nearly boundless—limited only by the energy, commitment, and resources of the community. Unlike at the household level, where design options can be limited, nearly the entire metabolism of a community can be adjusted to be more sustainable: from where fresh water is obtained,

to how food is produced, to how waste is treated. (See Table 11–1.) Most of these take significant time and effort to implement—or financial resources when built by a contractor—but in the end they can help bring the community together (through the planning and construction of the project), cut costs, and reduce ecological impact.⁷

Table 11–1. How Selected Communities Model Sustainability

Sector	Project	Location	Description
Energy	Micro hydroelectric generator	Inverie, Scotland	In 2002, this remote Scottish community on the Knoydart peninsula finished refurbishing a 280-kilowatt hydroelectric generator, which now provides electricity for at least 65 properties.
Energy	Biomass	ZEGG, Belzig, Germany	The 80 residents of ZEGG obtain their heating from a wood-chip-fired heating plant, with the wood sustainably harvested from the local area.
Energy	Biogas	Hammarby Sjöstad, Stockholm, Sweden	In this Stockholm district 1,000 residences obtain their cooking gas from biogas that is generated from the district's wastewater.
Food Production	Permaculture	Kibbutz Lotan, Arava Valley, Israel	Kibbutz Lotan maintains an array of sustainable agriculture features, including organic gardens, composting, trellising, and community-supported agriculture. It also maintains a migrating bird preserve of five distinct habitats.
Water Catchment	Rainwater harvesting	Christie Walk, Adelaide, Australia	This 27-unit Adelaide community captures all on-site rainwater and uses it to maintain its 870 square meters of rooftop and surrounding gardens.
Sewage Treatment	Ecological machine	Berea College Ecovillage, Kentucky, United States	This community's "ecological machine" processes about 12,700 liters of wastewater each day using a combination of bacteria, snails, and plants. Some of this water is then stored for use on the community's lawns and garden.
Sewage Treatment	Constructed wetlands	Ecoovila, Porto Alegre, Brazil	In this 28-family community, sewage is processed in a biological system that uses reed beds to filter water—water that is then used to irrigate the community's gardens.
Sewage	Water reuse	Solaire Apartments, New York City, United States	In this luxury apartment building, a water reuse system filters wastewater and reuses it for toilet flushing and the building's cooling tower. In 2006, this system recycled about 73,000 liters per day, reducing total water needs by one third.
Transportation	Car sharing	BedZED, London, England	Forty residents subscribe to a community carsharing venture, obtaining access to electric cars that are charged by solar energy.

Source: See endnote 7.

The ecovillage and co-housing movements are perhaps the best illustrations of the opportunities that exist in designing communities to be sustainable through the mobilization of resident energy and resources. An ecovillage, in particular, has the goal of creating “a human-scale, full-featured settlement, in which human activities can be harmlessly integrated into the natural world in a way that is supportive of healthy human development, and can be successfully continued into the indefinite future.” While none have achieved this high ideal, many have made great strides. A resident of Findhorn Ecovillage has just half the ecological footprint of an average individual in the United Kingdom. And in Germany’s Sieben Linden Ecovillage, per capita CO₂ emissions are just 28 percent the national average.⁸

While co-housing communities are typically more focused on developing a connected community than on reducing environmental impact, they often incorporate many ecological designs as well as adding another important element—namely, clustered homes. Instead of spreading out houses, co-housing communities group homes together, enabling them to preserve more land as open space or farmland and to facilitate community connections by having neighbors within walking distance. At the center of these houses there is also typically a community house, where meetings, dinners, and other activities are regularly held.⁹

Ecovillages and co-housing communities are not the only communities that can implement these changes. Indeed, with 385 registered ecovillages (though the actual number is greater if broader village networks are included) and about 500 co-housing projects worldwide, these serve more as models for other communities than as solutions themselves. Many of the projects these communities implement are readily replicable by any

group of like-minded neighbors. Small groups within a broader setting can come together and start a sustainability project, such as a car-pool, community garden, or weekly potluck dinner of locally grown food.¹⁰

People can even convert their neighborhood into an ad hoc ecovillage—like residents in the neighborhood of Phinney Ridge in Seattle, Washington, did. Phinney Ecovillage members hold regular meetings and gatherings to help neighbors reduce their ecological impact. In spring 2007, the group started a new neighborhood global warming project. This venture, partly funded by a grant from the city government specifically for neighborhood-based climate change efforts, is helping to mobilize residents to change their behavior to reduce fossil fuel use—everything from switching to a push lawn mower that relies on human power rather than fossil fuels to lowering their thermostats and turning off appliances not in use.¹¹

Cultivating Community Connections

Not all capital is tangible. Communities generate an often underappreciated asset called social capital, the relational glue that holds communities together, or as political scientist Robert Putnam defines it, “connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them.” As individuals in a community interact, work together, and trade favors, a level of trust and feelings of reciprocity form. This is what makes a community a community rather than just people living near each other.¹²

In industrial countries, social capital is an increasingly scarce asset, according to Putnam and other social scientists. Since 1985 the average American has lost connection to one confidant each—going from three other peo-

ple to confide in to just two. Today, nearly a quarter of Americans do not have anyone like that in their lives. But where social capital exists, or where there is the will to rebuild it through regenerating relationships, there is great opportunity to improve opportunity, life quality, and sustainability. Communities, regardless of the obstacles they face, can use social capital to form sustainable community development projects, empowering themselves as they work together on projects that increase their well-being while reducing their ecological impact.¹³

Social capital yields important dividends. Psychological research demonstrates that the breadth and depth of a person's social connections is the single best predictor of happiness. And social isolation translates directly into physical health concerns as well. More than a dozen long-term studies in Japan, Scandinavia, and the United States, for example, show that the chances of dying in a given year, no matter the cause, are two to five times greater for people who are socially isolated than for people with close family, friends, or community ties.¹⁴

Social capital is generated in a variety of ways. Some communities, particularly ecovillages and co-housing groups, do so by sharing resources. Some have a shared car available that residents can rent or borrow, thus freeing more of the community to live car-free. Many have shared major appliances, including washing machines and dryers. Others have created "tool libraries" for lawn mowers, chain saws, and other implements that may only be needed once a week, month, or year. One community tool is often more than enough and saves members significant cost in purchasing and maintaining these goods. Many people also barter food or goods they produce in exchange for what other residents produce. Along with goods, some communities share services, such as

babysitting and day care, and even elder care. This helps create the ties that bind communities together.¹⁵

Sharing within a community also helps to establish a different cultural norm, one based in cooperation instead of conspicuous consumption and competition.

While an economist would regard these shared goods or nonmarket exchanges as a reduction in economic activity (and thus a negative development), they actually may increase community members' quality of life. A recent study of individuals living in ecovillages and co-housing communities found that although they earned significantly less than people in Burlington, Vermont (a town with a similar demographic makeup to the communities studied), members expressed life satisfaction levels equal to Burlingtonians. Indeed, 50 percent of residents had incomes of less than \$15,000 a year yet life satisfaction levels equal to Burlingtonians—the majority of whom earned over \$30,000 a year. The conclusion of the study was simple: ecovillage members successfully substituted social capital for the possessions they own, thus enjoying a similar quality of life with much less consumption—and as a result a reduced ecological impact as well.¹⁶

Sharing within a community also helps to establish a different cultural norm, one based in cooperation instead of conspicuous consumption and competition. Indeed, this mental shift can help channel the urge to "keep up with the Joneses" into a more constructive form—namely from one of rivalry over who has the biggest SUV or McMansion to who has the lowest ecological footprint. (See Chapter 4.)

Many communities have even institution-

alized these educational efforts, providing schools for community children that maintain an ecocentric curriculum. For example, the Berea College Ecovillage in Kentucky includes the Berea Early Learning Center, for the students' children in day care (most residents of the ecovillage are "nontraditional" students who have children). This eco-friendly day care introduces preschool students to recycling, gardening, and composting.¹⁷

Throughout history, teahouses and coffeehouses have been a central staging ground to discuss revolutionary action.

Beyond the ecovillage, communities are trying to rebuild community connections in innovative ways, with one of the most interesting being the "third place." This term was coined by sociologist Ray Oldenburg to describe informal public gathering places—the place after home and work (the first and second places) that people tend to spend their time in. Being informal gathering places, they have many important roles: connecting the community, integrating newcomers and visitors, offering staging areas in times of local crisis, and providing a set of local store owners who tend to watch over and help the community.¹⁸

Over the past several decades, neighborhood hangouts have increasingly been replaced by soulless franchises that are typically identical in design, lack local flavor, and rarely serve community needs. Today, however, many neighborhoods are starting to consciously recreate third places and the community ties that they facilitate. And some are even starting to recognize that these places can not only serve a central role in cultivating social capital, they can also serve as important tools in shaping environmental values.

These "sustainable third places" not only

build community ties, they also adopt green business practices and help educate customers about living sustainably—using such tools as periodic lectures, discussion groups, informational guides, and books they sell. Sustainable third places can also synergistically support other sustainable business sectors—particularly food production. Local restaurants, not bound by franchise contracts, can order food directly from local farmers, helping to support local agricultural production. And sustainable third places can encourage their customers to get engaged in sustainability efforts, for example helping to set up volunteer groups to work on a local ecological restoration project or environmental campaign.

One example of a sustainable third place is the White Dog Cafe in Philadelphia. Judy Wicks founded the cafe in 1983 in a 100-year-old house on Sansom Street, after joining with her neighbors to fight to prevent this and other houses from being torn down to make room for a new shopping mall. The White Dog now fills three adjacent houses, serving up local food, running on wind power, and hosting regular "Table Talks" on a variety of social and environmental topics. Wicks was one of the first to serve local food in Philadelphia, a niche she could have attempted to monopolize. Instead, she started a foundation (and supported it with 20 percent of the cafe's profits) that worked to expand local food use in the city, by helping other restaurants to localize and connecting farmers and businesses in the city. And the White Dog is not alone. There are hundreds of sustainable third places around the world, each with its own priorities and projects.¹⁹

Cafes, in particular, have great potential to shape people's values and mobilize communities. Throughout history, teahouses and coffeehouses have been a central staging ground to discuss revolutionary action, with

organizers of both the American and French Revolutions discussing plans and organizing actions in coffeehouses. Today, organizations like the Green Café Network are starting to mobilize café owners to use their spaces to “mainstream sustainability”—teaching millions of Americans who visit a café each day how they can live greener. The Network, started in San Francisco in 2007, helps locally owned cafés reduce their ecological footprints and become certified green businesses. It also aims to change customer consumption patterns and promote green lifestyle practices by using partner cafés to teach sustainability—through hosting talks, eco-art exhibits, and educational displays and distributing information.²⁰

Localizing Economic Production

The dairy at the Cobb Hill Cohousing community in Hartland, Vermont, that produces award winning cheeses, the bakery in the ecovillage of Lakabe near Pamplona, Spain, that bakes bread for 25 stores in surrounding towns, the herbalist business at the Earthaven Ecovillage that makes medicines from herbs found in the surrounding bioregion—there are countless local businesses employing people from the community, providing a sustainable living, and helping to relocalize an economy that has become increasingly globalized and environmentally destructive. The benefits of localizing economic activity have been well chronicled and can include providing a more stable source of jobs and income, a reduction in use of fuel for transportation, businesses more willing to adapt to stricter environmental regulations (as opposed to closing and rebuilding elsewhere), and a larger percentage of profits circulating within the community instead of being concentrated in the hands of far-off investors.²¹

One key sector of the economy ripe for localization (in addition to energy production, discussed earlier) is food production. Farming today depends on massive amounts of petroleum-based inputs: fuel to run the tractors and ship food thousands of kilometers, fertilizers and pesticides, and packaging often derived from petroleum. While oil is cheap and the effects of climate change appear relatively minor, this may not seem to be a problem. But with ramped-up efforts to regulate greenhouse gas emissions, potential disruptions of agricultural production due to climate change, and increasing competition over a finite supply of oil, the cost of far-off food will most likely increase, as will its scarcity.

Local farming can address these problems, reducing oil dependency and the ecological impacts of industrial-scale agriculture while providing many other benefits, such as healthier, tastier food, heightened food security, and increased community interactions. Growing food locally reduces the fuel used to ship goods long distances. From farm to market, fruits and vegetables in the United States travel between 2,500 and 4,000 kilometers on average—generating 5 to 17 times more CO₂ emissions than the equivalent amount of local food. Eating locally produced food can reduce an individual’s carbon footprint by about 2,000 kilograms per year.²²

A study of 200 residents in Philadelphia found that residents who gardened not only had increased access to healthier foods—eating more fresh vegetables and fewer sweets—but also saved at least \$100 a year in food costs. Community gardens often help build social capital as well. In a study of 63 community gardens in upstate New York, people in 54 of these worked cooperatively—sharing tools, work, or harvest. Moreover, having a community garden improved many residents’ attitudes about their neighborhoods, reducing problems like littering, while also spurring

broader community revitalization efforts.²³

As more local farms and gardens are established, a growing number of farmers' markets and community-supported agriculture (CSA) operations are sprouting up. In the United States, there are now more than 4,300 farmers' markets and 1,100 CSA farms. These tie consumers and producers together—educating consumers about the source of their food, giving farms a better source of income, and, with CSAs, providing working capital to farmers (because CSA members purchase in advance a share of a farmers' annual production). Being part of a CSA or farmers' market can help reconnect consumers directly to the food cycle, obtaining fresh food straight from a farmer. And farmers' markets help increase community interactions: patrons shopping at these markets typically have 10 times more social interactions than those shopping at grocery stores.²⁴

To cultivate the local food movement, many community groups and nongovernmental organizations (NGOs) are creating community gardens and small farms. Some are driven by food security concerns, others environmental worries, and still others simply by the facts that local, organic produce usually tastes better and is healthier than food produced in far-off farms or greenhouses and that local gardens can strengthen community ties and give people an opportunity to exercise and reconnect with nature.

In Chicago and Milwaukee, Growing Power is working to create local sustainable food systems through a combination of training local farmers, supporting farmers' markets, setting up local food processing and distribution facilities, and converting the many underused spaces in these two cities—like the 60,000 vacant lots in Chicago—into gardens and farms. One impressive innovation is that the organization is working directly with the Chicago city government, being paid by

the city to set up community gardens and urban farms in public parks. This not only sustains the projects but redirects money that would have gone to for-profit landscape businesses toward providing food and job training to underserved residents. In 2006, one of these projects—a 1,900-square-meter urban farm in Grant Park—trained 25 young people in farming and produced over \$15,000 worth of food that was donated to food pantries and soup kitchens.²⁵

To expand this beyond certain cities or regions, a national grassroots network called Rooted in Community (RIC) is working to help young people set up community garden, local farms, and other local food projects. Since 1998, at least 75 grassroots groups have been engaged with the network, and RIC has strengthened the skills of hundreds of community leaders through national trainings.²⁶

But can gardens and local farms actually supply more than a small fraction of a community's food? Cuba—after reducing annual oil imports from 13 million to 6 million tons in one year because of the collapse of the Soviet Union and the U.S. embargo—proved that the answer to this question is yes. At that time, Cuba had the most industrialized agricultural system in all of Latin America and even used more than twice as much fertilizer per hectare as U.S. farmers did. But the Soviet collapse and subsequent lack of oil, chemical fertilizers, pesticides, and other industrial agricultural inputs forced Cuba to localize agricultural production rapidly. Today, after considerable innovation, the country now delivers much of its agricultural produce from small urban farms and community gardens. In Havana alone, there are more than 26,000 food gardens, spreading across 2,400 hectares of land and producing 25,000 tons of food.²⁷

Americans typically have ample space to devote to food gardens. During World War

II, Americans set up 20 million home and community gardens—Victory Gardens—that provided 40 percent of civilians’ fresh vegetables, allowing farms to concentrate on providing for the troops. Today, in contrast, Americans maintain 10 million hectares of lawns, often with assistance from toxic pesticides and fertilizers. These lawns could readily be replaced with gardens, producing a new source of local food and reducing toxic chemical usage. The key to this transition will ideally stem from increased support by

community groups, NGOs, and government agencies. Realistically, however, a major disruption in food production, like the one Cuba experienced, will also trigger a return to local farming. Future ecological disruptions may also speed the transition to a new model. (See Box 11–2.)²⁸

Beyond food production, efforts to localize the economy are taking some novel forms. NGOs are taking a lead in reducing dependence on the globalized economy. One—The Relocalization Network—is helping to

Box 11–2. Preparing for the Long Emergency

On the outskirts of Barcelona, a former leper colony now houses a new community. In 2001, a group of 30 squatters took over this property that had lain vacant since the 1950s and created an eco-squatter community, Can Masdeu. While squatters typically are viewed as a problem, this group has taken unused land and is now a model sustainable community—maintaining a composting toilet, a constructed wetlands for processing gray water, homemade solar thermal panels, even a “bici-lavadora” (bicycle-powered washing machine). Moreover, the community provides 28 community garden plots to neighborhood residents, maintains a regular meeting space for a variety of social activist groups, and sets up a sustainable third place on Sunday nights: the Rurbar, selling food and beer that the community produces.

Can Masdeu also offers another benefit: it shows that life can go on in a climate of uncertainty, where community members have no rights to ownership, where police have attempted to expel them by force, and where financial capital to invest is scarce. The leper colony, founded in the seventeenth century, functioned without electricity, obtained its water from mountain springs, and grew its own food. While Can Masdeu has electricity today, its water and sewage treatment and much of its food production are not dependent on it. The community—in pared-down form—could function even if the global economy seized up and died tomorrow.

Communities can play a significant role in helping reduce ecological problems that currently threaten the future of human civilization. But due to a lack of leadership by the worst polluters and positive feedback cycles like thawing permafrost and the melting Arctic ice cap, it may be too late to prevent the worst effects of climate change—such as a sea level rise of 15 meters that the melting of Greenland and western Antarctica would trigger. Add to this growing social disruptions from increased competition over petroleum supplies and the possible breakdown of global governance as new resource rivalries form, and the picture looks bleak indeed. If this scenario—“the long emergency,” as author James Howard Kunstler calls it—becomes the new reality, then communities will once again become central in providing for themselves. Local food provision, local energy production, and the basic technologies needed to maintain a water supply and process sewage safely may mean the difference between a high quality of life and abject poverty.

If humanity cannot mobilize to prevent an ecological collapse, any effort by communities to increase their self-sufficiency and reduce dependence on far-off goods that will become scarce as the global economic system falters will help them survive in a less stable future, much as the residents of Can Masdeu are doing now.

Source: See endnote 28.

coordinate 166 groups in 13 countries, providing an online learning and networking forum for communities working to lower their reliance on a fragile, globalized economic system. Efforts of these many groups are impressive—ranging from local community education projects to town and city resolutions to reduce dependence on oil.²⁹

Networks like BALLE—the Business Alliance for Living Local Economies—are also helping to drive localization forward. BALLE, consisting of more than 15,000 businesses, has 51 networks spread over 26 regions in North America (states and Canadian provinces). These networks help connect local businesses, with the goal of strengthening exchange of goods locally while helping to enact public policies to support decentralized ownership of businesses, fair wages, and good stewardship of the environment.³⁰

Some towns and cities are also looking holistically at how they can localize their economies. For example, in Willits, California, the WELL (Willits Economic Localization) initiative is educating town residents about the benefits of and opportunities to localize the economy. So far WELL has focused on assessing current resource use in Willits—such as the amount of energy imported and the CO₂ emissions produced per capita—and it is now turning to figuring out how best to reduce the town's ecological impacts and reduce dependence on the global economic system. In the United Kingdom, there are also 21 Transition Towns—towns, neighborhoods, villages, and cities that are setting up “transition initiatives” in which they try to move toward localization, reduce oil dependence, and lower the ecological impact of their economies.³¹

With growing disparities between rich and poor worldwide and the global growth of slums, there is a strong need to merge the

empowerment of communities like those just described with efforts to meet people's basic needs independently and sustainably. Community-driven development (CDD) is one strategy to address poverty in this way. With CDD, poor communities are the lead actors in development efforts, not passive recipients of aid, and are empowered to focus on the priorities they choose—whether that be health, education, sanitation, or other pressing issues—and given the assistance they need to succeed.

Sometimes CDD efforts are initiated directly by communities, but many are supported by either NGOs or international agencies that can provide financial or technical assistance. For example, a Zambian NGO, the North Luangwa Wildlife Conservation and Community Development Programme, has worked to reduce poaching in the North Luangwa National Park by empowering communities to make a living through farming and other more sustainable enterprises, while also setting up local clinics and education programs. Started in 1994, this program now reaches more than 35,000 people.³²

The United Nations and other international agencies are also increasingly using CDD. The COMPACT program (Community Management of Protected Areas Conservation), for instance, is a joint project of the U.N. Development Programme and the Global Environment Facility that provides grants of less than \$50,000 to communities in World Heritage Sites to help establish projects that improve community well-being while reducing people's impact on the surrounding ecosystems. Around Mount Kenya, where deforestation is a significant concern, COMPACT has worked with villages to set up a microhydro generator and sustainable food projects like beekeeping and trout farming, and it has worked with schools to provide more efficient cookstoves—all of which help

reduce community dependence on firewood while offering new economic opportunities. (For more on CDD in developing countries, see Chapter 12.)³³

Financing Sustainable Communities

Underlying local economic enterprise there needs to be sustainable community finance, which can mobilize community funds to invest in local green endeavors—an essential element if businesses like local farms and sustainable third places are to thrive. Traditionally, community development financial institutions (CDFIs)—including development banks, credit unions, loan funds, and venture capital funds—finance projects that build affordable housing, create livable-wage jobs, or provide essential services such as health care. (See also Chapter 13.) Although these investments are comparatively small—at just \$20 billion in the United States—the effects of community investing are impressive. A survey of 496 U.S. CDFIs found that in 2005 these institutions financed 9,074 businesses that established or sustained 39,151 jobs, and they facilitated the building or renovation of 55,242 units of affordable housing and 613 community facilities in economically disadvantaged communities.³⁴

While interest in CDFIs has grown significantly over the past years—with total investments quintupling between 1997 and 2005—few of these investments are targeted toward sustainable community development. If they were, they could have not just an economic impact but an ecological one as well. Some ecovillages have small banks that do just this. In Italy, the community of Damanhur maintains a co-operative that invests members' savings in existing community businesses as well as giving loans and business advice to community members trying to start new sus-

tainable businesses.³⁵

On a larger scale, ShoreBank Pacific in Washington State sees itself as a sustainable community development bank. This bank, with assets of \$113 million, lends to community businesses while also proactively helping clients in a variety of industries to use energy efficiently, reduce waste, conserve resources, and shift production toward a greener model. This starts with a review of the business by a staff scientist and continues with consultations throughout the course of the loan, offering strategic advice on how to become sustainable.³⁶

Instead of creating banks, some communities are actually creating their own currencies. These can take many forms. Some, like Ithaca Hours, are pegged against an hour of labor, thus valuing all work equally. Others are pegged to a national currency. The BerkShare is one of these. In Great Barrington, Massachusetts, there are about \$760,000 worth of BerkShares circulating; they are accepted by some 300 local businesses—from coffeeshops to grocery stores. A local bank is even considering creating a credit card based in BerkShares. And Great Barrington is not alone. There are over 4,000 community currencies around the world.³⁷

While the true economic impact of these currencies is relatively minor, they do provide many benefits to communities that use them. Because franchises typically do not trade in community currencies, these systems help create support—and loyal customer bases—for local businesses. They also help build community support networks. According to a U.K. study, local currencies help many users develop a network of people they could call on for help, as well as helping people cope with unemployment. And local currencies can help address specific social needs in a community. In Japan, many areas use *fureai kippu* (caring relationship

tickets): helping the sick and elderly with daily living will earn the helper some tickets, which can then be exchanged for help when that person is sick or can be given to sick or elderly relations to use. This has enabled more elderly people to continue living in their homes and communities rather than moving to convalescent homes.³⁸

Another innovative way to finance sustainable communities involves harnessing the profits of a new breed of business called “social enterprise.” This term refers to businesses that achieve their social missions through their earned income strategies. For example, Greyston Bakery in New York City was founded in 1982 to provide jobs for the chronically unemployed. Today, the profits of this \$6.5-million business provide funding for health clinics, day care centers, affordable housing, and other social services that help address poverty in New York City. And in Thailand, the resort and restaurant Cabages and Condoms uses its five restaurants and two resorts to promote safe sex and AIDS prevention while generating revenue for the Population and Community Development Association, an NGO that works on rural development, AIDS education, population growth, and environmental protection.³⁹

Although few social enterprises currently focus on sustainable poverty alleviation, when they do they can make an important contribution to redesigning the economy to serve the needs of communities in an ecologically responsible manner.

Communities Mobilizing Society

Beyond design and helping to rebuild local economies, communities can use members’ energy and resources to help green society more broadly—restoring local ecosystems, educating the broader public, or engaging in

efforts to reform local or even national political agendas.

One way communities are readily engaging in this effort is helping with ecological restoration projects in their area. The Los Angeles Ecovillage was instrumental in helping the Bresee Center design The Bimini Slough Ecology Park at the end of LAEV’s street. Now the runoff from two neighboring streets drains into a small stream in the park. Here the water is cleaned by stream plants on its way back to the watertable instead of moving directly to the ocean, with all of its pollutants, via the storm drain.⁴⁰

An example of a much broader-ranging restoration project comes from the community of Las Gaviotas in Colombia. This village was established on degraded savanna and made it a point to replant 8,000 hectares of surrounding land with forest—an area larger than Manhattan. Along with providing the community with food and tradable forest products, this land now absorbs 144,000 tons of carbon a year and will continue to do so while the forest grows. Gaviotas’ efforts are impressive, but the village’s decades-long plan is even more ambitious: Gaviotas hopes to replant another 3 million hectares with the help of other villages and towns; that’s enough to absorb a quarter of Colombia’s annual carbon emissions.⁴¹

Some communities—in particular ecovillages—are reaching out globally to local leaders to help spread the knowledge needed to make towns and larger regions sustainable. Many ecovillages have regular training courses. At The Farm, an ecovillage in Summertown, Tennessee, the Ecovillage Training Center hosts dozens of training workshops—from how to install solar panels to how to cultivate and build with bamboo. Ecovillages like The Farm also host longer apprenticeships for people wanting to learn about the many aspects of community sustainability. In 2003

many ecovillage and other community sustainability leaders founded Gaia University, which offers accredited bachelors and masters degrees in Integrative Ecosocial Design, in which students learn how to design societal, community, and personal behaviors that are in line with ecological principles.⁴²

Communities are also increasingly getting involved in local political efforts. Today in the United States, many of the 300,000 homeowners associations (HOAs) ban their members from hanging clothes outside to dry because of the perception that clotheslines look unsightly and thus reduce property value. Yet if Americans dried just half of their clothes outside instead of in dryers that were powered by coal-fired power plants, they could save enough electricity to shut down eight such plants and reduce CO₂ emissions by 23 million tons. Communities and community

groups are approaching HOAs to get this and other sustainability measures implemented. Project Laundry List is an organization that helps homeowners appeal to their HOAs and that is coordinating broader efforts to change state laws to uphold “the right to dry.”⁴³

At the town and city level, there are even more opportunities to foster local-level sustainability through policy changes. A key strategy is to push for “smart growth,” shifting urban planning away from car-dependent low-density housing to one of walkable neighborhoods with a mix of commercial and residential space. Smart growth is essential for reducing car dependency and for making towns and cities more sustainable. Some communities are joining broader coalitions working on campaigns as varied as increasing public transit, organizing to make cities bicycle-friendly, and lobbying to strengthen urban

Box 11-3. Dockside Green: Developers Taking the Lead

Until recently, the 15-acre Dockside Lands parcel in Victoria, British Columbia—the province’s capital on Vancouver Island—was the epitome of an underused property. Purchased by the city for a single dollar in 1989, this prime real estate lay largely ignored for years, crippled by an industrial legacy that left the soil saturated with petrochemicals and toxic heavy metals. Now the site is poised to become the greenest neighborhood in Victoria, thanks to collaboration between the city and two developers, Windmill Development Group and VanCity Enterprises. The first of three distinct neighborhoods, Dockside Wharf, is set for completion in 2009 and will include 268 residential units of varying sizes. By the time it is completed around 2018, the development will accommodate approximately 2,500 people.

The developers have promised to deliver 26 LEED platinum-rated buildings in addition to an impressive green infrastructure and have even pledged to pay penalties up to CDN\$1 million if certification goals are not met. One hundred percent on-site sewage treatment is projected to

save CDN\$81,000 a year in city fees. On-site energy generation, including solar panels and a biomass gasification system fueled by waste wood, will further reduce pressure on Victoria’s infrastructure. Preliminary studies indicate that Dockside Green’s goal of carbon neutrality may even produce excess energy that can be sold back to the city. Residents can stroll down a central greenway irrigated only with recycled rainwater, ride mini-transit vehicles that run on biodiesel, and check their personal energy consumption via monitors in each home.

Walkable, dense neighborhoods with a variety of housing units, lively public areas, and commercial space will help foster a sense of community. Planners have also been careful to integrate existing industry, interspersing light industrial space among the housing units, thus preserving Dockside Green’s distinctive harbor industry heritage.

—Meghan Bogaerts

Source: See endnote 44.

growth boundaries.

Another innovative strategy is to educate developers about the importance of smart growth. Some developers are starting to recognize the profitability of building developments along these lines, tapping into the growing demand for environmentally friendly communities and the many government incentives that subsidize such projects. (See Box 11–3.)⁴⁴

Eco-municipalities are efforts by community members, local NGOs, and town officials to create long-term comprehensive sustainability plans for towns, villages, or cities.

But the key will be making smart growth the norm for developers. One impressive effort is being led by the U.S. Green Building Council (USGBC). This organization’s LEED program (Leadership in Energy and Environmental Design) has helped provide green certification schemes for all type of buildings: commercial, residential, and others.

USGBC is now working on a new “LEED for Neighborhood Development” certification system. This standard, currently in its pilot phase, will provide a grade for planned neighborhood developments, giving points for designs that connect communities, reduce vehicle use, and create local jobs. It also includes prerequisites such that any development that compromises wetlands or agricultural lands, is located in a flood zone, or is built “60 miles from anything” (as Program Manager Jennifer Henry puts it) cannot be certified. For well-planned neighborhoods, developers can receive a high grade (platinum or gold), which may help expedite permission from local planning boards and make developers eligible for tax breaks or other incentives.⁴⁵

Currently 238 projects are involved in the pilot phase of the LEED for Neighborhood Development, ranging from sustainable communities like the Los Angeles Ecovillage to large urban projects. In 2009 the USGBC will finalize the program once the pilot phase concludes and public comments are received. Once finished, new communities that are forming can use these standards, and existing communities can lobby local governments to ensure that these standards are used when new developments are planned.⁴⁶

Another innovative idea that has started to spread around the world is that of the “eco-municipality.” In essence, eco-municipalities are efforts by coalitions of community members, local NGOs, and town officials to create long-term comprehensive sustainability plans for their towns, villages, or cities. Övertorneå, Sweden, became the first eco-municipality in 1983. Since then, more than 60 municipalities in Sweden, ranging from villages to cities of 500,000, have followed suit—as have 20 Estonian municipalities and municipalities in 10 other countries.⁴⁷

Because communities are by their nature small, their ability to address global environmental problems is often overlooked by national governments. But with proper support, they can have a dramatic impact. The key will be getting governments to recognize communities’ potential and tap into it. The United Kingdom may be the first country to proactively do so. Parliament is close to passing the Sustainable Communities Act, which would provide local councils with direct access to the office of the Secretary of State and fund local sustainability projects—including those that support local businesses, protect the local environment, and build community connections and political activity.⁴⁸

When national policy is changed in the right way, the effects can be impressive. While small-scale wind and other major projects are

often difficult to implement because of zoning restrictions, in some countries governments have actually facilitated them. Since the 1970s, Denmark has allowed communities, co-operatives, small companies, and towns to establish small renewable projects and obtain a set price for the electricity they provide to the grid. Today, over 80 percent of wind turbines are owned by co-operatives, local companies, or individuals. Along with triggering a major investment in wind energy (over 20 percent of Denmark's electricity comes from wind), local ownership and the resulting local profits have led to broad public acceptance.⁴⁹

National policy changes have great potential and could take many forms. Imagine the

impact of initiatives like California's Million Solar Roofs, which provides financial incentives and other support to individual homeowners to put solar panels on their roofs. Similar efforts could mobilize communities around the world: a 10,000 Town Wind Co-op Project; a 100,000 Neighborhood Energy Club Initiative; a Million Community Garden Program; or a \$10 Billion Sustainable Community Investment Initiative could all drive community sustainability efforts to the next level. The key will be mobilizing communities around the world to educate national policymakers on the benefits local efforts can bring—and to challenge them to make these happen.⁵⁰

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