

THE CONTEXT FOR SUSTAINABLE COMMUNITIES

A quiet transformation is taking place in communities all over North America and around the world. Thousands of citizens and their governments are embracing a new way of thinking and acting about their future.

Motivations for involvement vary, but they include a desire to improve the quality of community life, protect the environment, and participate in decisions that affect us; concern about poverty and other social conditions, whether in far away countries or in our own towns; longing for a sense of satisfaction that money can't buy; and pride in the legacy left for our children.

These motivations are all coming together now in a movement toward sustainable communities. As the following chapters demonstrate, this synergistic approach will enable our communities to be cleaner, healthier, and less expensive; to have greater accessibility and cohesion; and to be more self-reliant in energy, food, and economic security than they are now. Sustainable communities are not merely about “sustaining” the quality of our lives — they are about *improving* it.

This chapter explores the context for sustainable communities. Acting locally is more significant when we think globally, so that is where we begin our discussion of “sustainable development.” We then examine the concept of “community capital” as a way to “do development differently,” as well as to begin building a framework for sustainable community development.

THINKING GLOBALLY

Many people around the world are starting to consider that the population problem in the South is less significant a problem than over-consumption and wasted resources in the North.

The average person in a developed country uses 9 times as much fossil fuel and 20 times as much aluminum as his or her counterpart in developing countries. In terms of waste, the average person produces 4 times as much household refuse, 11 times more carbon dioxide, 26 times more chloroflourocarbons, and 75 times more hazardous wastes. Average Americans use 43 times as much gasoline as average Indians,

45 times as much copper, and 34 times as much aluminum (ICPQL, 1996). North Americans have double the “ecological footprint” of Europeans, and seven times the average footprint of Asians and Africans (WWF et al., 2004).

Many in both northern and southern countries now argue that gross population figures must be corrected by adding figures reflecting per-capita resource consumption. By these calculations, the US population is in the tens of billions, and is viewed as the biggest contributor to the global population problem (Henderson, 1996).

Bringing the Third World up to North American living standards would require a five- to 10-fold increase in world industrial output (WCED, 1987), yet the contingent combination of depleted resource stocks (e.g., fossil fuels, fisheries, forests) with degraded life-support systems (e.g., ozone depletion, global warming, acid rain) demonstrates the impossibility of the entire world consuming and polluting at the rate of North Americans.

SUSTAINABLE DEVELOPMENT

In December 1983, in response to a United Nations General Assembly resolution, the U.N. Secretary-General appointed physician Gro Harlem Brundtland of Norway as Chairman of an independent World Commission on Environment and Development. In April 1987, the Commission released its report, *Our Common Future*. The report showed that the poorest fifth of the world’s population has less than 2 percent of the world’s economic product while the richest fifth has 75 percent; the 26 percent of the world’s population living in developed countries consumes 80 percent to 86 percent of nonrenewable resources and 34 percent to 53 percent of food products (WCED, 1987). At the core of the report is the principle of sustainable development. Embracing sustainable development as an underlying principle gave political credibility to a concept many others had worked on over the previous decade. The Commission defined sustainable development as meeting “the needs of the present without compromising the ability of future generations to meet their own needs.”

The term sustainable development has been criticized as ambiguous and open to a wide range of interpretations, many of which are contradictory. Confusion has resulted from using the terms sustainable development, “sustainable growth,” and “sustainable use” interchangeably, as if their meanings were the same. They are not. Sustainable growth is a contradiction in terms: nothing physical can grow indefinitely. Sustainable use is applicable only to renewable resources: it means using them at rates within their capacity for renewal (IUCN, 1991).

Many people use the term sustainable development to simply mean either “environmental protection” or else sustained economic growth (presumably to pay for, among other things, environmental protection). Even the Brundtland Commission accepted the need for a five- to 10-fold increase in world industrial output as essential for sustainable development.

The very concept of environmental protection is based on the separation of humanity from nature. As a society, we point to a few things we think of as nature — some trees here, a pond there — draw a box around them, then try to “protect” what’s

within the box. Meanwhile, we ignore the fact that human activity *outside* that box — housing, economic development, transportation, and so on — has a far greater impact on the environment than do our “environmental” policies.

Environmental protection is like foam padding — it offers some protection from a fall. We congratulate ourselves if we double our spending to double the thickness of the foam, because we assume thicker foam means more protection. However, *we only get more protection if we fall the same distance*. Meanwhile, *unsustainable* development constantly increases the distance we’re likely to fall. Sustainable development must therefore be more than merely “protecting” the environment: it requires economic and social change to *improve human well-being while reducing the need for environmental protection*.

Social equity demands that we balance the needs of the biosphere with the needs of the vast majority of the human population, the world’s poor. Within the developed nations, this in turn means that we must balance the needs of the biosphere with the needs of our own poor. But in doing so we can no longer rely on our 200-year tradition of material growth as the primary instrument of social policy.

Like other political objectives of its kind (e.g., justice, democracy), we all agree with the ideal of sustainable development and disagree over what it entails. Nevertheless, sustainable development has a core meaning which remains, however it is interpreted. The three elements of sustainable development are (Jacobs, 1993):

- *Environmental considerations must be entrenched in economic policy-making.* Environmental and economic objectives must be placed within a common framework in which a variety of parallel objectives can be recognized.

- *Sustainable development incorporates an inescapable commitment to social equity.* This requires not simply the creation of wealth and the conservation of resources, but their fair distribution both between and within countries, including at least some measure of redistribution between North and South. Sustainability also requires the fair distribution of environmental benefits and costs between generations.

- “Development” *does not simply mean “growth,”* as represented by faulty measures of economic performance such as increases in gross national product (GNP). Development implies qualitative as well as quantitative improvement.

In sum, sustainable development must be a *different kind of development*. It must be a *pro-active strategy to develop sustainability*.

COMMUNITY CAPITAL

There are myriad ways to understand and conceptualize community. In terms of sustainable community development, however, we are discovering that it is useful to think of community in terms of assets, or *capital*. All forms of capital are created by spending time and effort in transformation and transaction activities (Ostrom, 1993).

In the last few years there have been several efforts to describe sustainable development in terms of three or four types of capital (e.g., Goodland, 2002, Rainey et al., 2003). For example, Canada’s National Round Table on the Environment and the

Economy, which published the original edition of this book in 1992, is using a capital model based on four types of capital (NRTEE, 2003).

Recent explorations by the SFU Centre for Sustainable Community Development (e.g., Roseland, 1999; 2000) and others (e.g., Hancock, 2001) are attempting to create a notion of *community capital* as a foundation for sustainable community development.

Our perspective on community capital includes *natural, physical, economic, human, social, and cultural forms of capital*.¹

Natural Capital

Global resource depletion and pollution are forcing recognition that existing patterns of development and resource use are not sustainable. Even conservative neoclassical economists are recognizing that the sustainable component of development requires that human activities today do not deplete what can be termed “natural capital” or “environmental capital.” Although the idea of natural capital originated nearly a century ago, only recently has the term gained prominence (primarily among ecological economists, themselves a relatively new breed), to further our understanding of sustainable development (e.g., Jansson et al., 1994; Wackernagel and Rees, 1996, Goodland, 2002). Natural capital refers to any stock of natural assets that yields a flow of valuable goods and services into the future. For example, a forest, a fish stock, or an aquifer can provide a harvest or flow that is potentially sustainable year after year. The forest or fish stock is natural capital and the sustainable harvest is “natural income.”

The total stock of environmental assets which comprise this natural capital may be divided usefully into three categories:

- non-renewable resources, such as minerals and fossil fuels;
- the finite capacity of natural systems to produce “renewable resources” such as food crops, forestry products, and water supplies — which are renewable only if the natural systems from which they are drawn are not overexploited; and
- the capacity of natural systems to absorb our emissions and pollutants without side effects, which imply heavy costs passed onto future generations (such as chemicals that deplete the atmosphere’s ozone layer, and greenhouse gases which may cause serious climatic imbalances).

Natural capital also provides such critical ecological services as waste assimilation, erosion and flood control, and protection from ultraviolet radiation (the ozone layer is a form of natural capital). These life support systems are counted as natural income. Since the flow of services from ecosystems often requires that they function as intact systems, the structure and diversity of the system may be an important component of natural capital (Wackernagel and Rees, 1996, Goodland, 2002).

Although natural capital is a relatively new way of framing choices for social policy and action, it has helped considerably to refine the sustainability debate. For example, there is no doubt that the stock of non-renewable resources is finite, nor is there any doubt that eco-systems (individually and collectively within the biosphere) have limits in their capacity to absorb pollutants. There is also agreement that some environmental assets, such as areas of outstanding natural beauty, are irreplaceable.

According to Mitlin and Satterthwaite (1991):

The debate centers on which environmental assets are irreplaceable and the extent to which current (and projected) future levels of resource use degrade the capital stock of environmental assets for future generations, the extent to which one resource can be substituted for another (for instance, a synthetic substance replacing a natural one) and the extent to which pollutants derived from human activities are damaging the biosphere.

Strong or Weak Sustainability?

Some analysts (e.g., Pearce et al., 1989) argue that “future generations should be compensated for reductions in the endowments of resources brought about by the actions of present generations”; they suggest that each generation should leave the next a stock of assets at least as great as that which they inherited themselves. There are two possible ways to interpret this: “weak sustainability,” which aggregates all types of assets, and “strong sustainability,” which differentiates between assets that are “natural” and those that are not. Strong sustainability argues that whatever the level of human-made assets, an adequate stock of environmental (or natural) assets alone is critical in securing sustainability (Daly, 1989; Rees, 1992).

Weak sustainability reflects the neoclassical economic assumption that non-natural assets can substitute for natural assets; therefore it is acceptable to use up natural assets so long as the profits they generate provide an equivalent endowment to the next generation. Yet in some cases, natural and non-natural assets are clearly not substitutable. For example, a sawmill cannot be substituted for a forest since the sawmill (non-natural capital) needs the forest (natural capital) in order to function (Daly, 1989). Weak sustainability also assumes that other forms of capital (e.g., manufactured, financial, or human capital) can be converted back into natural capital. This interpretation does not take into account irreversible processes such as the extinction of species or the destruction of ecosystems.

All this suggests that weak sustainability is grossly insufficient; natural capital stock should only be destroyed if the benefits of doing so are very large or if the social costs of conservation are unacceptably large (Pearce et al., 1990). Yet this begs the key question: *are we capable of knowing the full costs and benefits of destroying or conserving natural capital stock?*

Ecological economists can put a price on resources such as timber and fisheries; but the value of ecological process resources such as carbon absorption or photosynthesis cannot easily be quantified and monetized (Rees, 1991). The very concept of economic “trade-offs” depends upon being able to put a *price* on the items traded (see Pricing the Planet). Resources that cannot be quantified or monetized also cannot be priced. It may be theoretically possible to trade-off some value of a fishery for some value of a timber harvest, but it may not be possible to realistically price the value of the ozone shield.

The economic benefits of destroying natural capital stock or the social costs of conservation may *seem* large, but only as a function of our inability to adequately assess such costs and benefits. If the potential benefits of conservation approach infin-

ity, the costs are irrelevant (Rees, 1991). This suggests that it is time for a different kind of framework for planning and decision-making, guided by the understanding that *natural capital stock should not be destroyed*.

In terms of the life-support functions of natural capital, destruction of any single significant natural asset can be likened to destruction of any single bodily organ or system. The destruction of the ozone layer may have the same consequences, in planetary terms, as destruction of the immune system has for the human body; global warming may be analogous to a high fever.

We do not ask those who suffer from heart disease to trade normal brain functioning for a healthier heart. Such choices are the stuff of literature's great tragedies; they only become more tragic if we insist upon this approach to deciding complex societal choices.

Like a thermometer registering a fever, the accumulating trends of ecological decline (e.g., decrease in stratospheric ozone, increase in greenhouse gases, extinction of species, loss of biodiversity, etc.) are the indicators of our condition.

The "ecological bottom line" is that we must learn to live on the "interest" generated by our remaining stocks of living natural capital, and not deplete those stocks. In short, we must *minimize our consumption of essential natural capital*.

This applies particularly in developed countries, where one-quarter of the world's people consume three-quarters of the world's resources (ICPQL, 1996; WCED, 1987). For North Americans to contribute to global sustainability will require major shifts in lifestyles of the affluent. A wide variety of approaches are called for, including reducing atmospheric emissions and water pollution, waste reduction and recycling, and greening our cities. The most important adaptation for minimizing consumption of natural capital is a reduction of our present levels of materials and energy consumption. This will require a more globally conscious kind of local development than we are accustomed to.

Minimizing our consumption of essential natural capital means living within ecological limits, conserving and enhancing natural resources, sustainable resource management (soil, air, water, energy, agriculture, etc.), cleaner production, and minimizing waste (solid, liquid, air pollution, etc.).

Minimizing consumption of natural capital has profound implications for urban form, for the material basis of urban life, and for community social relationships in the 21st century. *If the basic science is correct, we have no choice but to shift to more sustainable patterns of resource use and development*. The longer we wait, the greater the

Pricing the Planet

A team of 13 ecologists, economists and geographers, in a report in the journal *Nature*, estimated the present global value of 17 ecosystem "services" at US\$16 trillion to \$54 trillion a year, with a likely figure of at least \$33 trillion. That figure is based on the cash value of such things as water, air, forests, animals, dirt, coral reefs, grasslands, and other aspects of the natural world. Most of this lies outside formal markets and is therefore not reflected in market prices, the customary gauge of economic value. Ecosystem services are services essential to the human economy, including climate regulation, water supply, soil formation, pollination, food production, raw materials, genetic resources, recreation and culture.

To come up with the \$33 trillion figure, the team, headed by University of Maryland ecological economist Robert Costanza, found published estimates of the economic value of natural ecosystems. After finding credible estimates of how much each of 17 ecosystems is worth, they multiplied that value by the total areas of each type of feature on earth.

The purpose of the study was to put a price tag on what people would have to pay to replace — if that were possible — the ecosystem services of the natural environment. In comparison, the gross national product of the world, which is all the goods and services produced by people each year, is about \$18 trillion (Stevens, 1997).

risk of having to impose rigid regulations in times of crisis. The sooner we make these shifts, the more options we will have to create mechanisms of adjustment that are socially acceptable and economically feasible.

Despite the interest in “natural capitalism” (Hawken et al., 1999), putting a price tag on everything in nature will not solve all of our planetary woes. Economic growth and industrialization as presently practiced are accompanied almost invariably with increasing energy demand and growing ecological waste, even when the intensity of energy use is falling. This means that technological improvements can be expected to slow down the rate of ecological damage only marginally, so long as the scale of production is increasing rapidly. Ultimately, social issues — including the nature and purpose of economic development — must be addressed (Foster, 1997).

Physical, Economical and Human Capital

Physical capital is the stock of material resources such as equipment, buildings, machinery and other infrastructure that can be used to produce a flow of future income. The origin of physical capital is the process of spending time and other resources constructing tools, plants, facilities and other material resources that can, in turn, be used in producing other products (Ostrom, 1993). Physical capital is sometimes referred to as *produced capital* (NRTEE 2003), *manufactured capital* (Goodland 2002) or *public capital* (Rainey et al., 2003).

Improving physical capital includes focusing on community assets such as public facilities (e.g., hospitals and schools); water and sanitation; efficient transportation; safe, quality housing; adequate infrastructure and telecommunications.

Economic capital refers to the ways we allocate resources and make decisions about our material lives. Economic capital should be maintained in order for people to live off the interest, or income. Goodland (2002) argues that economic and manufactured capital can be substituted: “There is much capitalization of manufactured capital, such as too many fishing boats and sawmills chasing declining fish stocks and forests.”

Strengthening economic capital means focusing on: making more with less — maximizing use of existing resources (e.g., using waste as a resource); making the money-go-round — circulating dollars within a community; making things ourselves — replacing imports; making something new — creating a new product (Nozick, 1992); trading fairly with others; and developing community financial institutions.

Human capital is the “knowledge, skills, competencies and other attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” (OECD, 2001). Human capital is formed consciously through training and education and unconsciously through experience (Ostrom, 1993).

Health, education, skills, knowledge, leadership and access to services constitute human capital. Human capital needs continual maintenance by investments throughout one’s lifetime (Goodland, 2002).

Increasing human capital requires a focus on areas such as health, education, nutrition, literacy, and family and community cohesion. Basic determinants of health

such as peace and safety, food, shelter, education, income and employment are necessary prerequisites (Hancock, 2001).

Social and Cultural Capital

Social capital is “the relationships, networks and norms that facilitate collective action” (OECD, 2001), or the shared knowledge, understandings, and patterns of interactions that a group of people bring to any productive activity (Coleman, 1988, Putnam, 1993). Social capital refers to the organizations, structures and social relations which people build up themselves, independently of the state or large corporations. It contributes to stronger community fabric, and, often as a by-product of other activities, builds bonds of information, trust, and inter-personal solidarity (Jacobs, 1961; Coleman, 1990; Woolcock, 2001).

Social capital includes community cohesion, connectedness, reciprocity, tolerance, compassion, patience, forbearance, fellowship, love, commonly accepted standards of honesty, discipline and ethics, and commonly shared rules, laws, and information. When social capital is undercapitalized, the result is high levels of violence and mistrust. Western-style capitalism can weaken social capital to the extent it promotes competition and individualism over cooperation and community (Goodland, 2002).

Though largely neglected in discussions of public policy, Putnam (1993) argues that social capital substantially enhances returns to investments in physical and human capital. However, unlike conventional capital, social capital is a public good, i.e., it is not the private property of those who benefit from it. Thus, like other public goods, from clean air to safe streets, social capital tends to be under-provided by private agents. The ties, norms and trust that constitute social capital are most often created as a byproduct of other social activities and then transferred from one social setting to another.

Social capital constitutes the “glue” that holds our communities together. It has both an informal aspect related to social networks and a more formal aspect related to our social development programs. High levels of what have been termed “social cohesion” and “civicness” are rooted in social networks and in participation in society, including the governance processes through which decisions are made. In addition to these informal forms of social capital, there are also the more formal forms of social capital that result from society’s investment in social development that ensures people have equitable access to such basic determinants of health as peace and safety, food, shelter, education, income and employment (Hancock, 2001). The shared cognitive aspects of social capital help account for two unusual characteristics that differ from physical capital. First, social capital does not wear out upon being used more and more; and second, if unused, social capital deteriorates at a relatively rapid rate (Ostrom, 1993).

Social capital differs from other forms of capital in several significant ways. It is not limited by material scarcity, meaning that its creative capacity is limited only by imagination. Consequently, it suggests a route toward sustainability, by replacing the fun-

Champagne on a Beer Budget

Kerala, a state of 29 million people in southern India, has a per capita income estimated by various surveys to be between US\$298 and \$350 per year, about one-seventieth the US average. Yet data for life expectancy, literacy, and birth rates for Kerala are comparable to those for the US "One-seventieth the income means one-seventieth the damage to the planet. So, on balance, if Kerala and the United States manage to achieve the same physical quality of life, Kerala is the vastly more successful society" (McKibben, 1996).

damentally illogical model of unlimited growth within a finite world with one of unlimited complexity, not bound by the availability of material resources.

However, social capital also has limitations which other forms of capital do not. It cannot be created instantly, and the very fact of trying to consciously create it or direct it can create resistance. People resist being instrumentalized for even the best of reasons. Social capital takes time to develop, and is inherently non-transferable (Flora and Flora, 1993). It is also fragile and subject to erosion not only by direct assault but more importantly, by neglect, if there are many or strong competitors for investment of emotional significance or time.

The modern concept of social capital is described as the *relations between* individuals and groups. It can take several forms, some of which are mutually recognized bonds, channels of information, and norms and sanctions.

In this sense, social capital is related to the concept of social ecology, as developed in the works of Murray Bookchin. Social ecology is the study of both human and natural ecosystems, and in particular, of the social relations that affect the relation of society as a whole with nature. Social ecology goes beyond environmentalism, insisting that the issue at hand for humanity is not simply protecting nature but rather creating an ecological society in harmony with nature. The primary social unit of an ecological society is the sustainable community, a human-scale settlement based on ecological balance, community self-reliance, and participatory democracy (Bookchin, 1987).

Multiplying Social Capital

Beyond understanding the basic nature of social capital, we need to know where to locate and how to *multiply social capital* for sustainable community development.

Social networks can be divided into those with and without closure (Coleman, 1988). A network with closure is one where most of the individuals within it know each other, and the relationship of each to the others. In contrast, a network without closure is one where each individual's circle of acquaintances overlaps only partially or not at all with those of the others, and the degree of overlap is generally unknown.

Formally organized groups are the necessary recourse of societies without closure. Organized groups have established procedures for adherence and keep membership lists, follow recognized procedures to conduct their affairs, and often administer budgets and own property. Examples are churches, ethnic associations, unions, trade associations, sports associations, theater societies, or environmental groups. However, a formal organization may also be a public representation of a more primary closure society. Churches, especially ethnically-rooted ones, tend to fall into this category. Organizations which have survived an intense struggle in a hostile social environment, such as some unions and environmental groups, can also take on something of this character of closure.

Informal groups can be regular customers of a shop, users of a park, sports fans, music fans, mothers of children who play together, or groups of street youth who mutually protect each other. Members of such groups may not necessarily know each other, or even that they constitute a group, yet they can be a useful resource for each other, and an immense reservoir of energy and imagination if it can be accessed and organized.

Multiplying and using social capital is not without its problems. By its very nature, social capital can tend to mirror existing power structures. Marginalized people are sometimes marginalized exactly because they are unable to access social capital, as is often the case with the mentally ill or other people with poor social skills.

Even in a society with closure, social capital may be divided among different factions who regard each other as rivals or threats. While there are possible tools to deal with this, their success is uncertain, and the difficulties are worse in situations like larger North American cities, where there are many groups competing with others without closure, who may not even be able to communicate because of language or cultural barriers or both. This is not to claim that we should give up on prospects for sustainable community development in urban centers, but rather that we should not deceive ourselves about the challenge involved.

Community “civicness” is key to maximizing the potential of communities as agents of sustainable development (Selman and Parker, 1997). Civicness in a community will lubricate social life, enhance productivity and facilitate action; in practice, it will then become a proxy for successful policy implementation (Putnam, 1993). It is also an important component of sense of place, which is critical for community sustainability.

Along with ecological carrying capacity, we also need an increase in the “social caring capacity” of our communities (UBC Task Force on Healthy and Sustainable Communities, 1994). Social caring capacity, reflected by networks of social capital, is a prerequisite for sustainable development. Evidence from the Indian state of Kerela (see Champagne on a Beer Budget) suggests that quality of life can increase while industrial production decreases; i.e., social capital can substitute for manufactured capital. Furthermore, whereas natural capital diminishes with exploitation, social capital accumulates with regular use (Selman and Parker, 1997).

Multiplying social capital requires attention to effective and representative local governance, strong organizations, capacity-building, participatory planning, access to information, and collaboration and partnerships.

Cultural capital is the product of shared experience through traditions, customs, values, heritage, identity, and history. Although sometimes subsumed under the heading of social capital, I have become convinced as I have worked with communities in different parts of the world that cultural capital deserves its own category.



Cultural capital is particularly important in aboriginal communities and in other communities with a long history. In mainstream western society, particularly in North America, it is too often under-valued.

Enhancing cultural capital implies attention to traditions and values, heritage and place, the arts, diversity, and social history.

Strengthening Community Capital for Sustainable Community Development

Minimizing the consumption of essential natural capital means living within ecological limits, conserving and enhancing natural resources, sustainable resource management (soil, air, water, energy, agriculture, etc.), cleaner production, and minimizing waste (solid, liquid, air pollution, etc.).

Improving physical capital includes focusing on community assets such as public facilities (e.g., hospitals and schools), water and sanitation, efficient transportation, safe, quality housing, adequate infrastructure, and telecommunications.

Strengthening economic capital means focusing on: making more with less — maximizing use of existing resources (eg. using waste as a resource); making the money-go-round — circulating dollars within a community; making things ourselves — replacing imports; making something new — creating a new product; trading fairly with others; and developing community financial institutions.

Increasing human capital requires a focus on areas such as health, education, nutrition, literacy, and family and community cohesion. Basic determinants of health such as peace and safety, food, shelter, education, income and employment are necessary prerequisites.

Multiplying social capital requires attention to effective and representative local governance, strong organizations, capacity-building, participatory planning, access to information, and collaboration and partnerships.

Enhancing cultural capital implies attention to traditions and values, heritage and place, the arts, diversity and social history.

Strengthening these six forms of community capital is the foundation for sustainable community development.

The Foundation for Sustainable Community Development

Strengthening these six forms of community capital is the foundation for Sustainable Community Development. The key to understanding this approach to development is recognizing that it is based largely on appreciation of community *assets* (as well as realistic acknowledgement of challenges or, in conventional terms, deficits).

For example, a transportation system that is oriented to walking, cycling and public transportation rather than the private automobile contributes to natural capital by saving energy and reducing emissions. It contributes to human capital by reducing health-damaging air pollution and motor vehicle accidents, and by increasing the amount of exercise people get. It may contribute to social capital by increasing the social networking required for car sharing, car pooling and other more social means of getting around, in addition to the social interaction that may occur in the use of public transport. Finally, it contributes to economic capital by reducing congestion and by reducing the costs of transportation if people do not need to own a car or perhaps are only part owners in a car-sharing or car-pooling system. This in turn increases disposable income, which may be spent on more health-enhancing products and services (Hancock, 2001).

DOING DEVELOPMENT DIFFERENTLY

Several key arguments inform this book. First, the term sustainable development acquires tangible meaning when understood in terms of natural capital and natural income. The bottom line for sustainability is that we must learn to live on our natural income rather than deplete our natural capital. Economic growth with an ecological deficit is anti-economic and makes us poorer rather than richer in the long-term (Daly and Cobb, 1989). Sustainability therefore requires that we minimize our consumption of essential natural capital.

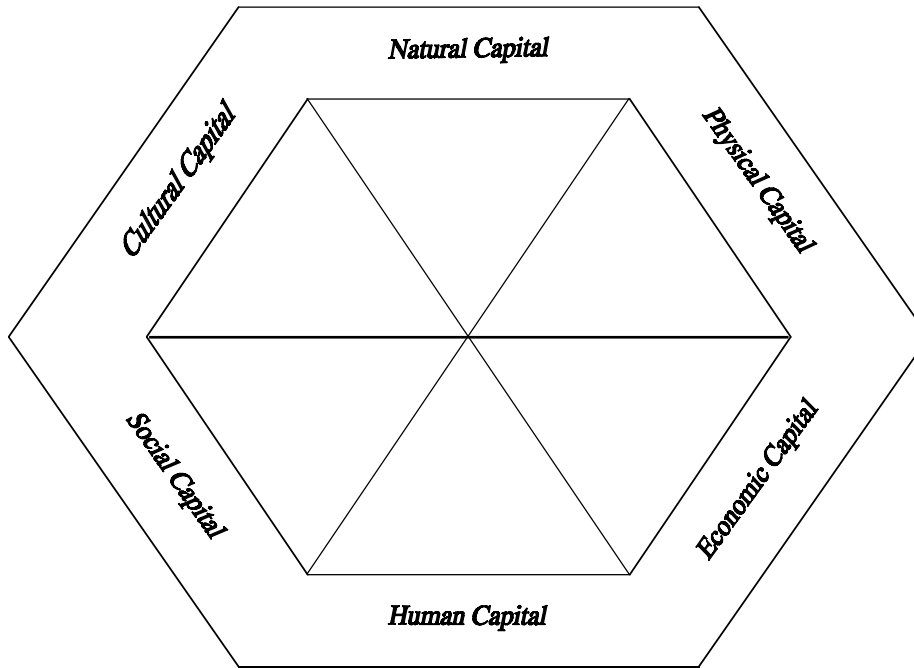


Figure 1: Community Capital is the foundation for sustainable community development. Each triangle represents the ways we can strengthen that form of capital.

Second, community capital and social equity demand that North Americans, who are among the world's most inefficient and wasteful consumers of materials and energy (ICPQL, 1996; WCED, 1987), find ways of living more lightly on the planet. At a minimum, we will have to increase the efficiency of our resource and energy use. More likely, we will also have to reduce our present (not to speak of projected) levels of materials and energy consumption.

Third, reducing our materials and energy consumption need not diminish and, in fact, would likely enhance our quality of life and the public domain — in other words, it could strengthen our community capital. It is important to distinguish here between “quality of life” and “standard of living” (Jacobs, 1993). Standard of living generally refers to disposable income for things we purchase individually, whereas quality of life can be considered as the sum of all things which people purchase collectively (e.g., the health care system, public education, policing), or those things which are not purchased at all (e.g., air quality). Standard of living refers solely to the private domain, whereas quality of life refers to the public domain, the realm of community capital.

Fourth, the critical resource for strengthening community capital is not money — rather, the critical resources are trust, imagination, courage, commitment, the rela-

tions between individuals and groups, and time, the literal currency of life. Many of the issues that people relate to most intimately — family, neighborhood, community, decompression from work, recreation, culture, etc. — depend on these resources at least as much as money. This is not to say that economic security isn't important — it is — but focusing solely on money to provide security is using 19th century thinking to address 21st century challenges.

Taken together, the direction to which these arguments point is clear. We must explicitly aim to nurture and strengthen community capital in order to improve our economic and social well-being. Government and corporate decisions should be reviewed for their effects on all forms of community capital. Programs and policies need to be effected at every level to ensure that community capital is properly considered.

In a nutshell, we need to *do development differently*.

¹The term “community capital” more conventionally refers to economic or financial capital. For example, in the US, National Community Capital is a network of more than 150 private-sector community development financial institutions (CDFIs) that provides financing, training, consulting, and advocacy for CDFIs. Active in all 50 states, the National Community Capital network invests in small businesses, quality affordable housing, and vital community services that benefit economically disadvantaged people and communities. National Community Capital is committed to leading the community development finance system to scale through capital formation, policy and capacity development. Details at <http://www.communitycapital.org/>

REFERENCES

- Bookchin, M. 1987. *The Rise of Urbanization and the Decline of Citizenship*. San Francisco: Sierra Club.
- Boothroyd, P. 1991. “Distribution Principles for Compassionate Sustainable Development.” In *Perspectives on Sustainable Development in Water Management: Towards Agreement in the Fraser Basin*, ed. A.H.J. Dorsey. Vancouver: Westwater Research Centre.
- Bridger, J. C., & Luloff, A. E. 2001. “Building the sustainable community: Is social capital the answer?” *Sociological Inquiry*, 71(4): 458-472.
- Canadian Conservation Commission. 1915. In *Towards a Liveable Metropolis*. Toronto: Metropolitan Plan Review Report. No. 13, May 1991.
- Coleman, J.S. 1988. “Social Capital in the Creation of Human Capital.” *American Journal of Sociology* 94 (supplement): S95-S120.
- Coleman, J.S. 1990. *Foundations of Social Theory*. Cambridge, Mass.: Harvard University Press.
- Daly, H.E. 1989. “Sustainable Development: From Concept and Theory Towards Operational Principles.” In *Population and Development Review*. Hoover Institution Conference.
- Daly, H.E., and J.B. Cobb, Jr. 1989. *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future*. Boston: Beacon Press.
- Flora, C.B., and J.L. Flora. 1993. “Entrepreneurial Social Infrastructure: A Necessary Ingredient.” In *Annals of the American Academy of Political and Social Science* 529 (September): 48-58.
- Foster, J.B. 1997. “Natural Capitalism?” *Dollars and Sense* 211, May/June: 9.

- Goodland, R. "Sustainability: Human, Social, Economic and Environmental," *Encyclopedia of Global Environmental Change*. John Wiley & Sons Ltd., 2002.
- Hancock, T. "People, Partnerships and human Progress: Building Community Capital," *Health Promotion International* 16 (3), Sep 2001: 275-280.
- Hawken, P., Lovins, A. and Lovins, L. H. 1999. *Natural Capitalism: Creating the Next Industrial Revolution*. Little, Brown and Co., Boston, MA.
- Henderson, H. 1996. *Building a Win-Win World: Life Beyond Global Economic Warfare*. San Francisco: Berrett-Koehler Publishers.
- Independent Commission on Population and Quality of Life (ICPQL). 1996. *Caring for the Future*. New York: Oxford University Press.
- International Council for Local Environmental Initiatives (ICLEI), International Development Research Centre (IRDC), and United Nations Environment Program. 1996. *The Local Agenda 21 Planning Guide*. Toronto: ICLEI and Ottawa: IDRC.
- Jacobs, J. 1961. *The Death and Life of Great American Cities*. New York: Random House.
- Jacobs, M. 1993. *The Green Economy: Environment, Sustainable Development, and the Politics of the Future*. Vancouver: University of British Columbia Press.
- Jansson, A-M., M. Hammer, C. Folke, and R. Costanza, eds. 1994. *Investing in Natural Capital: The Ecological Economics Approach to Sustainability*. Washington, DC: Island Press.
- McKibben, B. 1996. "The Enigma of Kerala: One State in India is Proving Development Experts Wrong." *Utne Reader* 74, March/April: 102-12.
- Mitlin, D., and D. Satterthwaite. 1991. Sustainable Development and Cities. Prepared for How Common Is Our Future? A Global NGO Forum, Habitat International Coalition, Mexico City, 4-7 March.
- National Round Table on the Environment and the Economy (NRTEE). 2003, *Environment and Sustainable Development Indicators for Canada*, Ottawa: NRTEE.
- OECD 2001. *The Well-Being of Nations: The Role of Human and Social Capital Organization for Cooperation and Development* (OECD).
- Ostrom, E. 1993. Social Capital and Development Projects. Prepared for Social Capital and Economic Development, American Academy of Arts and Sciences, Cambridge, Mass, 30-31 July.
- Pearce, D.W., E. Barbier, and A. Markandya. 1989. *Blueprint for a Green Economy*. London: Earthscan Publications.
- Pearce, D.W., E. Barbier, and A. Markandya. 1990. *Sustainable Development: Economics and Environment in the Third World*. Brookfield, Vt.: Gower Publishing.
- Porrit, J. 1989. "Seeing Green: How We Can Create A More Satisfying Society." *Utne Reader* 36, November/December: 70-77.
- President's Council on Sustainable Development. 1996. *Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future*. Washington, DC: US Government Printing.
- Putnam, R., R. Leonardi, and R. Nanetti. 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.
- Putnam, R.D. 1995. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6:1, January: 65-78.

- Rainey, D. V., Robinson, K. L., Allen, I., & Christy, R. D. 2003. "Essential forms of capital for sustainable community development." *American Journal of Agricultural Economics*, 85(3): 708-715.
- Rees, W.E. 1991. "Economics, Ecology, and the Limits of Conventional Analysis." *Journal of the Air and Waste Management Association* 41, October:1323-27.
- Rees, W.E. 1992. "Understanding Sustainable Development: Natural Capital and the New World Order." Vancouver: UBC School of Community and Regional Planning.
- Roseland, M. 1999. "Natural Capital and Social Capital: Implications for Sustainable Community Development," in J.T.Pierce and A. Dale, Editors, *Communities, Development, and Sustainability across Canada*. Vancouver: UBC Press: 190-207.
- Roseland, M. 2000. "Sustainable Community Development: Integrating Environmental, Economic, and Social Objectives," *Progress in Planning*, Volume 54 (2), October : 73-132.
- Selman, P., and J. Parker, 1997. "Citizenship, Civicness and Social Capital in Local Agenda 21." *Local Environment* 2 (2): 171-84.
- Stevens, W.K. 1997. "The Value of Nature." *New York Times*. Reprinted in *Vancouver Sun*, 24 May 1997: G9.
- University of British Columbia (UBC) Task Force on Healthy and Sustainable Communities. 1994. "Tools for Sustainability: Iteration and Implementation." In *The Ecological Public Health: From Vision to Practice*, eds. C. Chu and R. Simpson. Toronto: University of Toronto Centre for Health Promotion; Australia: Institute for Applied Environmental Research at Griffith University.
- Wackernagel, M., and W. Rees. 1996. *Our Ecological Footprint: Reducing Human Impact on the Earth*. Gabriola Island, BC: New Society Publishers.
- Woolcock, Michael. 2001. "The Place of Social Capital in Understanding Social and Economic Outcomes." *ISUMA: Canadian Journal of Policy Research*, Vol. 2, No. 1: 11-17.
- World Commission on Environment and Development (WCED). 1987. *Our Common Future*. New York: Oxford University Press.
- World Conservation Union (IUCN), United Nations Environment Program (UNEP), and World Wide Fund for Nature (WWF). 1991. *Caring for the Earth: A Strategy for Sustainable Living*. Gland, Switzerland: IUCN, UNEP, WWF.
- World Wildlife Fund et al. 2004. *Living Planet Report 2004*. Gland, Switzerland: World Wildlife Fund, United Nations Environment Program, and Global Footprint Network.