

Sustainable Louisiana

An Introduction to Sustainable Development in Louisiana

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People First; Developing Sustainable Communities is a cooperative effort of individuals and groups in Louisiana seeking to promote the joint goals of prosperous communities and a healthy environment. For further information, please contact Paul Templet, Project Coordinator.
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Environmental Problems Are Signs of Inefficiencies

Environmental problems are indicators of design flaws and waste within governments, communities, and economic systems. The problems almost always generate unneeded costs and economic inefficiencies. Conversely, a growing pool of research shows that reducing and eliminating design flaws and waste can save governments, businesses, and taxpayers millions of dollars, generate new jobs and incomes, and improve quality of life. At its core, this is what sustainability is about—eliminating design flaws and inefficiencies to reduce toxins, waste, and unneeded costs. Almost as a side benefit, the environment will improve.

Both its economic and its environmental problems are symptoms of inefficiencies in how Louisiana uses natural resources. In a cross-state analysis of the relationship between energy use and economic performance, for example, Templet found that Louisiana was at the bottom in terms of the number of jobs and amount of value-added output produced per unit of energy consumed.¹ In using the additional energy, Louisiana's businesses incur additional costs, unnecessary costs relative to competitors elsewhere. Wasteful energy use also results in environmental damage, such as greater air pollution and accelerated destruction of coastal marshes by oil and gas extraction.

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For decades, the prevailing economic and political reasoning in the state was that Louisianians had few options. Environmental degradation was seen as the price that must be paid to have even a limited degree of economic development. Providing tax breaks to large industrial firms has been seen as a primary economic development tool. Meanwhile, Louisiana outranks most states in terms of toxic releases, and water quality is impaired throughout the state. And to add insult to injury, almost 20 percent of Louisianians live in poverty, the third highest poverty rate in the country.² In a study ranking the 50 states for economic and environmental performance, Louisiana ranked 48th for economic performance and dead last for the environment.

Past economic development policies have failed, yielding environmental degradation and high poverty rates. The system must change to bring about economic and environmental improvements to Louisiana. Sustainable economic development provides an answer to these problems.

¹ Templet, P.H. 1995. "The Positive Relationship Between Jobs, Environment and the Economy: An Empirical Analysis and Review." *Spectrum* (Spring): 37-49.

² Dalaker, J. and B.D. Proctor. 2000. *Poverty in the United States: 1999*. U.S. Department of Commerce, Census Bureau. Current Population Reports - Consumer Income. P60-210. Washington D.C. September.

What Is Sustainability?

The 1987 U.N. World Commission on Environment and Development developed the term ‘sustainable development’ to describe the response to complex economic, social, and environmental problems. It defined the term as “meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.” In other words, sustainability means passing along to future generations ample stocks of environmental capital such as clean water, clean air, topsoil, predictable climate, intact ozone layers, forests, clean estuaries, oceans, and a diverse biodiversity including fish, wildlife, and plant species.³

Many find this definition to be too vague. To make the concept of sustainable development more concrete, we recommend thinking of sustainability in terms of disconnecting the historical linkages between economic growth and environmental degradation. In the past the two have moved hand-in-glove: as profits, incomes, and employment have moved to new levels, so too has the amount of raw material extracted from the earth and the amount of (often toxic) pollution dumped onto the land and into the rivers and the air. Sustainable development means finding ways to realize improvements in the standard of living without trashing the environment.

At its core sustainability is about eliminating design flaws and inefficiencies to reduce toxins, waste, and unneeded costs.

Moving toward sustainable development means finding ways to increase the standard of living while steadily diminishing the impacts on the environment. There are three separate ways toward this end:

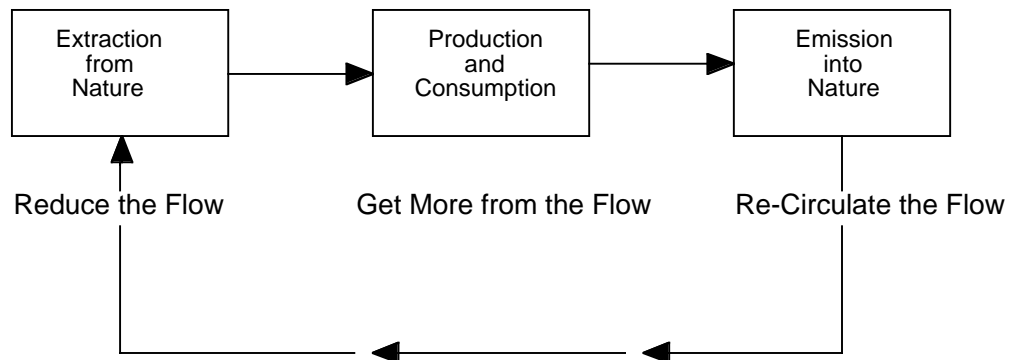
- **Reduce the flow** of scarce resources, toxic materials, and energy used by a firm or organization by reducing unneeded inputs and finding non-toxic, environmentally-sound alternatives.
- **Get more output per unit of input** by instituting measures to reduce the wastage in the use of scarce resources, toxic materials, and energy.
- **Re-circulate all waste materials** by finding ways to use the waste as a raw-material input into the production of other products.

These three ways to disconnect economic growth from environmental impacts are illustrated in Figure 1. The boxes at the top of the figure, commonly called the economic value chain, identify the three major ways in which conventional human activity increases the value of environmental resources: extracting them from their natural state, producing and consuming goods derived from the extracted resources, and disposing of wastes by emitting

³ This discussion is taken from a variety of papers prepared by the Center for Watershed and Community Health at Portland State University.

them into the environment. In each of these cases, the linkage between the economy and the environment can be broken, or at least weakened.

Figure 1: Disconnecting the Linkages Between Economic Growth and Environmental Impacts



Source: Center for Watershed and Community Health.

Reducing the flow includes shifting to methods of farming, fishing, water use, mining, and energy generation that does not deplete the resource faster than nature can replace it. For example, farming practices have resulted in the loss of fertile topsoil; some fisheries have collapsed from harvest rates that exceed replacement rates; and most electricity is generated from fossil fuels. Reducing the flow of resources extracted from the environment entails adopting farming practices that generate less erosion, eliminating over-fishing, and increasing the output from electricity generators that rely on renewable energy sources, such as wind.

Getting more from the flow requires redesigning products so they require fewer resource-inputs to produce, redesigning production processes so they are more efficient, and adopting more-efficient technologies. The opportunities are manifold. Many factories use water one time, and then flush it into the sewer system, when it would be cheaper to either use less, or use it multiple times. Motors that waste large amounts of electricity, because they use out-dated technology or are inappropriately matched to their loads, can be rewired or replaced with smaller, more efficient ones. Buildings that waste energy and incorporate toxic materials harmful to occupants can be retrofitted with additional insulation, more heating/cooling systems, and non-toxic building materials.

Re-circulating the flow of resources includes re-use and recycling. Often the waste products from one part of a production process can become an input for another: heated waste water from the end of a manufacturing process, for example, can be cycled back and used to warm the water going into the process. A waste product from one firm also can be an input for another firm. The essential point is that, in today's economy, waste products that in the past would have had little value and, hence were discarded, now increasingly have a value.

At its heart, sustainable development entails solving problems before they are created. In the past, for example, the environmental problems associated with industrial activity were addressed at the end of the industrial process—at the end of the pipe, just before effluents were released into the air or water or dumped on the ground. The sustainable approach entails moving upstream in the system to redesign products and production process so they require fewer inputs and produce less waste.

Sustainable development means finding ways to realize improvements in the standard of living without trashing the environment.

It also is important to recognize that moving toward sustainable development involves a fundamentally different way of thinking than what underlies traditional environmental-compliance programs. Though government can play important roles in providing the governance structures, policies and programs needed to foster these sustainable-development efforts, sustainability measures are typically adopted voluntarily by a firm or organization because they believe the practices will provide added value. They are not an environmental-compliance module added onto the central, core functions of a firm or organization. Instead, they build upon, enhance, and are integrated into existing profit-enhancement, quality control, human-resource, and other internal programs. They have these characteristics because they evolve in response to recognition that environmental problems are indicators of inefficiencies and design flaws, which waste resources, energy, and, ultimately, money.

Businesses, Governments, and Communities Are Moving Toward Sustainability

This report is the introduction to a series of reports written by ECONorthwest, based in Eugene, Oregon, in conjunction with People First, Sustainable Communities, an organization committed to promoting the accomplishment of prosperous communities and a healthy environment in Louisiana.

- One report describes how businesses can increase their profits developing sustainable practices.
- Another focuses on buildings, commercial and residential. The report describes a variety of ways that homeowners, builders, and commercial building owners can reduce their negative impact on the environment while reducing energy and materials costs.
- A third report describes how state and local governments in Louisiana can help firms and communities meet sustainability goals.

These reports are modeled on similar research elsewhere, and especially the Pacific Northwest, a region often recognized as a global leader in technological, economic, and environmental innovation. Trends in that region have important implications for Louisiana. One study in the Pacific

Northwest quickly found that, between 1992 and 1999, 137 firms and agencies saved more than \$42 million, and the researchers concluded that, if only one-quarter of the firms in nine industrial sectors were to take similar actions, the total savings (and increase in profits) for the region would exceed \$1.1 billion over five years.⁴ These findings, and others like them, have helped business leaders and elected officials recognize the importance of taking the steps needed to encourage broader adoption of actions that improve the region's economy and environment.

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We hope the information in these reports serve to inspire more widespread applications of sustainability measures at many firms, organizations, homes, and governments throughout Louisiana, as well as a more serious dialogue among Louisianians about strategies for accelerating the process.

⁴ Goodstein, Eban, Bob Doppelt, and Karin Sable. 2000. *Saving Salmon, Saving Money: Innovative Business Leadership in the Pacific Northwest*. Center for Watershed and Community Health, Portland State University. Portland, Oregon. January.

How to Get More Information

Anne Fifield and Ernie Niemi wrote this report at ECONorthwest, an economic consulting firm in Eugene, Oregon, in conjunction with People First, Sustainable Communities, an organization committed to promoting the accomplishment of prosperous communities and a healthy environment in Louisiana. Funding support for the project was provided by the Ford Foundation. We gratefully acknowledge the insight and assistance of Paul Templet, Amy Clipp, and all the individuals we interviewed.

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