



## AN ECONOMY DESIGNED TO SUSTAIN THE ENVIRONMENT

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***Eco-Economy:  
Building an  
Economy for  
the Earth***  
by Lester Brown

You have probably heard of Lester Brown's work before—whether you know it or not. For the past 30 years, when an environmentalist or activist has wanted to document ecological problems or cite data on forests, fisheries, or population, he or she has often quoted Lester Brown's reports. Ray Anderson of the carpet company Interface supported his rallying cry for sustainability with Brown's statistics. Dana Meadows, the founder of our organization, Sustainability Institute, kept 15-years' worth of his "State of the World" books on a shelf next to her desk.

For three decades, Lester Brown has been dedicated to researching and communicating the major trends in the world's use of resources, the health of our ecosystems, and the state of our society. His hope has been that by understanding the patterns of behavior of our economic system and its impact on the environment, all of us—individuals, businesses, nations—would commit ourselves to halting destructive activities. But despite the many efforts that Brown's work has inspired, he says they're not enough.

### Linking Economics with Environment

In his latest book, *Eco-Economy: Building an Economy for the Earth* (Earth Policy Institute, 2001), Brown urges

us to recognize that our economy does not function separately from the natural world. While we may be able to ignore the effects of our economic activity on the environment in the short run, in the long run, if we do not create an economy aligned with the Earth, then we will erode the natural systems on which life depends. Brown argues that "the economic policies that have yielded the extraordinary growth in the world economy are the same ones that are destroying its support systems." He cites statistics that show how worldwide misman-

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agement has been eroding forests, rangelands, fisheries, and croplands—ecosystems that provide both raw materials and food.

Brown offers us three challenges: We need to understand how our current economic system and population growth are incompatible with the way that natural systems function; we need to create a positive, hopeful vision of an economy that works in harmony with ecology; and we need to change the structure of our current economic system to fulfill that vision. This last challenge in particular caught our interest as systems thinkers. The central premise of systems thinking is that a system's underlying structure drives its behavior. As such, before we make changes, we should first understand that structure—that is, look at things such as

information flows, rewards, and incentives to understand why people and physical systems act the way they do. Then we need to change the structure in ways that harness the energy of the system to push itself in a needed direction and don't require constant effort and energy to sustain progress (see "Non-Structural vs. Structural Interventions").

For our economy to support the natural systems on which all life depends, Brown says we need to create incentives that guide behavior naturally in positive directions. In the first section of *Eco-Economy*, he concisely summarizes the ecological trends that are motivating the need for change, from global climate instability to regional water-supply issues to species loss. In the next section, he moves quickly from the bad news into an ambitious, inspiring vision for a more sustainable economy. This vision includes a hydrogen-based energy system, a closed-material product economy, and a redesign of cities. In the final section, Brown explores ways in which we could rewrite some of the rules of our economy to support the necessary changes.

### Harnessing the Power of the Market

Brown's approach in these last chapters feels refreshingly *practical*; he describes how various existing public-policy tools could harness the power of the market to improve our economy by including both better information and truer costs. The theory is that the market provides a powerful system of product self-selection through supply and demand—in other words, how people spend money is what determines whether products and services are successful or

not. So if ecological goals were better incorporated into the market signals (through costs and information), then the market could help nudge the world into alignment with natural systems. Some of his ideas include:

**Eco-labeling** Consumers ultimately drive the success of products and businesses. Currently, many commodity products compete primarily on cost, and companies are forced to continually reduce their costs. This emphasis generally takes away from efforts to reduce the impact of products on the environment. Brown believes that when product labels provide information about superior environmental practices, such as farming organically, recycling fibers in paper, and designing for energy efficiency, consumers will reward the companies that are committed to developing more sustainable solutions.

**Tax shifting** What we tax sends a powerful signal throughout the economy. For example, high taxes on wages limit the number of people we hire and the pay increases we offer. Conversely, low taxes on pollution and resource usage encourage us, as Brown writes, “to exploit our natural resources as rapidly and competitively as possible.” To align taxation with a more robust environment, Brown proposes “tax shifting”—changing not the level but the composition of taxes. To do so, we could decrease taxes on salaries and raise taxes on undesirable things, such as toxic waste and emission. He outlines actions that people in the U.S. can take similar to what many European countries have already done.

**Subsidy shifting** Government subsidies also produce economic incentives that damage our ecosystems. Brown quotes a recent report

## NON-STRUCTURAL VS. STRUCTURAL INTERVENTIONS

Non-Structural	Structural
The book industry spends marketing dollars convincing people they want to own books.	The book industry convinces residential architects and design gurus to build bookshelves into the walls so people are motivated to fill the shelves with books.
Community organizers educate people about the value of informal neighborhood networks.	Community organizers advocate zoning laws that create clusters of homes, where people can see one another from their front porches and yards. Networks naturally evolve.
A manufacturing company implores line operators to dedicate more time to work on fixing machines that create defective parts.	A manufacturing company restricts access to supplies so that operators have to fix the root-cause problems of their machines in order to meet their production goals.

One of the most interesting contributions of Brown’s book is his focus on changing the structure of the market economy to make it more consistent with the ecological world. As shown in these examples, well-designed structural changes are changes in physical structure, information flows, or rewards and incentives that align the implicit goals of local decision-makers (such as individual consumers or investors) with the desired change in the overall system’s behavior.

that identified over \$700 billion of environmentally destructive subsidies that encourage the overuse of water, fossil fuels, pesticides, and fishery resources. Many of these subsidies initially helped sectors such as farmers and fishing companies that were struggling with high costs, but, eventually, the subsidies led those same sectors to ignore signals of resource scarcity. Brown asks us to see this problem in the positive: What if we subsidized environmentally constructive activities? What would the impact of \$700 billion be?

*Eco-Economy’s* focus on moving from understanding the trends to integrating our economic systems with the ecological world is appealing to systems thinkers—it helps us

understand both the physical system at work and the rewards and incentives that encourage our decision-making. While no single book can answer the question of what *the* sustainable economy is, *Eco-Economy* reminds us that we have practical policy tools that can guide the economy in a better direction and inspires us to try again to do so. ■

For more information about creating an eco-economy, visit Lester Brown’s new research group, the Earth Policy Institute, at [www.earth-policy.org](http://www.earth-policy.org).

Drew Jones and Don Seville work for Sustainability Institute, a research and consulting center that uses systems thinking and organizational learning to help create a more sustainable world ([www.sustainabilityinstitute.org](http://www.sustainabilityinstitute.org)).