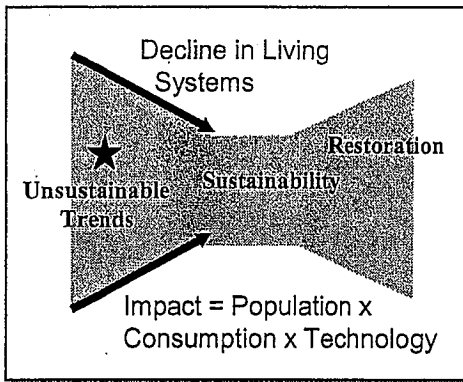
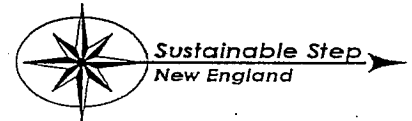


A 10 Minute Overview of Sustainability

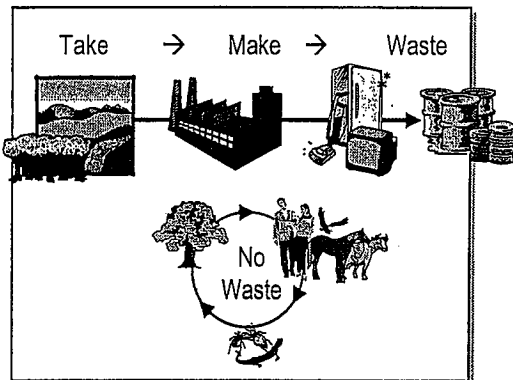


★ The Big Picture

We face two global, converging trends that cannot be sustained. Human impact on the planet is increasing steeply, which is causing a sharp rate of decline in the health and capacity of people and other living things. These trends have costly repercussions: wars, cancer, asthma, market volatility, energy costs, regulation, pollution, sick buildings, species extinction, etc.

How can organizations respond strategically to the scope and rate of the unpredictable changes now under way? Opportunities for a preventive, strategic response become possible by exploring these challenges at a systemic level rather than reacting to each new issue.

Here's the core of the problem when we look at the systemic level:



Industrial vs. Natural Systems

Our industrial systems are linear: we take raw materials, make products and services, and turn over 90% (by weight) of the original mined raw material and energy into unusable waste. By contrast, nature works in cycles so "waste" from one part of the system becomes nutrient for another. Nature has functioned cyclically for 3.5 billion years, leading to ever increasing resiliency, productivity, and diversity. For our quality of life to improve long term, humans have to learn to mimic cyclic natural systems. The most basic Laws of Physics illustrate why a linear approach is problematic.

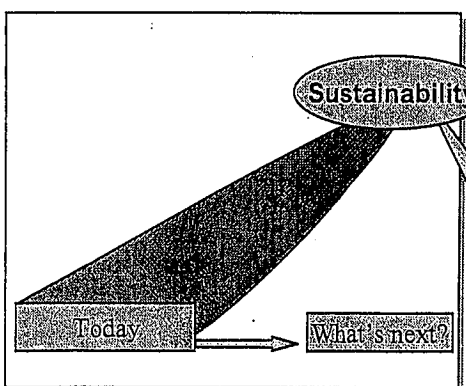
Here's the scientific basis for many solutions:

Nothing disappears: there's no "away."
 Everything spreads
 We consume energy & material quality: its purity and structure.
 Sun-driven processes restore quality

Nature Works in Cycles Because of the Laws of Physics

- Since nothing disappears (matter and energy are conserved) waste we throw "away" stays in the system. Earth's capacity is finite.
- Everything spreads. Contaminants will always disperse, and can build up in our bodies.
- Consumption degrades the usefulness of energy & materials.
- Only sun-driven processes restore usefulness (e.g., purity and structure of food, forests, soil, oceans, metals, minerals, fuels, etc.). So if we diminish the green space, we reduce the system's capacity to recover.

Therefore, to make businesses, communities, and individual practices more sustainable, what should we do?



Guiding Actions for a Better World

Based on these scientific laws, four categories of actions become most important. Strategic questions based on these categories (see over) can help us move towards creating new, profitable business models and healthy communities.

To create a sustainable society, address impacts on nature's functions and diversity by systematically reducing:

- 1) Use of material from the earth's crust (i.e. fossil fuels and metals)
- 2) Use of persistent, and/or toxics and/or synthetics (i.e. carcinogens)
- 3) Degradation of living systems (i.e. over-harvesting)
- 4) And, meet basic human needs worldwide (i.e. address inequity)

Next Steps

There are many steps and a major societal transition between where we are today and an equitable, restorative society. These tools can help you map the journey.

Strategic Questions to Ask to Move Towards Sustainable Practices:

Which basic human need(s) are we actually seeking to fulfill?

Clean air, water, food	Shelter, warmth, light	Understanding
Leisure & peaceful enjoyment	Creativity	Identity/meaning
Health & safety	Participation in decisions	Affection
Freedom & equal treatment	Mobility	Connection to community

How can we meet these needs using as little material and energy as possible while protecting living systems?

Here are some examples of answers to this question, focusing on some of the most important actions in the four key categories:

Mined Materials including fossil fuels:

- Reduce transportation required: locate operations near suppliers and customers; buy from local suppliers
 - Use transportation choices that reduce fossil fuel use, e.g., telecommuting, public transportation, rail; e-mail and regular mail rather than overnight services; buy the smallest, most fuel-efficient vehicle in the class of vehicle needed for the most miles, and only rent extra capacity when needed; use alternative fuel vehicles
 - Practice 'green' building & renovation
 - Conserve energy & use energy efficient products
 - Design for product take-back and re-manufacture
 - Purchase electricity from green (renewable) power providers
 - Minimize use of metals & minerals, & reuse & recycle them at end of life
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Persistent and/or toxic synthetics, chemicals:

- Use non-toxic, biodegradable and organic materials and products
 - Avoid disposable, synthetic products
 - Reduce, reuse, remanufacture and recycle synthetic materials in closed loops
 - Ask yourself, "When this material breaks down and spreads, will I want it in my body? How can I get the same value and service while minimizing use of this material?"
-

Living systems:

- Maintain open space & wetlands: redevelop brownfields and in-fill rather than build on open space; invest in sustainable reforestation
 - Promote transportation and building policies that limit sprawl
 - Tele-commute &/or use building space effectively rather than expanding
 - Promote habitat protection, biodiversity, reforestation; use less meat & more local organic, seasonal produce in food services; compost waste; replace chemical lawns with native landscaping
 - Maintain water & soil quality with living systems for human waste and storm water control and remediation
 - Use non-toxic materials, including in custodial services
 - Reuse materials, improve product durability and repairability, and recycle (with small down-cycles) so less virgin material is required
 - Buy recycled materials & independently certified, sustainable forest products
-

Meeting human needs worldwide

- Ensure changes/solutions meet human needs of all involved and affected
 - Invest in/support efforts that address the roots of social, ecological and/or economic problems *in the communities from which your labor, materials, energy and/or products are drawn*; i.e. support education, community building, micro-lending, regenerative technologies, public services, affordable housing, etc.
 - Shift to flows of service: lease & remanufacture equipment rather than sell & dispose; sell services that help communities reduce crime instead of (or in addition to) selling locks and alarms...
 - Locate/expand operations close to large unemployed and under-employed populations
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