

The Natural Step: A Framework for Sustainability

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A Framework

The Natural Step (TNS) is an international science-based framework for understanding sustainability. Within TNS an organization can combine specific tools (such as self-assessments), technologies (such as specific energy-saving or pollution preventing devices), environmental management strategies (such as specific sets of management practices), and systems (such as ISO 14001 or other environmental management systems) in a unified way that promotes their own and the planet's sustainability.

Some organizations in the US that are currently applying or exploring the TNS framework include Hewlett-Packard, Starbuck's, Nike, Home Dept, Bank of America, Interface, Inc., Collins Pine, IKEA, and McDonald's.

The Natural Step, developed by Dr. Karl-Henrik Robért of Sweden in 1989 through a consensus-building process within the scientific community, is based on four principles, or "System Conditions," derived from the laws of thermodynamics and international standards of social equity:

• Four system conditions

1. Substances from the earth's crust must not systematically increase in nature. That is, fossil fuels, metals and minerals should not be extracted faster than they can be redeposited.
2. Substances produced by society must not systematically increase in nature. That is, toxic substances should not be produced at a rate faster than they can be broken down in nature, and that synthetic compounds that do not break down should be systematically eliminated.
3. The physical basis for the productivity and diversity of nature must not be systematically deteriorated. That is, land and resource use should contribute to regeneration of renewable resources.
4. There must be fair and efficient use of resources with respect to meeting human needs. This is what #1-3 are *for*, after all.

• Three unique benefits

In practice, these principles provide three unique benefits:

- these principles provide a clear guide for setting goals and objectives, developing policies and programs, and measuring successful progress, as is required for any environmental management system (including ISO 14001).
- they provide overriding, science-based standards against which organizations can measure the effectiveness of their tools, technologies, strategies and systems (TTSS).
- they enable an organization to develop explicit criteria to prioritize their application of specific TTSS, and ensure that the selected TTSS work together to accomplish the overall environmental and financial goals of the organization.

In summary, they actually help to move an organization toward full environmental *sustainability* rather than only toward preventing pollution or adopting piecemeal activities such as recycling or energy reduction.

A Compass for the Journey

TNS is often compared to a *compass* that provides direction and guidance for the journey toward sustainability. By itself it does not prescribe specific TTSS, or contain specific measurement methods. Organizations adopting TNS must provide their own means of travel and create an environmental odometer to track their progress.

But TNS does constitute the goal of the journey, and one that is worth striving for.

• Definition of Sustainability

A *sustainable* organization (or at least one that is on the path toward sustainability) would be able to answer "yes" to the following questions based on the four System Conditions:

- Does your organization systematically reduce its dependence on substances from the earth's crust?
- Does your organization systematically reduce its dependence on unnatural substances produced by society?
- Does your organization systematically enhance the physical basis for productivity and diversity of nature?
- Does your organization ensure the fair and efficient use of resources for human beings?

• Measurements

Numerous scales have been or are being developed for measuring progress toward sustainability. Two that are most applicable to the TNS framework are:

- Direct measurements of reductions or enhancements related to the four System Conditions (e.g., tons of metal, non-biodegradable chemicals, acres of green space, and equity distribution of resources)
- Indices such as the "ecological footprint" developed by Mathis Wackernagel, Ph.D.

• Unanticipated benefits

Organizations that have adopted TNS principles to guide them toward sustainability report the following kinds of unanticipated benefits:

- Reduced costs
- Improved employee morale
- Increased profits
- Increased stock prices
- Improved public image
- Improved relationships with enforcers
- Streamlined processes

• For more information

The Natural Step, US : www.naturalstep.org