Effective Approaches for Motivating People and Institutions to Adopt More Sustainable Practices and Technologies

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Roundtable on Science and Technology for Sustainability

Overview

1. Problem Statement
2. Personal Behavior
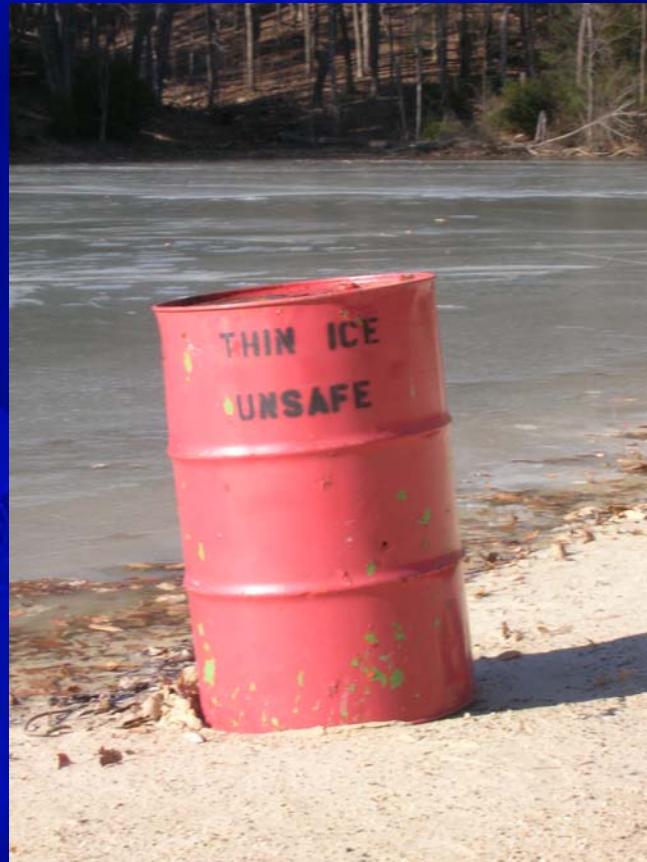3. Institutional Behavior

Thesis

- Changes in personal and institutional behavior are needed to achieve a transition to sustainability.

- We do not have a systematic understanding of the behavior changes needed for a transition to sustainability or mechanisms needed to trigger those changes.

Question

⭐ What specific role could Roundtable play in identifying those changes and in realizing them?

1. Problem Statement

Negative Trends Continue

✦ Problem-specific trends

✦ Trends are widespread

✦ Many trends are accelerating

✦ "It is not one problem. It is all of them."

Better Data and Information

⌖ We have vastly better information about the environment and environmental trends now than we had in 1970. For example:

  ⌖ Millennium Ecosystem Assessment

  ⌖ IPCC Reports

  ⌖ National "State of Environment" Reports

  ⌖ Air & Water Quality Monitoring

Root Causes of Negative Environmental Trends

✡ Population

✡ Consumption

Population and Human Behavior

✩ *Short Term:* meet unsatisfied demand for contraception.

✩ *Medium Term:* enhance status of women, particularly through education

✩ *Long Term:* delay onset and increase spacing of childbearing

NRC: Our Common Journey (1999)

Lessons and Outcomes

- Opportunity, not coercion
- Opportunities available in short-term
- Problem specific
- Context specific

- Population growth is decelerating
- Peak likely around 2050

Consumption and Human Behavior

- Drivers:
  - Basic needs (food, shelter, drinking water, etc.)
  - Better quality of life
  - Freedom/opportunity
  - Status/prestige/competition

Tendency not to Deal with Behavioral Aspects of Consumption

- Rationales:
  - Don't want to restrict personal choices
  - Don't appear to advocate "going back to caves"
  - Don't want to limit opportunities, especially for developing countries
- Instead:
  - Improve technology
  - Improve efficiency

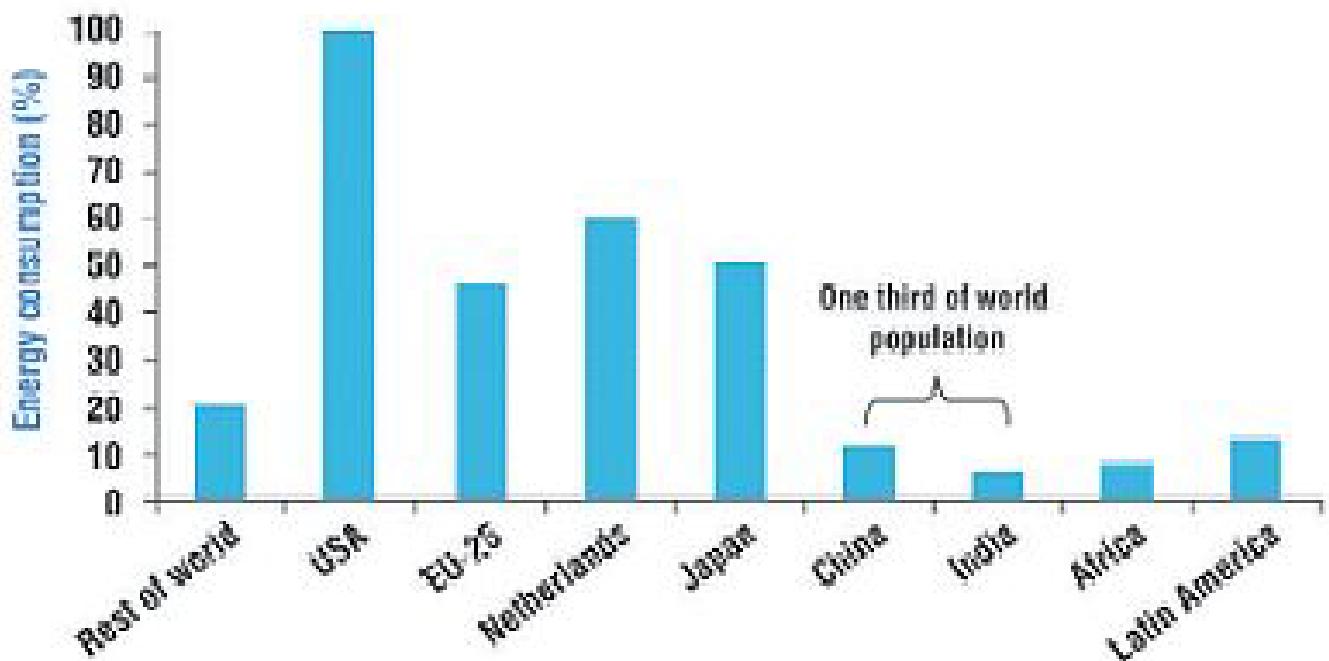# *What if rest of world consumed energy at U.S. per capita levels?*

Figure 1. Primary energy consumption per capita, relative to the US.
Source: IGU/IEA

2. Individual Behavior

- Questions from population issue:
  - How can we create attractive short-term opportunities?
  - How can we expand choices rather than restrict them?

Of course, prices affect behavior

Community-Based Social Marketing

- Identify and prioritize barriers to desired activity.
- Selected behavior change tools that match barriers to be overcome
- Design and Evaluation
    - Commitment
    - Prompts
    - Norms
    - Communication
    - Incentives
- Design and Evaluation

Environmental Norm Activivation

☆ *Abstract Environmental Protection Norm:* I have an obligation to protect the environment

☆ *Abstract Reciprocity Norm:* I have an obligation to act to solve common problems if others are doing or will do their fair share.

Michael P. Vandenburgh, ELR (2005)

Awareness of Consequences

⛶ The mean individual behavior in the aggregate causes an environmental problem.

⛶ Share of problem attributable to me (relative to mean individual behavior and relative to other source categories) indicates I am not doing my fair share.

Ascription of Responsibility

⌘ If mean individual changes behavior X or individuals in the aggregate change behavior X, the environmental problem will be ameliorated.

⌘ I can do my fair share relative to the mean individual, or individuals as a group can do their fair share relative to other source categories, by changing behavior X.

Concrete norm: individuals should change behavior x

⚔ *Direct environmental behavior:* I do not intend to engage in behavior X.

⚔ *Civic behavior:* I intend to support government programs that provided alternatives to, or otherwise discourage, behavior X.

3. Institutional Behavior

⌘ U.S. Constitution designed based on keen sense of how people behave, particularly people in power.

⌘ Hence, for instance, separation of powers.

What changes do we need to govern for sustainability?

⍺ Human tendencies in governance:
  ⍺ Short-term thinking
  ⍺ Ignore negative trends
  ⍺ Self interest
⍺ Options include:
  ⍺ National entity with data-gathering and strategic responsibilities for sustainable development
  ⍺ National entity that develops and reports satellite data corresponding to GDP.
  ⍺ Other?

Two Types of Environmental Laws

⌗ Environmental Law
- ⌗ Intended primarily to protect human health and environment
- ⌗ Primarily regulatory
- ⌗ Transparent
- ⌗ Significant public participation
- ⌗ Well documented

⌗ Anti-Environmental Law
- ⌗ Effect is to harm environment and public health
- ⌗ Exists in all types of laws
- ⌗ Not transparent
- ⌗ Not subject to significant public participation
- ⌗ Not well documented

Integrated Decision-Making

✵ Key action principle for sustainability

✵ Tools:
  ✵ Mapping
  ✵ Price

✵ How to encourage use of tools?

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