



# Comments on Chapter I: Sustainability Science and Sustainable Development

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- Human well-being as the foundation of sustainability science
- Role of practice in current sustainability science
- Sustainability, sustainability science, and sustainable development

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# Anthropocentrism Framework

- To limit the sustainability debate, focus on humanity
- Anthropocentrism still requires ecocentrism, as natural ecosystems provide environments resilient to climate change, medicines, and the natural resources used to increase economic growth



# Ethic of Sustainable Development

- Expand resources, improve quality of life for as many people with minimal prosthetic dependence
- Inextricably linked to population growth
- Measure of success: ecological footprint (per capita and total)

Wilson (1998)

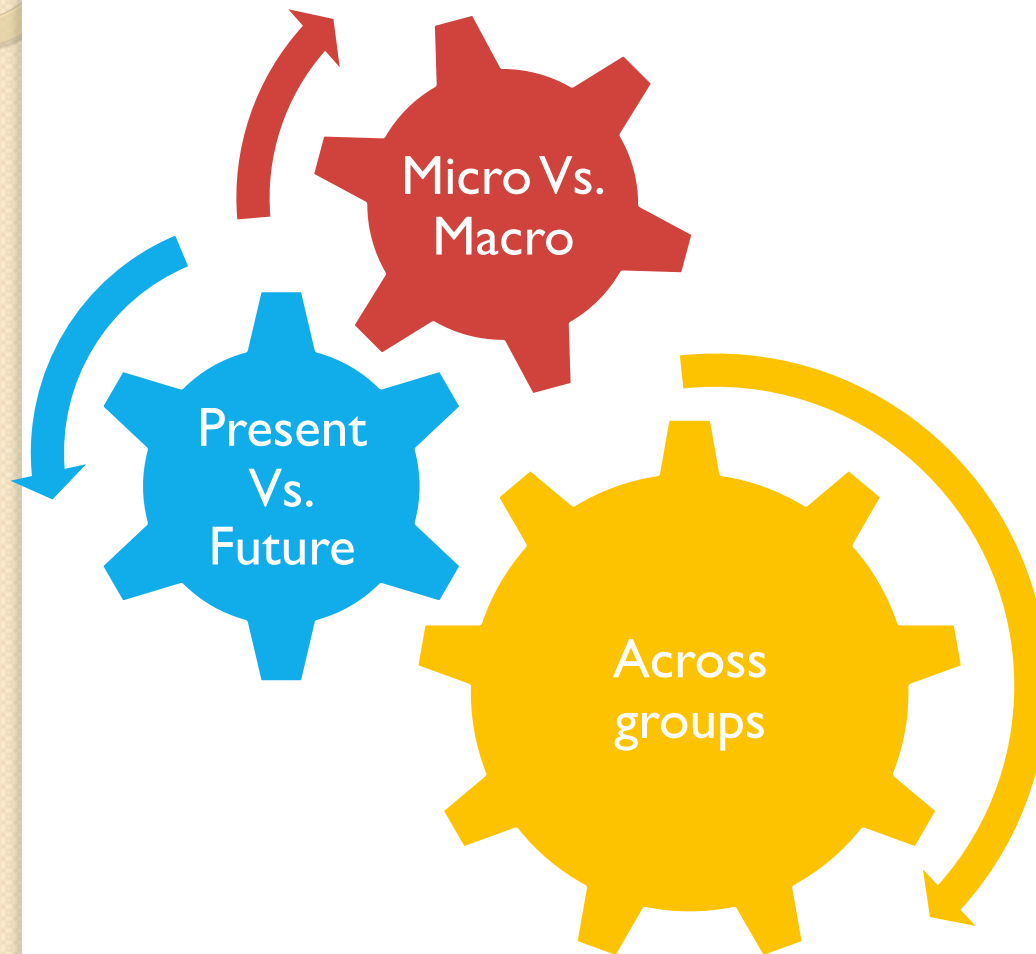
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# Path to Sustainable Development

- Full-cost accounting
  - Include environmental degradation as a COST
  - Natural world and human well-being must be included
- Conservation ethic: anthropocentric protection of ecological world
  - Take the rest of life with us as we meet the environmental challenge

# Sustainable Development: Varying Contexts



- Individuals vs. Society
- Nation vs. World
- Academia vs. Industry
- Industry vs. Industry
- Nation vs. Nation
- Nation vs. World



# Industry views

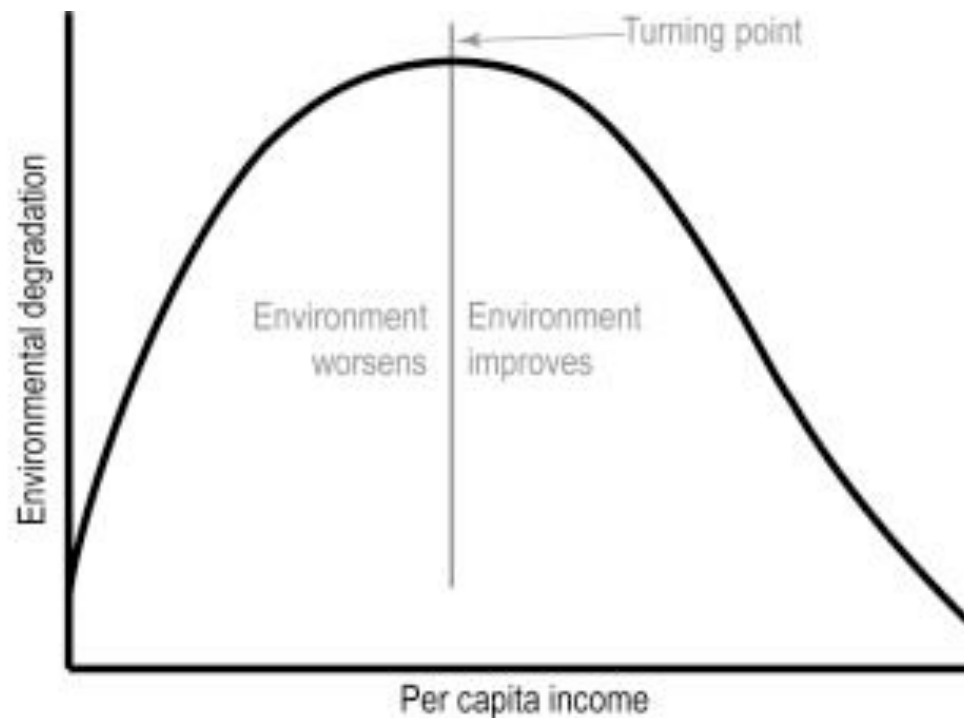
- Varying views of sustainability in industry
  - Dow Jones Sustainability Index
  - Community Sustainability from Sustainable Measures
- New Framework: 'Conditions, characteristics and indicators of sustainability'
  - Triple Bottom Line
  - Natural Step

Marshall and Toeffel (2005)

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# Nation vs. Nation

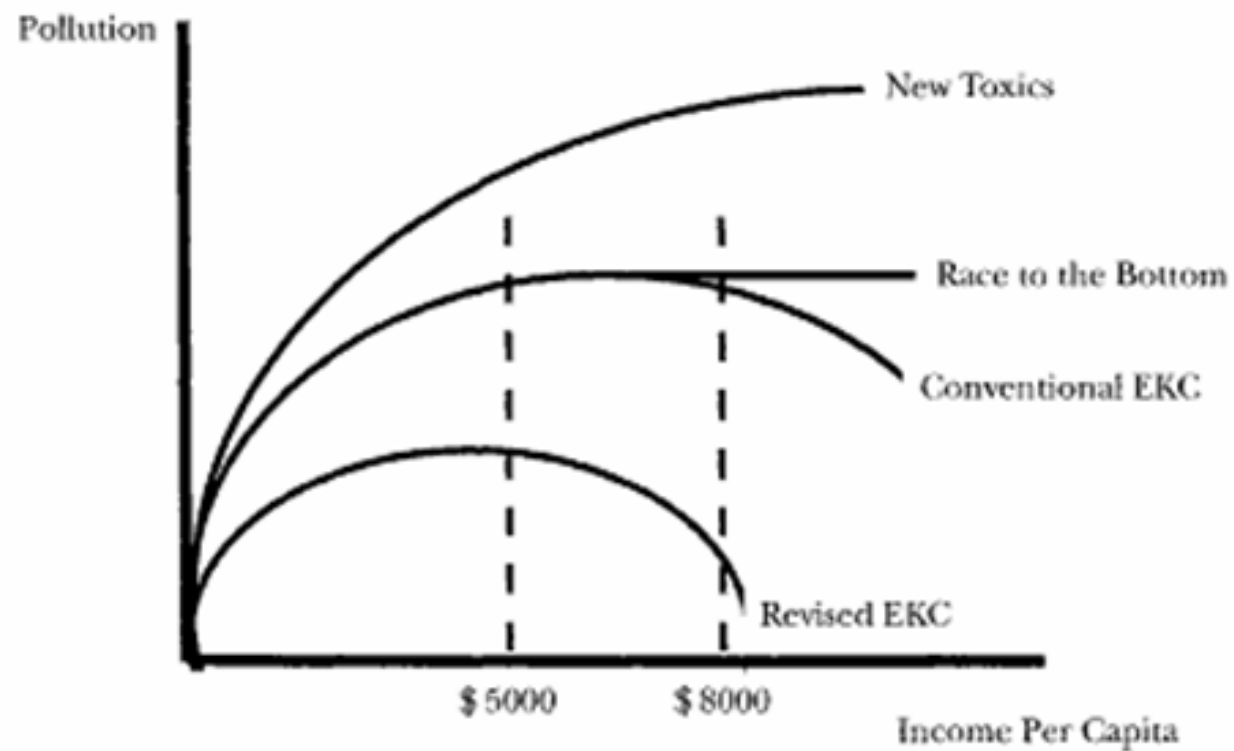
- Environmental Kuznets Curve



# And the Controversy

*Figure 1*

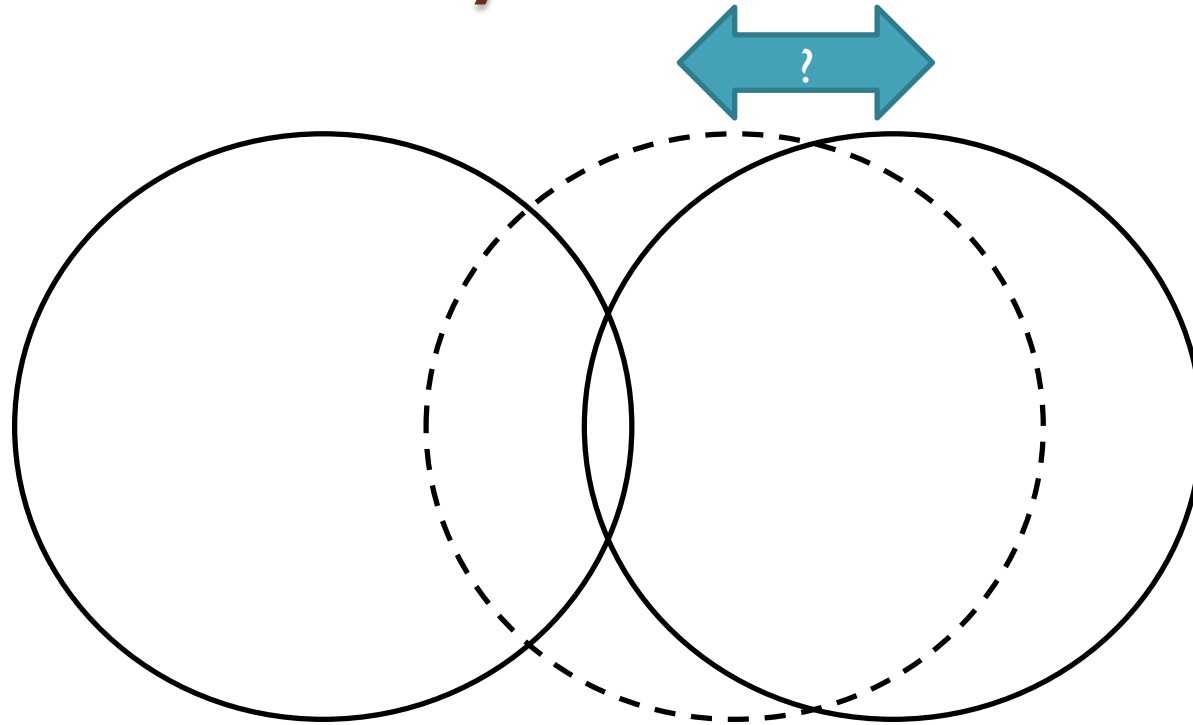
**Environmental Kuznets Curve: Different Scenarios**




Dasgupta (2003)



# Sustainable Development vs. Sustainability Science Revisited





# Who are sustainability scientists?

- Educated people
- People who are interested enough in the ‘natural’ environment to want to study it
- Do these often imply certain moral beliefs?
- Are these moral beliefs necessary to practice sustainable development from an anthropocentric standpoint?



# Who implements sustainable development?

- Citizens
- Politicians
- Industrial and economic leaders
- NGOs
- Sustainability scientists?
- Not all are educated
- Not all are interested in the 'natural' environment (except insofar as they depend on it)
- **BUT ALL ARE REQUIRED TO BE ON BOARD FOR SUSTAINABLE DEVELOPMENT TO WORK!!**



## Pros of high SS-SD overlap:

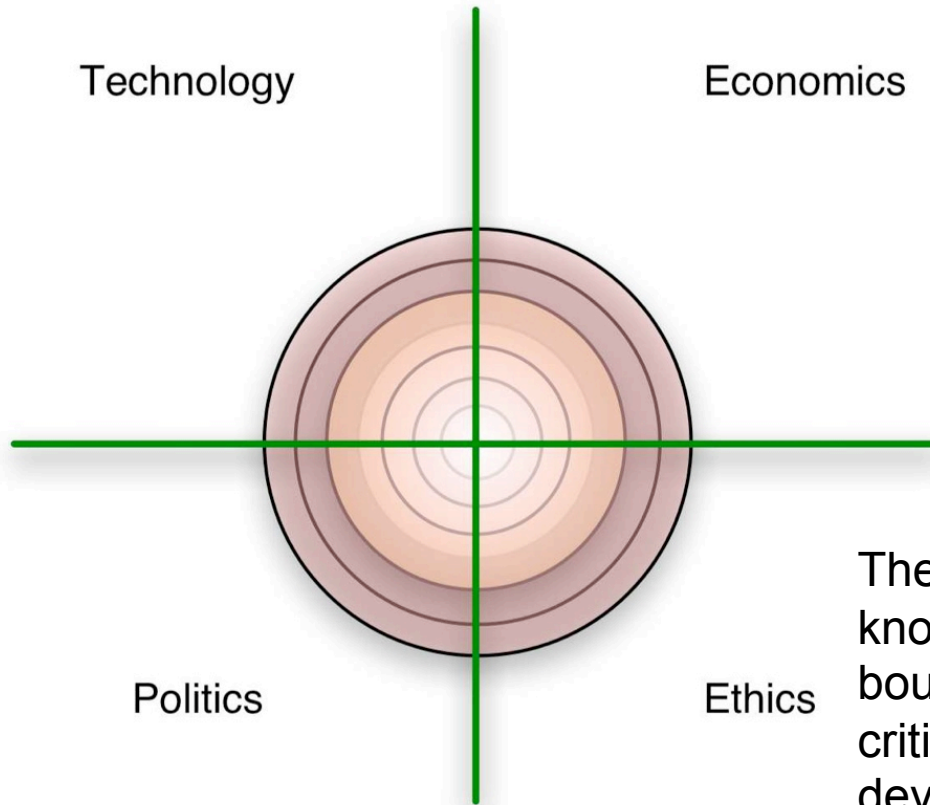
- Efficiency – knowledge is directly (and correctly!) transferred from science to practice
- Encourages education: if knowledge of sustainability science is required to practice sustainable development, more people might be encouraged to educate themselves
- Others?



## Cons of high SS-SD overlap

- Elitism – as SD, arguably society's greatest current challenge, becomes an elitist venture, participation and interest may decline
- Skewed moral compass – if only those who are educated/interested in the 'natural' world can participate, the values of society at large are not represented and anthropocentrism is potentially undermined

# Sustainable development: poster child for “consilience”?



E.O. Wilson, *Consilience*

The notion and need for a unity of knowledge across traditional boundaries of knowledge is critical to sustainable development. At such intersections of knowledge we can discuss the difference between scientific and ethical uncertainty