

Sustainable Indicators

Jan Suurland

Counselor for Environment and Spatial Planning

Royal Netherlands Embassy

E-mail: VMWNL@aol.com

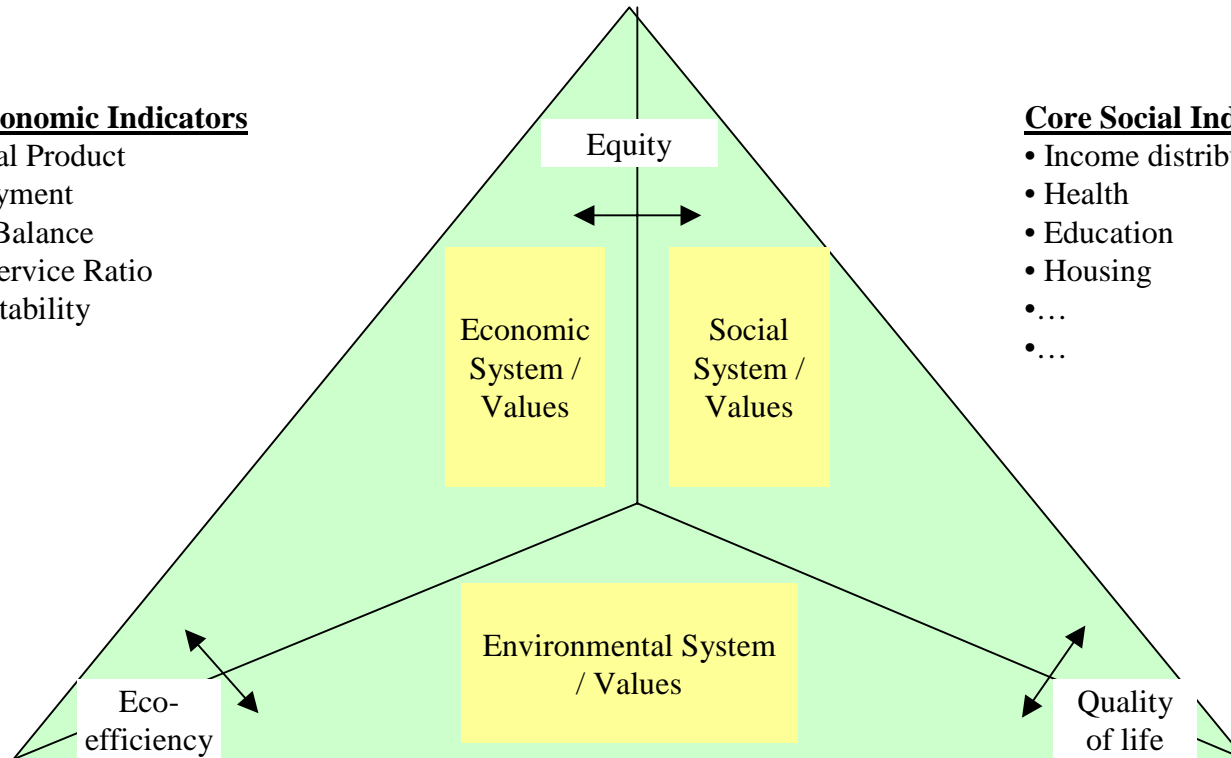
Framework Sustainability Indicators

Core Economic Indicators

- National Product
- Employment
- Trade Balance
- Debt/Service Ratio
- Price Stability
- ...
- ...

Core Social Indicators

- Income distribution
- Health
- Education
- Housing
- ...
- ...

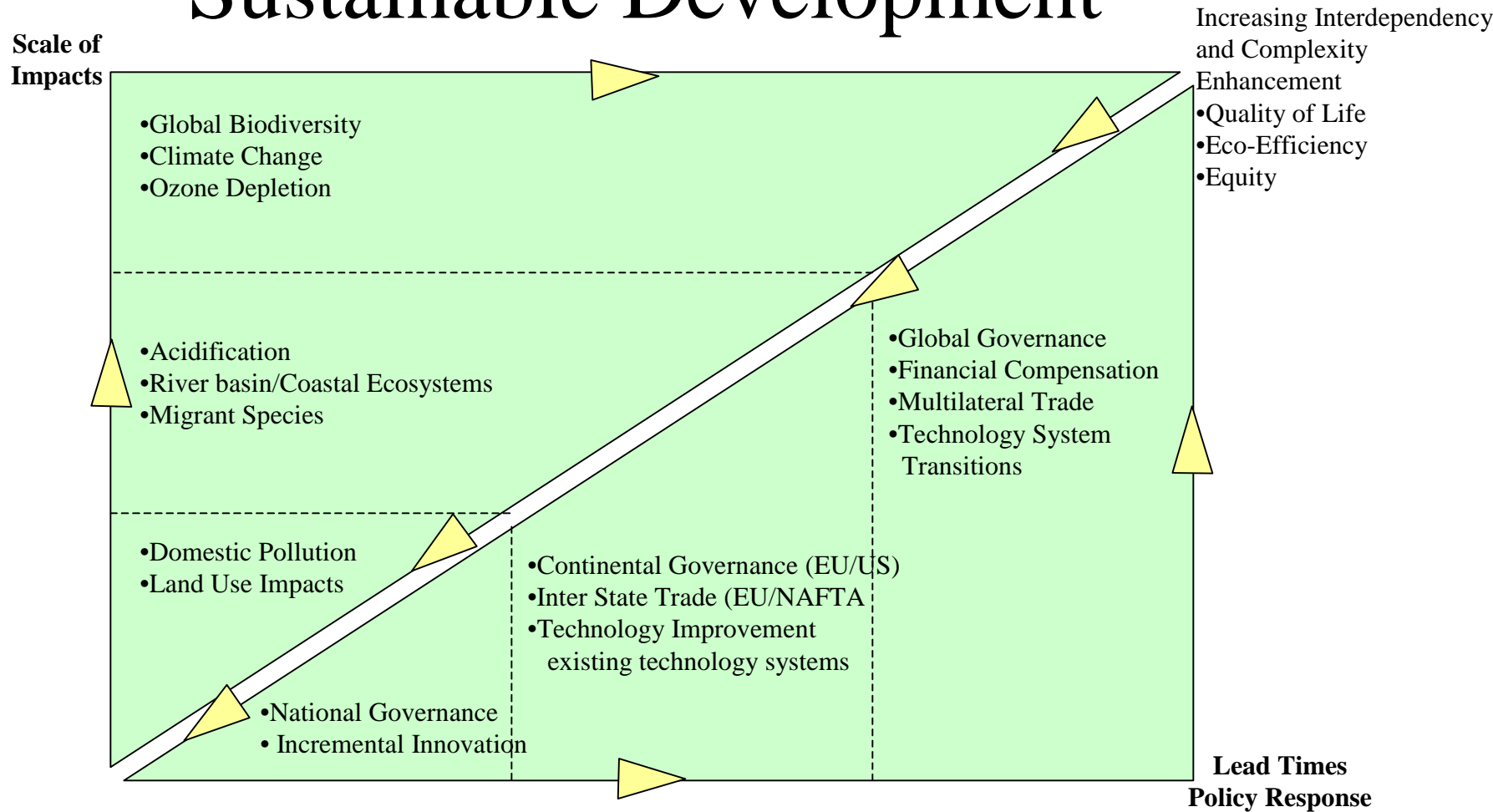


Core Environmental Indicators

- Air, Water, Soil Quality / Pressures
- Ecosystem Quality (biodiversity) / Pressures

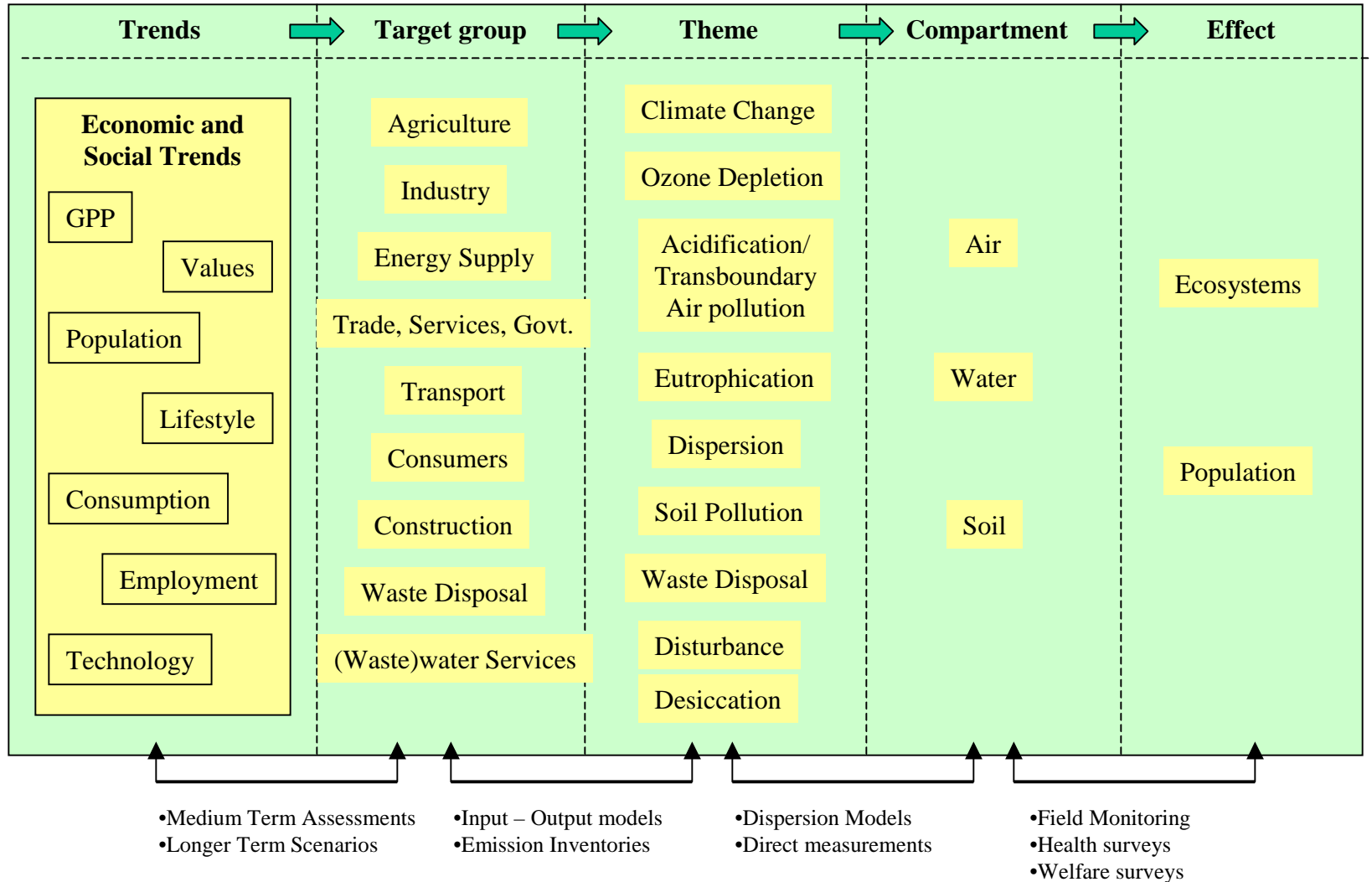
Challenge: To develop meaningful indicators providing policy relevant information about the interactions between the three systems and their impact on core values attributed to the various components of these systems, both here and now and elsewhere and later.

Time and Scale Dynamics in Sustainable Development



NB: Large discrepancies between feedback loops environmental stress factors and policy response frustrate sustainable development efforts at all levels.

Dutch System Environmental Accounting



Developing Sustainable Indicators State of Affairs in The Netherlands

A. Core Indicators Environment

1. Comprehensive set of environmental quality and pressure indicators available.
2. Nature and biodiversity quality indicators for range of ecosystems and species populations.
Pressure indicators for acid, nutrients, pesticides and some heavy metals.
Non environmental pressures (land use, transport, necessities) only as an aggregate indicator.

Developing Sustainable Indicators State of Affairs in The Netherlands

B. Quality of Life Indicators

1. Public Health

Indicators for exposure of people to toxic chemicals above maximum allowable and negligible risk levels;

Exposure to air pollutants exceeding ambient quality standard;

Bio-accumulation via food chain monitored (zero-risk level).

2. Public Safety Environmental Hazards

Indicators for exposure of people to risk-levels exceeding external safety standard for individual and group risks.

3. Nuisance

Indicators for number of people exposed to noise and odor levels above standards.

4. Urban and Rural Living Conditions

No established set of indicators to measure non-pollution pressures on well being of people.

Policy objective is to enhance 'spatial quality' (physical environment) in both urban and rural regions.

Developing Sustainable Indicators

State of Affairs in The Netherlands

C. Eco-Efficiency Indicators

1. Economic Growth and Environmental Stress
Absolute decoupling GPP and environmental stress for all themes except Climate Change.
2. Energy and Resource Intensity
Indicators for total production and consumption as well as specific production sectors and consumption categories.
3. Footprints Dutch Economy
Crude ad-hoc estimates resource-use (defined by land-use) abroad for total production and consumption.
4. Life-cycle impacts product-service systems
Micro-assessments by private sector for a range of activities.
Government sponsored assessments for specific consumption categories on ad-hoc basis.
5. Cost-Benefit Indicators
Available for most theme related policy measures.
Total benefits estimated at 5% GPP versus costs 2.5% GPP.
6. Net Sustainable Income
Not considered feasible.

Developing Sustainable Indicators

State of Affairs in The Netherlands

D. Equity Indicators

- No agreed methods and formats to assess fairness of distributional impacts of environmental and social-economic policies
- ‘Who is to pay, who is to benefit’ questions dealt with on ad-hoc basis in policy negotiations.
- Information about overall distribution of environmental costs and benefits among people and nations is scanty.
- Existing human welfare indicators (UNEP/OECD, Worldbank) measure domestic well being but not the sustainability of lifestyles.
- Most pressing environmental equity issues related to global biodiversity and climate change.

Environmental Theme Indicators

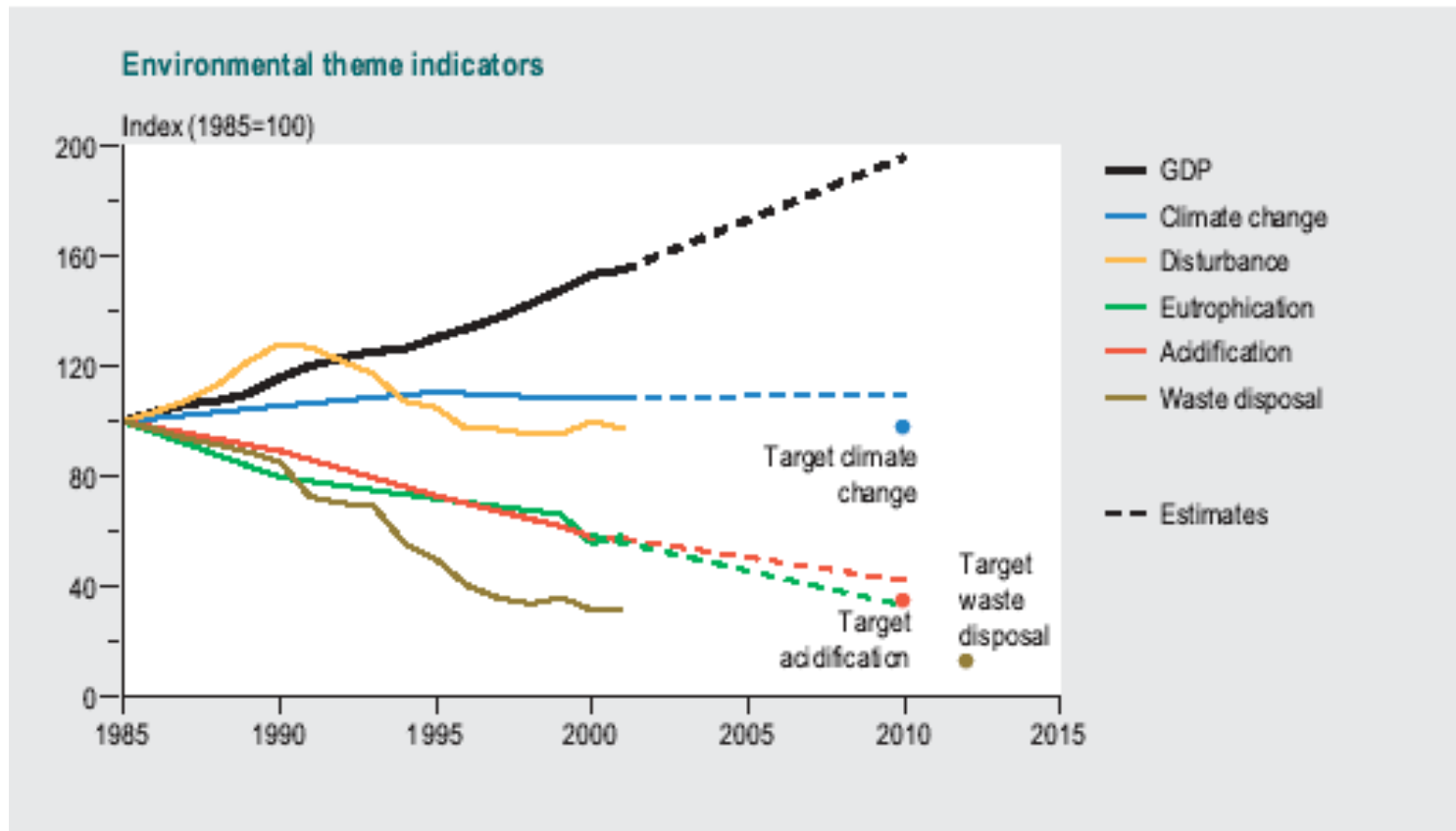


Figure 1 Environmental pressure per theme in relation to changes in GDP, 1985-2010.