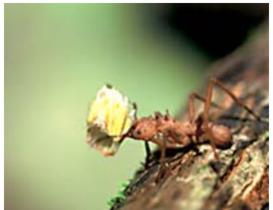
for a living planet

Rethinking Growth and Sustainability Science

Gianfranco Bologna

Scientific Director and director Sustainability Area WWF Italy




The ANTHROPOCENE

International Conference on Sustainability Science 2009

>>

home

Home | outline | program | session | statement

ICSS2009

Date: February 5-7, 2009
Venue: Sanjo Conference Hall, The University of Tokyo, Japan
Organized by the Integrated Research System for Sustainability Science (IR3S)
Co-organized by IR3S-UNU Sustainability Joint Initiative (IR3S-UNU-SJI)

Climate Change

< 350 ppm CO_2 < 1W m^2

(350 – 500 ppm CO_2 ;
1-1.5 W m^2)

Ozone depletion

< 5 % of Pre-Industrial 290 DU

(5 - 10%)

Atmospheric Aerosol Loading

To be determined

Ocean acidification

Aragonite saturation ratio > 80 % above pre-industrial levels

(> 80% - > 70 %)

Global Freshwater Use

<4000 km^3/yr

(4000 – 6000 km^3/yr)

Chemical Pollution

Plastics, Endocrine Desruptors, Nuclear Waste Emitted globally

To be determined

Land System Change

≤15 % of land under crops

(15-20%)

Rate of Biodiversity Loss

< 10 E/MSY

(< 10 - < 1000 E/MSY)

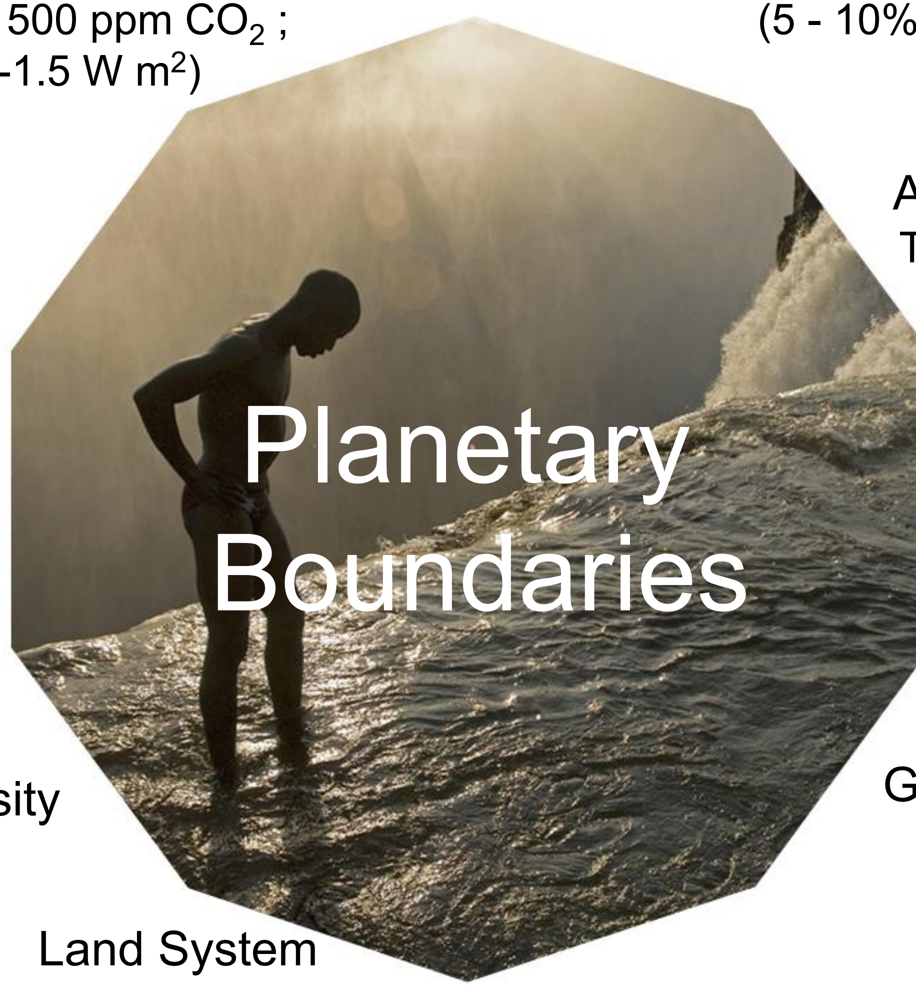
Biogeochemical loading: Global N & P Cycles

Limit industrial fixation of N_2 to 35 Tg N yr^{-1}(25 % of natural fixation)

(25%-35%)

P < 10× natural weathering inflow to Oceans

(10× – 100×)



World Resources Forum 2011

September 19 - 21, 2011 • Davos Switzerland

- Welcome
  - The Issue
  - The Approach
  - The Event
- WRF Declaration
- Presentations WRF 09
- Davos Talks Videos
- Blog
- Documents & Links
- Participate!
- About

Stay informed on the latest WRF news!
Email: *

Subscribe

Shaping the Future of Natural Resources - Towards a Green Economy

The World Resources Forum (WRF) is an independent, international platform for debate on global resource consumption issues, advocating innovation for resource productivity. The WRF is building a bridge from the natural sciences and engineering to economics. It aims to equip political decision makers to identify realistic policy options for sustainable growth.

Welcome

During the first public event of the WRF in Davos (Sept. 15-16, 2009), over 350 scientists, entrepreneurs and policy makers shared their ideas and thoughts which resulted in a common declaration.

You are cordially invited to watch the Davos Talks videos and browse through the WRF 2009 presentations.

The next WRF is scheduled to take place from **Sept. 19-21, 2011** in Davos.

Click here to learn more about how you can participate.

Xaver Edelmann,
President World Resources Forum

Metabolic scale:
Global materials use 1900 to 2005

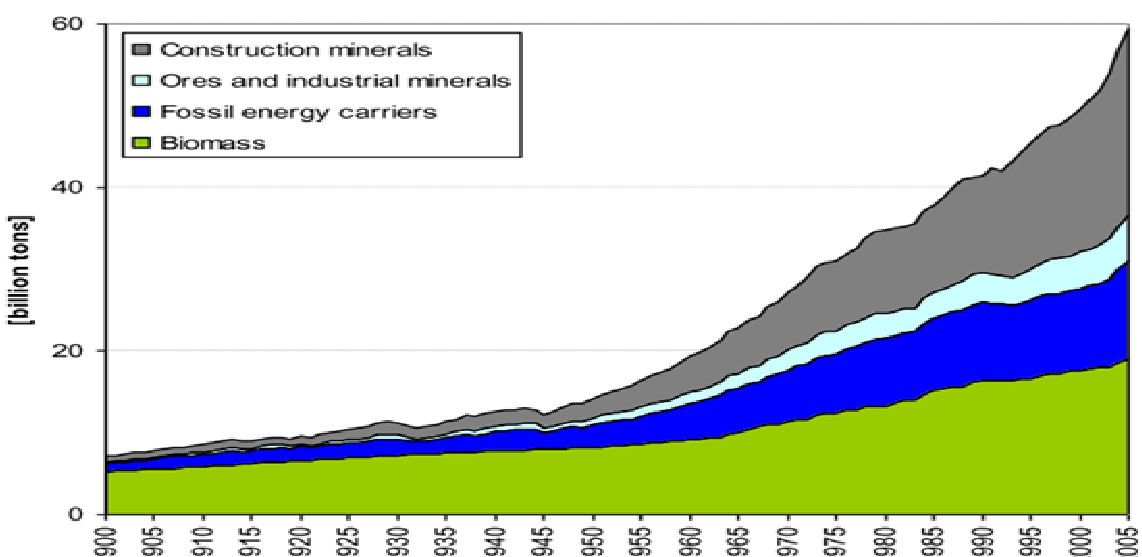


Fig. 1: **LIVING PLANET INDEX,** 1970–2005

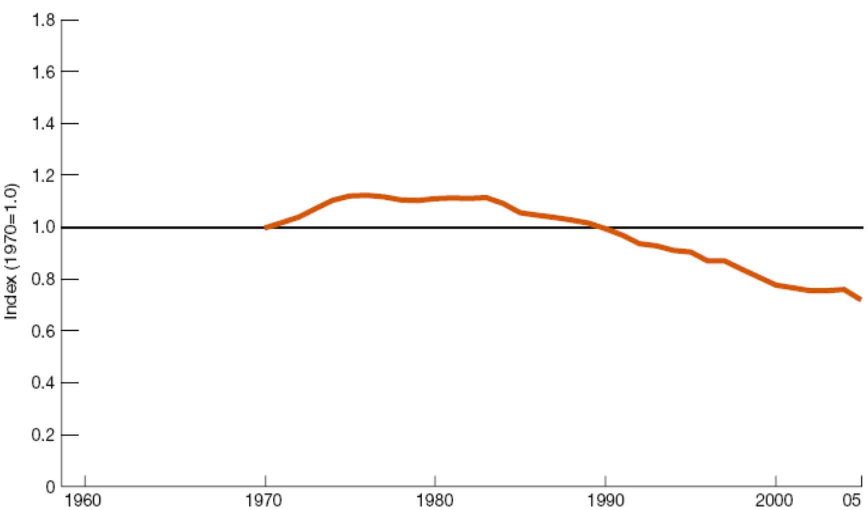
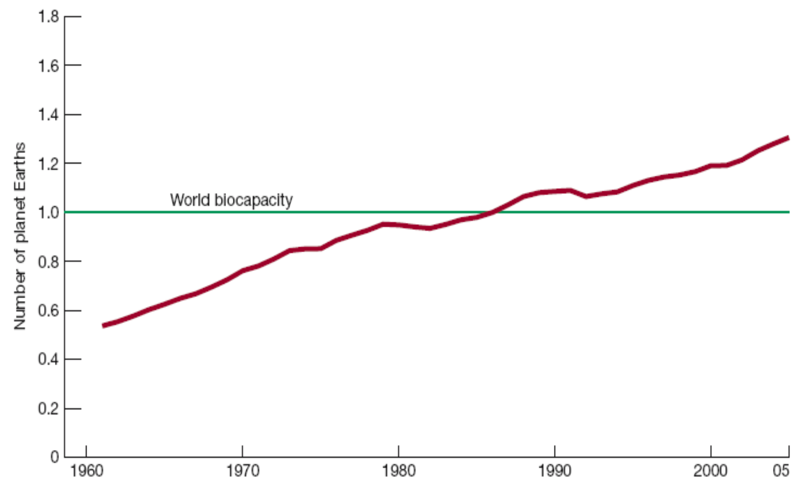


Fig. 2: **HUMANITY'S ECOLOGICAL FOOTPRINT,** 1961-2005



Trends shown by agreed indicators of progress towards the 2010 biodiversity target:

Status and trends of the components of biological diversity

- Trends in extent of selected biomes, ecosystems, and habitats
- Trends in abundance and distribution of selected species
- Change in status of threatened species
- Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance
- Coverage of protected areas

Ecosystem integrity and ecosystem goods and services

- Marine Trophic Index
- Connectivity – fragmentation of ecosystems
- Water quality of aquatic ecosystems

Threats to biodiversity

- Nitrogen deposition
- Trends in invasive alien species

Sustainable use

- Area of forest, agricultural and aquaculture ecosystems under sustainable management
- Ecological footprint and related concepts

Status of traditional knowledge, innovations and practices

- Status and trends of linguistic diversity and numbers of speakers of indigenous languages

Status of access and benefit sharing

- ?
  Indicator of access and benefit-sharing to be developed

Status of resources transfers

- Official development assistance (ODA) provided in support of the Convention

European Commission

EUROPEAN PARLIAMENT

THE CLUB OF ROME

WWF

OECD

Beyond GDP

Measuring progress, true wealth, and the well-being of nations

International Initiative

Beyond GDP

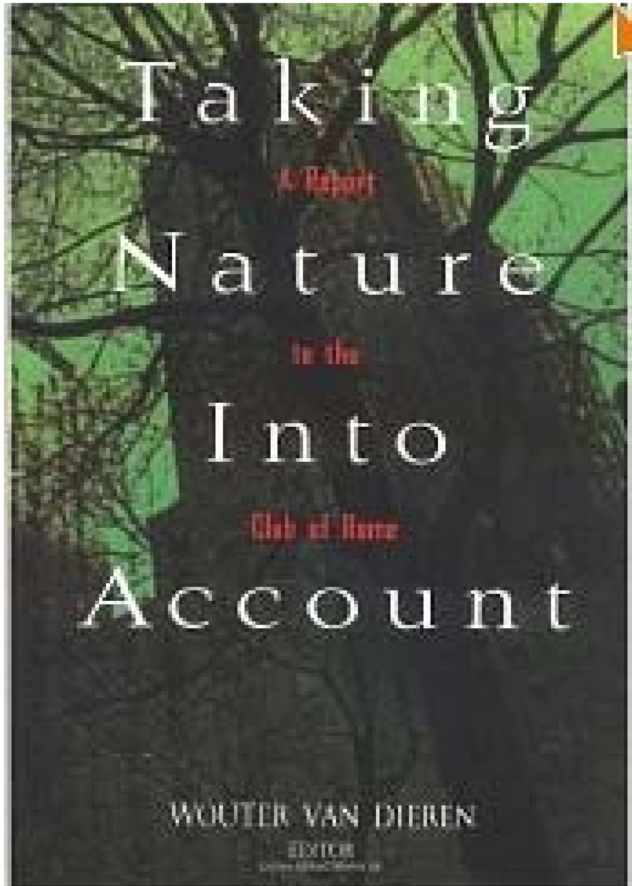
08 Sept 2009, Brussels

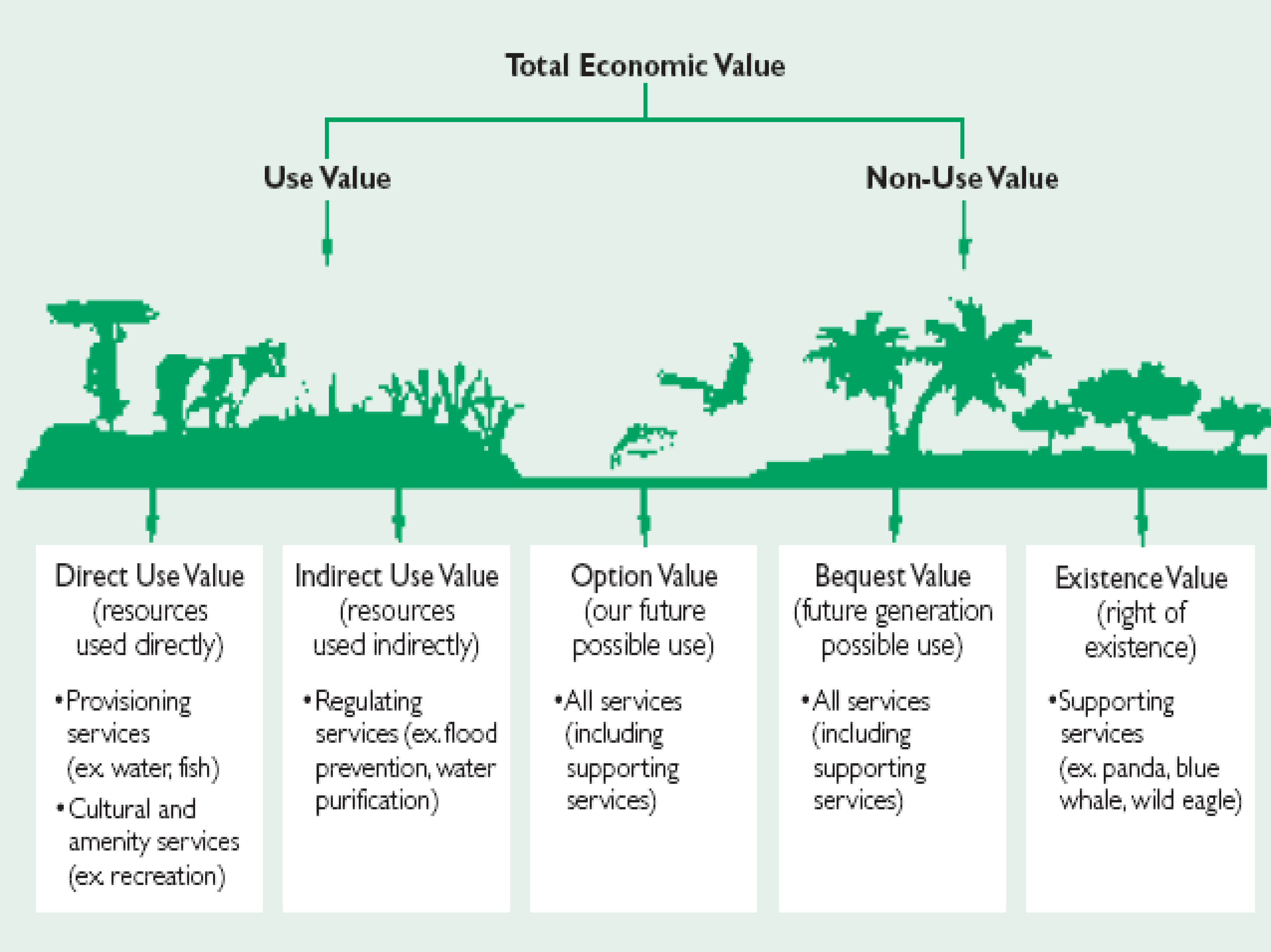
Discussion of the Commission's Communication:

"GDP and Beyond –

Measuring Progress in a Changing World"

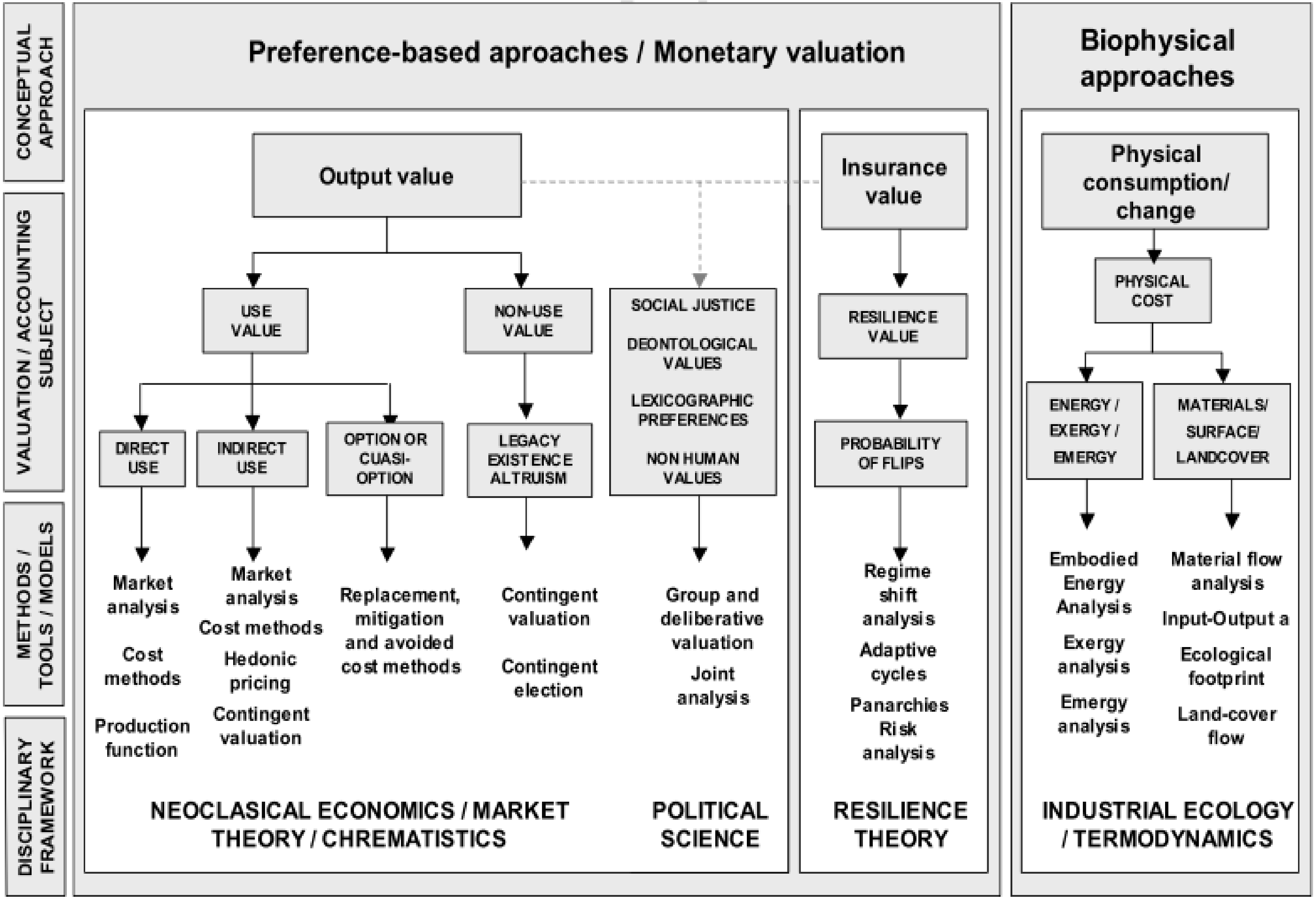
EUROPEAN COMMISSION



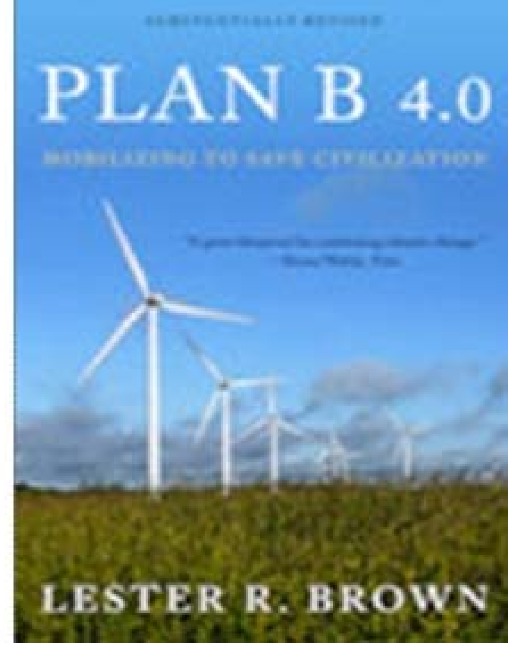

Total Economic Value
Use Value
Non-Use Value
Direct Use Value (resources used directly)
• Provisioning services (ex. water, fish)
• Cultural and amenity services (ex. recreation)
Indirect Use Value (resources used indirectly)
• Regulating services (ex. flood prevention, water purification)
Option Value (our future possible use)
• All services (including supporting services)
Bequest Value (future generation possible use)
• All services (including supporting services)
Existence Value (right of existence)
• Supporting services (ex. panda, blue whale, wild eagle)

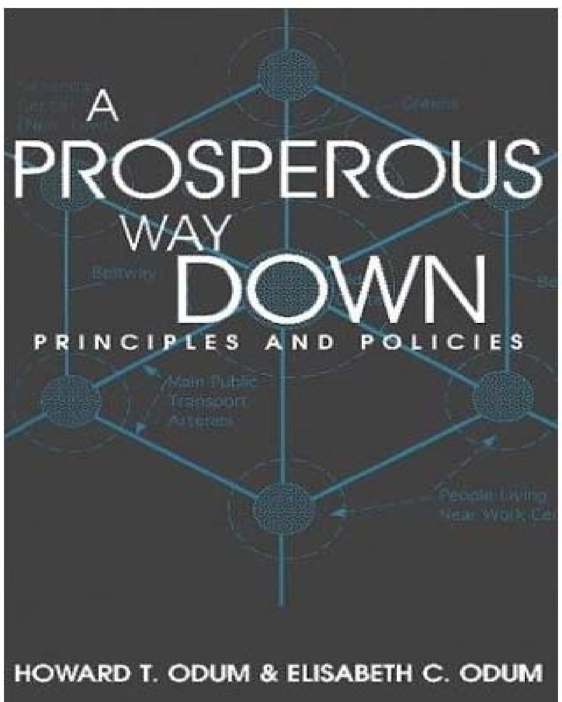
Why *Five* 'TEEB' Reports …Mainstreaming

- Science & Economics Foundations, Policy Costs, & Costs of Inaction
- Policy Evaluation for Policy-Makers
- Decision Support for Administrators
- Business Risks & Opportunities
- Citizen & Consumer Ownership



Source: Gómez-Baggethun, deGroot, et al. in progress


PLAN B 4.0
MOBILIZING TO SAVE CIVILIZATION
LESTER R. BROWN


A PROSPEROUS WAY DOWN
PRINCIPLES AND POLICIES
Beltway
Main Public Transport Arteries
HOWARD T. ODUM & ELISABETH C. ODUM