

# Environmental Statistics

## Frameworks, classification, and statistics

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- Complex organization of statistics collection – Norw.ex.
- Influential work on environmental issues since 1984
- The capital approach as paramount?
- A common framework for env. statistics based on well known principles
- A paramount framework and detailed handbooks
- Summary

# The collection of statistics based on comparative advantages - – ex. Norway –

- SFT – Norwegian Pollution Control Authority – [www.sft.no](http://www.sft.no)
- DN – Directorate for Nature Management – [www.dirnat.no](http://www.dirnat.no)
- NVE - Norwegian Water and Energy Directorate – [www.nve.no](http://www.nve.no)
- NINA – Norwegian Institute for Nature Research – [www.nina.no](http://www.nina.no)
- NGU – Geology for Society – [www.ngu.no](http://www.ngu.no)
- NILU – Norwegian Institute for Air Research – [www.nilu.no](http://www.nilu.no)
- NIVA – Norwegian Institute for Water Research – [www.niva.no](http://www.niva.no)
- IMR – Institute of Marine Research – [www.imr.no](http://www.imr.no)
- NILF – The Norwegian Forest and Landscape Institute – [www.skogoglandskap.no](http://www.skogoglandskap.no)
- Bjerknes – Bjerknes Center for Climate Research – [www.bjerknes.uio.no](http://www.bjerknes.uio.no)
- NPD – Norwegian Petroleum Directorate – [www.npd.no](http://www.npd.no)
- NPRA – Norwegian Public Roads Administration – [www.vegvesen.no](http://www.vegvesen.no)

**This calls for a common framework to secure**

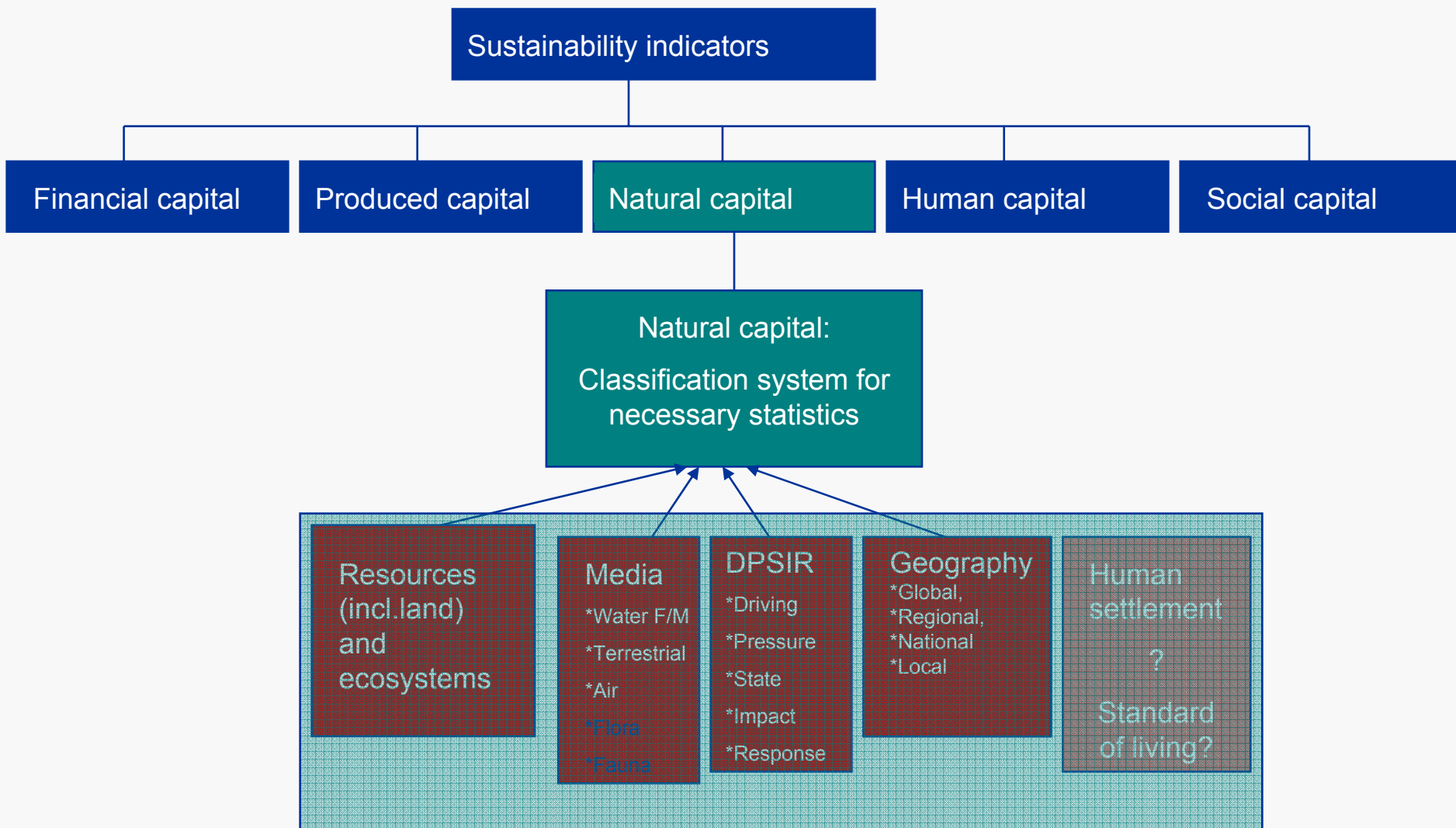
- i) a common understanding and possible linkages –**
- ii) within and between countries/regions**

## A lot of influential work on environmental information

- The FDES – (1984) – A Framework for the Development of Environment Statistics
- World Commission on Environment and Development (WCED-1983) The Report of the Brundtland Commission, *Our Common Future*, was published by Oxford University Press in 1987
- National Accounting Matrix including Environmental Accounts (NAMEA) (1989) (“originated” in Statistics Netherlands – cf. Norway in 1987)
- SEEA (2003): Integrated Environmental and Economic Accounting 2003
- United Nations Millennium Ecosystem Assessment (2005)
- UN/Eurostat/OECD (2009) – Measuring sustainable development
  - The capital approach
- Beyond GDP (2009) – Communication from the European Commission to the Council and the European Parliament
- The Stiglitz report (2009): Measurement of Economic Performance and Social Progress

**How do we capture the best of all ideas into one common framework for environmental statistics?**

# The MSD (2009) as a start of departure



# A classification system for "env." statistics

	Environment			
	Natural Resources			
Ecosystem	Freshwater	Marine water	Terrestrial	Air/atmosphere
<b>The chain:</b>	Flora and fauna – geography human settlement?	Flora and fauna – geography human settlement?	Flora and fauna – geography human settlement?	Flora and fauna – geography Human settlement?
<b>Drivers</b>	<b>Economic activity by source, industry (+residential), purpose, regions, impact) – NAMEA</b>			
<b>Pressure</b>	Extraction, treatment, use Pollution, Discharge Wastewater Nutritive subst.	Extraction Pollution Wastewater Nutritive subst.	Extraction, conversion, pollution, waste, resource depletion	Emissions of compounds (incl. waste): Greenhouse, pollution; SO <sub>2</sub> , NO <sub>x</sub> , VOC, ozone depl. comp. Noise
<b>State</b>	FW species FW resources Energy Quality, biodiversity	M species M Resources Fish Quality, biodiversity	Species, biodiversity Reserve, resource Energy, Forest, Minerals, Land by type and qual. Quality of each	Temperature Precipitation Concentration, biodiversity
<b>Impact</b>	Health, critical levels, eradication, corosion	Health, critical levels, eradication, corosion	Health, critical levels, eradication, corosion	Health, acidity, critical levels, corosion
<b>Response</b>	Regulation, protection and maintenance investment	Regulation, protection and maintenance investment	Regulation, Deposit, recovery, taxes, protection and maintenance investment	Regulations Taxes, permit trading, protection and maintenance investment

# Framework, classification and handbooks

- Framework – classification
  - “Simple and paramount”
- Handbooks to deal with
  - Relevance
  - Demarcation
  - Definition of variables
  - Dimensions
  - Accounting
  - Defining limits
  - Examples
  - Methods

# Summary and conclusions

- We need a framework for a common understanding of
  - Principles
  - Definitions
  - Linkages
  - Comparison
  - Within a country, between organization, and between countries
  - To bridge initiatives
- We need handbooks to help on
  - Relevance
  - Demarcation
  - Definition of variables
  - Dimensions
  - Accounting
  - Defining limits
  - Examples
  - Methods
- The framework should be paramount
- The details in the devils in the handbooks

Thank You  
for  
Your attention!