

Frameworks for environment statistics – a common denominator?

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- Introduction/Motivation
- Several frameworks
- Other initiatives
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Introduction/Motivation

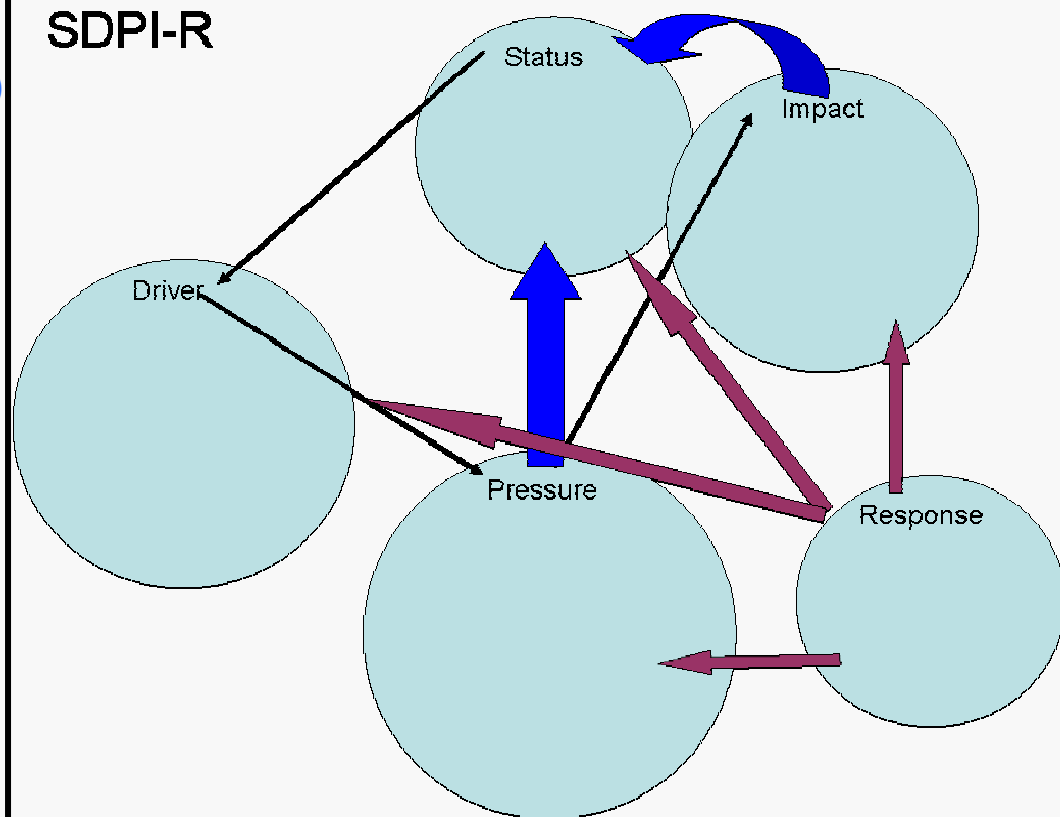
- A lot of frameworks
 - DPSIR or SDPI-R, SEEA/NAMEA, Capital approach, Ecosystem approach
- Other initiatives (indicators/indices)
 - Beyond GDP initiative, the Stiglitz commission, Europe 2020,
 - Environmental indicators and Sustainable development indicators e MDI (millennium development indicators), CSD (Commission development indicators), the recent OECD initiative, the indicators for the green growth strategy
- The point of departure different but are they really “different”?
 - The same phenomena we want to measure? Only difference is scope and detail?
- The advantage of a framework
 - What figures should we gather, where does figures fit in, what is missing, how do we compare, stock (status) or flows (change)?
- Statistics should serve the frameworks in
 - a consistent, systematic and efficient way,
 - having a multipurpose flexible statistical system is very important to avoid double work, double counting, confusion and resignation.

DPSIR or SDPI-R – where is the focus?

The SDPI framework in Alfsen, Bye and Lorentsen (1987)

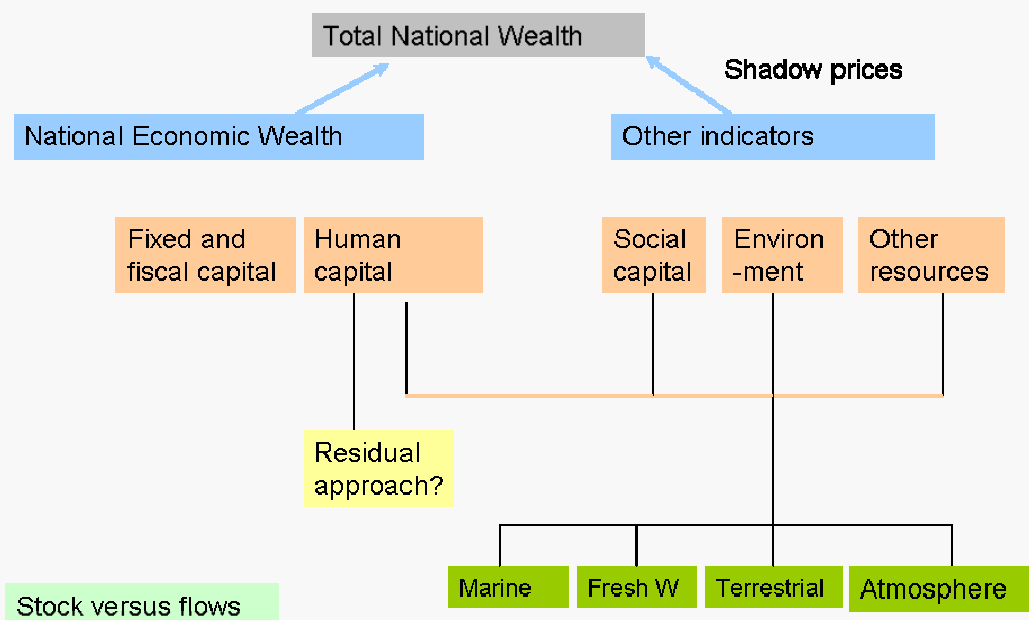
- Resource base (or Environment status) at date t-1
- Adjustments of resource base in t (new discoveries, reappraisal of old discoveries)
- Resource base at date t
- Reserves – i.e. profitable resources to develop, (developed and non-developed) at date t
- Adjustments of reserve base (new technology, new cost of extraction, new information on prices, new regulations)
- Total gross extraction in period t
- Use of reserves in extraction process
- Net extraction
- Reserves base at t+1
- Import
- Export
- Total domestic use
- Domestic use by source (“driving forces”)
 - Connection to the SNA

SDPI-R



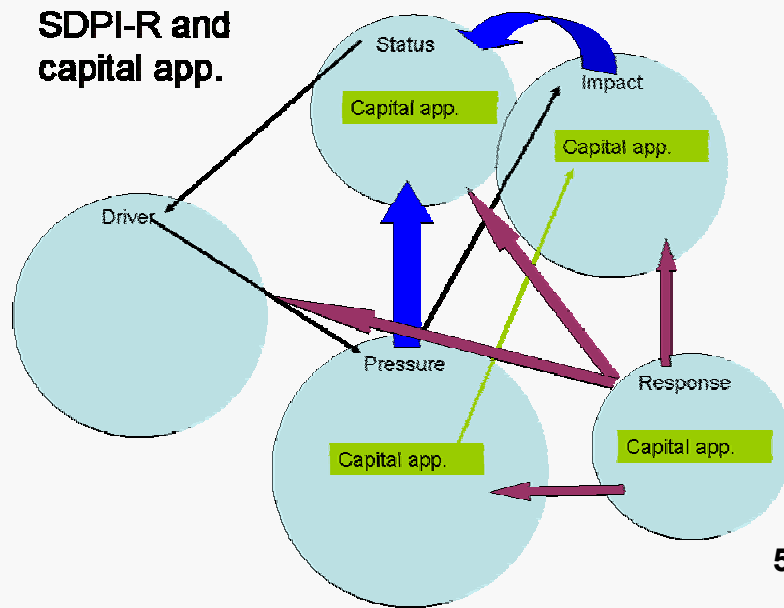
The capital approach

The Capital approach



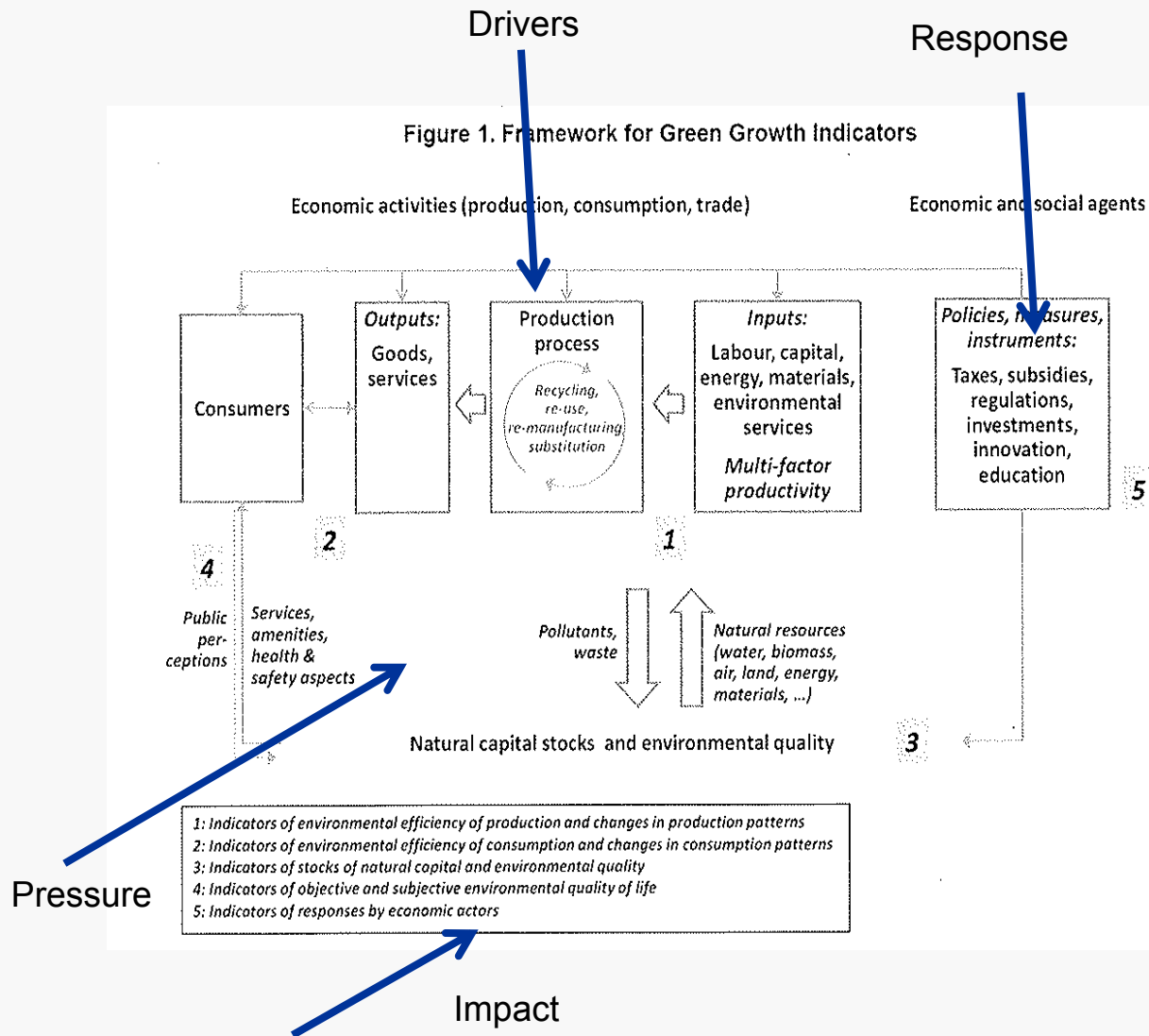
- Sustainable development
- Long term “wealth of nations”
 - (see Smith (1776)):
- The Asset/Status
- In physical terms
- Flows and stocks ?
- Threshold values ?
- A limited approach?
 - Does not focus on drivers

SDPI-R and capital app.



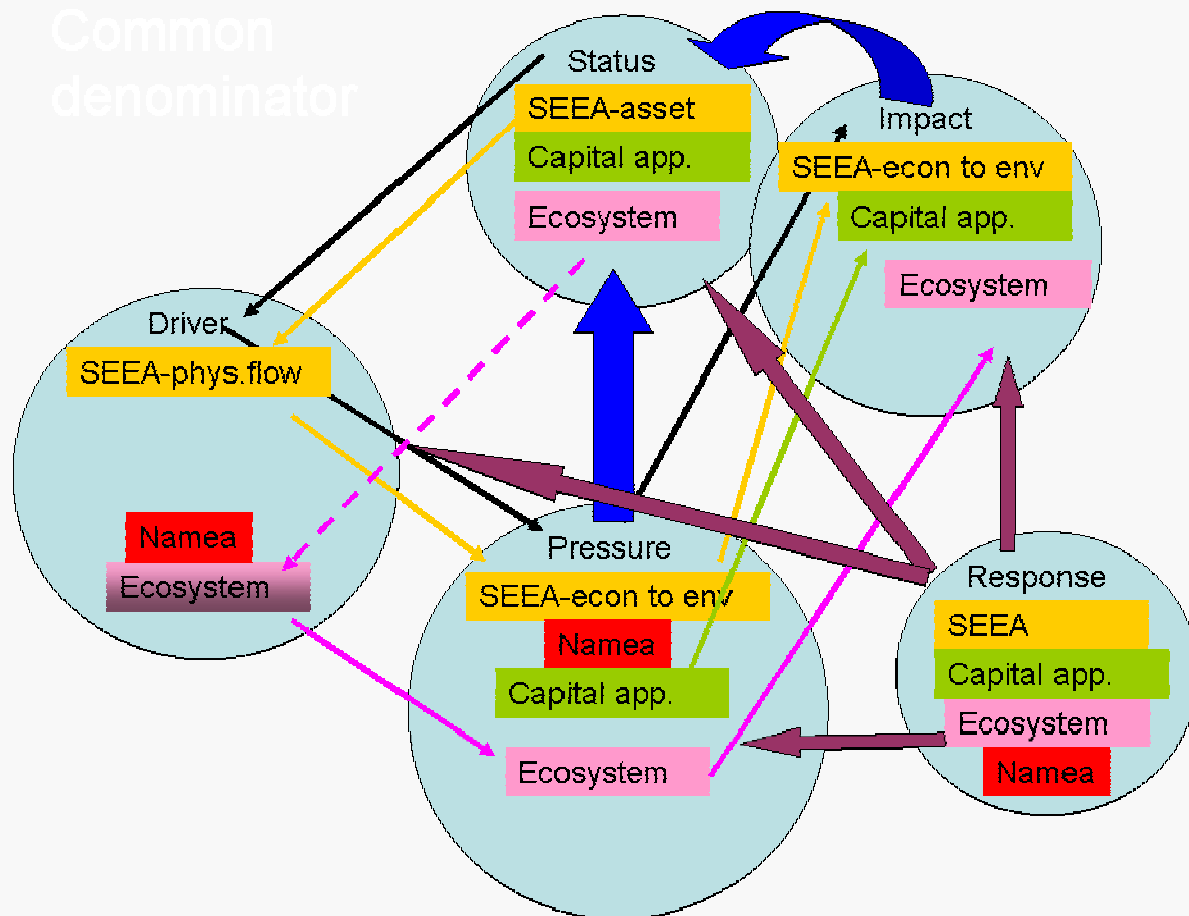
Other initiatives

- GDP and beyond
 - Capital stock
 - Flows
 - Drivers
 - Distribution aspects
- Stiglitz commission
 - Capital stock
 - Flows
 - Drivers
 - Distribution aspects
- CSD indicators
- Indicators for green growth strategy



A common denominator?

- The **point of departure** for the frameworks are different, obviously, and there is **also a difference with respect to which element is most in focus (the scope and the detail)**. For instance, the capital approach framework and the ecosystem management approach focus most on the state or capital part, while the SEEA focus very much on the capital and the driver part. **The DPSIR takes up all**. The description of the response and impacts parts is also slightly different in the semantics, but not really in principle? All frameworks consider the response part.



The collection of statistics based on comparative advantages – ex. Norway – need for framework

- SN – Statistics Norway – www.ssb.no
- Klif – Norwegian Pollution Control Authority – www.klif.no
- DN – Directorate for Nature Management – www.dirnat.no
- NVE - Norwegian Water and Energy Directorate – www.nve.no
- NINA – Norwegian Institute for Nature Research – www.nina.no
- NGU – Geology for Society – www.ngu.no
- NILU – Norwegian Institute for Air Research – www.nilu.no
- NIVA – Norwegian Institute for Water Research – www.niva.no
- IMR – Institute of Marine Research – www.imr.no
- NILF – The Norwegian Forest and Landscape Institute – www.skogoglandskap.no
- Bjerknes – Bjerknes Center for Climate Research – www.bjerknes.uio.no
- NPD – Norwegian Petroleum Directorate – www.npd.no
- NPRA – Norwegian Public Roads Administration – www.vegvesen.no

This calls for a common framework to secure

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

Summary and conclusions

- We should try to unite on one framework – what are the arguments?
 - The DPSIR is a long proven success for many countries?
 - The SEEA is a highly emphasized framework from UN but limited in scope?
 - The ecosystem approach has existed a couple of decades but
 - ♦ it is not implemented in a large scale?
 - ♦ Is very research dependant and more uncertain than other statistics?
 - ♦ Lacks the driving force aspect that is important in most other initiatives?
 - The other approaches lack ecosystems way of thinking?
 - A crucial challenge is to combine the insights from the various approaches.
 - ♦ The common denominator
- The statistical system should serve the frameworks in a consistent way – i.e. be multipurpose
 - The same figures should be applicable in all frameworks and
 - be recognizable from framework to framework
 - The statistics has just one language?
- Regardless of choice of conceptual and statistical framework,
 - an important common denominator is to recognize **the need for a disaggregated and comprehensive information basis** for environmental data in physical units, in order to represent the complexity and the possible interactions between the economy and the environment
- A perfect information system for policy formation

Thank You
for
Your attention !