Economics and nature conservation – Values and Valuation

Associate Professor Jesper S. Schou

jss@ifro.ku.dk

Department of Food and Resource Economics, UCPH

IPBES-symposium on Economics and Biodiversity, Odense, 21 August 2020
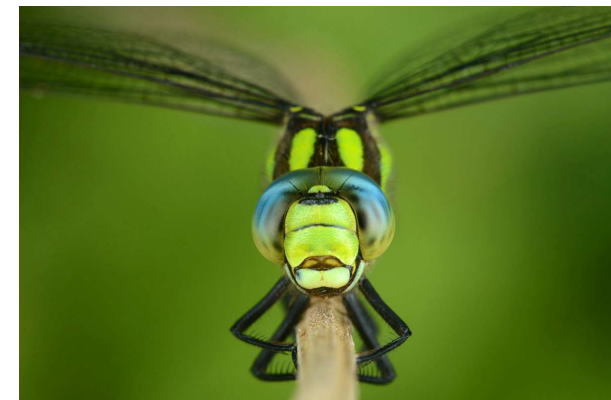
UNIVERSITY OF COPENHAGEN

Traditional GDP

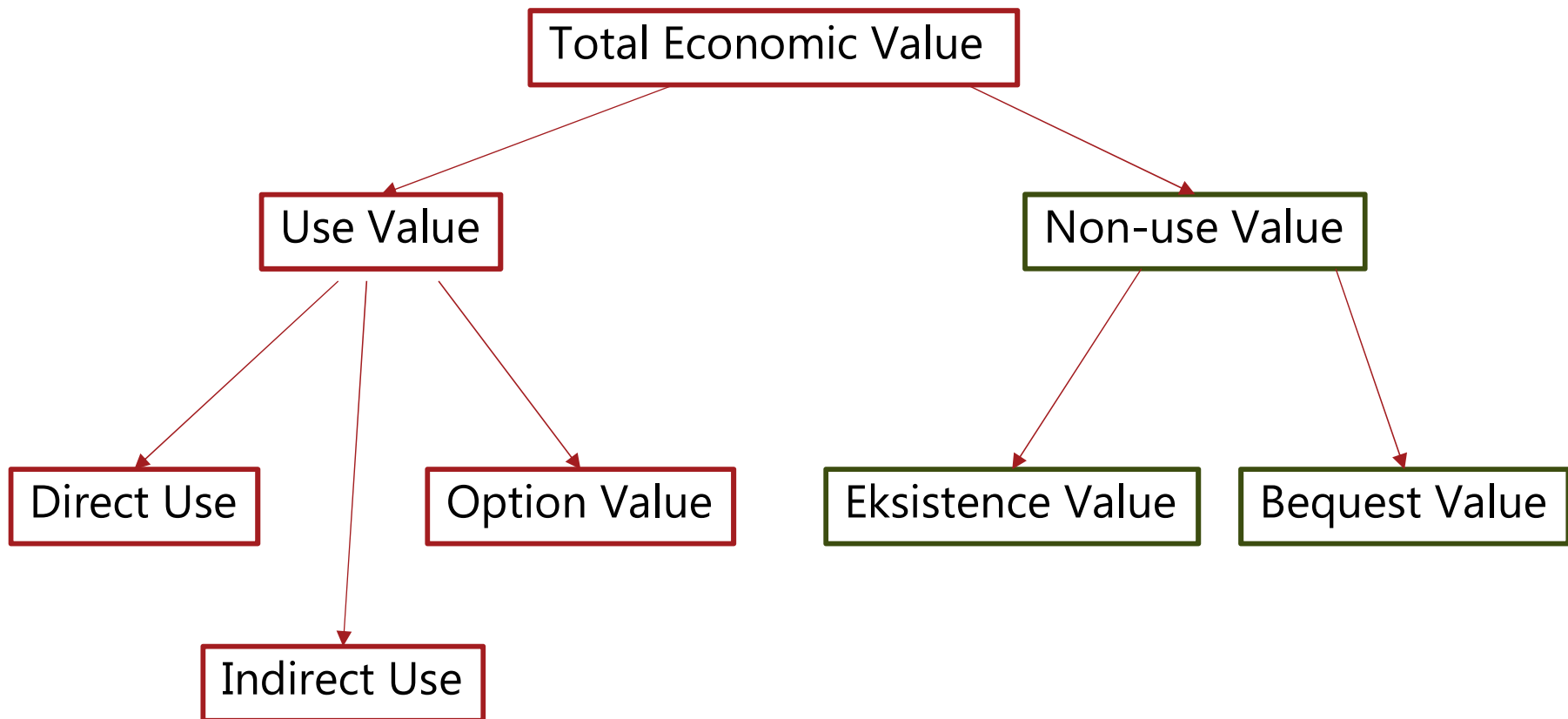GDP in 2015 from sectors based on natural ressources in Denmark (DKK):

- Fisheries: 3,3 bill.
- Forestry: 1,2 bill.
- Agriculture: 74,5 bill.

Total GDP: 3.517 mia. (2,2%)

Values not measured in the traditional GDP

Framework: Total Economic Value

Economic methods for apraising biodiversity

- Benefit-Cost analysis

- Green GDP

- Genuine Savings

Benefit-Cost Analysis (BCA)

- Quantifying the effects on human welfare of projects or policies leading to re-allocation of ressources

- The BCA incorporates impacts on both produced and environmental goods (use and non-use).

- Cardinal measurement of utility
  - The utility of consumers can be compared quantitatively.
  - The difference between utility and costs are considered as a measure for aggregate welfare effects.
- Apply the The Kaldor–Hicks Cmpensating Criterion

Green GDP
(Source: Statistics Denmark)

- GDP is an measurement of the economic activity
- Green GDP have been WIP by Statistics Denmark and research at UCPH for several years.
- The purpose is to include interactions between the environment and activities of firms and households.
  - Compare value of production with use of energy and water, production of waste, and air emissions.
  - Include use of non-renewable ressources (e.g oil) and renewable resources (land, fish)
  - Highlight activities related to environmental protection and green fiscal instruments (subsidies and taxes

Genuine Saving or Adjusted Net Savings
(Source: Danish Environmental Economic Council, 2017)

- Saving measures the change in the capital stock
- Genuine saving is an extented measurement of capital stocks in the National Account adding human capital, nature capital and social capital to the traditional capital measures.
  - Physical capital (e.g. machines and buildings)
  - Financial capital
  - Human Capital (Labour force and education)
  - Nature Capital (Amount and Quality of Renewable and Non-Renewable Resources and Environment and Biodiversity)
  - Social Capital (formal and in-formal institutions supporting human activities)

Genuine Saving in DK
(Source: Danish Environmental Economic Council, 2017)
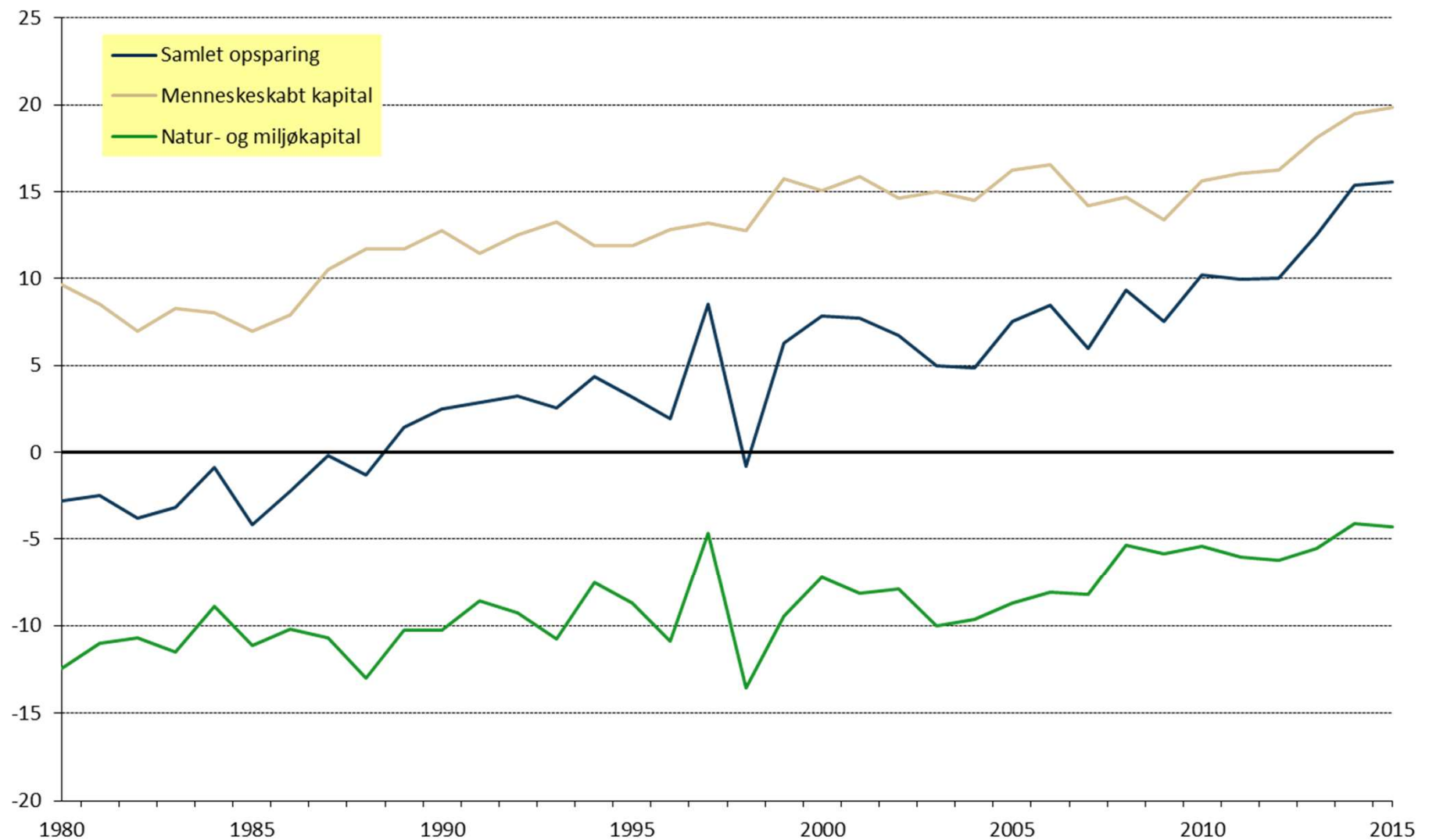
Discussion: Should we put a economic value on biodiversity?

"If you can't be with the one you love, love the one you're with" (Crosby, Stills, Nash & Young)

or

"Campaigning against economic valuations could inadvertently strengthen the hand of those who believe nature has little or no worth." Tony Juniper (2012).

- We always prioritize nature against other things
- Strong way of putting natural resource issues on the agenda
- Issues of methods and measurement
- How to link Green GDP and Genuine Saving to Sustainability
- Ethical or Goverance Issues: To wich degree do we allow for substitution between different goods/capital?