

Issue paper on biodiversity accounts and Indices- some comments on the difference between the Australian and Norwegian approach.

UN Committee of Experts on Environmental
Accounting

Per Arild Garnåsjordet
London, 5-7 December 2011

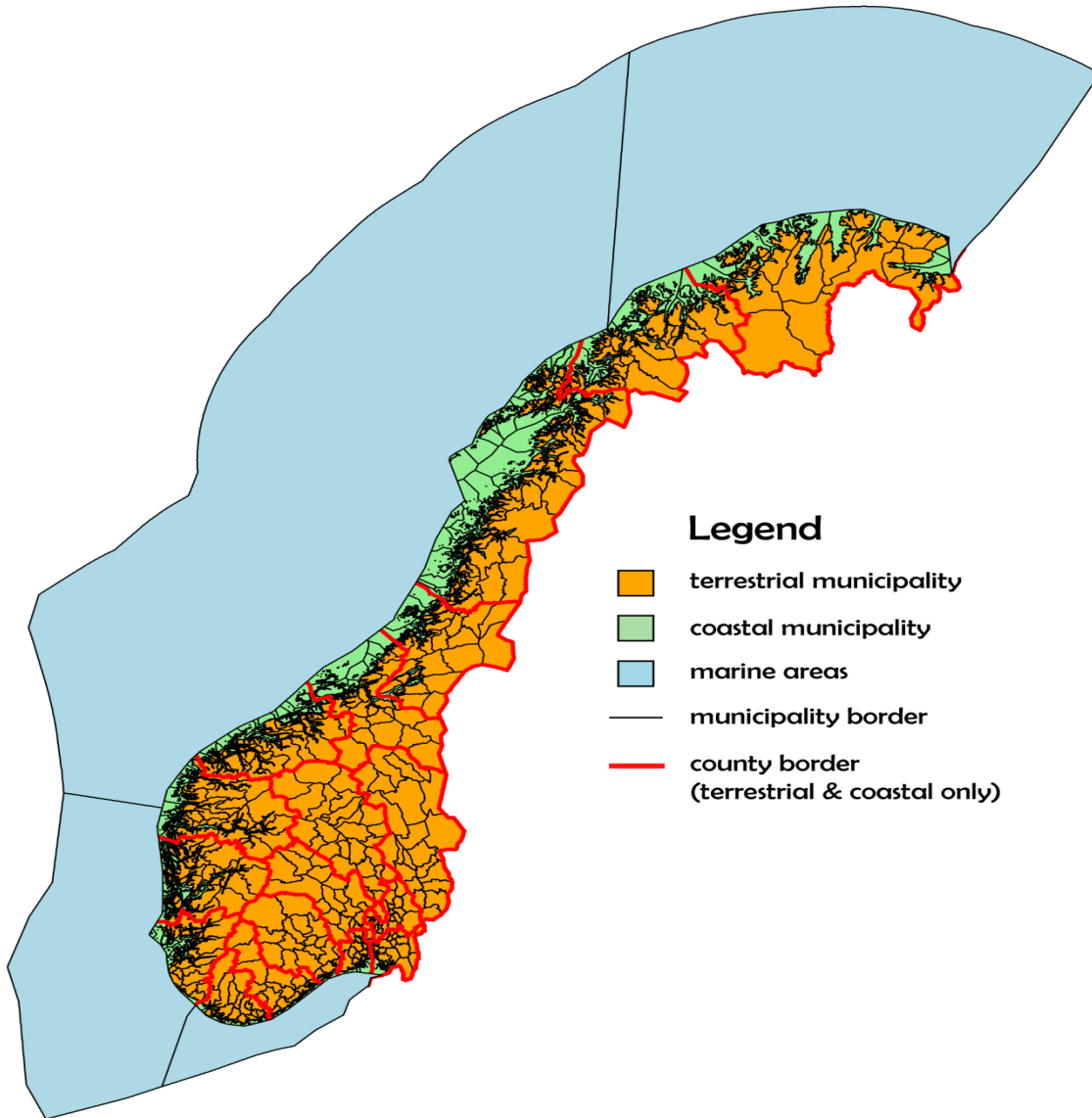
Purpose: Overview of state and trends of biodiversity



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- Measure state and trends of biodiversity in natural ecosystems, including the cultural landscape.
- Reflect threats to biodiversity: The combined effect of all pressure.
- Combines current biodiversity knowledge in a common conceptual framework (expert-judgements and monitoring data).
- Measurement tool for government policy and management





Legend

-  terrestrial municipality
-  coastal municipality
-  marine areas
-  municipality border
-  county border
(terrestrial & coastal only)

5 national research institutes
Statistics Norway
125 Researchers
Internet based data-collection
1950, 1990, 2000, 2010, 2020
309 indicators

$$NI_t = \sum_{ijk} S_{ijkt} W_{ijkt}$$

S = State

W= Weighted at tropical level

t= time

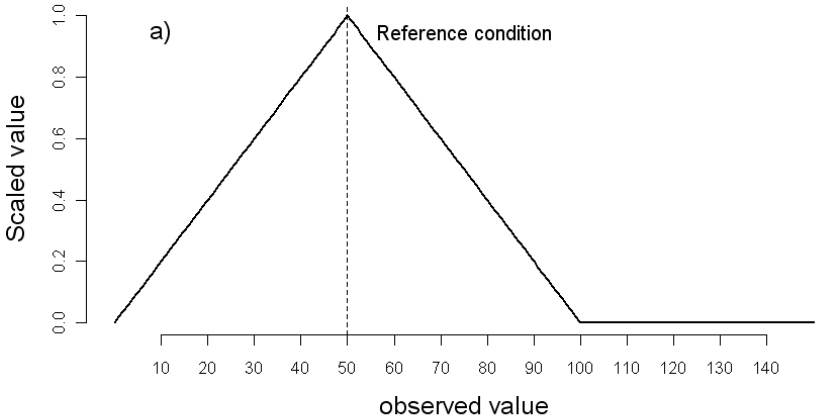
i= species

j= ecosystem

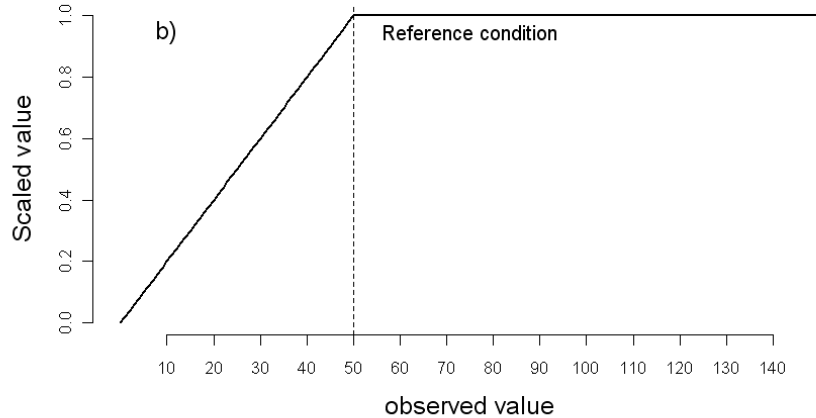
k= municipality, area

Several scaling models: several way of using the reference condition.

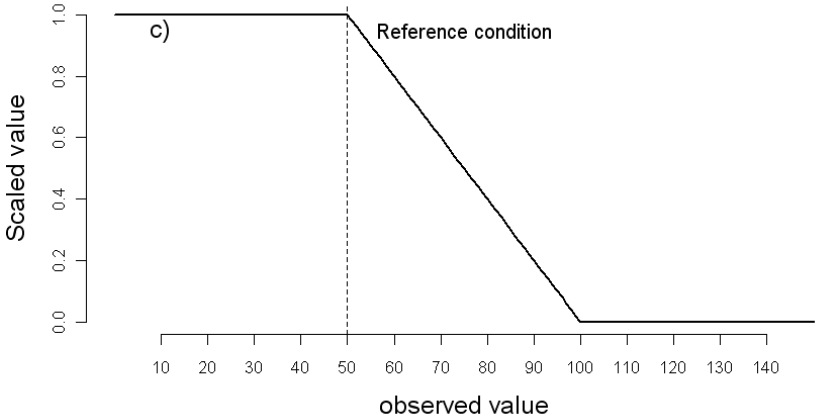
Optimal model



Minimal model



Maximal model

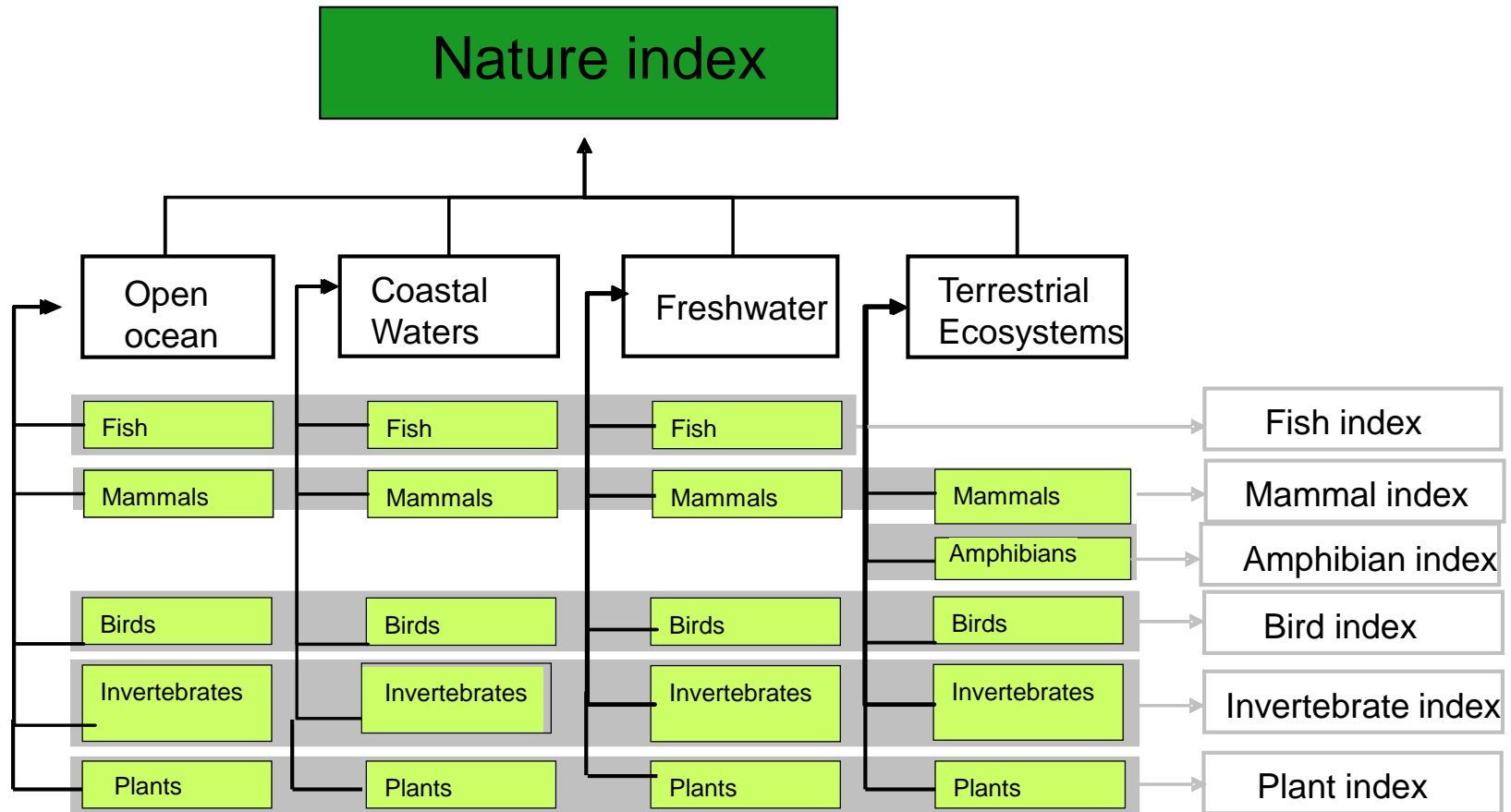


Reference state ist the "ideal" state for the ecosystem. Model decided by each expert.

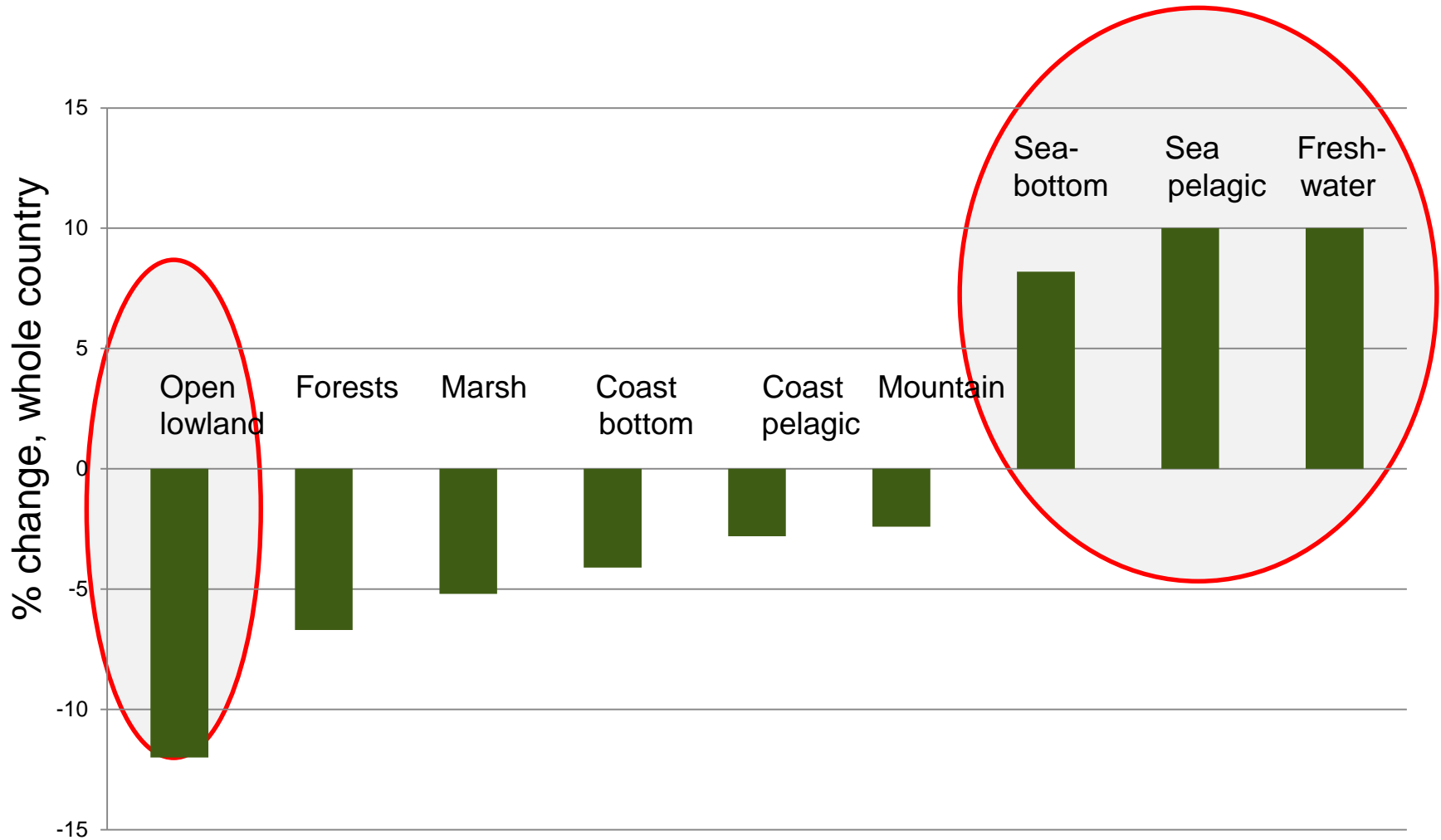
Nature Index



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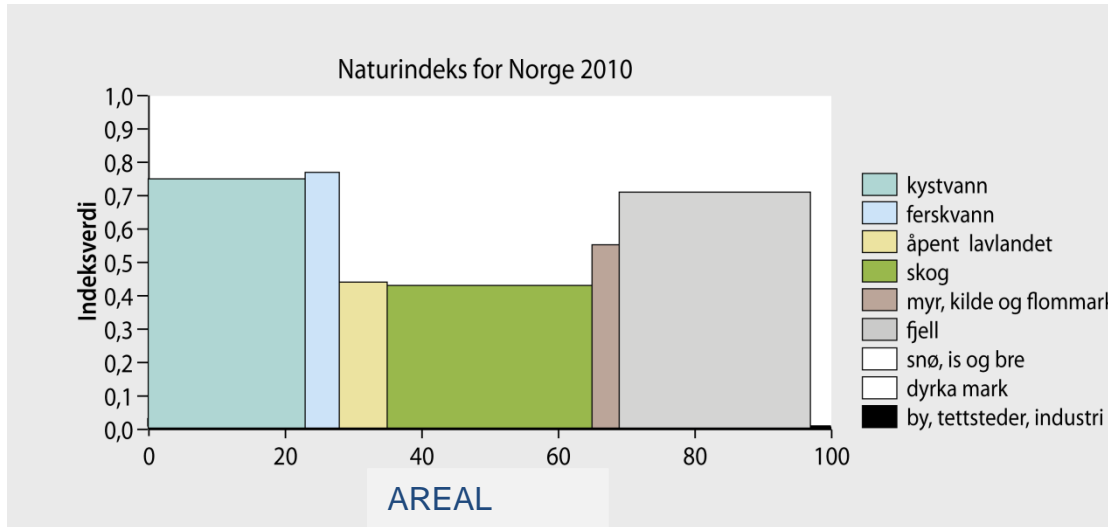
% change from 1990 to 2010



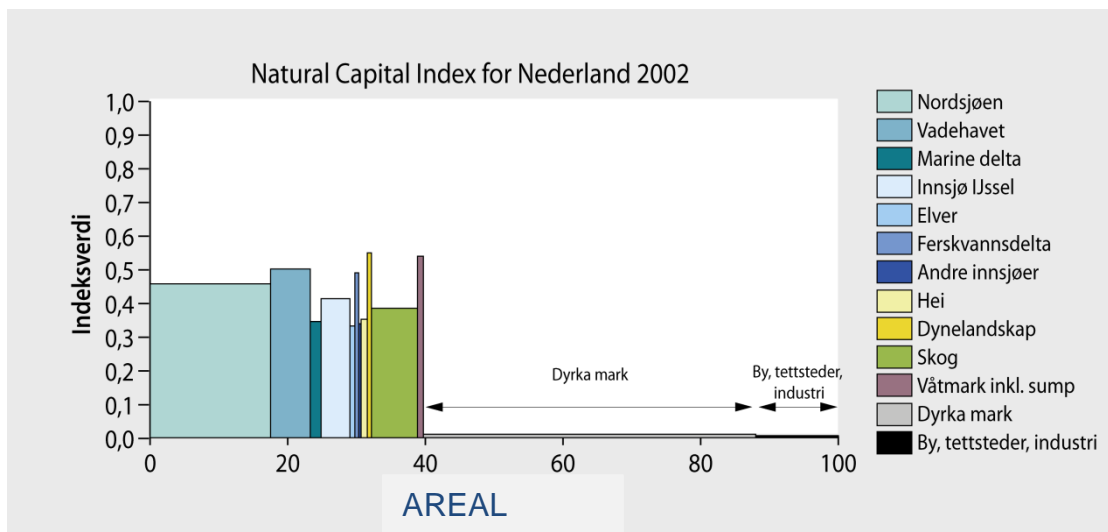
State of biodiversity: Norway and Netherlands



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Ut til 1 nautisk mil



Ut til 12 nautisk mil

Some differences between the Australian and Norwegian approach.

- Administrative units- ecosystem within these units
- Trophic levels- All levels equally represented
- Max,min and optimal levels
- Scaleable from local to regional to national level, thematic indices.
- Systematic use of expert judgements
- Systematic information about uncertainty in estimates (25 and 75 percentiles)
- Marine areas included
- **THE INDICATORS WILL CHANGE WHEN USED FOR POLICY**

www.dirnat.no/naturindeks



DN-utredning 3-2010

Naturindeks for Norge 2010

NINA Report 542

Nature Index

General framework, statistical method and data collection for Norway

Grégoire Certain
Olav Skarpaas



TEAMWORK



ENTHUSIASM



INTEGRITY



QUALITY

Cooperation and expertise for a sustainable future