# 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
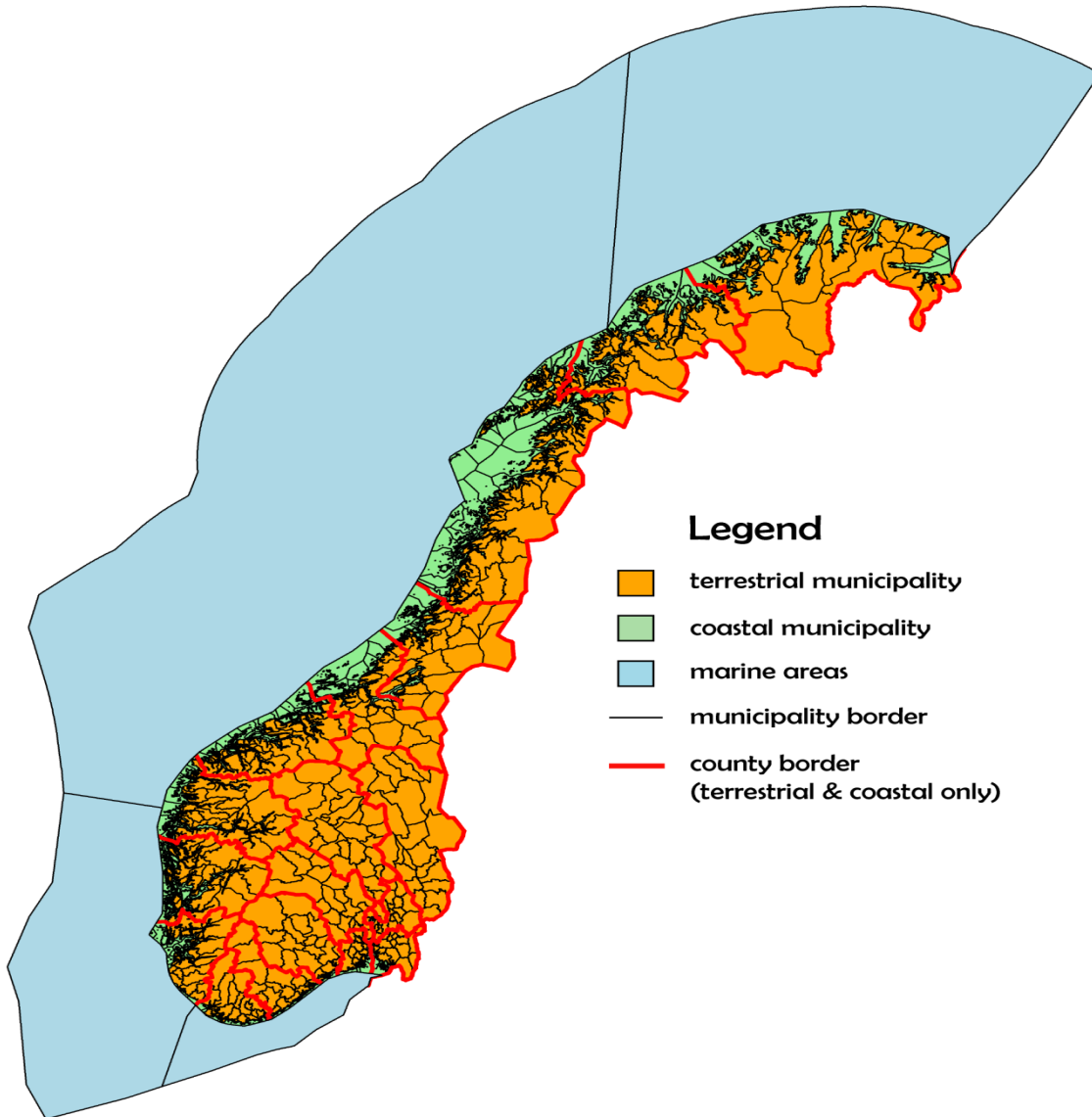
Per Arild Garnåsjordet

London, 5-7 December 2011

# Purpose: Overview of state and trends of biodiversity

- 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

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
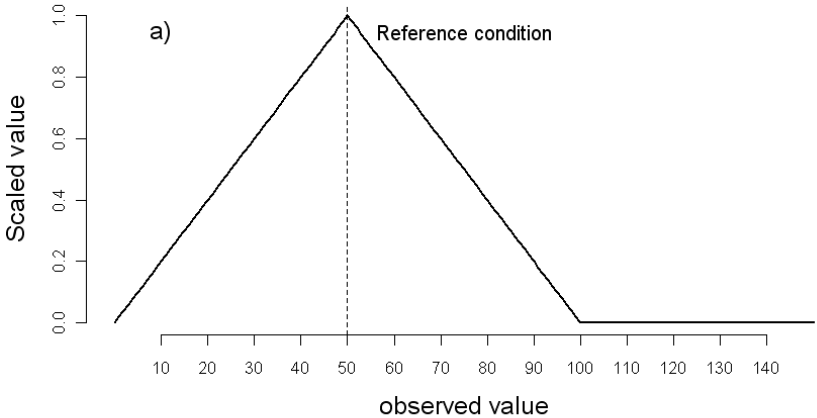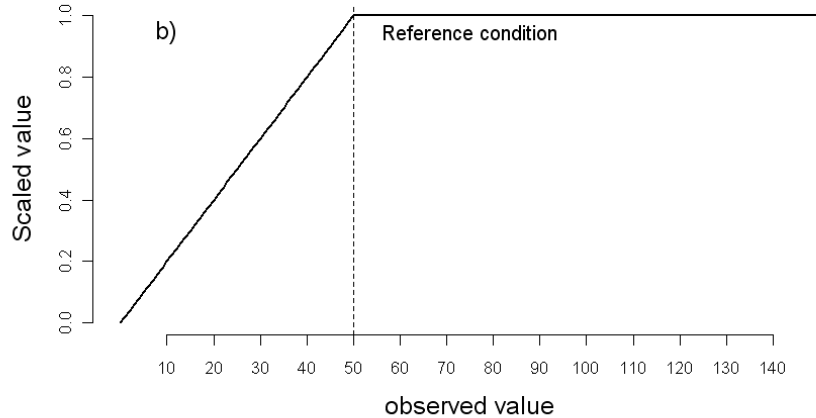W = Weighted at trophical level
t = time
i = species
j = ecosystem
k = municipality, area

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

DIREKTORATET FOR NATURFORVALTNING

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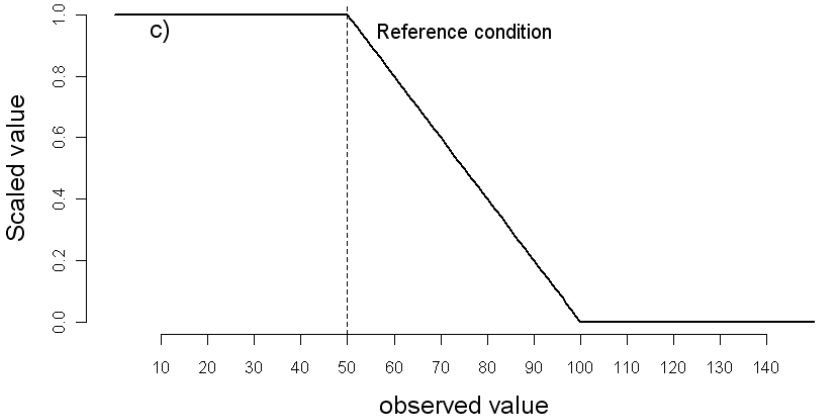


**Reference state ist the "ideal' state for the ecosystem. Model decided by each expert.**

# Nature Index
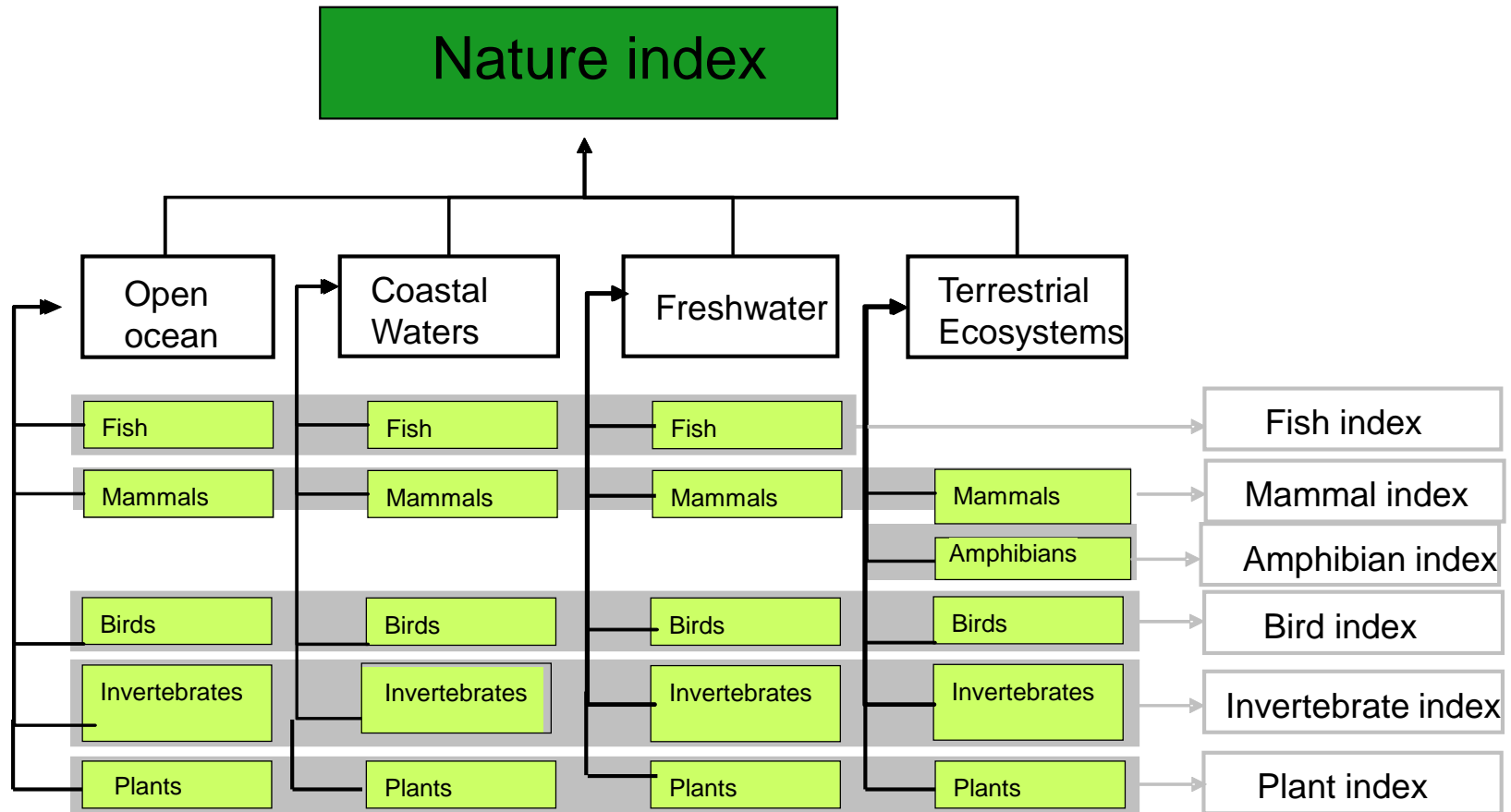
# % change from1990 to 2010
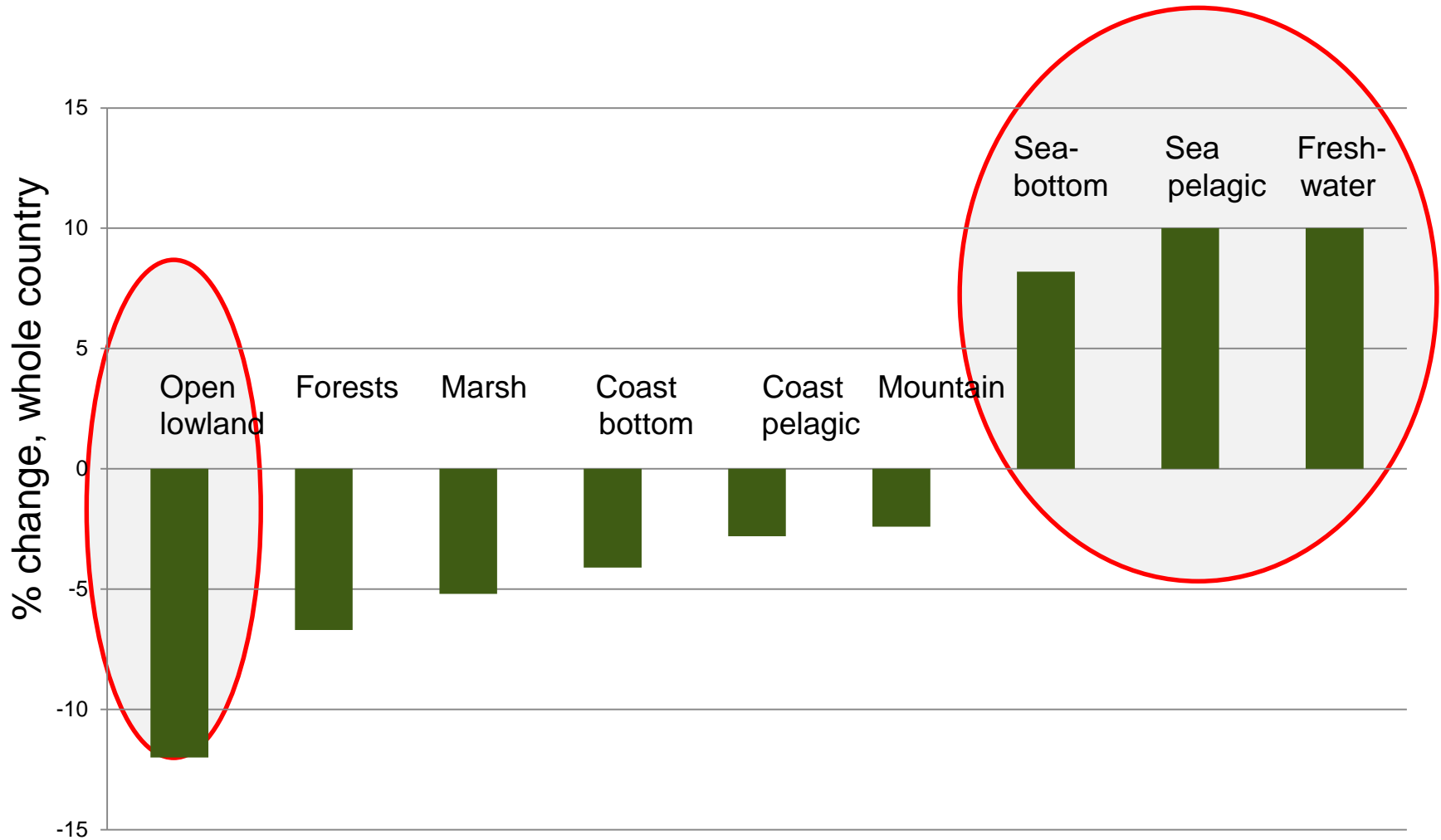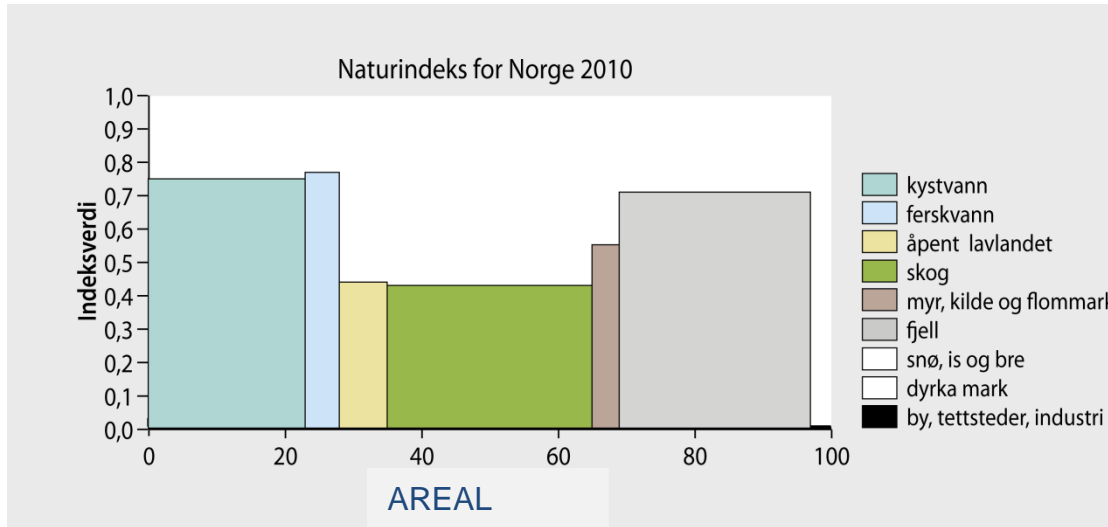
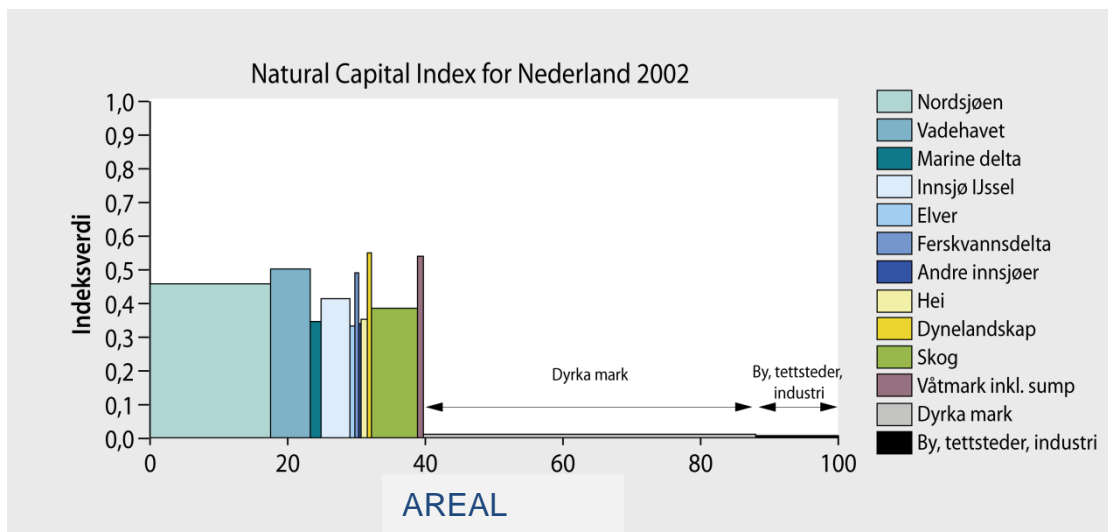# State of biodiversity: Norway and Netherlands



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

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