KM-GBF indicators from an ecologist's point of view

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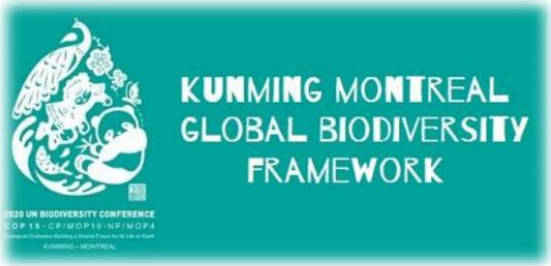

CONSERVE

1. Biodiversity-inclusive **spatial** planning, «**near-0 loss**»
2. Effectively **restore 30%** of degraded nature
3. Effectively **conserve 30%** of lands and seas
4. Halt human-induced **extinctions**

AVOID

5. Stop unsustainable **use, harvest, trade** of species
6. Reduce **alien species** spread by at least 50%
7. Reduce **pollution** risks, impacts by at least 50%
8. Reduce **climate change** impacts

SAFE-GUARD

9. Sustainably **manage and use** wild species
10. Sustainable **agri/aquaculture, fisheries, forestry**
11. Restore and enhance **nature's goods**, services
12. Increase area, quality of **urban** green/blue spaces
13. Fair sharing of benefits from **genetic resources**

ACT

14. **Mainstream** biodiversity into all policy, practice
15. **Businesses** to monitor, disclose nature impacts
16. Sustainable **consumption**, half food waste
17. Phase out 'perverse' **subsidies**, increase **finance**
18. Strengthen **capacity, participation, IPLC, women**

23

2030-goals
Not time specific

Four overarching goals
A. Halt loss, restore nature
B. Use lands & seas sustainably
C. Share benefits and services
D. Mobilize necessary resources
to be met by 2050

https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf

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https://www.uib.no/en/cesam/159846/cheat-sheet-kunming-montréal-global-biodiversity-framework

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Monitoring framework:

- indicators
- data
- methodology
- capacity

- **Headline indicators**

"a minimum set of high-level indicators, which capture the overall scope of the goals and targets of the KM-GBF"

- **Component indicators**

"a list of optional indicators that, together with the headline indicators, capture the overall scope of the goals and targets"

- **Complementary indicators**

"a list of optional indicators for thematic or in-depth analysis of each goal and target"

- **Binary indicators**

"global indicators based on responses to yes/no questions to be included in the national reporting template. They will provide a count of the number of countries having undertaken specified activities"

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see www.cbd.int/doc/decisions/cop-15/cop-15-dec-05-en.pdf and www.post-2020indicators.org

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Monitoring framework:

- indicators
- data
- methodology
- capacity

- **Publicly available**
- **Metadata available**
- **Peer-reviewed basis**
- **Maintained data collection**
- **Relevant and sensitive**
- Aligned with other intergovernmental processes, where possible

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Monitoring framework:

- indicators
- data
- methodology
- capacity

- **Underlying methodology for every indicator**
- **Uncertainty**
- **Aggregation**
- **Standardization / Scaling**

Monitoring framework:

- indicators
- data
- methodology
- capacity

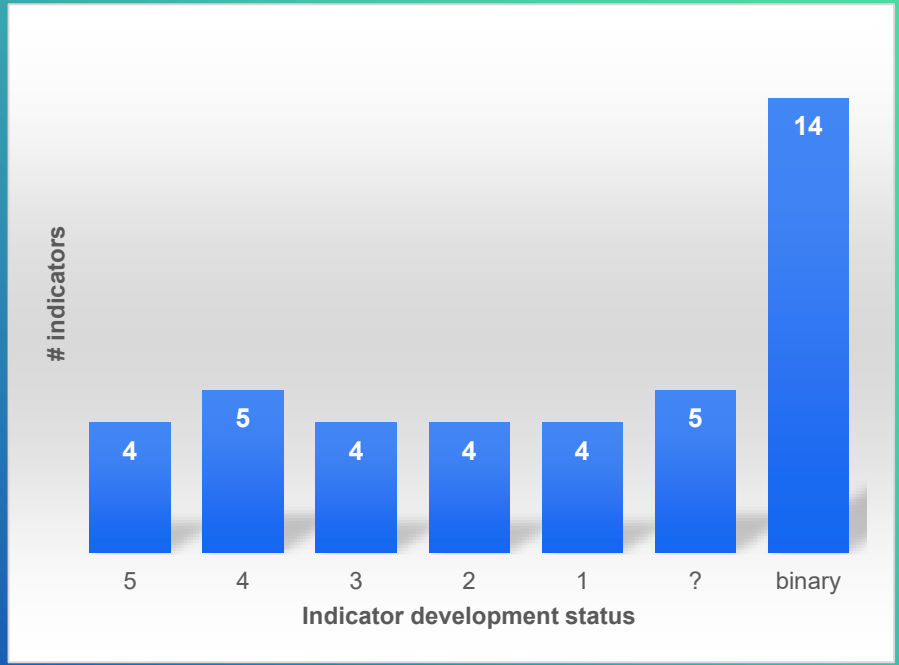
- **Some indicators are more easily operationable than others**
  - **Methodology**
  - **Data**
- **Some countries have a better starting position than others**
  - **Expertise**
  - **Resources**

- **Capacity building**
- **Indicator design**
- **Data collection**

Indicator status:

(Headline indicators)

1. Methods not yet developed, and a process needs to be established to develop these
2. Methods not yet developed, but a process is underway to develop them, led by one or more organisations, to develop them
3. Methods developed (or partially developed) and tested/piloted, but data not yet widely available (and/or collection not yet underway). (Indicator/,Methodology maintained by an organization(s))
4. Methods established, data being compiled, and indicator operational in at least some countries, but further investment in methods ongoing and/or further (data collection required).
5. Methods established, data being compiled and accessible, and indicator operational for most/all countries.



Source: Annex 1 in Report from AHTEG's 3rd meeting (Montreal, Canada, 3–6 October 2023)

https://www.cbd.int/doc/c/f22d/ab58/236acdd54779ab58b97aecf1/ind-ahteg-2023-03-02-en.pdf

?...to be first discussed by the Expert Group on Financial Reporting which was established in notification 2023-067

Headline indicators

related to

Goal A (condition of nature)

and

Targets 1-8 (condition of nature & nature management)

A.1 & 1.2 Red List of Ecosystems (4)
A.2 & 1.3 Extent of natural ecosystems (3)
A.3 & 4.1 Red List index (5 SDG)
A.4 & 4.2 The proportion of populations within species with a genetically effective population size > 500 (3-4)
1.1 Percent of land and seas covered by biodiversity-inclusive spatial plans (1)
2.2 Area under restoration (2-3)
3.1 Coverage of protected areas and OECMS (4-5)
5.1 Proportion of fish stocks within biologically sustainable levels (5 SDG)
6.1 Rate of invasive alien species establishment (3)
7.1 Index of coastal eutrophication potential (4 SDG)
7.2 Pesticide environment concentration (1)

Binary instead of headline indicator for target 8 (reduce climate change impacts)

Headline indicators

related to

Goal B (sustainable use)

and

Goal C (fair sharing)

and

Targets 9-13 (sustainable use and fair sharing)

B.1 & 11.1 Services provided by ecosystems (2)
C.1 & 13.1 Indicator on monetary benefits received (2)
C.2 & 13.2 Indicator on non-monetary benefits (2)
9.1 Benefits from the sustainable use of wild species (1)
9.2 Percentage of the population in traditional employment (3)
10.1 Proportion of agricultural area under productive and sustainable agriculture (4 SDG)
10.2 Progress towards sustainable forest management (5 SDG)
12.1 Average share of the built-up area of cities that is green/blue space for public use for all (4 SDG)

Headline indicators

related to

Goal D (act)

and

Targets 14-23 (implementation)

D.1 & 19.1 International public funding, including official development assistance (ODA) for conservation and sustainable use of biodiversity and ecosystems (?)
D.2 & 19.2 Domestic public funding on conservation and sustainable use of biodiversity and ecosystems (?)
D.3 & 19.3 Private funding (domestic and international) on conservation and sustainable use of biodiversity and ecosystems (?)
15.1 Number of companies reporting on disclosures of risks, dependencies and impacts on biodiversity (1)
18.1 Positive incentives in place to promote biodiversity conservation and sustainable use (?)
18.2 Value of subsidies and other incentives harmful to biodiversity, that have been eliminated, phased out or reformed (?)
21.1 Indicator on biodiversity information for monitoring the global biodiversity framework (2)

Binary instead of headline indicators for targets 14, 16, 17, 20, 22, and 23

Binary indicators

Suggestion from AHTEG on binary indicators:

www.cbd.int/doc/c/fc2f/9f66/ffaa283c75eb50b24cc80aa1/ind-ahteg-2023-02-03-en.pdf

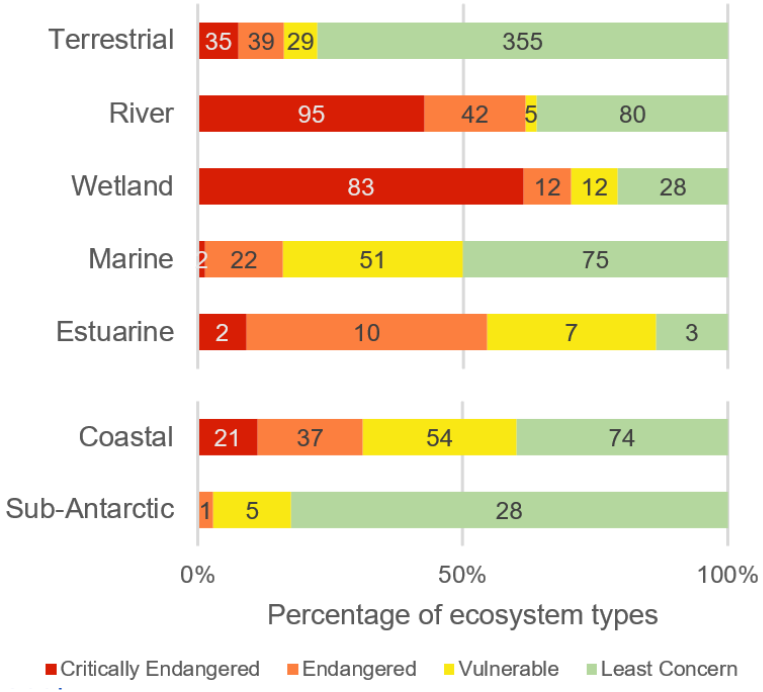
Note:
New wording and one more suggestion for target 20 in
www.cbd.int/doc/c/f22d/ab58/236acdd54779ab58b97aecf1/ind-ahteg-2023-03-02-en.pdf

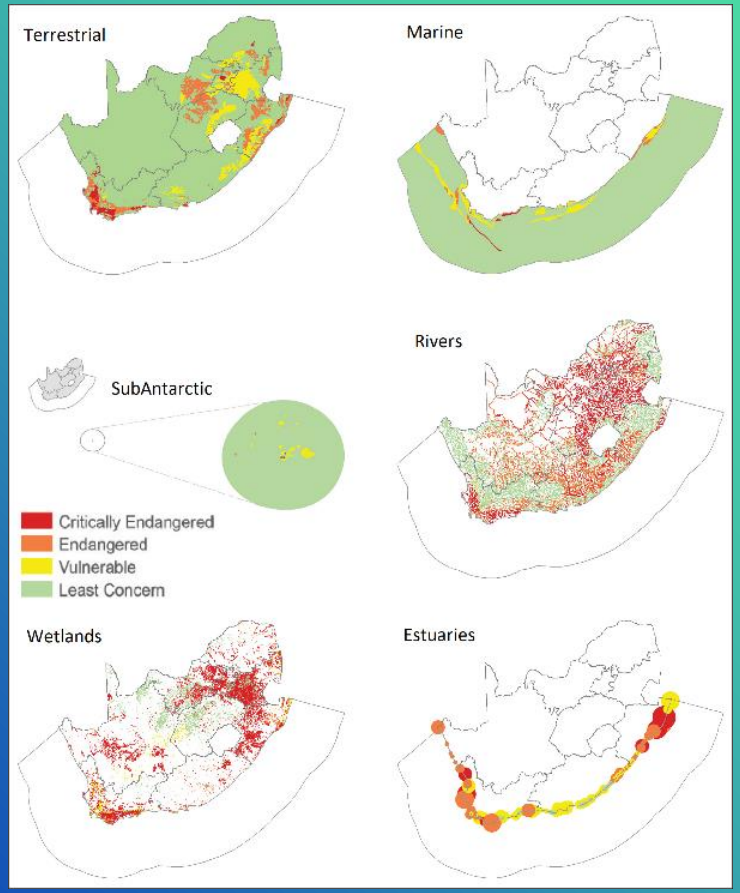
Goal/target	Global indicator derived from binary reporting
B	Number of countries with national constitution or legislation recognizing and implementing and monitoring a right to a healthy environment
1	Number of countries using terrestrial and marine spatial planning to identify areas of high biodiversity importance in national development planning
6	Number of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species
8	Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications that reflect biodiversity
9	Number of countries with legal instruments to regulate the use of and trade in wild species, and respecting customary sustainable use by indigenous peoples and local communities
12	Number of countries with urban sustainability plans referring to green and/or blue spatial management
13 / C	Number of countries that have operational legislative, administrative or policy frameworks which relate to Target 13
14	Number of countries with national targets for integrating biodiversity values into policies, regulations, planning, development processes, poverty reduction strategies and accounts at all levels, ensuring that biodiversity values are mainstreamed across all sectors and integrated into assessments of environmental impacts
15	Number of countries taking legal, administrative or policy measures to ensure that Target 15 is achieved
16	Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production (Sustainable Development Goal indicator 12.1.1)
17	Number of countries with capacity and measures in place related to Target 17
22	Number of countries recognizing the legal rights of indigenous peoples and local communities, environmental human rights defenders, women, youth and persons with disabilities with respect to their traditional territories, cultures and practices
23	Number of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control

Let’s take a closer look at some of the headline indicators

Joachim taking a close look…

Red List of Ecosystems





Red List of Ecosystems assessments for South Africa, from the National Biodiversity Assessment in 2018

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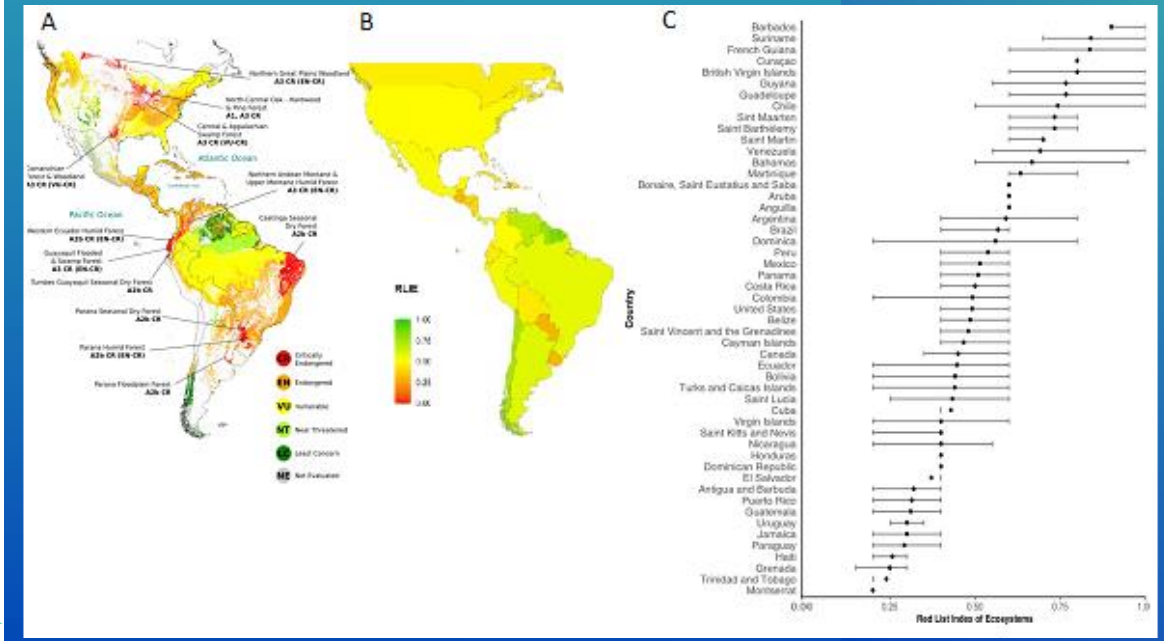
Red List of Ecosystems

The ***Red List Index of ecosystems*** (RLIe) summarises risk or threat status across sets of ecosystem types, based on the proportion of ecosystems in each Red List risk category (Rowland et al. 2020).



A) Ferrer-Paris et al. 2019
doi.org/10.1111/conl.12623

B & C) adapted from Rowland et al. 2020,
doi.org/10.1111/conl.12680

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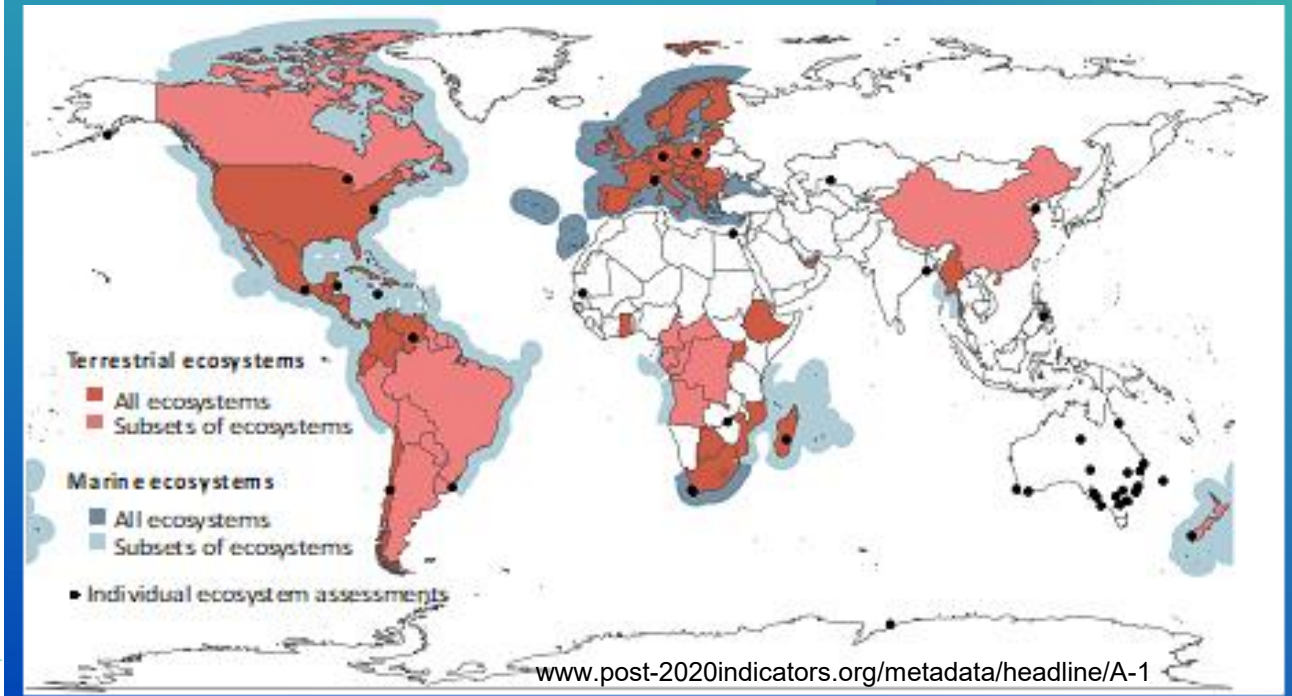
Red List of Ecosystems

Global availability?



www.post-2020indicators.org/metadata/headline/A-1

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Extent of natural ecosystems

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Extent of natural ecosystems

Crucial for biodiversity:

- Need to take stock of habitats
- Ecosystem map (not land cover)
  - Field mapping
  - Earth observation
  - Modelling

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Extent of natural ecosystems

Headline or binary Indicator	Category of development/implementation[2]	Next steps to be led by a representative of the AHTEG
A.2 Extent of natural ecosystems	3	• Develop recommendations on the ecosystem typology to be used for national reporting; this should be aligned with indicator A.1 Red list of ecosystems. • Develop in the metadata a method for deriving an indicator from an underlying geospatial dataset on extent, in collaboration with UNSD. • Provide guidance on the national reporting of the indicator, including through identifying a global reference dataset which can be used by countries who would prefer to use a global dataset[4].

Annex 1 in Report from AHTEG's 3rd meeting (Montreal, Canada, 3–6 October 2023)
https://www.cbd.int/doc/c/f22d/ab58/236acdd54779ab58b97aecf1/ind-ahteg-2023-03-02-en.pdf

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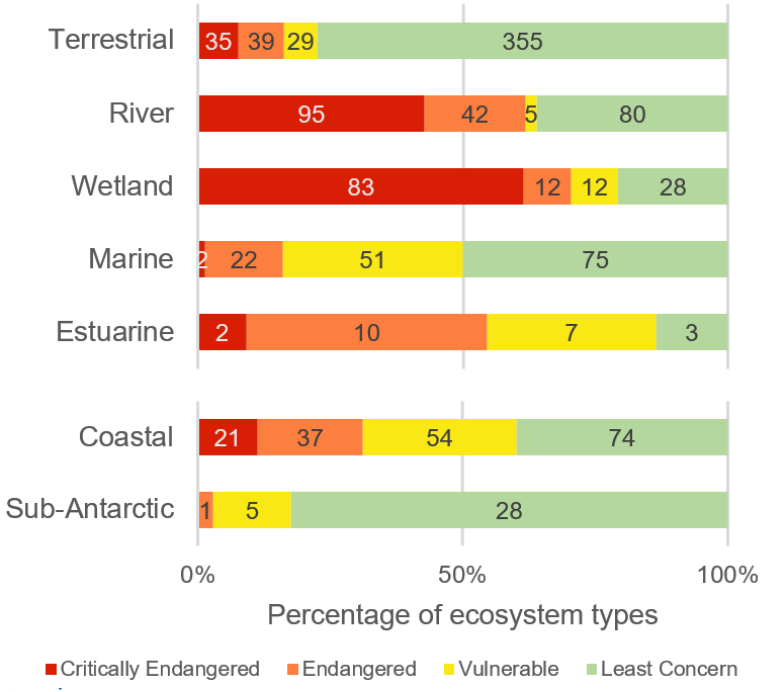
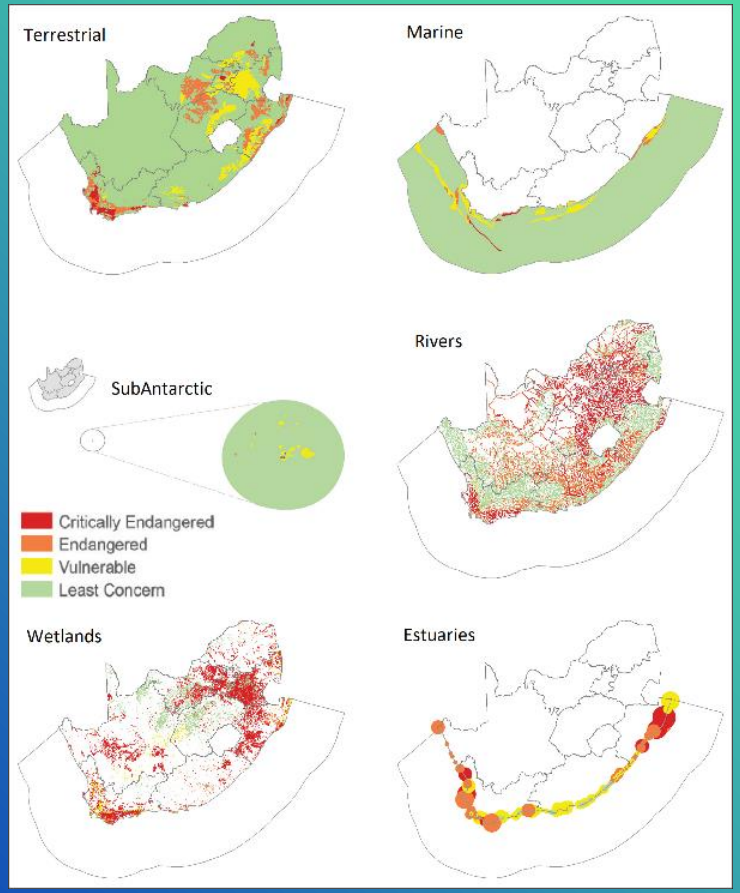
Red List of Ecosystems





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Coverage of protected areas and other effective area-based conservation measures

- Coverage alone insufficient
- Effectiveness & representativity important

➢ by Key Biodiversity Area
➢ by Ecosystem type

www.protectedplanet.net

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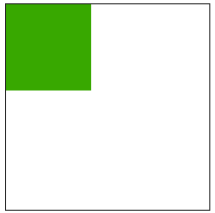
Coverage of protected areas and other effective area-based conservation measures

Norway

Terrestrial and inland waters protected area coverage



17.71%
Coverage

57,619km²
Land area covered

325,288km²
Total land area

17%
6th National Report coverage

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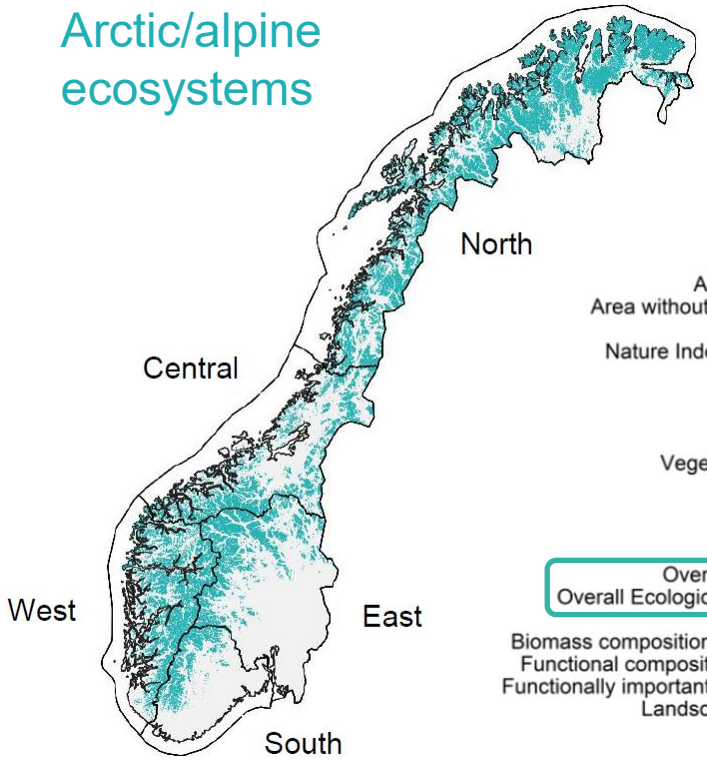
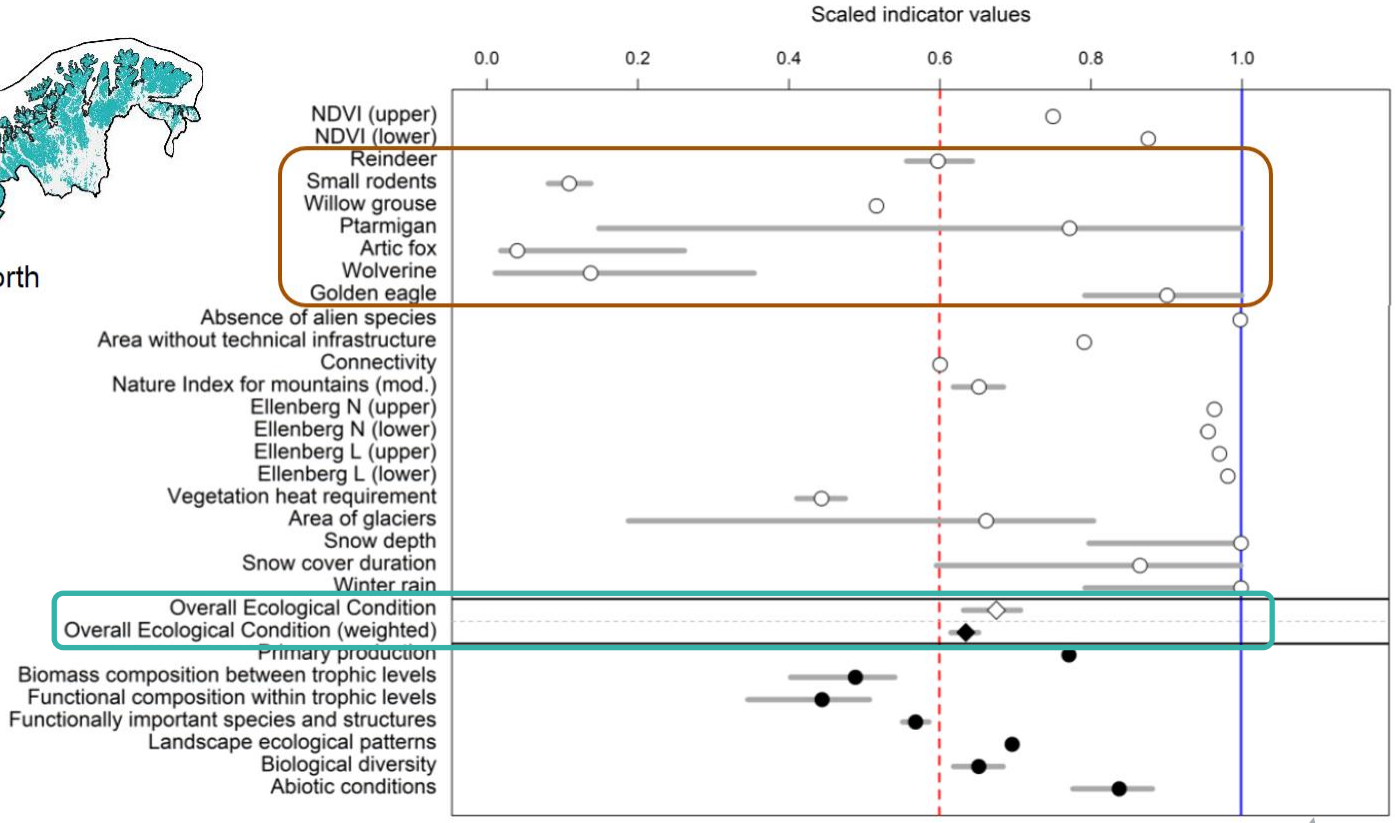
Ecological condition in Norway

Arctic/alpine ecosystems





Framstad, E., Kolstad, A. L., Nybø, S., Töpper, J. & Vandvik, V. 2022. The condition of forest and mountain ecosystems in Norway. Assessment by the IBECA method. NINA Report 2100. Norwegian Institute for Nature Research.

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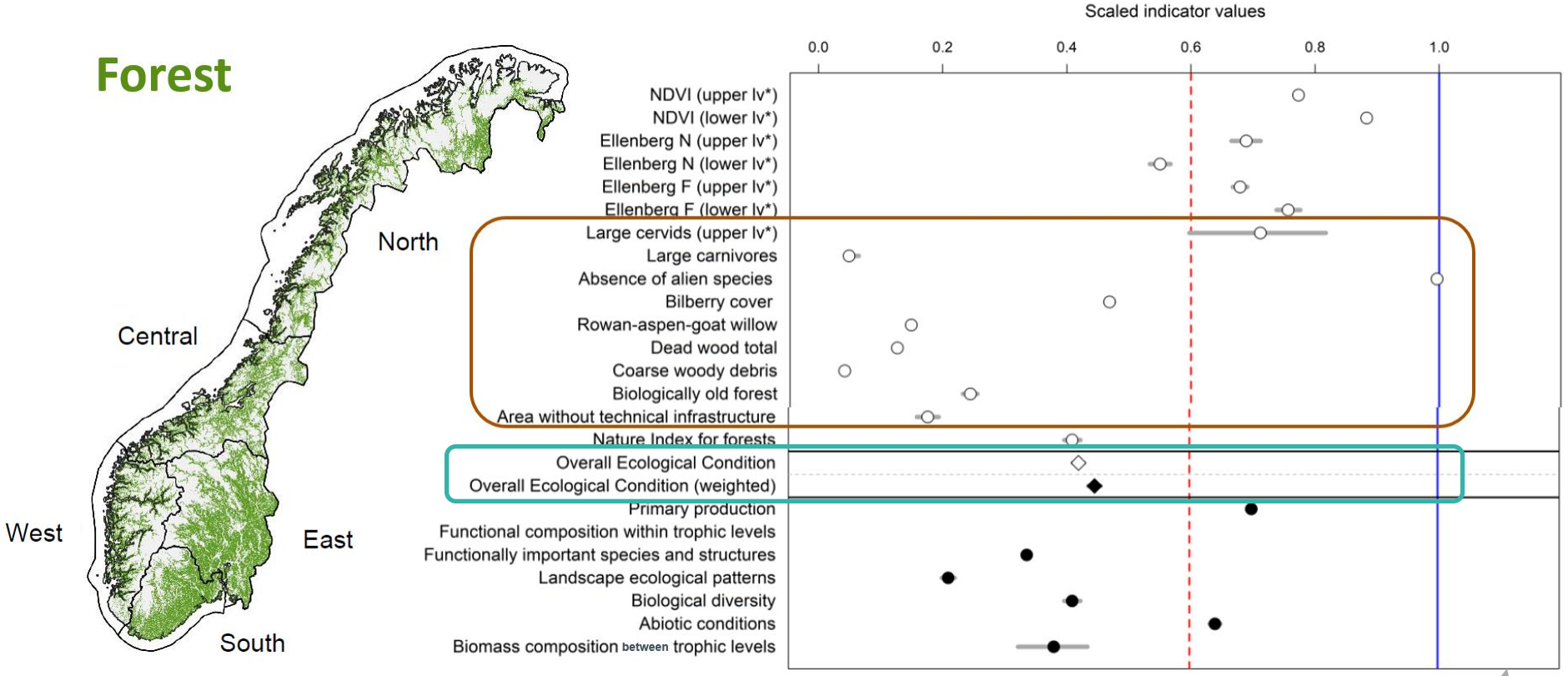
Ecological condition in Norway



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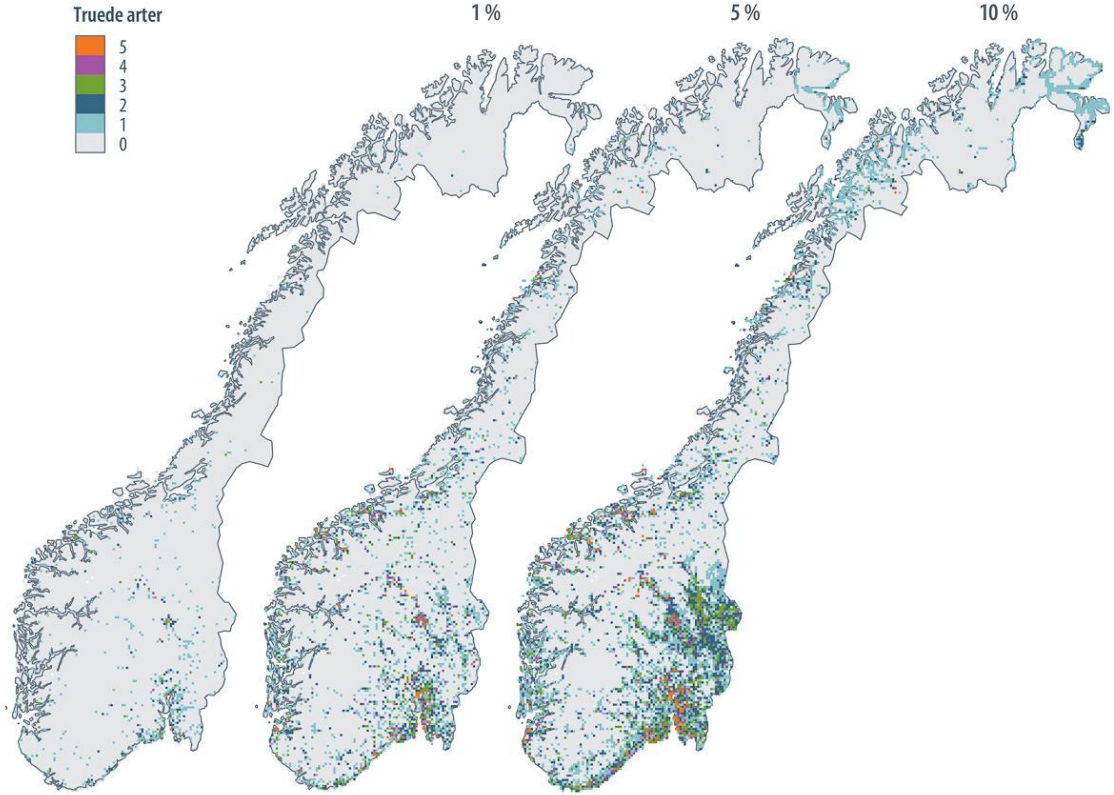
Hotspots for threatened species in Norway



Olsen et al. 2020. Geographical distribution of threatened insects and arachnoids, fungi, lichens and bryophytes: modelling of hotspots. NINA Report 1727. Norwegian Institute for Nature Research.

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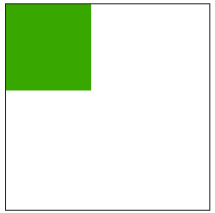
Coverage of protected areas and other effective area-based conservation measures

Norway

Terrestrial and inland waters protected area coverage



17.71%
Coverage

57,619km²
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Total land area

17%
6th National Report coverage

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Coverage of protected areas and other effective area-based conservation measures

So, what's really crucial for this indicator to be meaningful is:

- **Representativity**
  - Are the different types of ecoystems in a country covered well enough?
- **Effectiveness**
  - Are Key Biodiversity Areas covered

Transferrable to all indicators

- Support the national knowledge base for indicators
- Ensure representativity
- Ensure effectiveness
- Ensure sensitivity
- Support the global capacities for indicator implementation

Global capacity?

- CO-OP4CBD and UNEP-WCMC are conducting a European/Global survey on national capacities for implementing the monitoring framework (January/February)

- Results will be presented to AHTEG on indicators (March) which will give recommendations to SBSTTA

Monitoring framework / indicator topics at COP16?

- Missing/underdeveloped indicators
- Binary indicators
- Global capacity for implementation
- Resources for global implementation
- Simplification vs. usefulness
  - Representativity
  - Effectiveness
  - Sensitivity

Thank you for your attention!

Joachim Töpper

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