
NATIONAL
ECOSYSTEM
ASSESSMENT
INITIATIVE

WEBINAR: USING INDICATORS

- NATIONAL ECOSYSTEM ASSESSMENT INITIATIVE -

@Richard Todd from Pixabay

UN environment programme WCMC

UNDP

UNESCO

BESNet
Biodiversity and Ecosystem Services Network

Supported by:
Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
based on a decision of the German Bundestag

HOUSEKEEPING

Recording: This workshop will be recorded and will be uploaded to our NEA Initiative website. If you have any issues with this, please let us know.

Microphone and Camera: Your microphone will be muted throughout the workshop.

Questions: If you would like to comment or ask a question during the Q&A session, please raise your hand or type it in the chat function accessible from the bottom of your screen.

Support: If you have any technical issues, please send a direct message to Technical Support Grania Cooke via the chat.

Webinar Agenda

- Use of indicators within National Ecosystem Assessments and how they can be aligned with national indicators and international processes.
- Indicators and Climate Change
- Decade On Restoration
- Q&A

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Choosing and Using indicators

Philip Bubb – Senior Programme Officer, UNEP-WCMC

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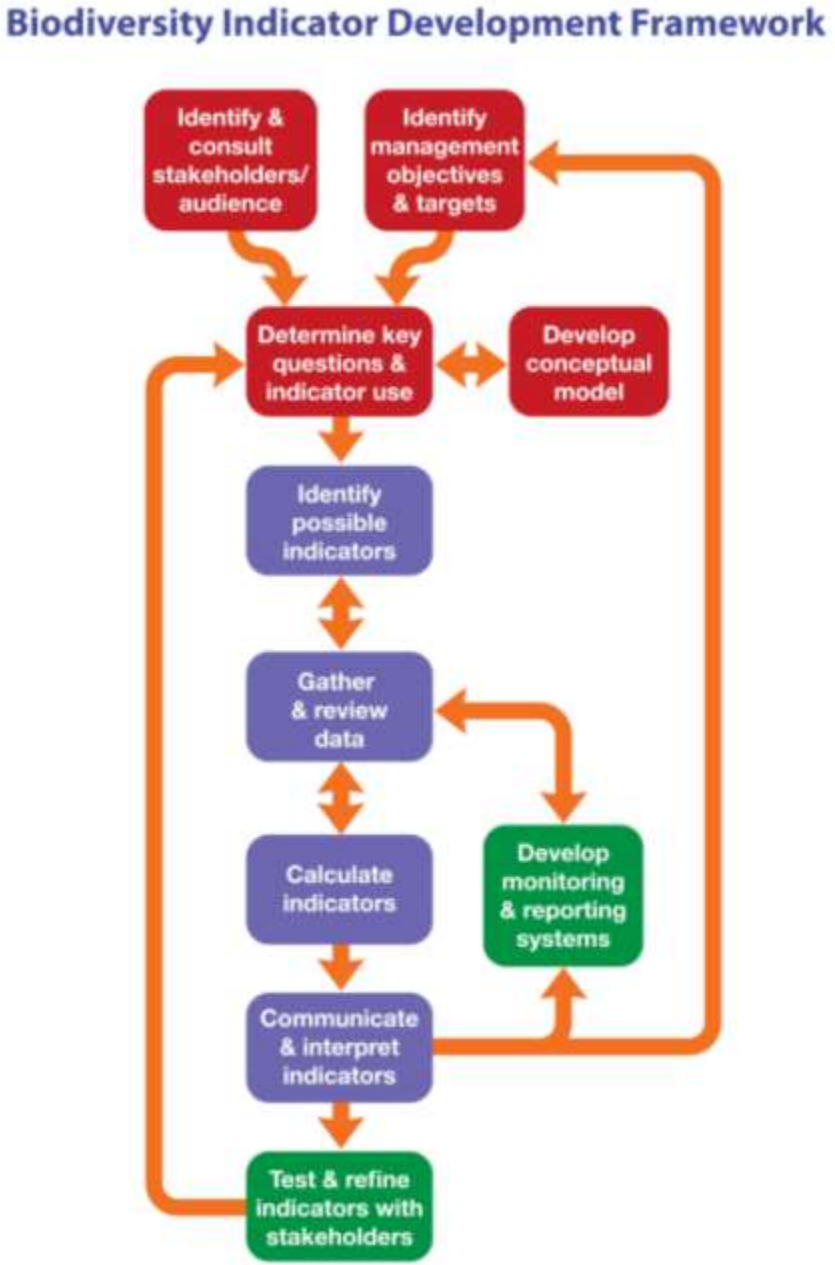
Biodiversity Indicators Partnership

Home About Indicator Development Partners

Home > National indicator development > Biodiversity Indicator Development Framework

Biodiversity Indicator Development Framework

www.bipindicators.net



A definition:

An indicator is a measure based on verifiable data that conveys information about more than itself.

(www.bipindicators.net)

for example,

The measure of change in above ground biomass could be an indicator of:

- deforestation
- reforestation
- land use abandonment
- agricultural land expansion
- biodiversity loss and gain
- carbon emissions or sequestration by land
- …..

The data becomes an indicator of something when it used to help answer a key question.

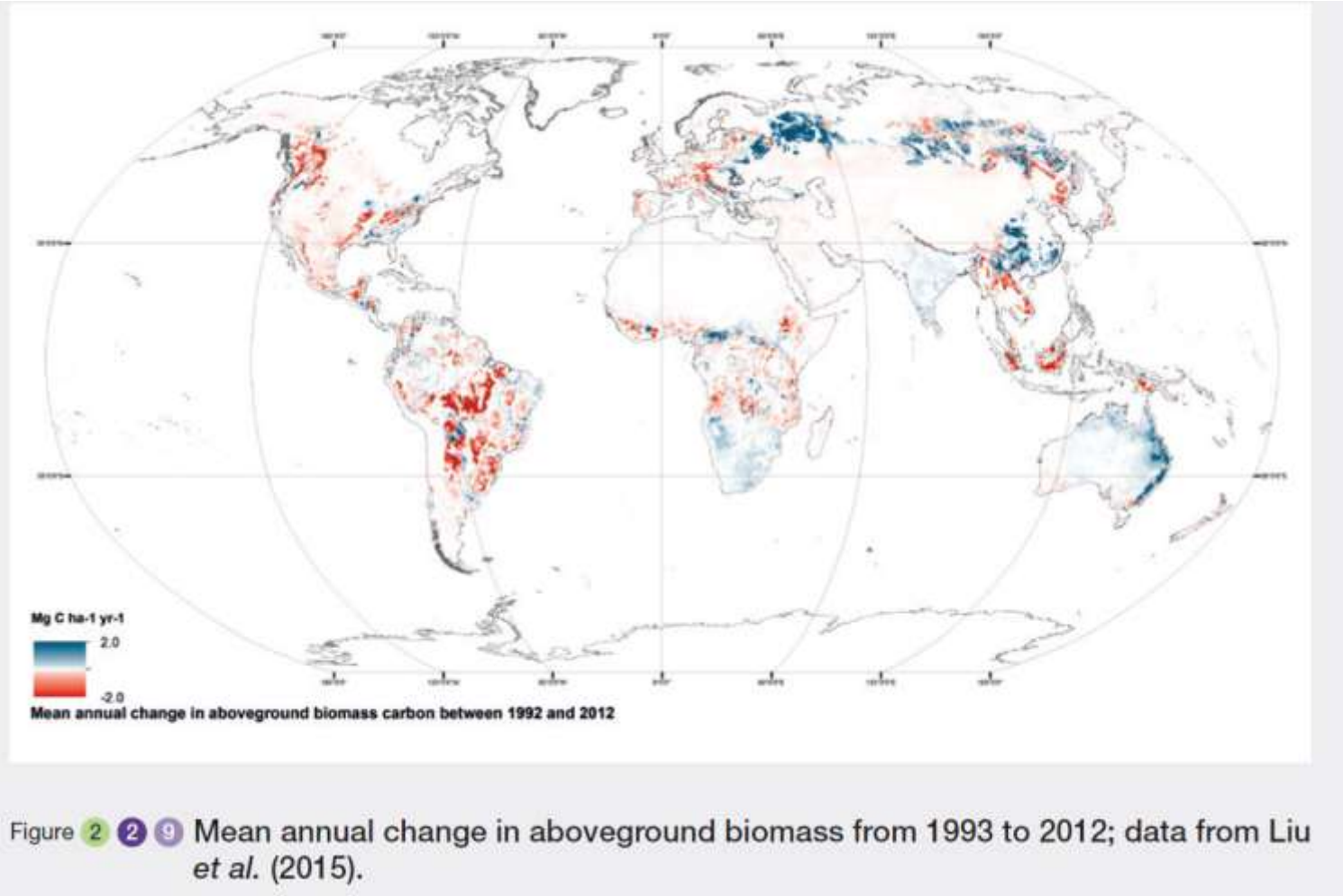


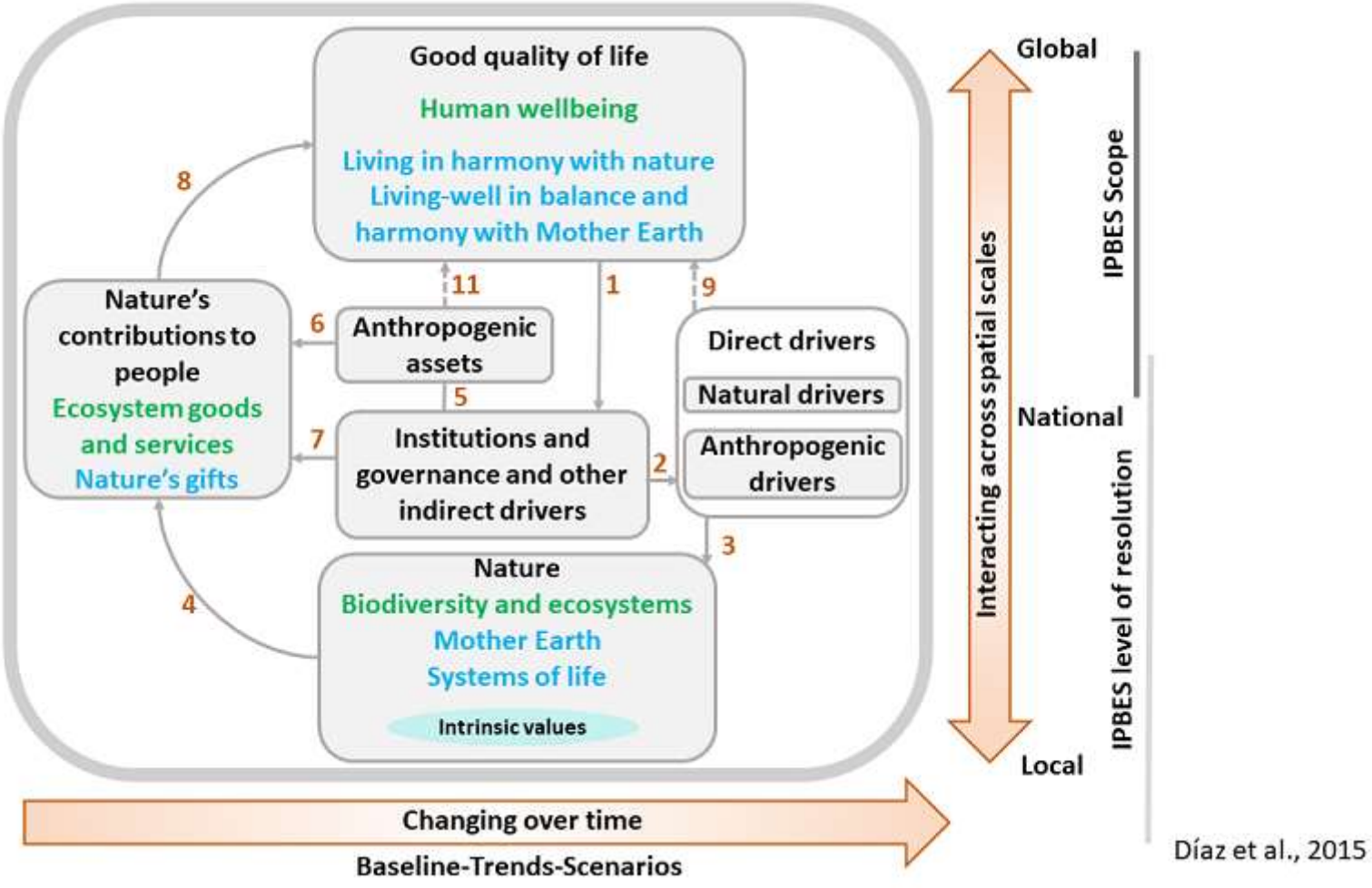
Figure 229 Mean annual change in aboveground biomass from 1993 to 2012; data from Liu *et al.* (2015).

An index: a numerical scale used to compare variables with one another or with some reference number

Components of an ecosystem assessment

The IPBES Conceptual Framework

Current Opinion in Environmental Sustainability 2015, 14:1–16

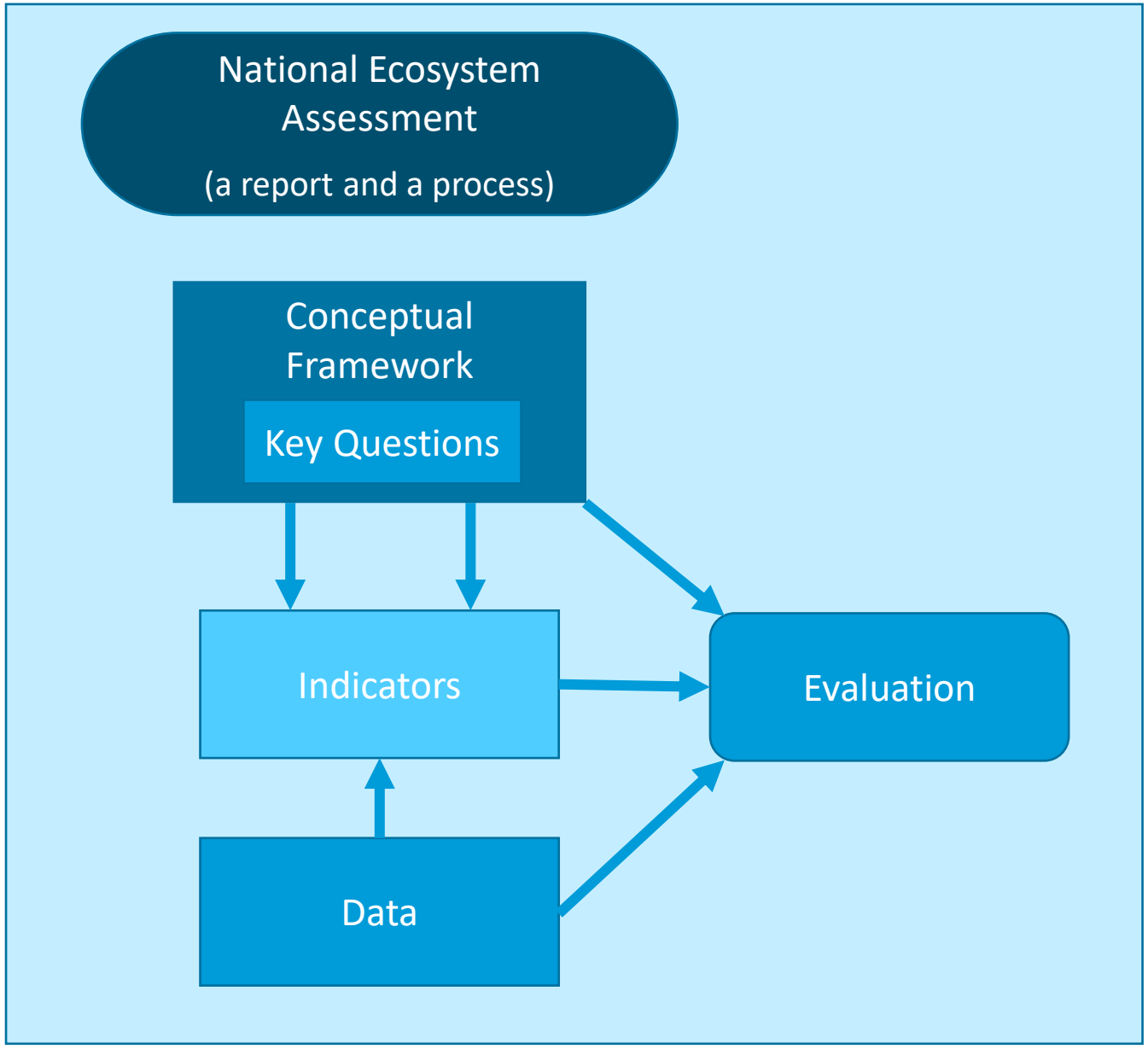


Díaz et al., 2015

Example Key Questions derived from the conceptual framework

- How does nature provide 'Nature's contributions to people' in our country?
- What are the most important direct drivers of change on nature in our country?

Components of an ecosystem assessment



Ideally, choose indicators to help answer the key questions.

Gather data to produce the indicators.

Conduct and write the evaluation to answer the key questions, supported by indicators and data.

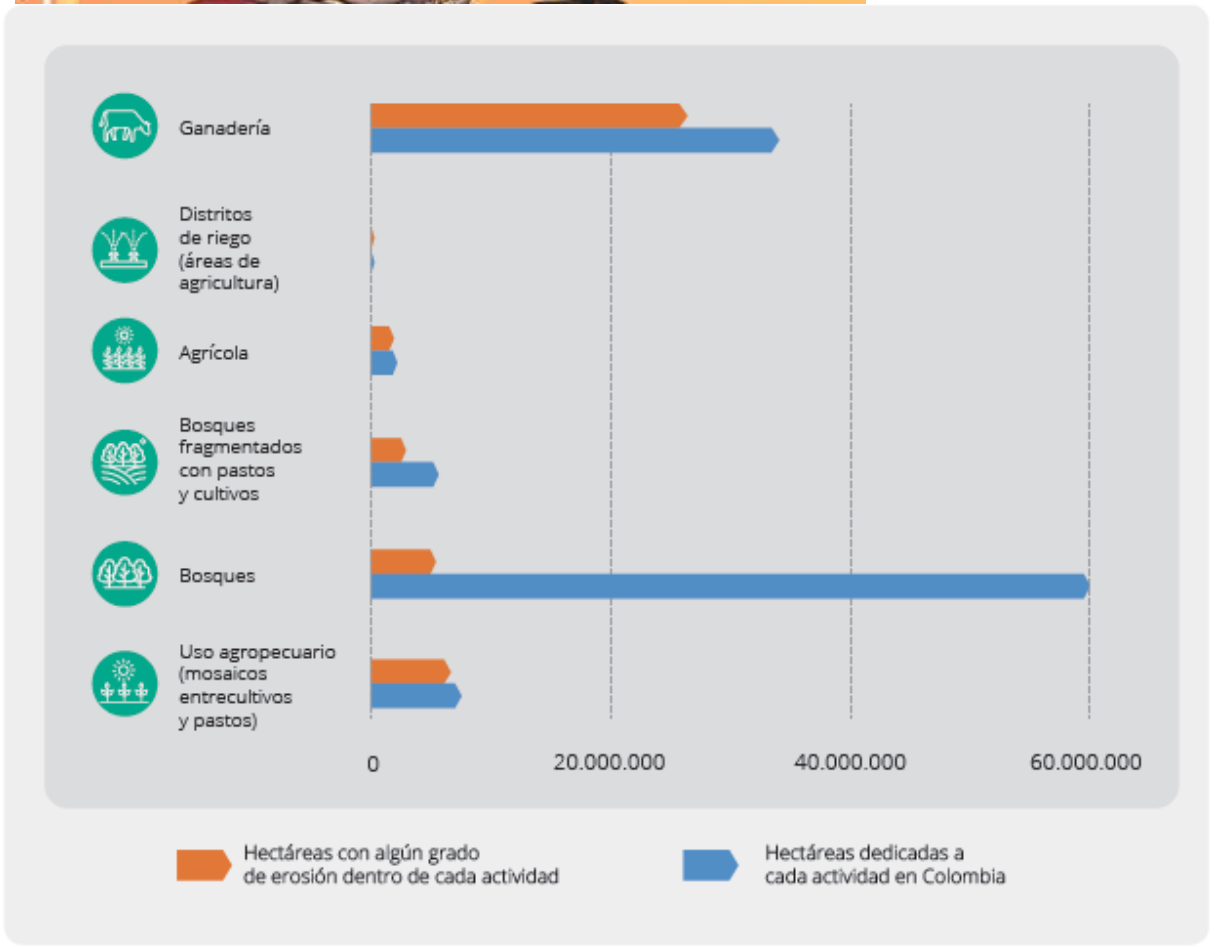


Figura 8. Usos del suelo y erosión en Colombia. Elaboración con base en Ideam et al. (2015).

Land use and erosion in Colombia.

Elaborated on the basis of Ideam et al. (2015)

Key Question:

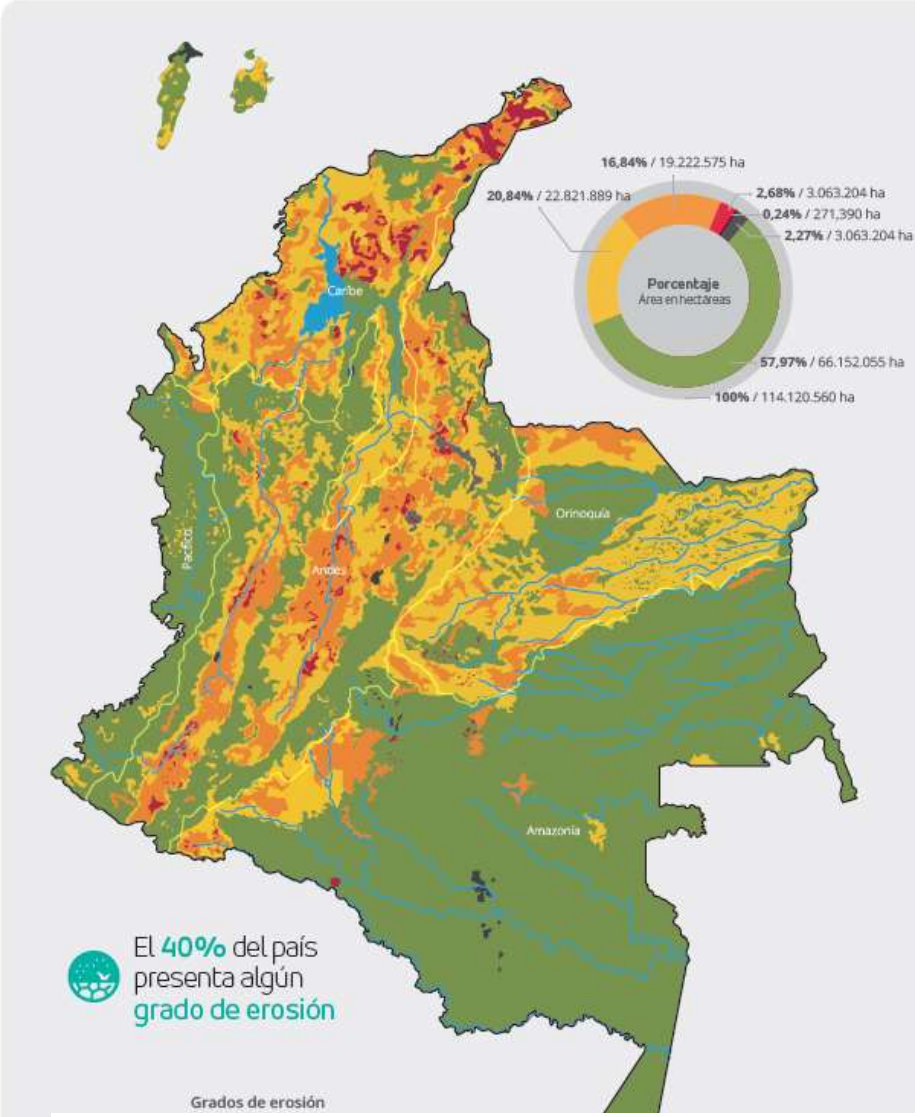
Which ecosystems are most degraded?

Indicators:

- Percentage and area of ecosystem extent modified by people

Hectares with some degree of erosion within each activity

Hectares dedicated to each activity in Colombia



http://www.humboldt.org.co/evaluacion-nacional/prensa.html

Key Question:
Which ecosystems are most degraded?

Indicators:

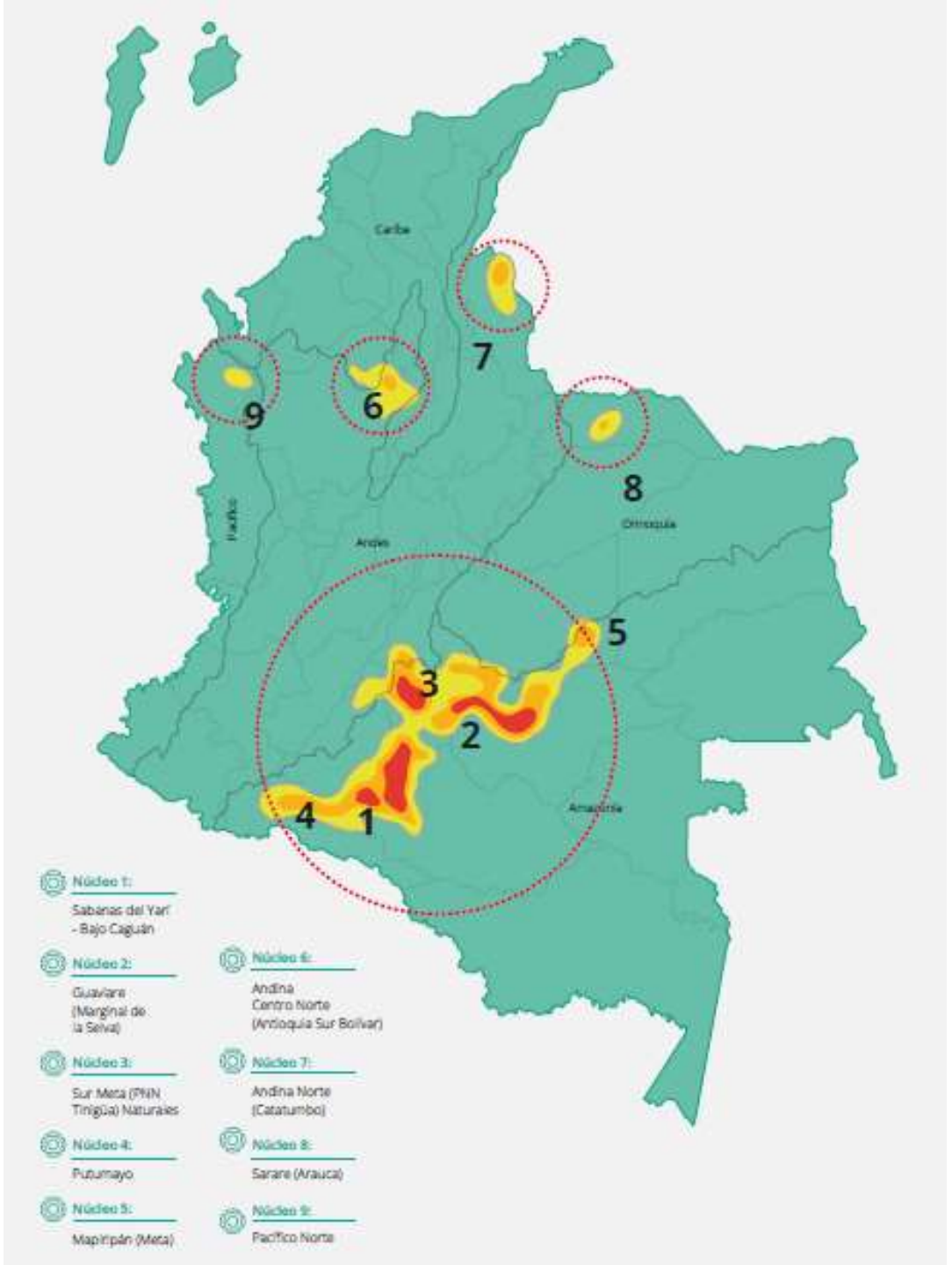
- Percentage and area of ecosystem extent modified by people
- **Percentage and area of ecosystems affected by soil erosion**
- Percentage and area of ecosystems affected by fire
- ….

Evaluación Nacional de
BIODIVERSIDAD Y SERVICIOS ECOSISTÉMICOS de Colombia

Key Question:
Which ecosystems are most degraded?

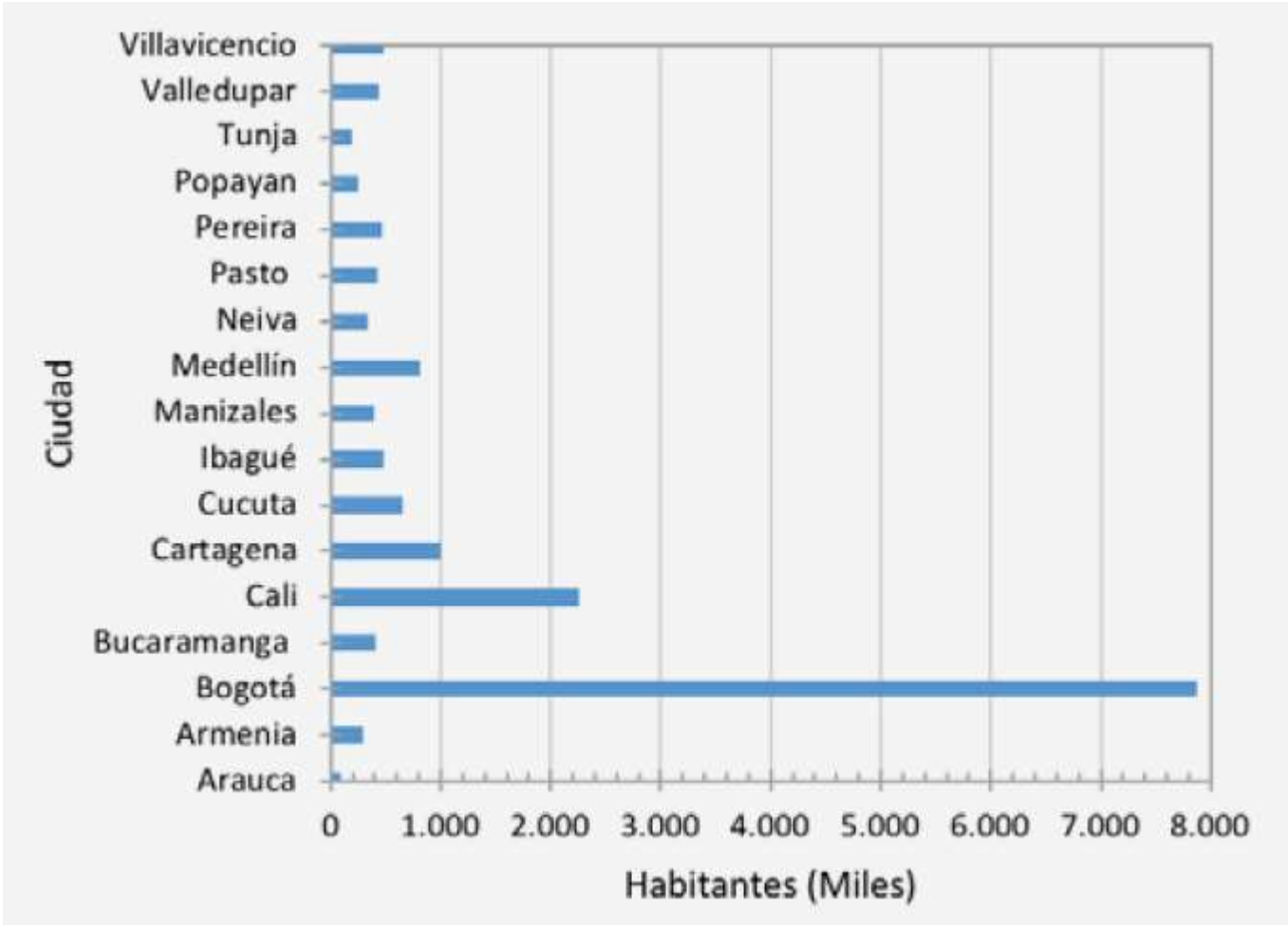
The nine principle focal areas of deforestation in Colombia in 2018.

Source, data and image: Ideam, 2019



Key Question:

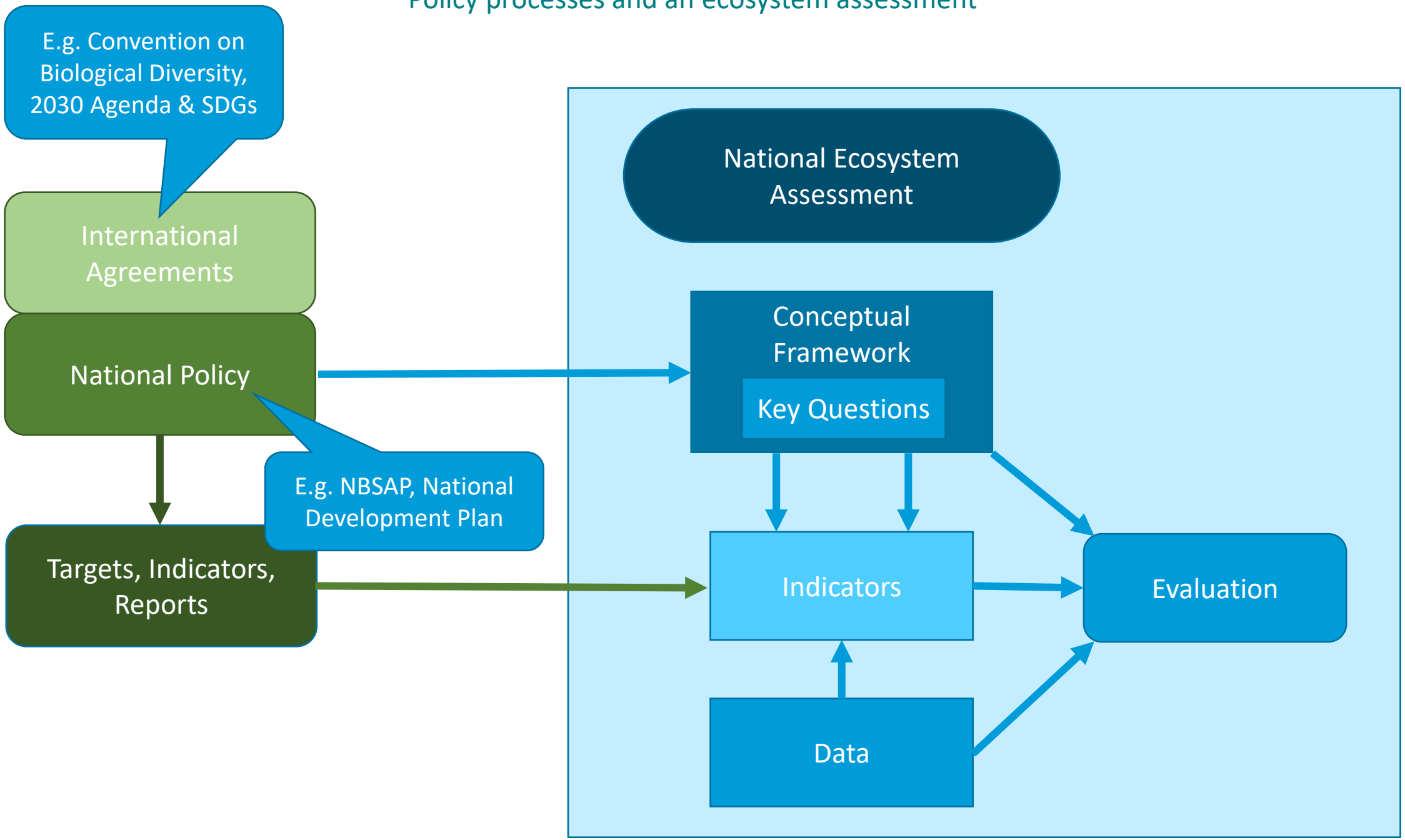
- How does nature provide 'Nature's contributions to people' in our country?



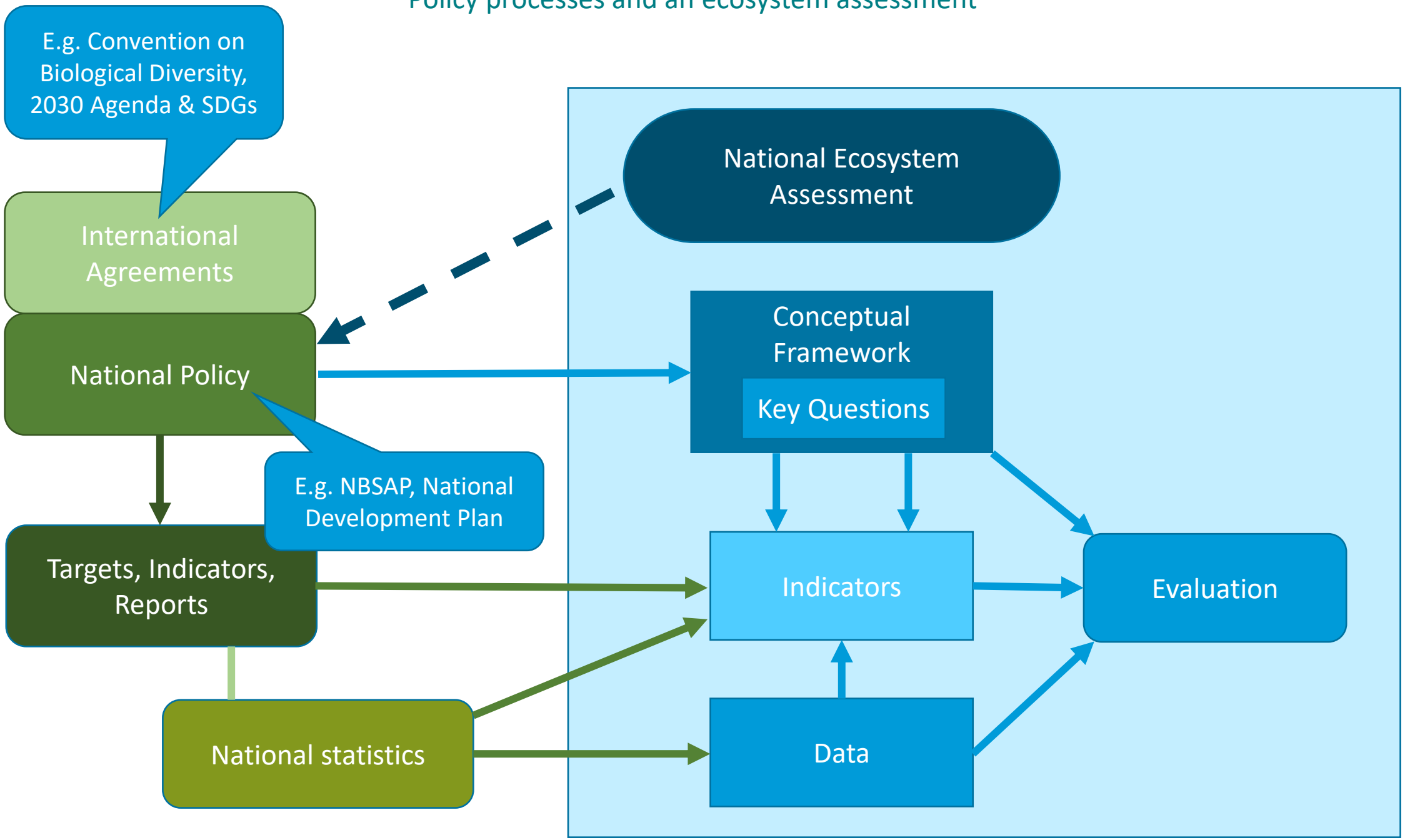
Population of cities in Colombia that benefit from water that originates from highland peat bogs (paramos)

Source; Sarmiento (2018)

Policy processes and an ecosystem assessment



Policy processes and an ecosystem assessment



Indicators and the climate and biodiversity link

Cordula Epple – Senior Programme Officer, UNEP-WCMC

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Why is climate change important for NEAs?

Climate change drives changes in ecosystems directly – and indirectly

Ecosystem services for climate change mitigation and adaptation are becoming increasingly important




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Climate change and the NEA

Why is climate change important for NEA?

Climate policies are increasingly embracing nature-based solutions

Nationally Determined Contributions, Climate Change Strategies, REDD+, National Adaptation Plans, Disaster Management Plans, etc.

Important part of the policy landscape for biodiversity, and a great opportunity for outreach and synergy!

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What country teams have done

- Climate change-related ecosystem services, pressures/impacts and other considerations **integrated in reports** to varying degrees.

- **Climate change data** is integrated (e.g. current climate variability, projections, recorded impacts) and often focused on particular impacts/ecosystems

- **Direct pressures and impacts** more prominent than **indirect impacts** and **interactions** between climate change and other pressures (e.g. land use change, migration, energy mix)

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Identifying indicators

- Very few global indicators ready to use
- Proposals exist (e.g. draft Global Biodiversity Framework, UN Draft Global Set of Climate Statistics and Indicators)
- Indicators need to be relevant to country context (e.g. key climate hazards, vulnerable ecosystems, ecosystem services for mitigation and adaptation)

Opportunity for NEA to support progress!

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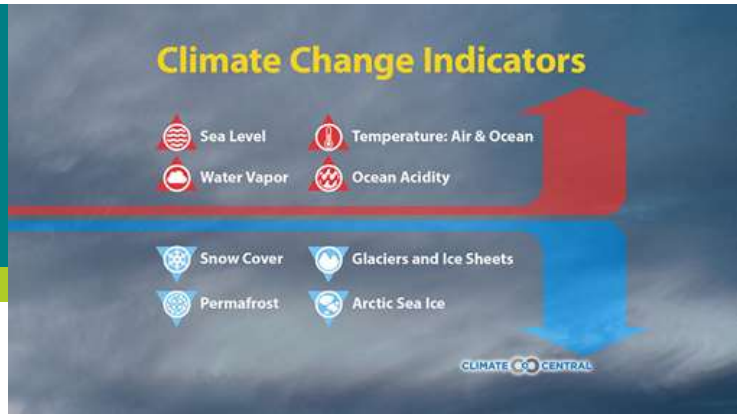
Tips on indicators



- Worth thinking beyond direct climate impacts
- Indicators for national context may have been developed by climate experts (Nationally Determined Contribution, National Adaptation Plan, Greenhouse gas monitoring / REDD+, Disaster Risk Reduction Strategy, etc.)
- Identify key climate change issues first, indicators second

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Indicator examples

Direct climate impacts:

- Climate parameters (e.g. Occurrence of extremes of temperatures and precipitation)
- Climatic impacts on European and American birds
- Red List Index (disaggregation for climate change not yet available)
- Proportion of population maintained within a species
- Change in surface water bodies
- Proportion of forest area disturbed
- Area affected by coral bleaching
- Vegetation health index

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Indicator examples

Indirect climate impacts:

- Freshwater abstracted as proportion of renewable freshwater resources
- Proportion of area of biofuels from total agricultural area
- Renewable energy production (wind)
- Intensity of use of forest resources
- Uptake of soil conservation measures

What are the threats to biodiversity in our country – now and in future? Which species and ecosystems are most at risk?

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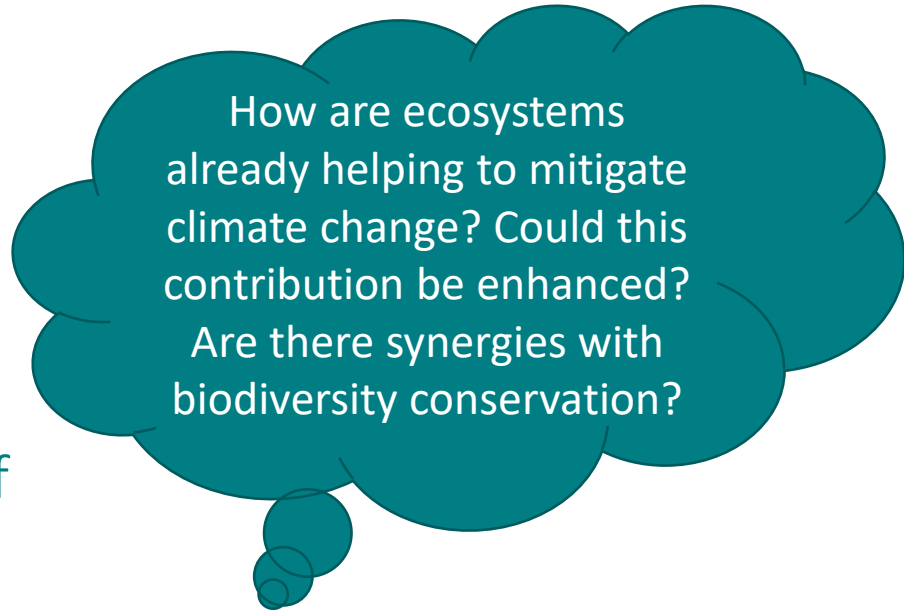
Indicator examples

Ecosystem services for mitigation:

- Greenhouse gas emissions from land use, land use change and forestry (LULUCF)
- GHG removals (Carbon sequestration) by ecosystems
- Forest carbon stock
- Ratio of drained/degraded organic soils out of total area of organic soils



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Indicator examples

Ecosystem services for adaptation:

- Area of nature-based protection from storms
- Share of green urban areas in the total area of cities
- Area of restored mangrove forest
- Area of floodplain available for natural flood water retention
- Area of degraded watershed slopes restored

How are ecosystems already helping people to adapt to climate change? Could this contribution be enhanced? Are there synergies with biodiversity conservation?

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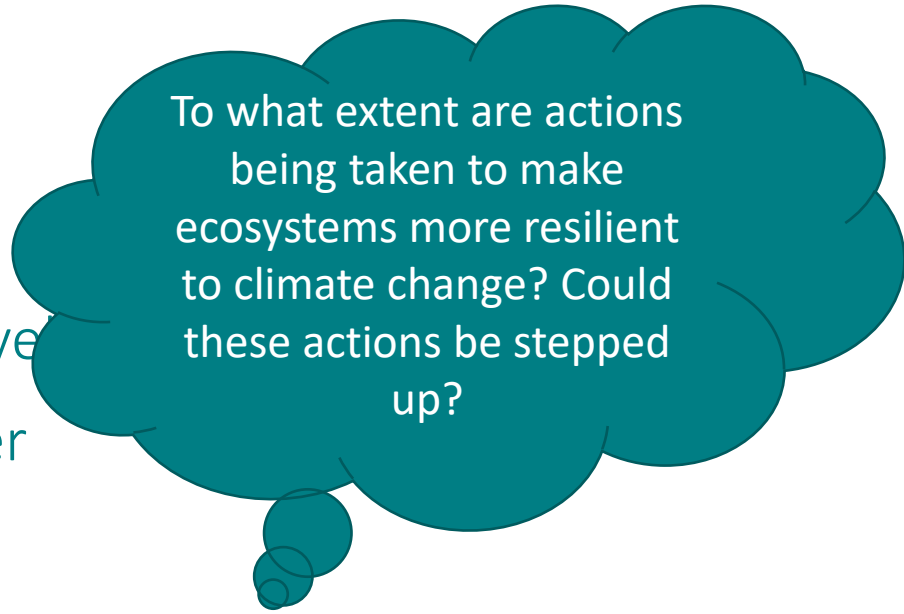
Indicator examples

Actions to increase ecosystem resilience:

- Groundwater use efficiency at monitored wells
- Area cleared of invasive species
- Proportion of fish stocks within biologically sustainable leve
- Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas
- Areas covered by Integrated Coastal Zone Management



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Indicators and the Decade on Restoration

Hazel Thornton – Programme Officer, UNEP-WCMC

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UN Decade on Ecosystem Restoration

- UNGA Resolution A/RES/73/284
- Accelerator for transformative change through delivery of existing goals and targets
- Inspire, support and engage all sectors and levels
- Terrestrial, marine & freshwater ecosystems

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UN Decade on Ecosystem Restoration

Embedded in existing policy

- Biodiversity
- Climate
- Society

Ramsar Convention on Wetlands
Convention sur les zones humides
Convención sobre los Humedales

SUSTAINABLE DEVELOPMENT GOALS

UN environment assembly
#SolveDifferent

UNFCCC

United Nations
Convention to Combat Desertification

Convention on Biological Diversity

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UN Decade on Ecosystem Restoration

Utilising existing indicators and frameworks

Global

National

UN Decade on Ecosystem Restoration

Utilising existing indicators and frameworks

- Annual reporting (2022-2030)
- 81st UNGA (2026)
- Culmination of the UN Decade (2030)

2021 – 2030: A decade for change

UNITED NATIONS DECADE ON
ECOSYSTEM
RESTORATION
2021-2030

2021
2030
United Nations Decade
of Ocean Science
for Sustainable Development

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Q&A

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@Sasin Tipchai from Pixabay

What's next?

Webinar: Integrating multiple values

Monday 17th of January

12:00 to 13:30 (GMT)

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@Rafa Mekhraliev on Unsplash

Thank you!

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