

**IPBES**

**Goals. Challenges, Opportunities**

And the Regional Assessments

# What is it and why was it established?

- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
- Modeled on IPCC for similar science challenges
  - Questions fundamentally complex
  - Literature large but lack of consensus on many important points
  - Challenges are global, as are drivers
  - Policy options require large scale and small scale actions
- 129 States are now Parties, and growing
  - Nine new members between 2017 and 2018 Plenaries

# What are the core science questions?

- Are we actually losing biodiversity on global and regional scales?
- If so, does it matter to human well-being (and in what ways)?
- What are the drivers of the changes?
- What are policy options to address the drivers?

Conceptual framework in papers by Diaz and coauthors

- Chapter structure of assessments reflects logic
  - Framing of the assessment,
  - Status and trend in Human well-being, Biodiversity, Drivers,
  - Scenarios, Policy options
  - SUMMARY for POLICY MAKERS

# What makes IPBES assessments novel and challenging?

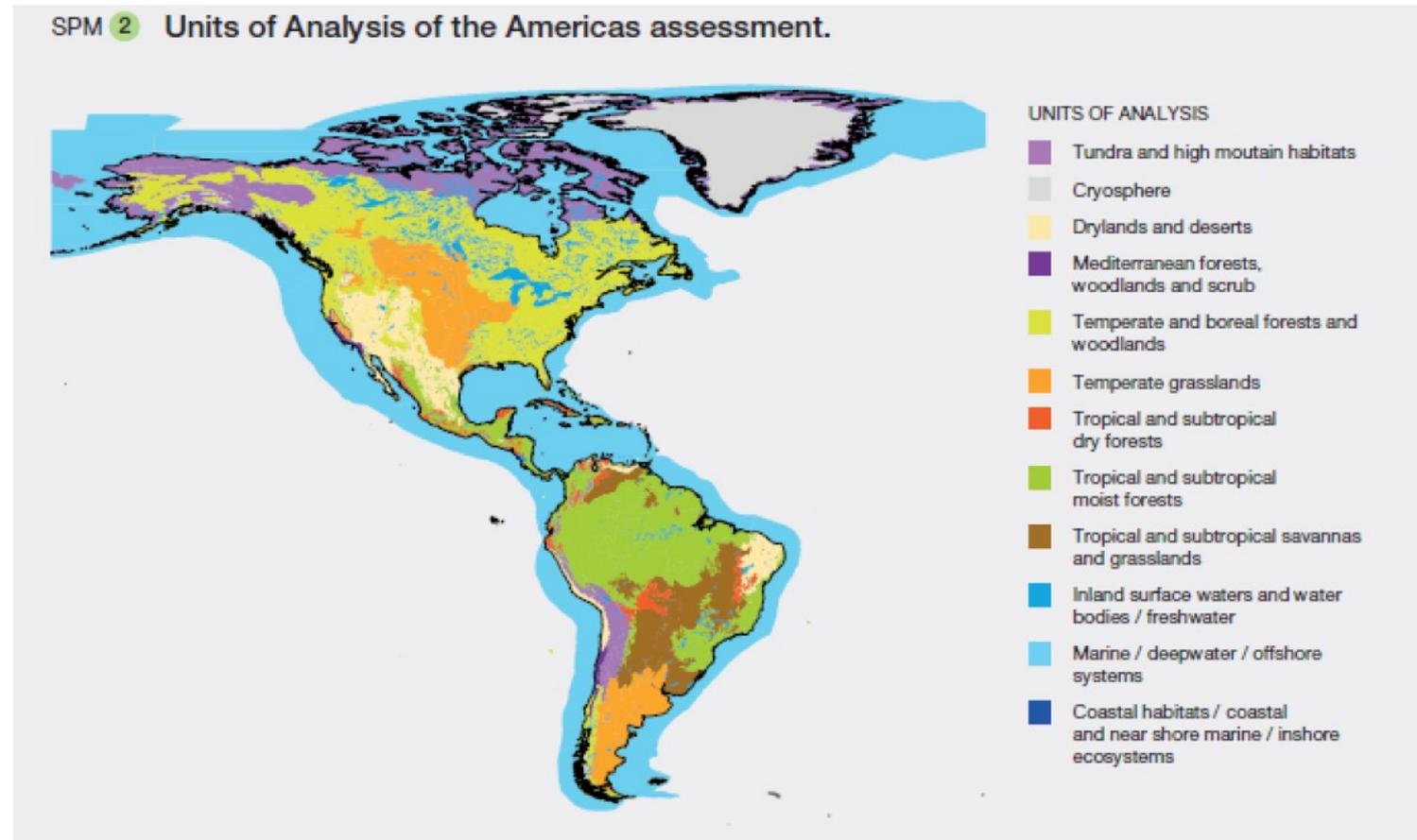
- Commitment to make extensive use of Indigenous and Local Knowledge as complete and equally legitimate knowledge systems – and then actually DOING IT.
- Commitment to reflect plurality of worldviews in interpretation of findings AND DOING IT.
- What's been achieved
  - Thematic assessment on Pollinators (Feb 2016)
  - Four Regional Assessments (March 2017)
  - Thematic Assessment on Land Degradation “

# Americas regional assessment

- Who?
  - Co-chairs : Jake Rice, Cristiana Seixas, Maria Elena Zaccagnini
  - CLAs and LAs - 115 experts with around 75 truly active,
  - TSU and Central Secretariat
  - Management Committee from MEP & Bureau
- 30 Months of effort
  - First Order Draft – expert review with ~750 comments
  - SOD ~ 6300 comments (individual responses)
  - Final Version + SPM (9-12 drafts for final version+negotiation)
- From Arctic to Patagonia, including Caribbean
  - 140 deg of latitude. Coast to 2<sup>nd</sup> highest mountain chain, Huge cultural and economic diversity

Figure SPM.2

**Units of analysis of the Americas assessment**



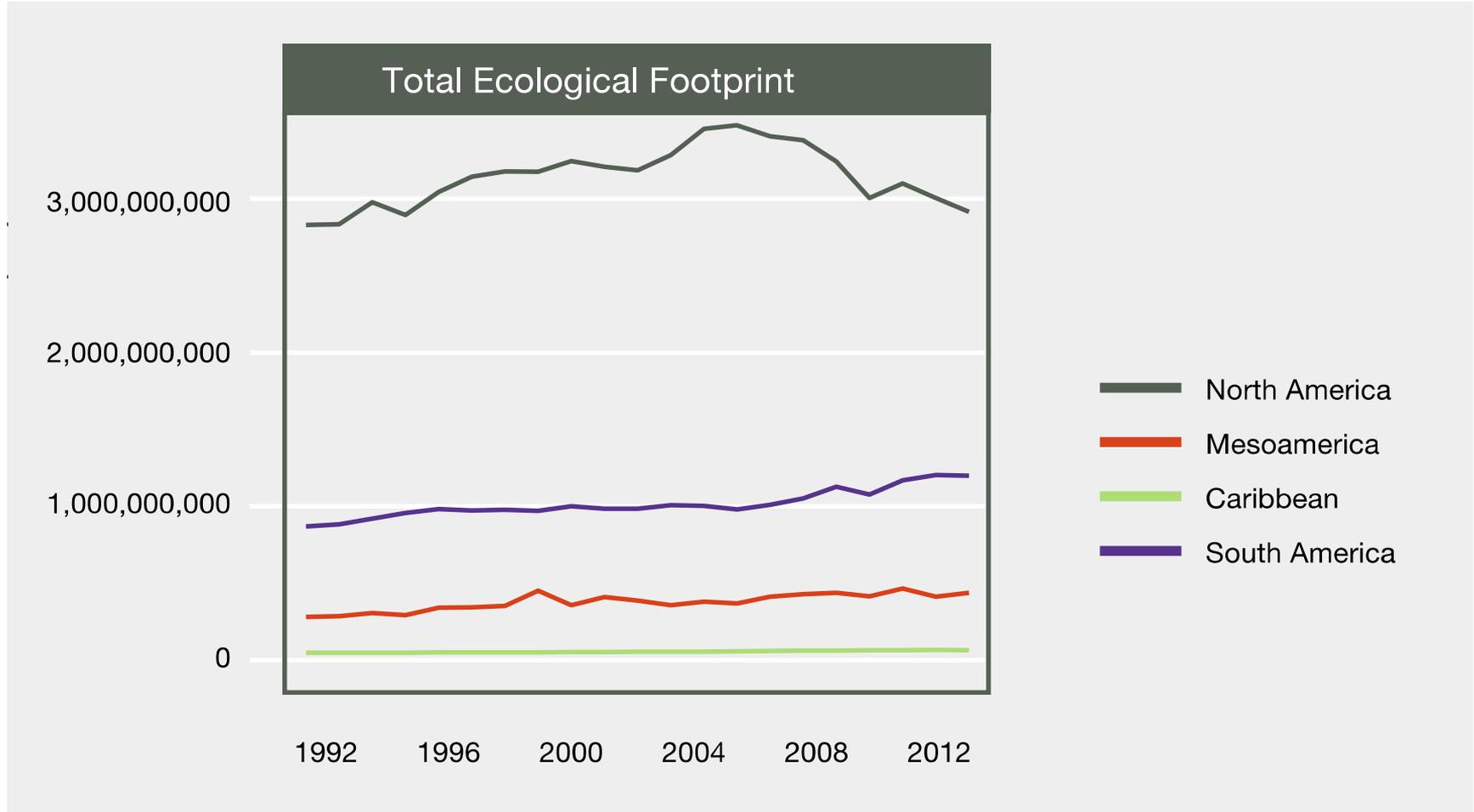


## Americas Findings: Challenges

- 40% Of Global Bio-capacity, with 13 % of the global human population produces 22.8% of the global ecological footprint of humankind. (65% in NA)
- Rate of use places Nature-based securities under pressure: Food: Water:, Energy: Health: Culture:
- Causes
  - Unsustainable rates of consumption
  - Decoupling of lifestyles from local habitats and direct degradation of the environment erode sense of place, language and local ecological knowledge, compromising cultural continuity.
- Tipping points are being approached.

# Ecological footprints **DO** grow and the footprints **CAN** change

Total ecological footprint per subregion in the Americas between 1992 to 2012.



Source: Global Footprint Network, 2017



## Findings: Trends of concern in biodiversity

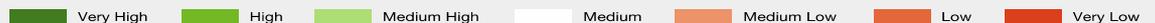
- 65 % of NCP in all units of analysis are declining, with 21% declining strongly.
- Compared to pre-European settlement, reductions of
  - 95 % of tall-grass prairie in NA;
  - 72 % and 66 % of tropical dry forest in Mesoamerica and the Caribbean, respectively;
  - 88 % of the South American Atlantic tropical forest,
  - 70 % of the Rio de la Plata grasslands,
  - 50 % of the tropical savanna
  - 50 % of the Mediterranean forest,
  - 34 % of the Dry Chaco
  - 17 % of the Amazon forest

Have all been transformed to human-dominated landscapes

- And these increasing pressures are having impacts on ability of all Units of Analysis to provide NCP;
- Particularly material NCP people use directly and some regulating NCP we depend on indirectly.

	Food and Feed	Materials and assistance	Energy	Medicinal, biochemical and genetic resources	Learning and inspiration	Supporting identities	Physical and psychological experiences	Maintenance of options	Climate regulation	Regulation of freshwater quantity, flow and timing	Regulation of freshwater and coastal water quality	Regulation of hazards and extreme events	Habitat creation and maintenance	Regulation of air quality	Regulation of organisms detrimental to humans	Pollination and dispersal of seeds and other propagules	Regulation of ocean acidification	Formation, protection and decontamination of soils and sediments
Tropical and subtropical humid forests	↘	→	↗	↗	→	→	→	↘	↘	↘	↘	↘	↘	→	↘	↘	↘	↘
Tropical and subtropical dry forests	↘	↘	→	↗	→	↘	→	↘	↘	↘	↘	↘	↘	↘	↘	↘	→	↘
Temperate and boreal forests and woodlands	↘	→	→	→	→	↘	→	↘	↘	↘	↘	→	↘	→	↘	↘	↘	↘
Mediterranean forests, woodlands and scrub	↘	↘	↘	↘	→	→	→	↘	↘	↘	↘	↘	↘	→	↘	↘	→	↘
Tundra and high mountain habitats	↘	→	↘	↘	→	↘	→	↘	↘	↘	↘	↘	↘	→	↘	→	↘	↘
Tropical and subtropical savannas and grasslands	↘	↘	↘	↗	→	→	→	↘	↘	↘	↘	↘	↘	↘	↘	↘	→	↘
Temperate grasslands	↘	↘	↘	→	→	→	→	↘	↘	↘	↘	→	↘	↘	↘	↘	→	↘
Drylands and deserts	↘	↘	↘	→	→	↘	↘	↘	→	↘	↘	→	↘	→	↘	↘	→	↘
Wetlands - peatlands, mires, bogs	↘	↘	↘	→	↗	→	→	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Freshwater	↘	→	↗	↘	→	↘	→	↘	↘	↘	↘	↘	↘	→	↘	↘	→	↘
Coastal marine	↘	→	→	↘	→	→	→	↘	↘	↘	↘	↘	↘	→	↘	↘	↘	↘
Offshore marine	↘	→	→	↘	→	↘	→	↘	→	↘	↘	↘	↘	→	↘	↘	↘	→
Urban areas	→	→	→	↘	↗	↗	↗	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Agricultural, silvicultural, aquacultural systems	↑	↑	↑	→	↘	↘	→	→	↘	↘	↘	↘	↘	→	↘	↘	↘	↘

Importance of unit of analysis for delivering each nature's contribution to people



Direction of change in provision of each nature's contribution to people





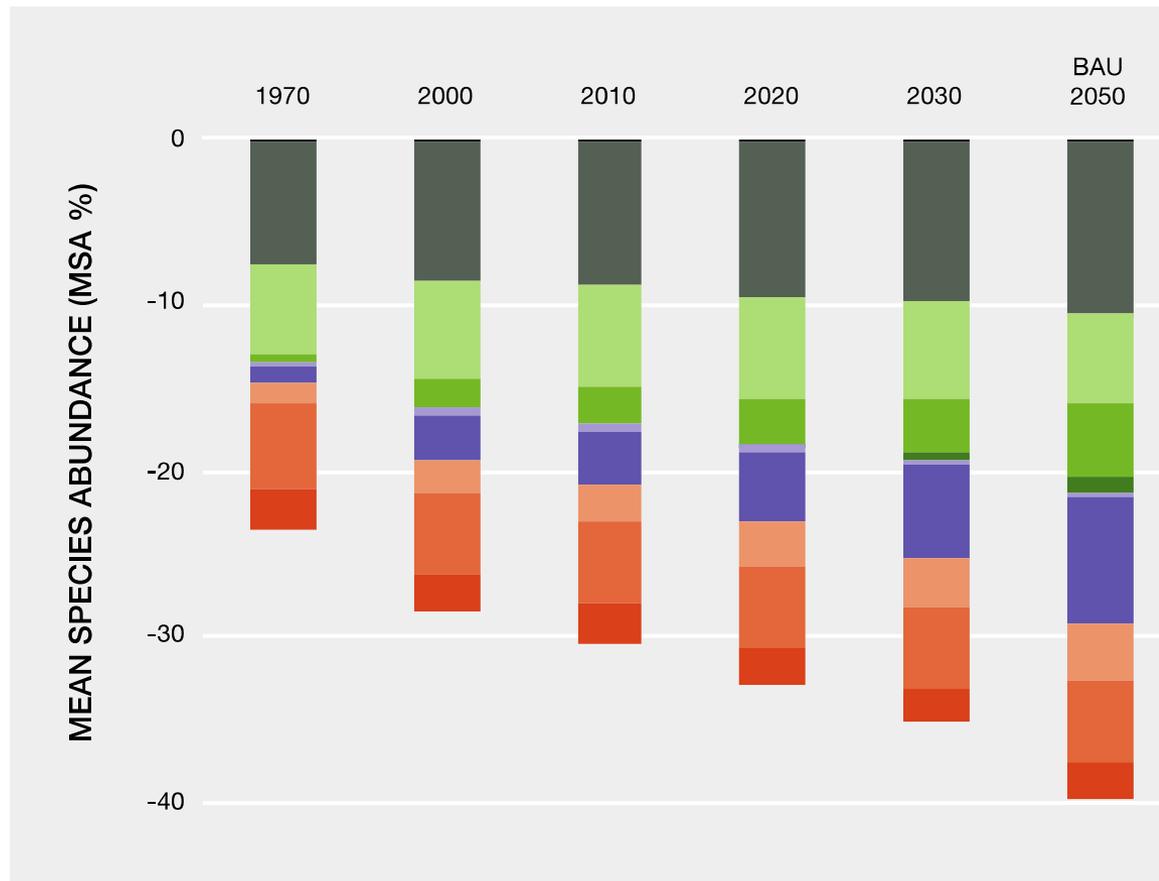
## What are the Drivers of Loss

- Main INDIRECT Drivers of losses
  - Unsustainable patterns of economic growth
  - Weaknesses in the governance systems
  - Population and demographic trends
  - Inequity
- Main DIRECT Drivers of loss
  - Habitat degradation and fragmentation: \*\*\*
    - Land conversion, agricultural intensification, urbanization and other new infrastructure;
  - Overexploitation/overharvesting
  - Climate Change
- Includes consequences of each driver

## Findings: Where will the status quo take us (projections circa 2050)?

- Population increase by 20 % to 1.2 billion and the GDP increase nearly 2X.
- Unsustainable agricultural practices [dark brown] [light green] and climate change [purple] to be major drivers of degradation.
- Multiple drivers will interact, often in synergistic ways.
- Consequence - Further increase in biodiversity loss, reduction in ecosystems' resilience and the provision of present levels of NCP.

Pressures driving biodiversity loss in the Americas.

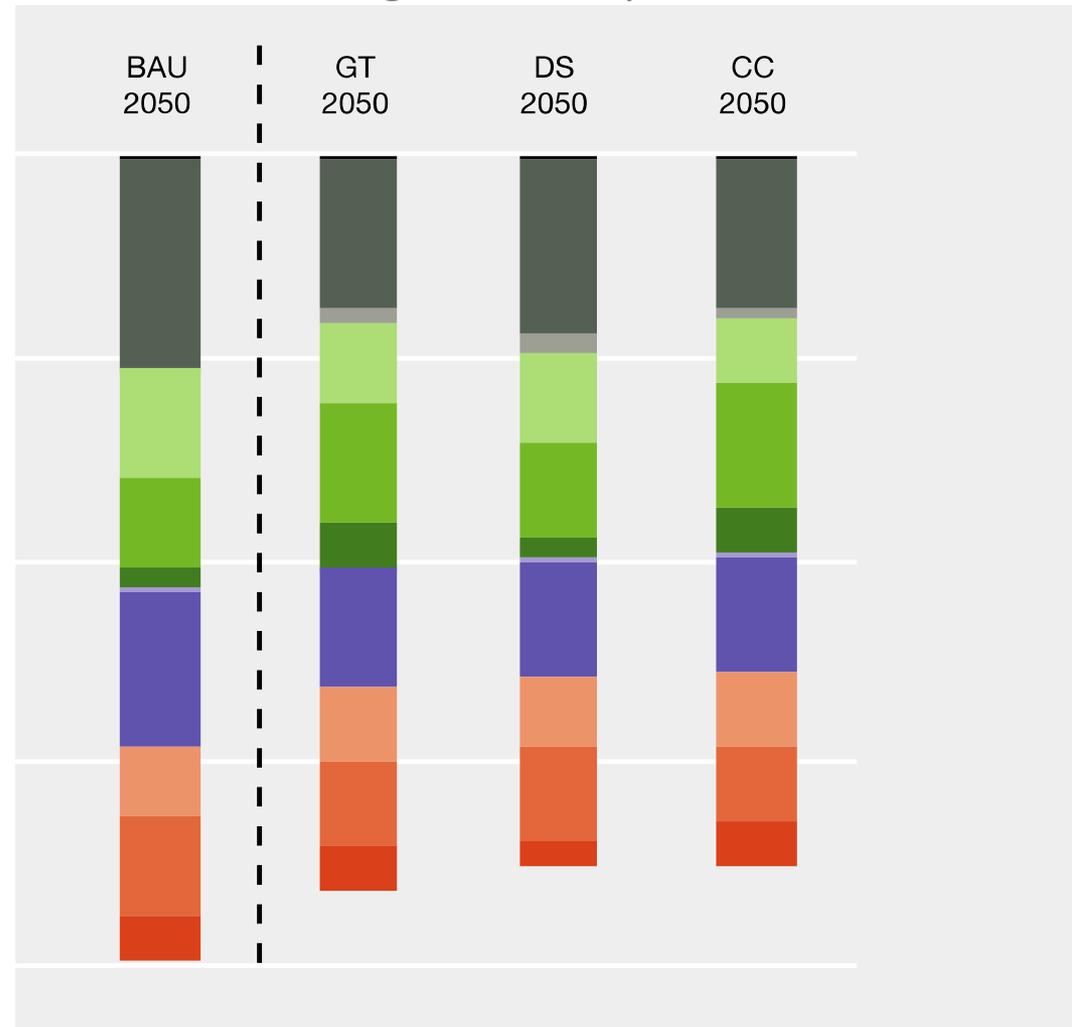


Source: PBL Netherlands Environmental Assessment Agency, 2012 and 2014.

## Findings: What are alternative pathways and outcomes?

- Large-scale technologically-optimal solutions
- Decentralized governance solutions
- Consumption change solutions
  - All feature pathways to climate change mitigation, the expansion of protected areas and the recovery of abandoned lands

Pressures driving biodiversity loss in the Americas.



Source: PBL Netherlands Environmental Assessment Agency, 2012 and 2014.



## Findings and Conclusions : The Future

- What initiatives are making a difference currently?
  - An increase in protected areas
  - Ecological restoration projects
  - Strategies for making human-dominated landscapes (supportive of biodiversity and nature's contributions to people are essential
- What options are available for progress
  - take into account short and long-term trade-offs, telecoupling and leakage and spillover effects on many scales.
  - Mainstreaming the environment effectively into economic and social development sectors.
  - No single governance approach including mixed governance systems
  - Behavioural change, individual – corporate – community – State
  - TABULATION of instruments and performance

# The oceans and coastal coverage was VERY WEAK

- Where was the marine expert community?
  - Nomination of experts by national focal points
- **WHY IT MATTERS TO GET ENGAGED**
  - Global synthesis is covering high seas
  - Sustainable use of natural resources (start 2019)
- **HOW TO ENGAGE**
  - Make yourself and interest known to national focal points,
  - Get your marine and coastal Ministries aware