

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?

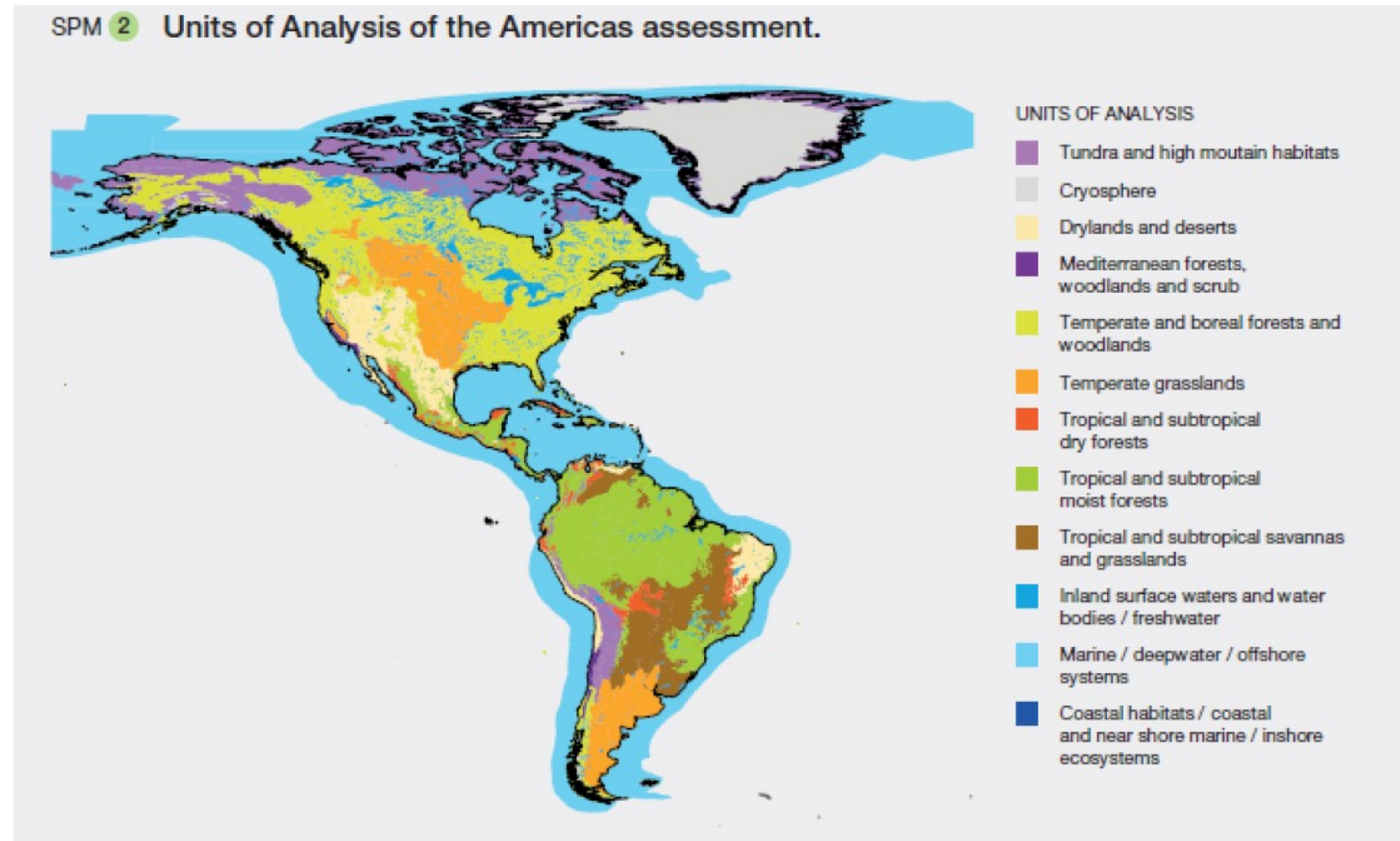
- Commitment to make extensive use of Indigenous and Local Knowledge as complete and equally legitimate knowledge systems – and then actually DOING IT.
- Commitment to reflect plurality of worldviews in interpretation of findings AND DOING IT.
- What's been achieved
 - Thematic assessment on Pollinators (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 2nd highest mountain chain, Huge cultural and economic diversity

Figure SPM.2

Units of analysis of the Americas assessment



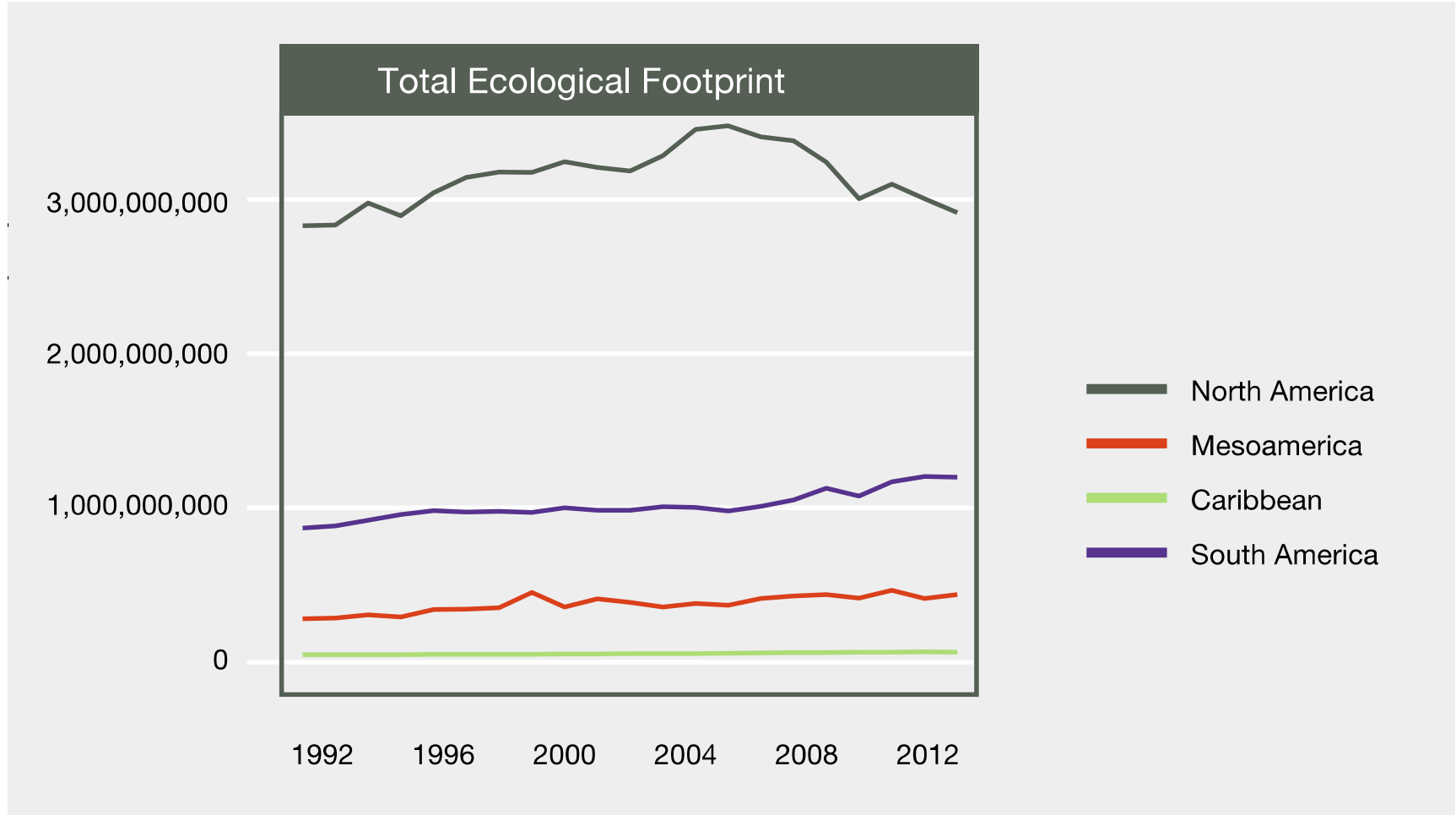


Americas Findings: Challenges

- 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

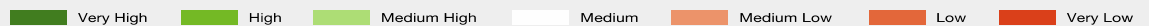
- 65 % of NCP in all units of analysis are declining, with 21% declining strongly.
- Compared to pre-European settlement, reductions of
 - 95 % of tall-grass prairie in NA;
 - 72 % and 66 % of tropical dry forest in Mesoamerica and the Caribbean, respectively;
 - 88 % of the South American Atlantic tropical 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

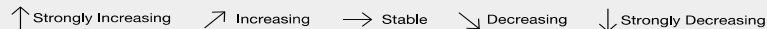
- And these increasing pressures are having impacts on ability of all Units of Analysis to provide NCP;
- Particularly material NCP people use directly and some regulating NCP we depend on indirectly.

| | 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





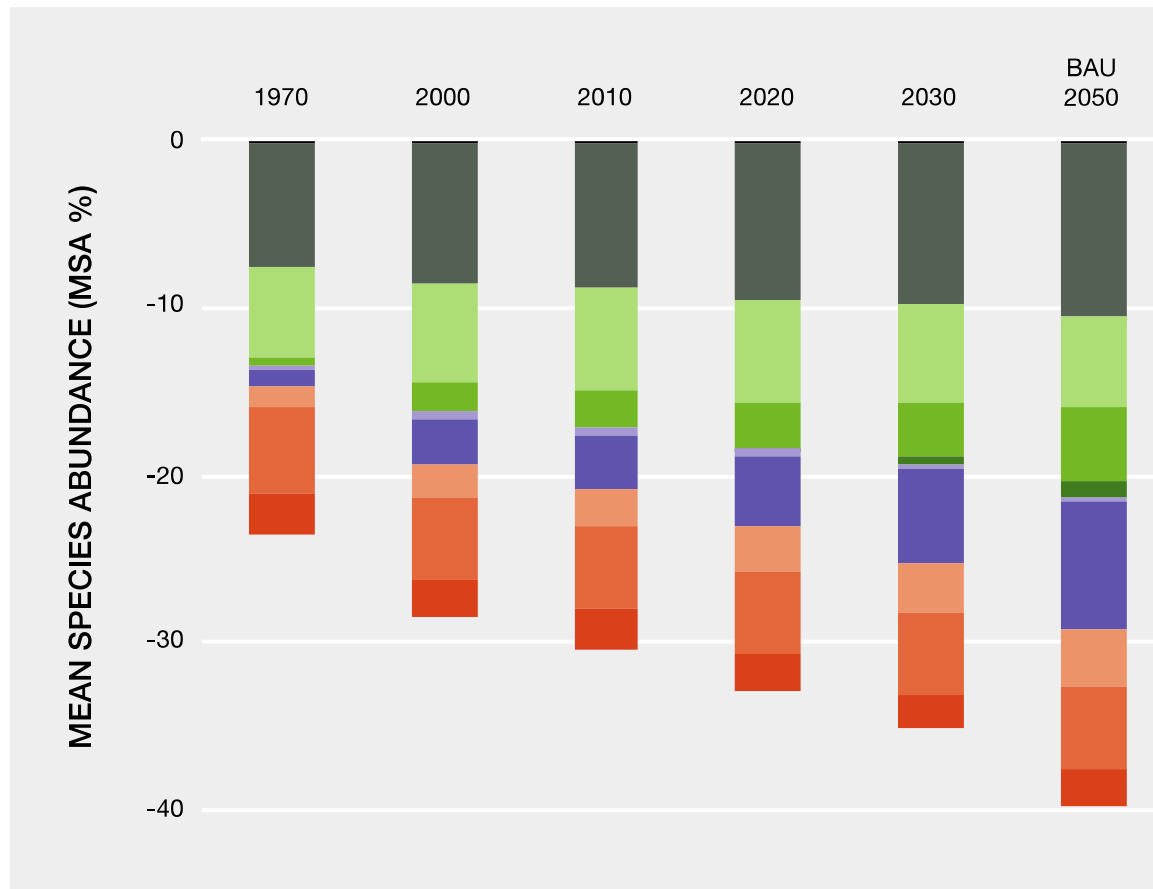
What are the Drivers of Loss

- 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 blue] and climate change [light blue] 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.

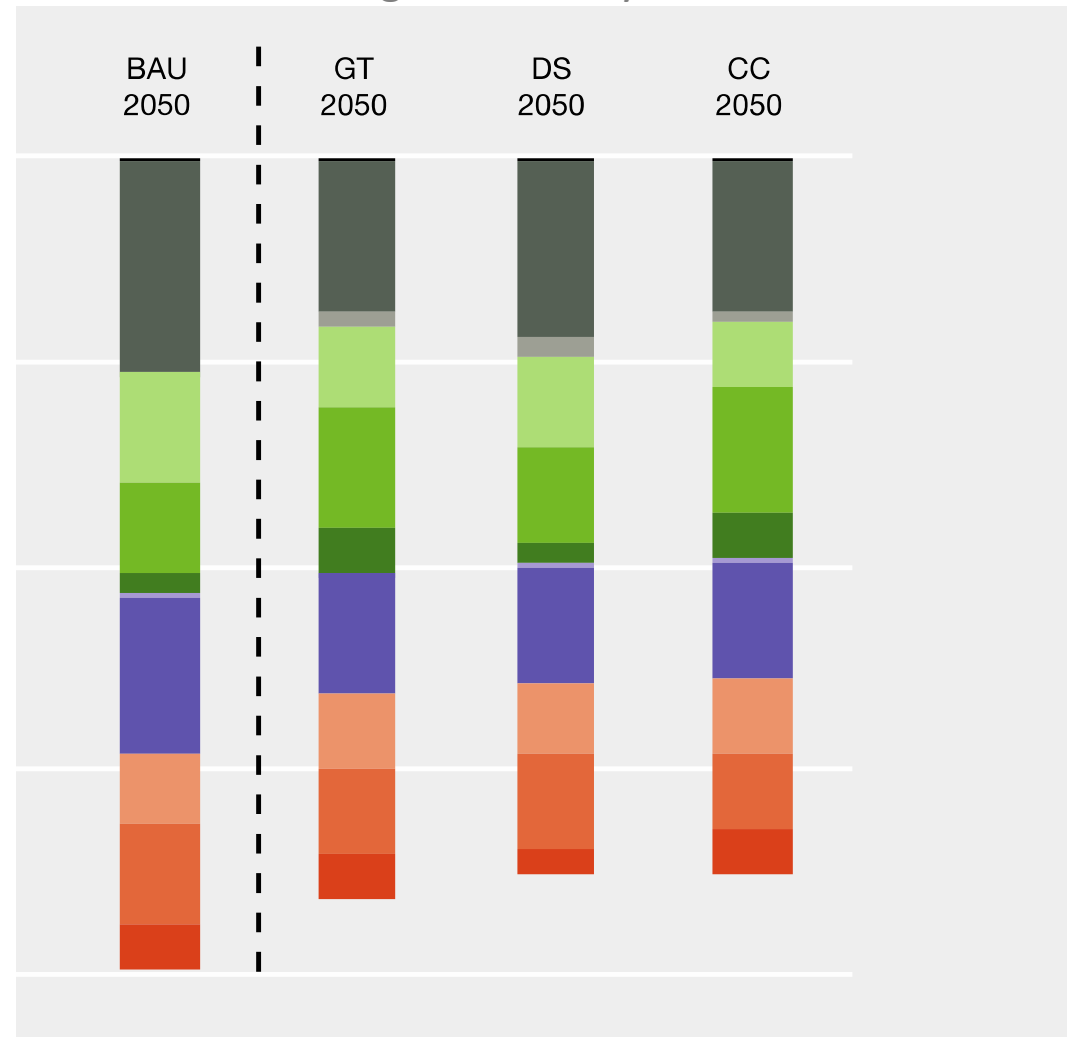


Source: PBL Netherlands Environmental Assessment Agency, 2012 and 2014.

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