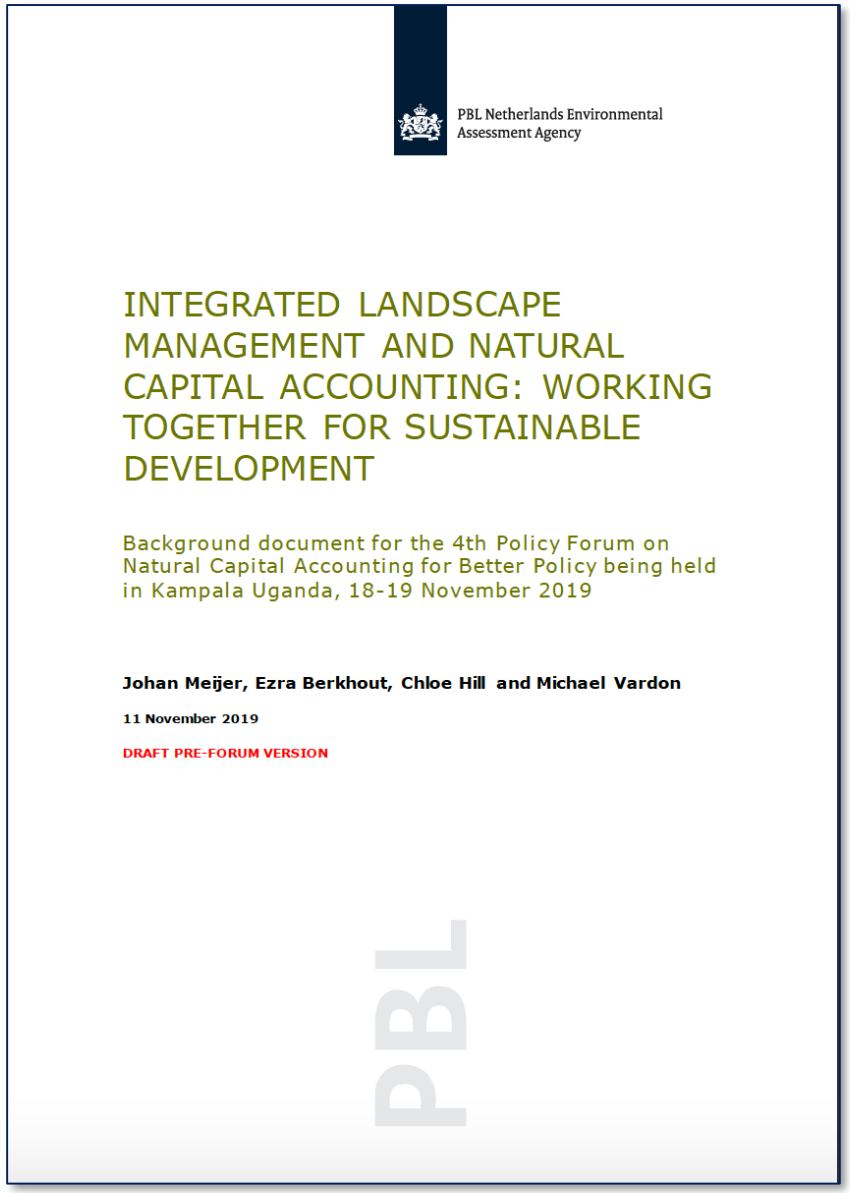
PBL Netherlands Environmental Assessment Agency

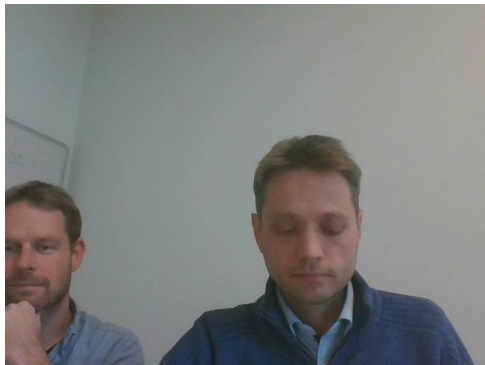
Integrated Landscape Management and Natural Capital Accounting

Working together for sustainable development

Johan Meijer, Ezra Berkhout, Chloe Hill, Michael Vardon



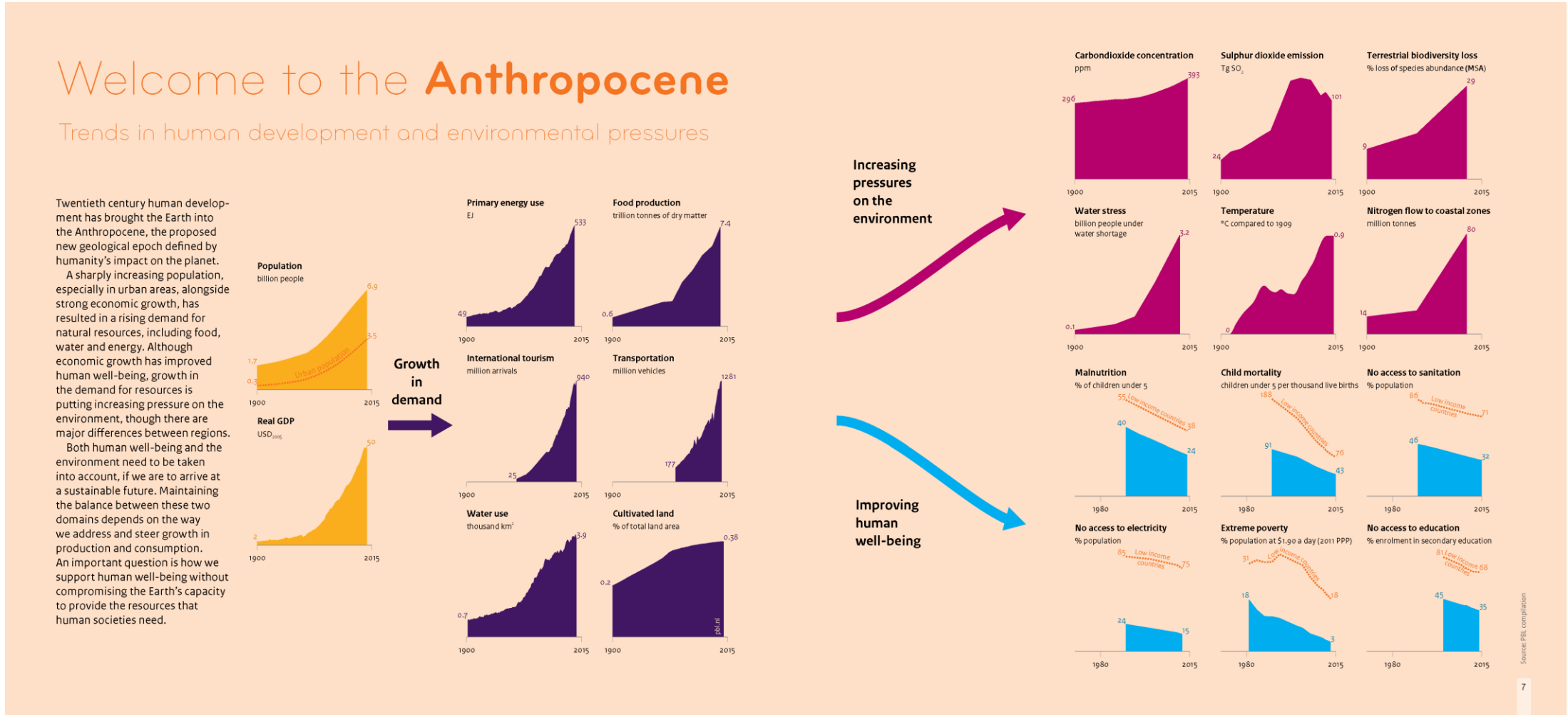
- Draft paper at forum website: http://www.wavespartnership.org/
- Joint effort by PBL, Michael Vardon (ANU) and Chloe Hill, with input from WAVES partners



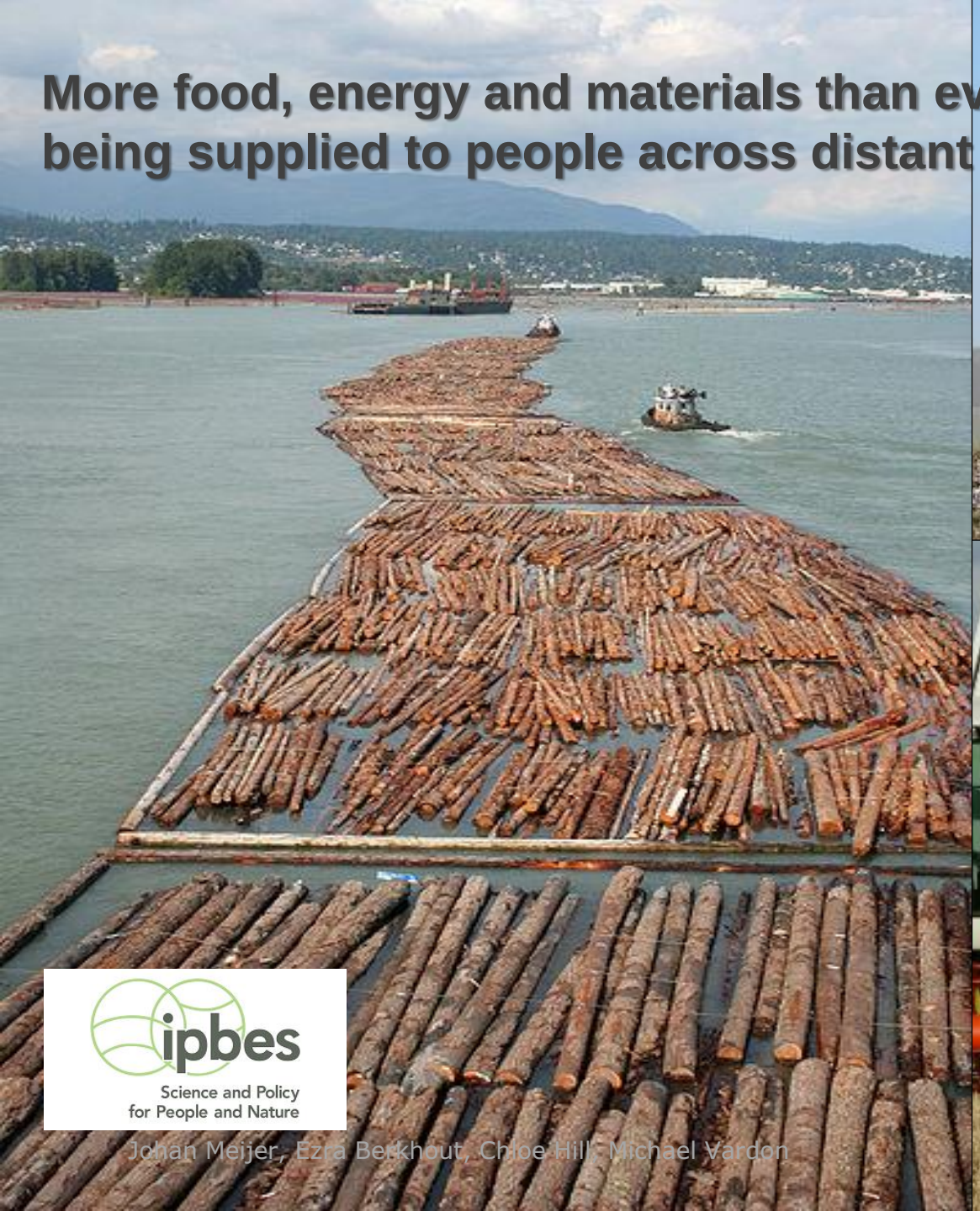
Outline

- Introduction
- Why focus on landscapes
- Use of NCA in landscapes
- Benefits of NCA for Integrated Landscape Management
- Connecting ILM and NCA processes
- Triggering the Forum on taking steps forward

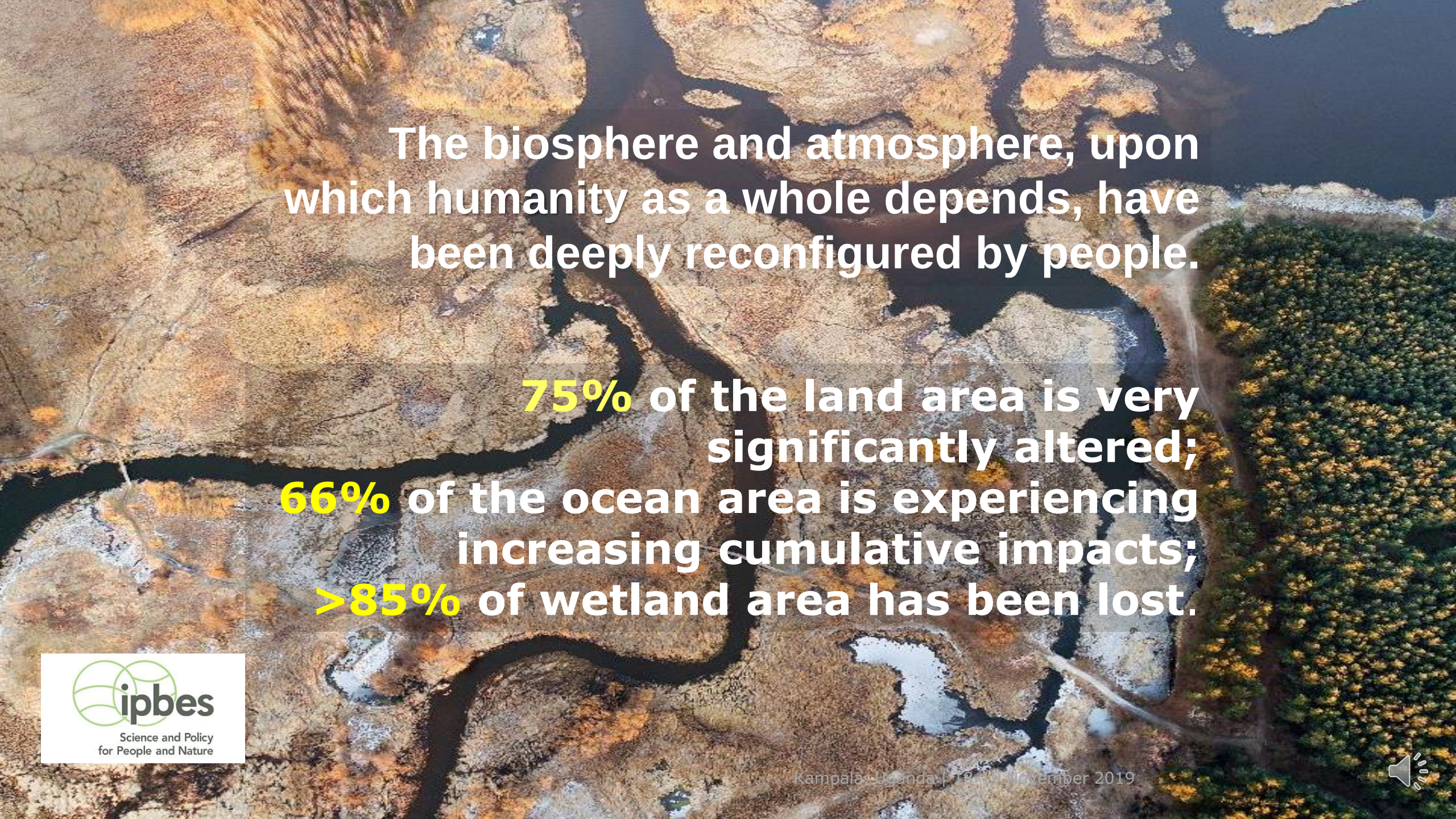
Introduction



More food, energy and materials than ever before are now being supplied to people across distant regions

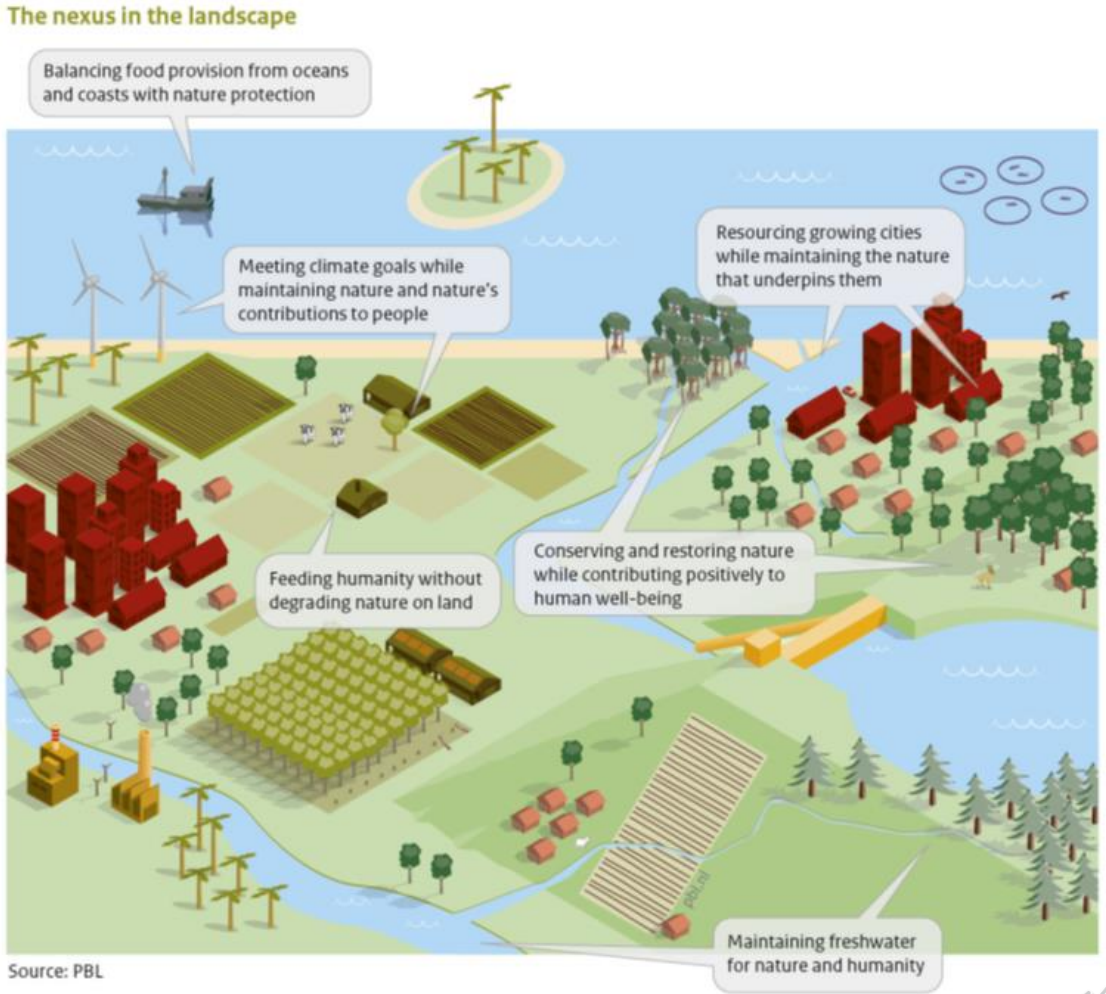


ipbes
Science and Policy for People and Nature


The biosphere and atmosphere, upon which humanity as a whole depends, have been deeply reconfigured by people.
75% of the land area is very significantly altered;
66% of the ocean area is experiencing increasing cumulative impacts;
>85% of wetland area has been lost.
ipbes
Science and Policy for People and Nature
Kampala, Uganda | 18 - 30 November 2019

Why focus on landscapes (1)

- Many global challenges converge at the landscape scale
- A logical unit for managing them in an integrated way
  - Where people live and work, linking to culture and identity
  - Governance: local rules and regulations to access natural resources
- Visualize interactions and tradeoffs between SDGs
- Mapping, modelling and scenarios
  - Create awareness and support discussions
  - A catalyst for collaboration



Why focus on landscapes (2)

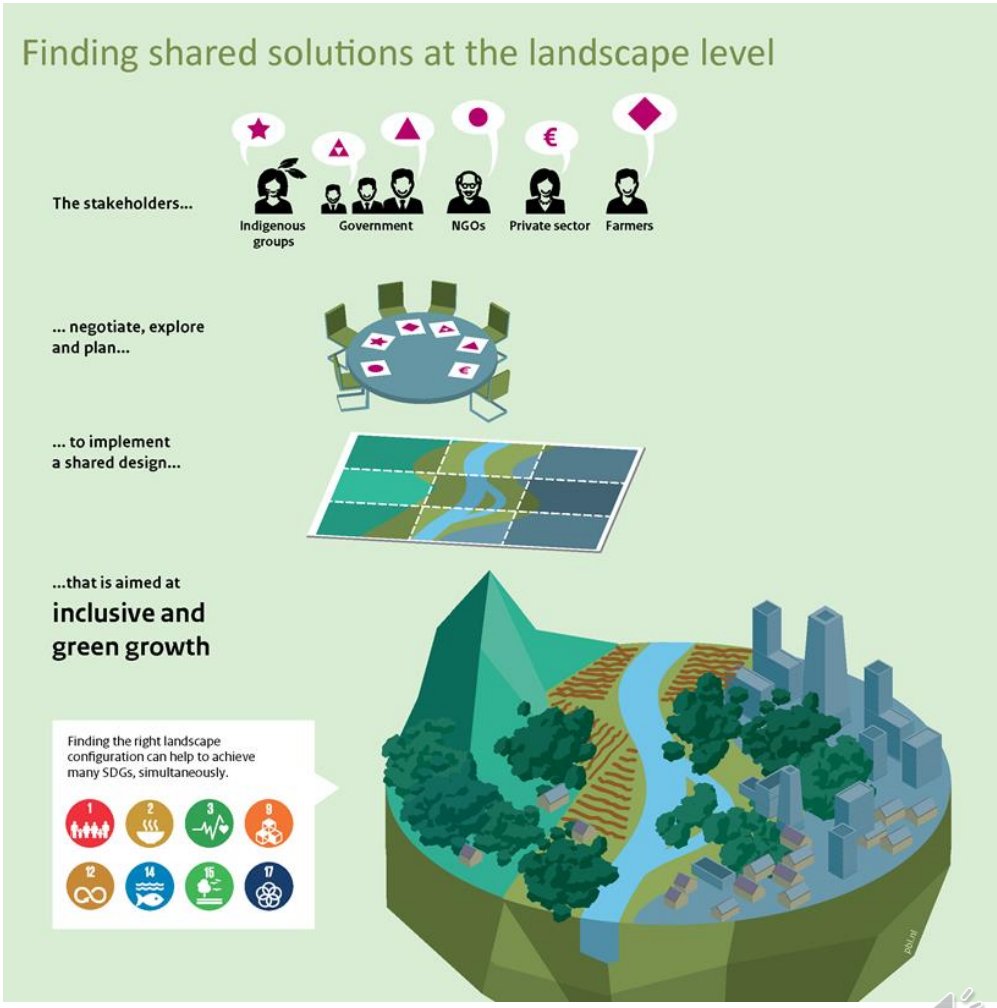
- The landscape approach
  - An integrated strategy that aims to bring together multiple stakeholders from multiple sectors to provide solutions at multiple scales
  - Core principles: participation, interdisciplinarity, multifunctionality and sustainability
- Integrated Landscape Management (ILM)
  - Multi-stakeholder process
  - Cycle: shared understanding, explore, plan, implement, monitor
- Various global initiatives:

Landscapes for People, Food and Nature

THE GLOBAL PARTNERSHIP ON FOREST AND LANDSCAPE RESTORATION

SATOYAMA INITIATIVE

Global Landscapes Forum



Use of NCA in landscapes (1)

- NCA is undertaken or being developed in more than 100 countries
  - Integrates natural resource and economic analysis, development beyond GDP
  - Show how natural resources contribute to the economy and how the economy affects natural resources

- Roles NCA can play to inform ILM:
  - Manage and allocate land to support sustainable development
  - Assess trade-offs between social, economic, and environmental use of land
  - Maximize economic returns from investments in land and land management
  - Minimize environmental degradation from economic activities on land

Use of NCA in landscapes (2)

- In practice not often recognized or used in decision-making, but various examples already exist → Table 3.3 in the paper

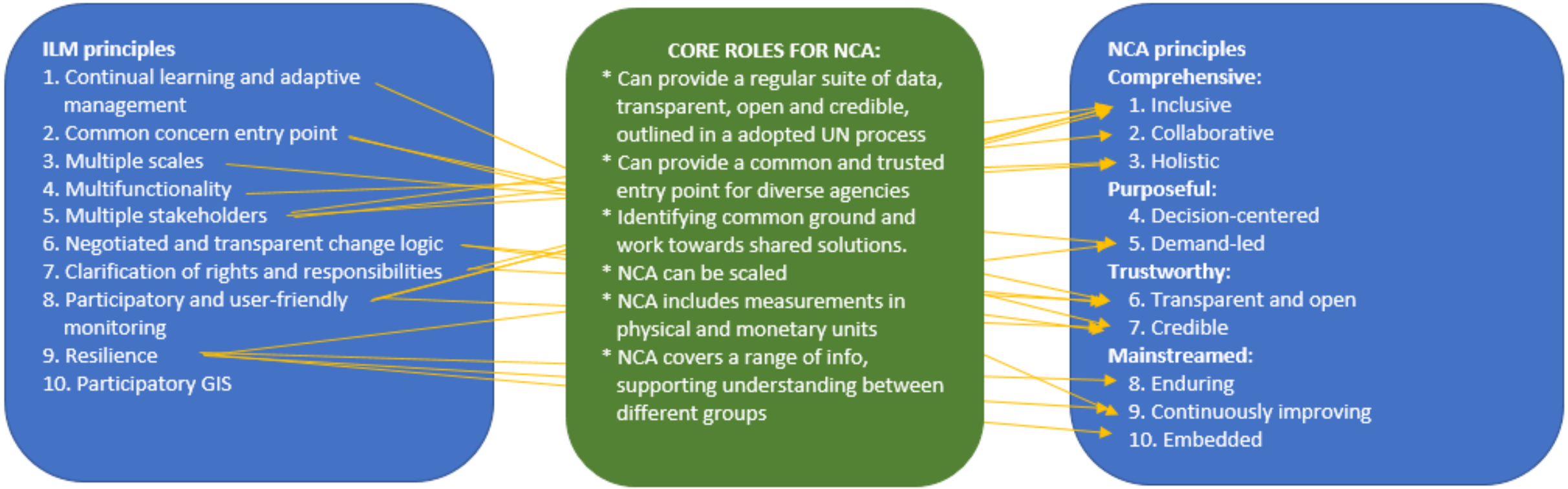
- Experience from five stories:
  - (1) ecosystem accounts (Australia)
  - (2) land and peat swamp accounts (Indonesia)
  - (3) agriculture and ecosystem accounts (Guatemala)
  - (4) water and land accounts (Rwanda)
  - (5) planning and ecosystem accounts (Netherlands)

Table 3.3: Summary of NCA and ILM examples

Country	Account types produced	Land management issues	References
Australia	Water Land Ecosystem	Protected area management - Great Barrier Reef - Victoria Water supply Forest management Water shed management	ABS (2017) Eigenraam et al. (2013) ABS and BoM (2019) Varco et al (2013) Keith et al. (2017)
Botswana	Water	Water supply management	Pule and Galegane (2017)
Brazil		Water resource management	IBGE (2018)
Canada		Clean growth & climate policy analysis; trade agreement analysis; forest carbon budget (2018)	Ruijs and Graveland (2019)
Colombia	Forest Water Ecosystem	Forest Water pricing Water shed management - Lake Tota - Chinchina - Orinoquia	DANE (2017) Romero et al (2017a) Romero et al (2017b)
Costa Rica	Forest Water CO_2	Timber supply Water supply Ecotourism Climate change	Gutiérrez-Espeleta (2017) Rivera et al. (2017) The Contribution of Energy and CO2 Accounting to Policy in Costa Rica
Guatemala	Land Forest	Forest management Fuelwood supply	Castaneda et al. (2019)
Indonesia	Land Ecosystem	Management of forest and peatland	Garrido, L., et al. (2019)
Madagascar	Water	Water supply	BRL (2016)
New Zealand	Forest	Forest management	Yao et al. (2019)
The Netherlands	Ecosystem	Food and water supply and nature conservation	PBL (2016), Atlas Natural Capital (2019), CBS (2018)
Peru	Ecosystem	Water management Biodiversity conservation	Portela et al. (2018)
The Philippines	Ecosystem	Water management and pricing including valuation	Reported at the 2016 Policy Forum

Benefits of NCA for Integrated Landscape Management

- Matching the ILM and NCA living principles:



Connecting ILM and NCA processes (1)

- Experiences from reports, cases and 12 experts interviewed for this forum paper
- Topics touched upon:
  - **Awareness of the concepts in both communities**
    - NCA in general is not well-known, if at all, by many people in the ILM community
    - A view that NCA was mainly about economics and putting a price on nature
    - Communication on and understanding the NCA data is sometimes a barrier
    - Missing the spatial context or granularity in NCA data
    - But, activities and research that is undertaken in ILM can be related to accounting (like ES m&m)
  - **Benefits of bringing ILM and NCA closer together**
    - Bringing environmental information into monitoring frameworks to assess landscape development progress
    - Opportunity to make development plans more coherent, between sectors and levels
    - Improving communication with financiers and providing trusted information al all

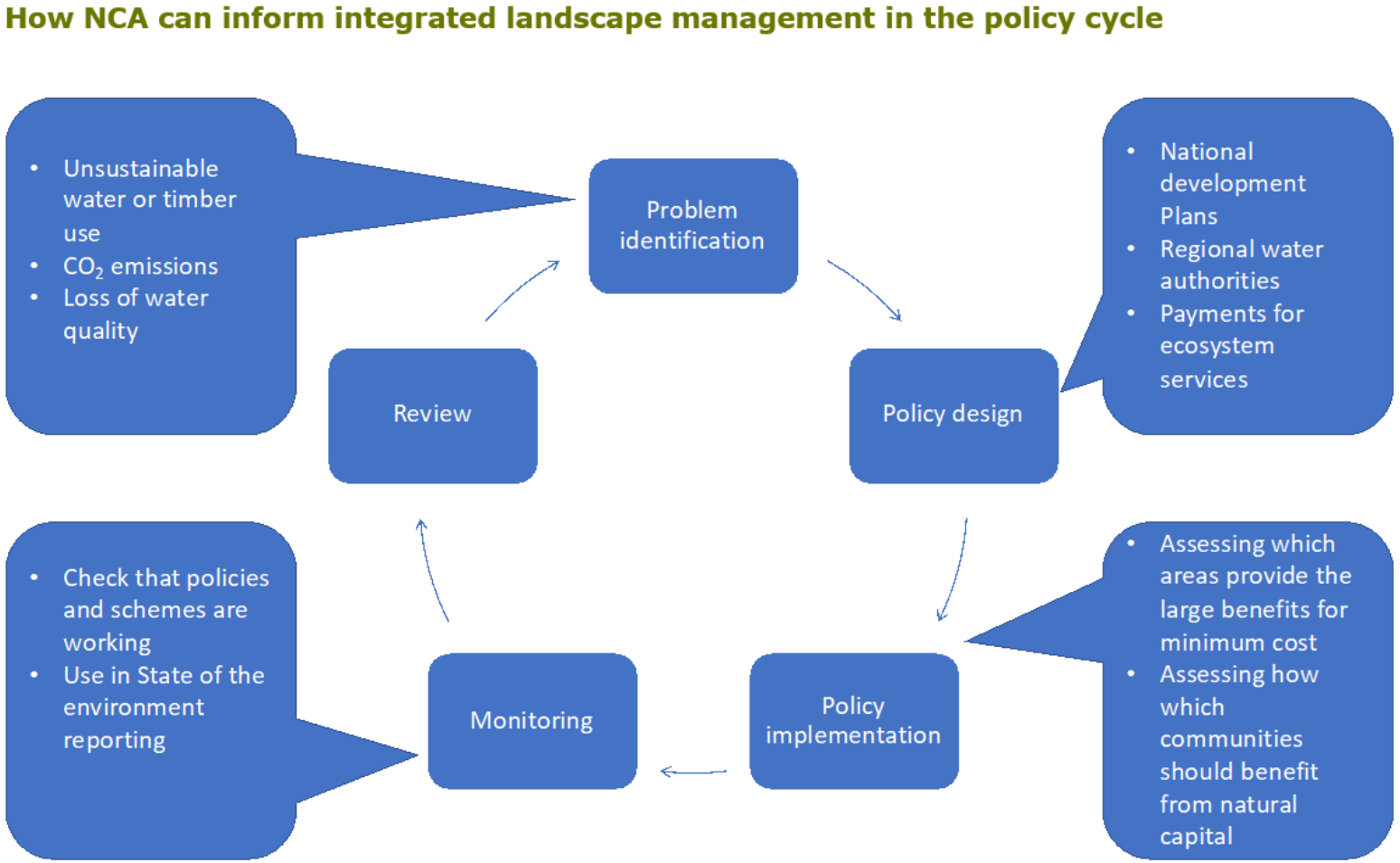
Connecting ILM and NCA processes (2)

- How to bring ILM and NCA closer together

Category	Reinforcing ILM & NCA
Process and governance	(1) Senior representative of key stakeholders in the ILM and NCA communities need to be brought together as early as possible (2) Need to form a high-level strategic body as well as technical groups that cover both construction and use of accounts (3) Production of the first accounts is not the end point
Data and methods (information needed)	(1) Need to accurately represent the quality of data in information products. (2) Need have data quality assessment processes in place (3) Need to continuously improve data sources for the accounts
Challenges in construction (or challenges in implementation)	(1) Defining boundaries for NCA that align with ILM regions (2) Gaining common understanding of terminology between ILM and NCA communities (3) Need to produce NCA quickly to demonstrate usefulness to ILM community
Funding and finance	(1) Funding needs to be found for pilot studies of applying NCA to ILM (2) Funding by national governments and international agencies is important initially. (3) Funding can come from a range of international, national and local stakeholders and joint funding may increase commitment to on-going production and use of accounts
Communication	(1) Very important to identify the different audiences for NCA and ILM (2) Very important to be able to demonstrate the value of account production to the ILM community (3) Good examples are important (4) need to recognize the limits of data quality
Potential in decision making (use in policy cycle)	(1) Monitor and review the sustainability of current land use and land management (2) Assess trade-offs between different management and investment decisions (3) Identify hotspots in need of land use and land management change (4) Can be applied to international agreements such as the SDGs and CBD
Challenges in policy cycle use	(1) Need to align international, national and sub-national decision-making processes and priorities (2) Information needs to be seen as important (3) information needs to be available when decisions are being made and hence ILM and NCA need to be "ahead of the game"

Connecting ILM and NCA processes (3)

- Linking to the policy cycle



Triggering the Forum on taking steps forward

- Several topics for discussion at the Forum

Data coverage and quality mismatch – Data access and data quality are recurring issues for both ILM and NCA. What are the key datasets needed for ILM and NCA?

Boundary selection – The management areas of ILM seldom directly match the data output area available. How best to select the policy boundaries and then to match these to the data available?

Landscape-level decision-making criteria – what approaches, like 'carrying capacity', 'catchment planning' and 'social value', are paramount for ILM and how can NCA best serve them?

Institutional reform – how can ILM and NCA together shift institutional set-ups from silos to synergies, from overly-centralized to usefully decentralized?

Inclusion – can NCA and ILM work together to reduce the risk of entrenching top-down approaches? How can better landscape level data put power in local stakeholders hands to ensure ILM is equitable?

Pilots – what scope for pilot joint ILM/NCA work that would address the above?

Thank you for your attention!

- Feedback on the paper welcome!
- Send to johan.meijer@pbl.nl