



Marine Social-Ecological Systems Symposium (MSEAS)
Yokohama, Japan, June 3 to 7, 2024

The role of biodiversity and ecosystem services in Ocean-based prosperity

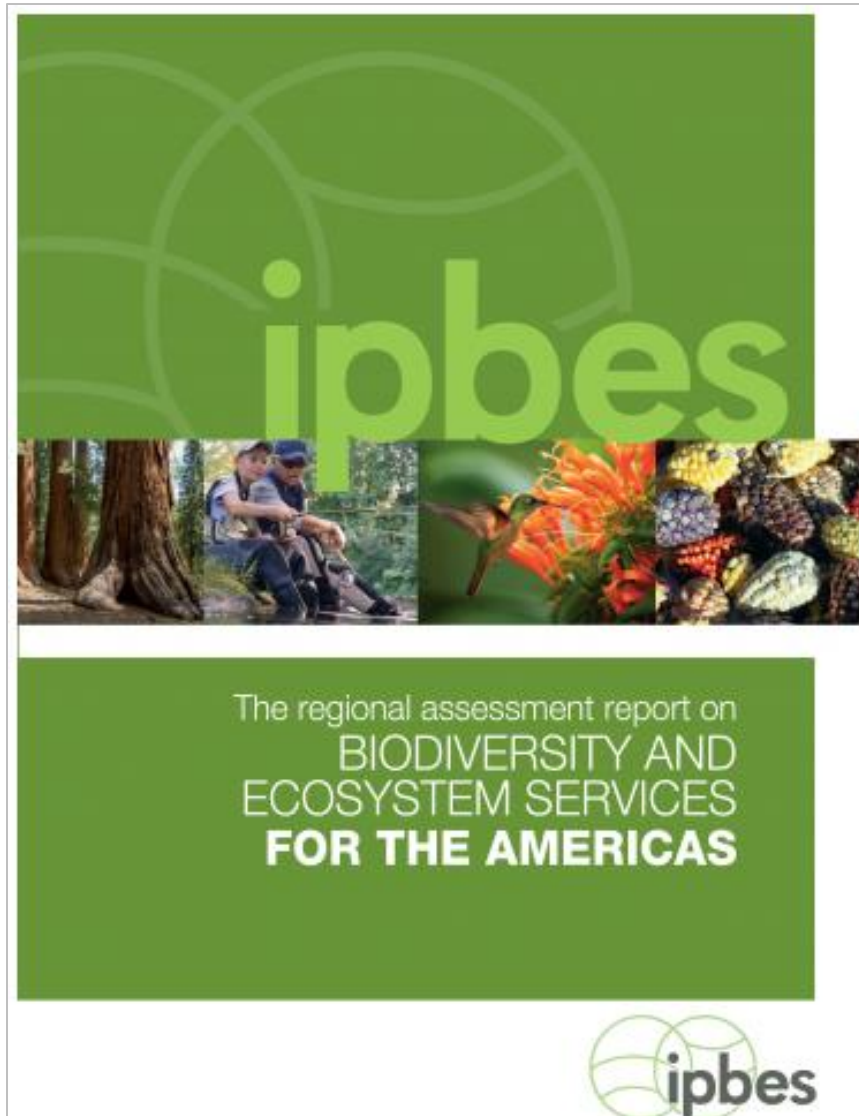
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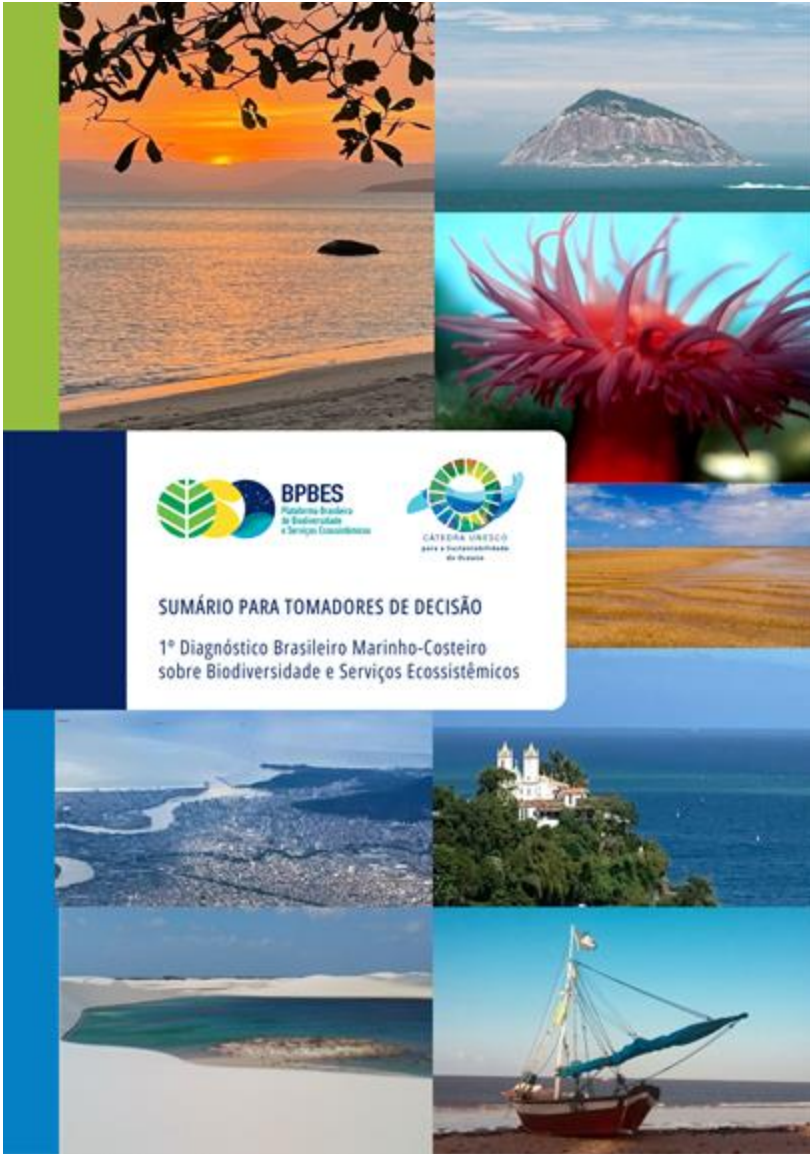


Some
reflections
based on:



Co-chairs: J. Rice, C. S. Seixas, M.E. Zaccagnini

- 88 experts
- 6 fellows
- 72 contributing authors
- 11 review editors



Summary for Decision Makers 1st Brazilian Marine-Coastal Assessment on Biodiversity and Ecosystem Services

Co-chairs: C. S. Seixas, A. Turra, B. P. Ferreira

- 53 experts from academia and government
- 12 fellows
- 26 reps of indigenous e traditional peoples.

Ocean-based Prosperity

Prosperity: what does it mean?

Latin word 'Prosper' → 'doing well' 'render happy'

Not necessarily 'wealth'...

It is about 'Opportunities' and 'Freedom' to thrive!





Biodiversity and Ecosystem Services (BES)

- supporting system for people's good quality of life and economies
- The Ocean and the coastal zone provide humans with BES

- Material ecosystem services: fishing products, bioproducts, etc.
- Regulating ecosystem services: climate regulation, coastal protection, etc.
- Immaterial ecosystem services: leisure, spirituality, inspiration, culture, etc.

- not only on the marine and coastal zone, but also inland...

Unfortunately....

- most people are unaware of the importance of the Ocean for their well-being and the impact of their actions on the Ocean
- most policy- and private-sector decision-makers do not see the value of conserving the Ocean today to sustain economies in the long run
- Prevalence of the logic of unlimited growth in economic systems – including consumerism – and the logic of competition over collaboration
 - **triple environmental crises:** the loss of biodiversity, climate change, pollution



THE NEW FRONTIER FOR RESOURCE EXPLOITATION
THE SHOWCASE OF THE TRIPLE ENVIRONMENTAL CRISIS



Direct uses of marine and coastal zone

- Natural Resources Exploitation
 - *Fishing and Aquaculture*
 - *Ocean Mining*
 - *Desalination*
- Shipping sector, defense and Port development
- Tourism
- Sports and Leisure
- Energy production
- Housing
- Industries
- Infrastructures, etc.



... has led to economic growth and...

... environmental degradation and...

... social injustice in most coastal areas...

DRIVERS

INDIRECT DRIVERS

Demographic and sociocultural

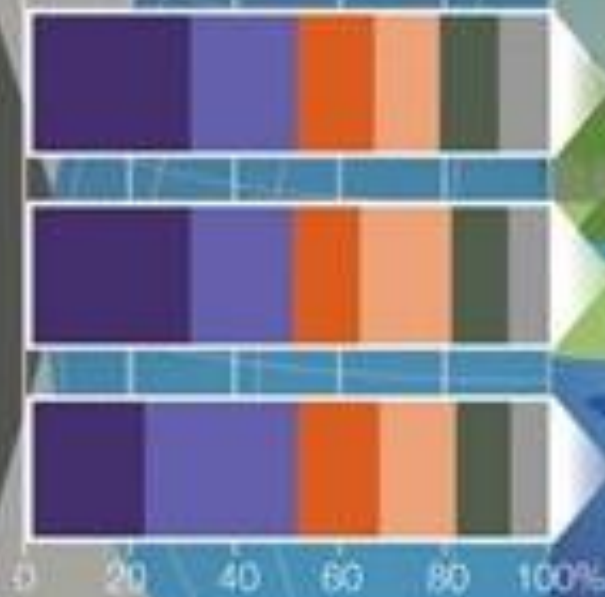
Economic and technological

Institutions and governance

Conflicts and epidemics

Values and behaviors

DIRECT DRIVERS



- Land/sea use change
- Direct exploitation
- Climate change
- Pollution
- Invasive alien species
- Others

EXAMPLES OF DECLINES IN NATURE

ECOSYSTEM EXTENT AND CONDITION

47%

Natural ecosystems have **declined by 47 per cent** on average, relative to their earliest estimated states.

SPECIES EXTINCTION RISK

25%

Approximately **25 per cent of species are already threatened with extinction** in most animal and plant groups studied.

ECOLOGICAL COMMUNITIES

23%

Biotic integrity—the abundance of naturally-present species—has **declined by 23 per cent** on average in terrestrial communities.*

BIOMASS AND SPECIES ABUNDANCE

82%

The global biomass of wild mammals has **fallen by 82 per cent**.* Indicators of vertebrate abundance have declined rapidly since 1970

NATURE FOR INDIGENOUS PEOPLES AND LOCAL COMMUNITIES

72%

72 per cent of indicators developed by indigenous peoples and local communities show **ongoing deterioration** of elements of nature important to them

* Since prehistory

Why would 'blue growth' be different from our past trend?

Potential social injustices from blue growth

(Bennett et al. 2021)

dispossession, displacement and ocean grabbing	inequitable distribution of economic benefits
environmental justice concerns from pollution and waste	social and cultural impacts
environmental degradation and reduction of ecosystem services	marginalization of women
livelihood impacts for small-scale fishers	human and Indigenous rights abuses
lost access to marine resources needed for food security and well-being	exclusion from governance

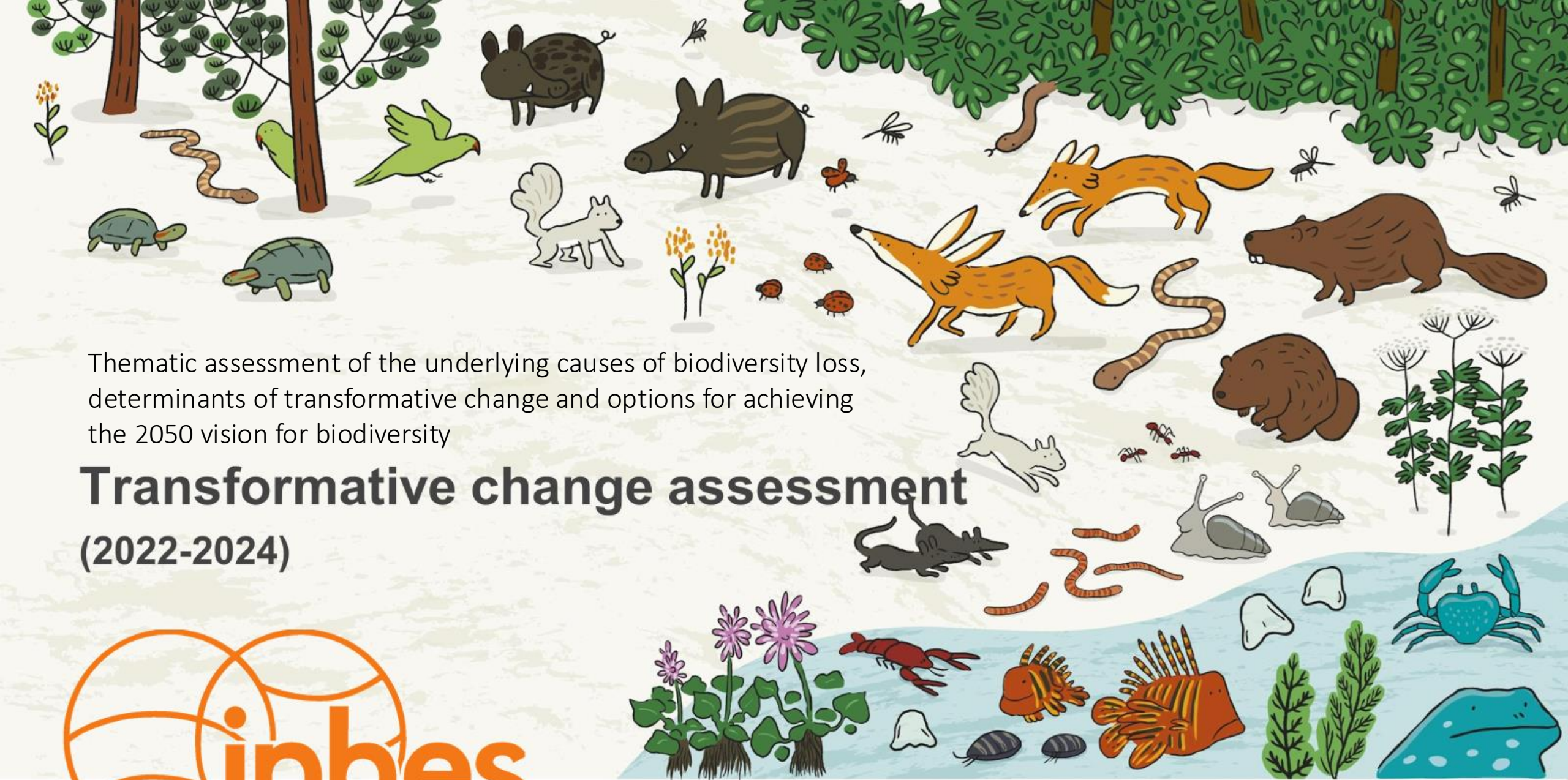
How to put the breaks on unsustainable development while promoting prosperity?

→ overcome the myths of unlimited growth and consumerism

Neither of them has reduced poverty or brought happiness to people in general.

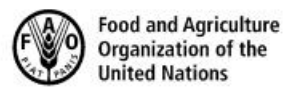
Inequity and poverty rose more than ever, and we face a pandemic of mental health issues

→ *Transformative change*: “a fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values, needed for the conservation and sustainable use of biodiversity, long-term human wellbeing and sustainable development” (Annex II to decision IPBES-8/11).



Thematic assessment of the underlying causes of biodiversity loss, determinants of transformative change and options for achieving the 2050 vision for biodiversity

Transformative change assessment (2022-2024)



Push the agenda for transformation at all levels...



2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development



UNITED NATIONS DECADE ON
**ECOSYSTEM
RESTORATION**
2021-2030

The science we need for the Ocean we want....

Learn from Indigenous and traditional peoples' knowledge and practices

Listen to nature and read its signs

Respect all forms of life

Sustainably use resources

Cooperate in stewarding ecosystems

Value reciprocity

Adapt to ecosystem dynamics instead of controlling it



Foster good Ocean governance

Coordinate and integrate of policies and actions

at multiple levels and among different sectors

Promote objectivity, commitment, transparency

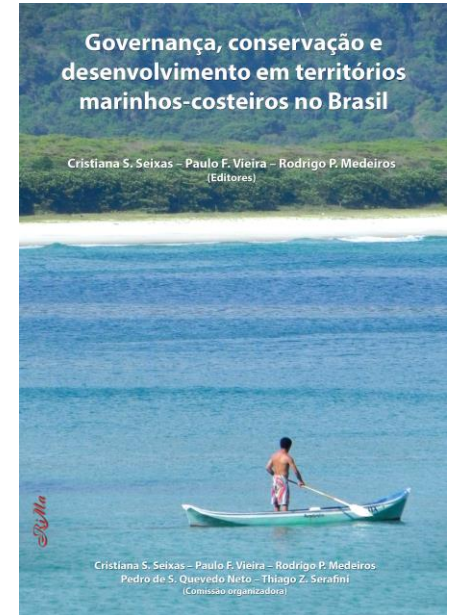
Promote inclusion and plurality (gender, ethnicity, age, values, knowledge)

Promote equity and social-environmental justice

Learn, adapt and adjust to the scale of the problem

Reduce fragmentation of public policies (PP)

Increase in PP effectiveness, efficiency, and efficacy



Transform our science

Do things differently/ getting out of comfortable zone and change/expand our views

Change structures (institutions, organizations)

Change our practices, views and values

Promotes more collaboration and less competition

Focus on human resource development

Focus more on the knowledge building processes and not mainly on scientific products

Take risks to innovate!

How to promote Ocean-based prosperity based on biodiversity and ecosystem services?

Education and Ocean literacy

Foster activities to reconnect people to nature, to the Ocean (even in cities!)

... to reconnect people to people in nature

... to reconnect people to themselves

Nurture a paradigm shift in economies and societies

THANK YOU!
Arigatou!
Obrigada!

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