Current State of Affairs and Future Trends

Key findings of the regional assessment report on biodiversity and ecosystem services for Asia and the Pacific

Regional Workshop on the Post-2020 Global Biodiversity Framework for the Asia and the Pacific

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UN environment

United Nations Educational, Scientific and Cultural Organization

Food and Agriculture Organization of the United Nations

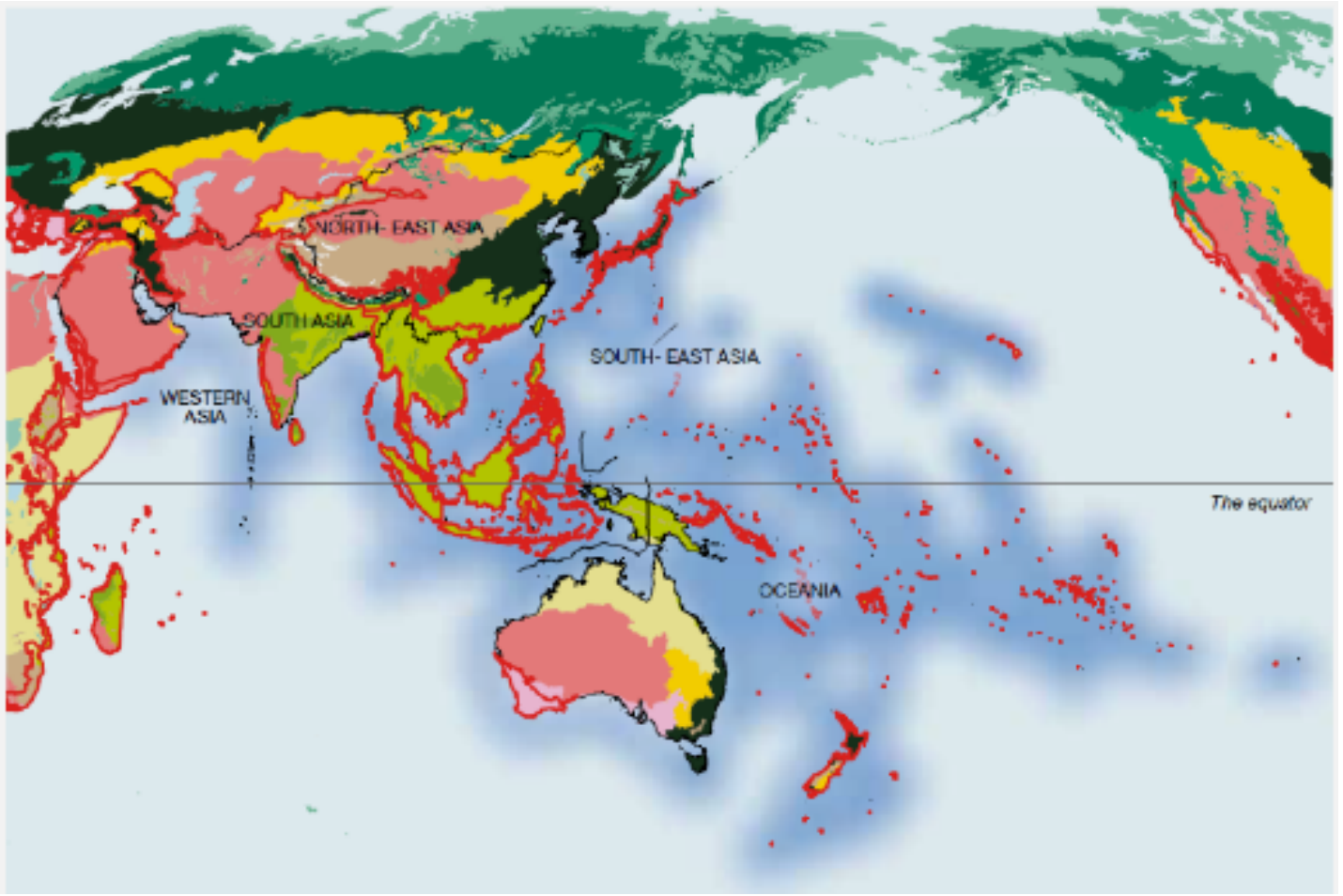
UNDP empowered lives. Resilient nations

Introduction

- One of the most biodiverse regions from social, cultural, biological, climatic and geomorphological perspectives

- 17 of the 36 global biodiversity hotspots and 7 of the 17 megadiverse countries

- 5 sub regions comprising more than 62 countries and territories



Nature has benefitted the Asia-Pacific, but with consequences

- A region undergoing rapid economic growth and change
  - 4.5 billion people
  - Rapid economic growth (7.6% average in 1990-2010)
  - Among fastest rates of urbanization (2-3% per year)
  - Agriculture lead employer but causing extensive land-use change since 1960s

- High poverty levels in some subregions resulting in high demand for provisioning services
  - More than 400 million poor (52% of global poor earning below $1.90/day)
  - Nearly 200 million people depend directly on the forest for their non-timber forest products, medicine, food, fuel as well as other subsistence needs

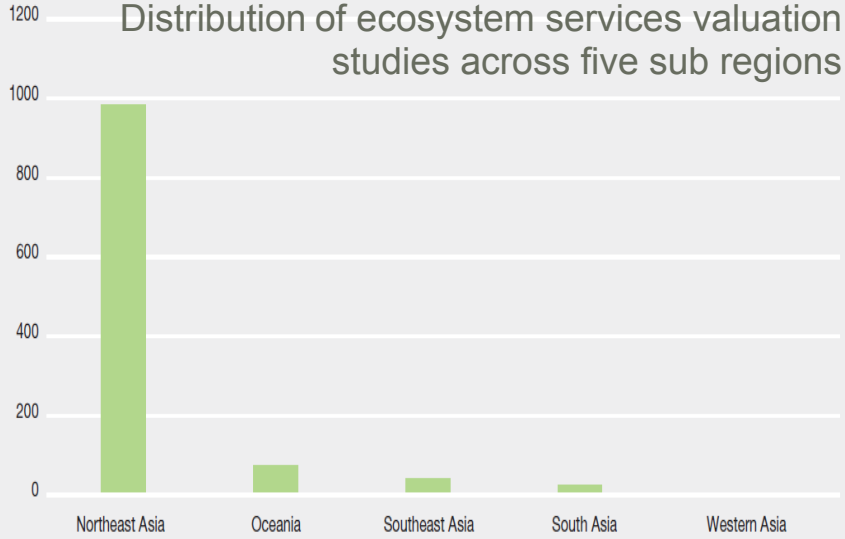


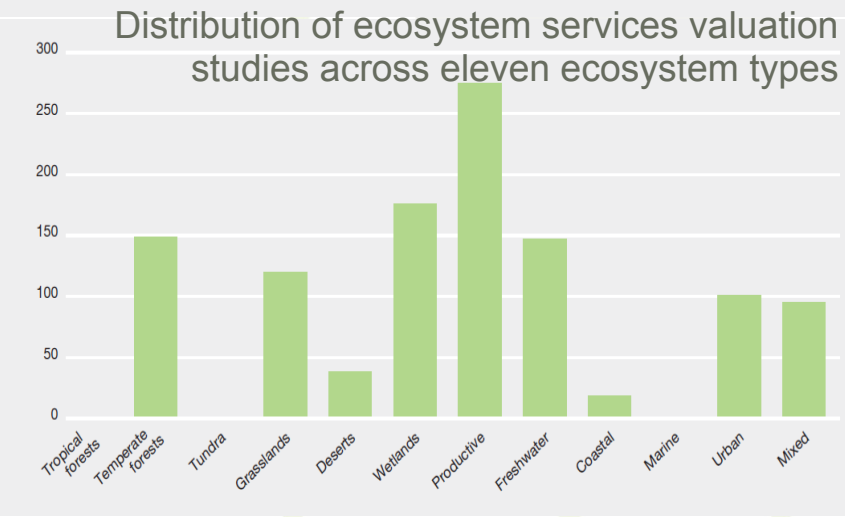

Ecosystem services have a high economic value in the region

Provisioning and regulating services in the region are highly valued

- Wetlands: water regulating services ($3,957 per hectare per year for regulating water flows, $6,485 per hectare per year for regulating water quality)
- Temperate forest ecosystem: habitats ($864 per hectare per year), carbon store ($760 per hectare per year) and water reserve ($544 per hectare per year)

Number of studies is limited and economic valuation dominates

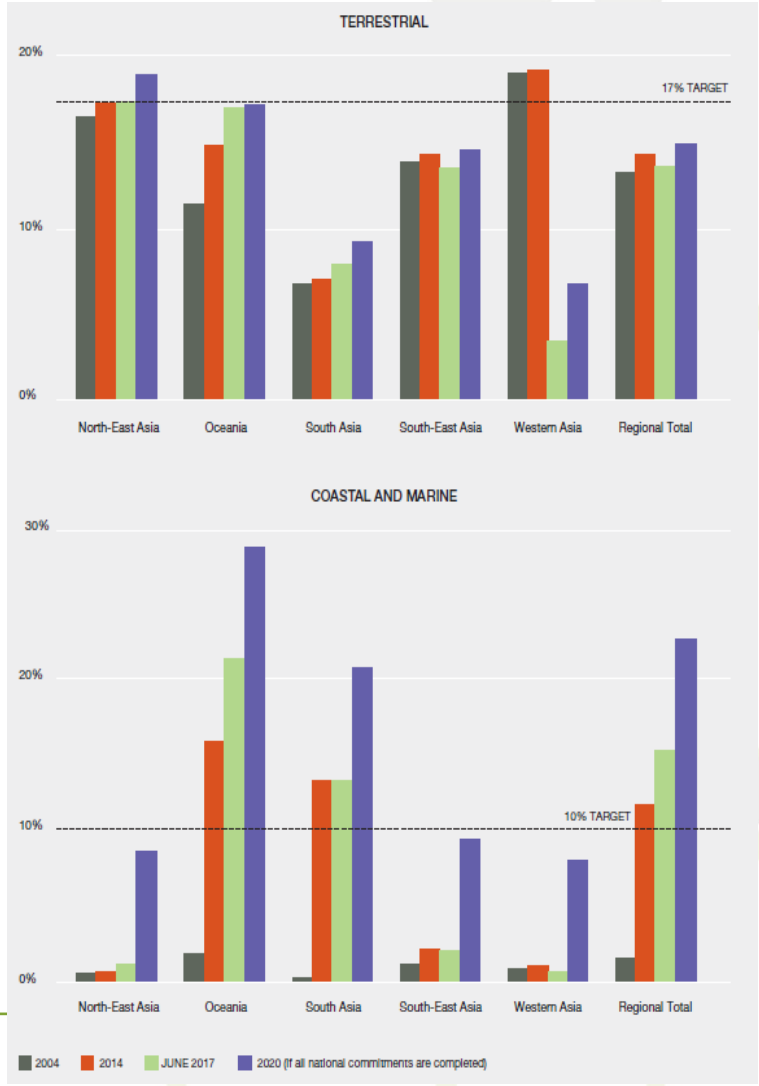




Contrasting trends in the status of biodiversity and ecosystem services

- All major ecosystems are threatened and habitats fragmented/degraded
- Steep decline in key emblematic wildlife
- Declining Crop Genetic Resources
- Growing number and abundance of Invasive Alien Species
- Increase in forest cover (South Asia and North-East Asia) but impact on biodiversity unclear
- Increase in both terrestrial and marine protected areas, but most key biodiversity areas still remain unprotected

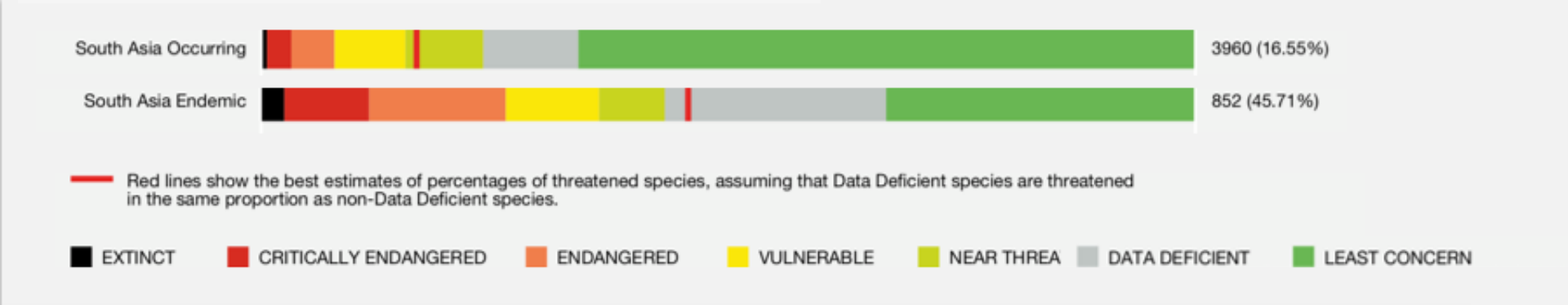
Protected Areas in Asia Pacific (2004, 2014, 2017 & 2020)



High rate of species loss and threat status

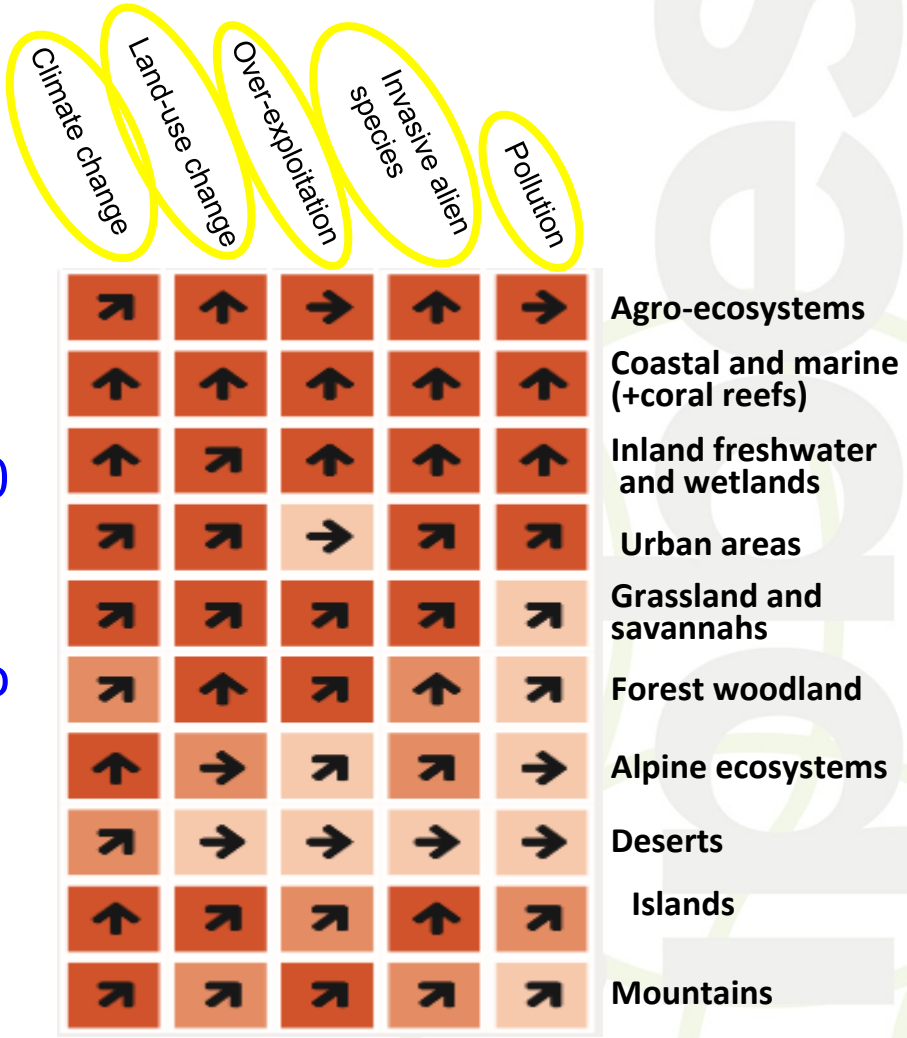
- 22 % of species and 25 % of endemic species in the IUCN Red List are either extinct, extinct in the wild, critically endangered, or vulnerable
- Largest number of species at risk are in South Asia (19 % of all species and 45 % of endemics)
- Roughly 1 in 3 species of freshwater fish assessed is threatened
- Capture fisheries in both ocean and inland water is at great risk due to over- harvesting, under-reporting, invasive alien species, disease and pollution

Proportion of species in each red list category



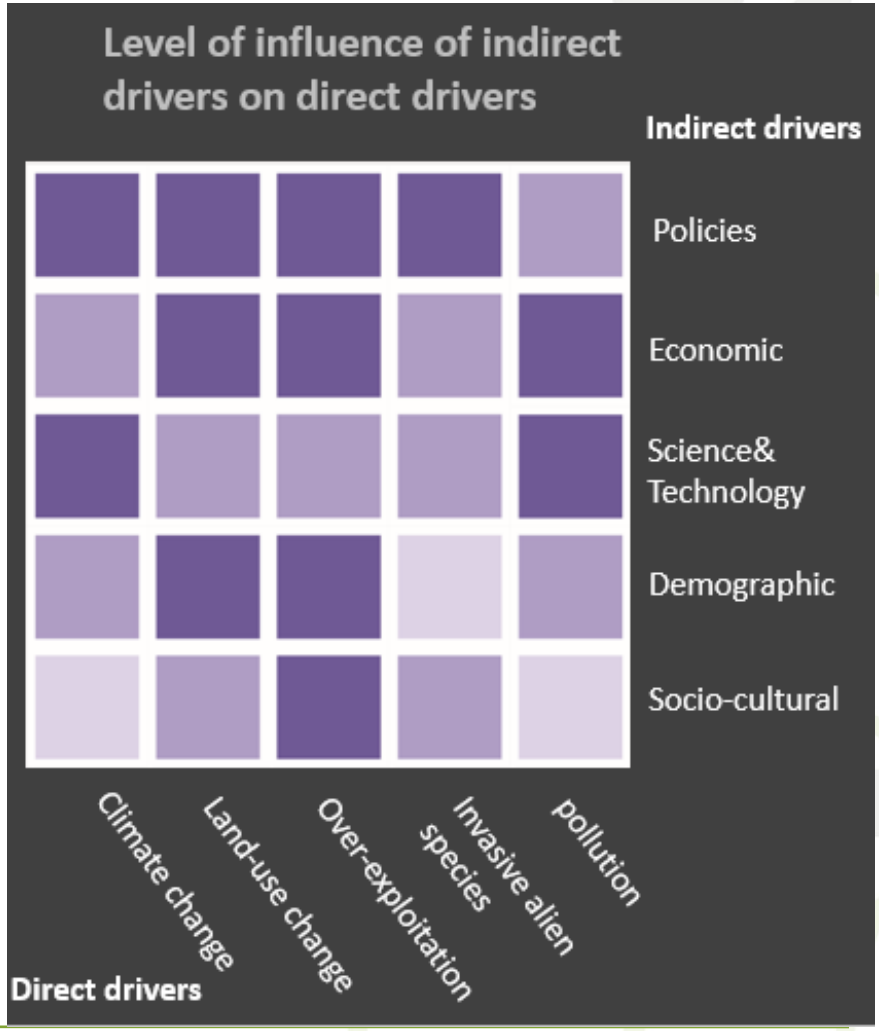
Major ecosystems are directly threatened by a combination of drivers

- **Climate change**: sea level and temperature rise, glacier melting
- **Land-use change**: land conversion to agriculture and urban use
- **Overexploitation**: capture fisheries declining from 70 % to 40 % of the region's total fish production
- **Invasive species**: increase due to international trade, transportation, cross-border migration, causing huge economic loss
- **Wastes and pollution**: threat to marine, freshwater, human health



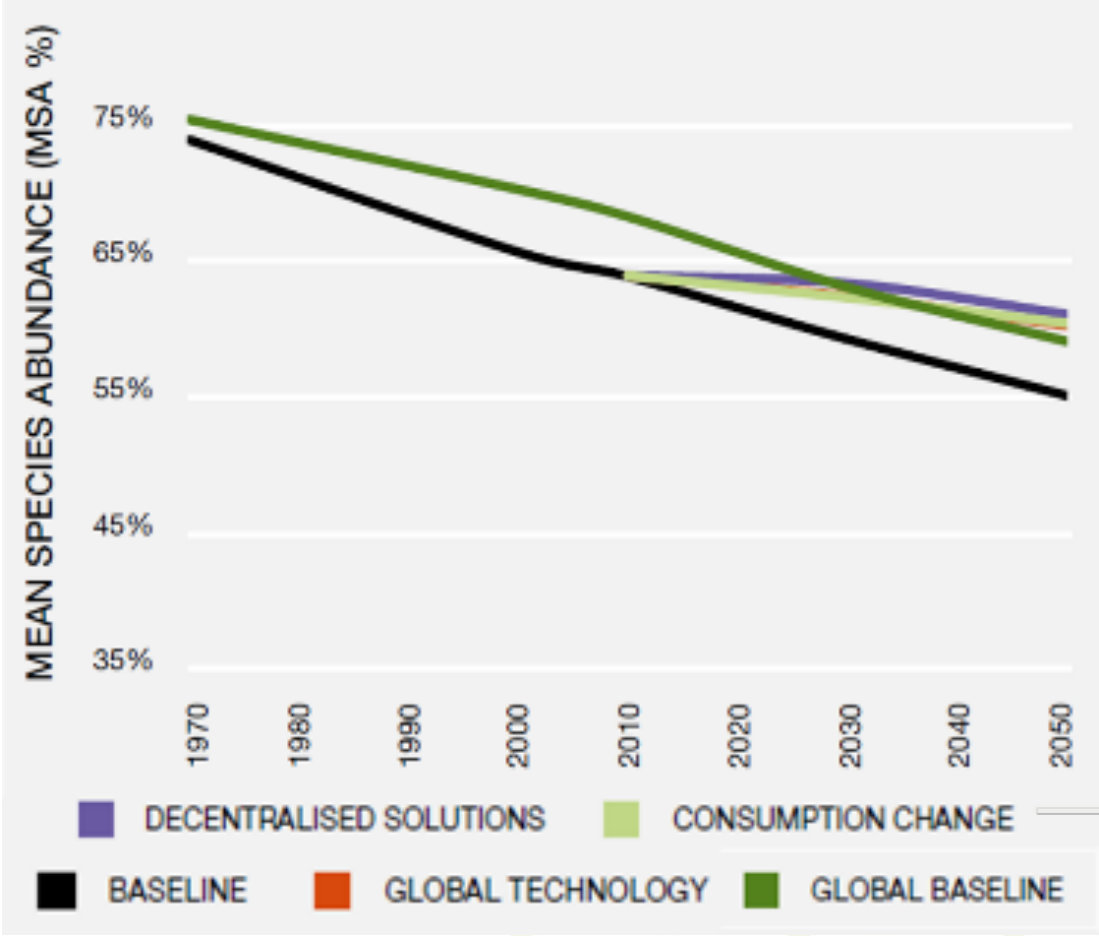
Scenarios for 2050: implications of driver behaviors and interactions

- Interactions within and between drivers increasing biodiversity loss by:
  - Exacerbating biodiversity loss
  - posing an increasing risk to supply of ecosystem services
- Indirect drivers are playing an increasingly dominant role
- These interactions are complex and require interactive and cross-scale analysis



Scenarios for 2050: Implications on SDGs and Aichi biodiversity targets

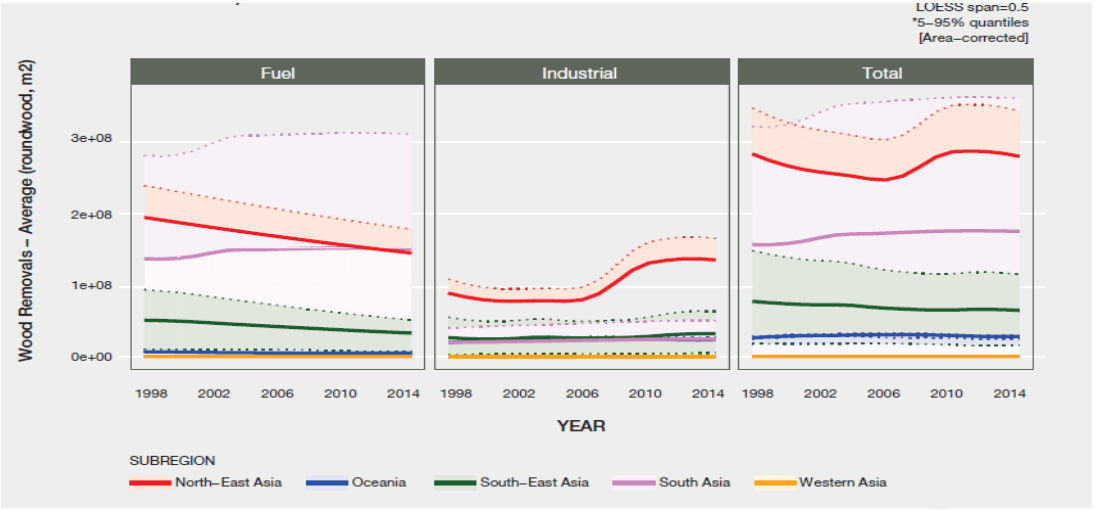
- Increases in protected area coverage but biodiversity loss continues
- Under business as usual (BAU) scenario by 2050:
  - 45 % anticipated loss of habitats and species
  - Up to 90% severely degraded corals
  - 24% and 29% of mammal and bird species likely to go extinct in lowland forests of Sundaland in South-East Asia in coming decades;
  - Rapid decline in fish stocks



Biodiversity loss in the Asia-Pacific region under different **scenarios**

Positive scenario due to increase in forest and PA cover

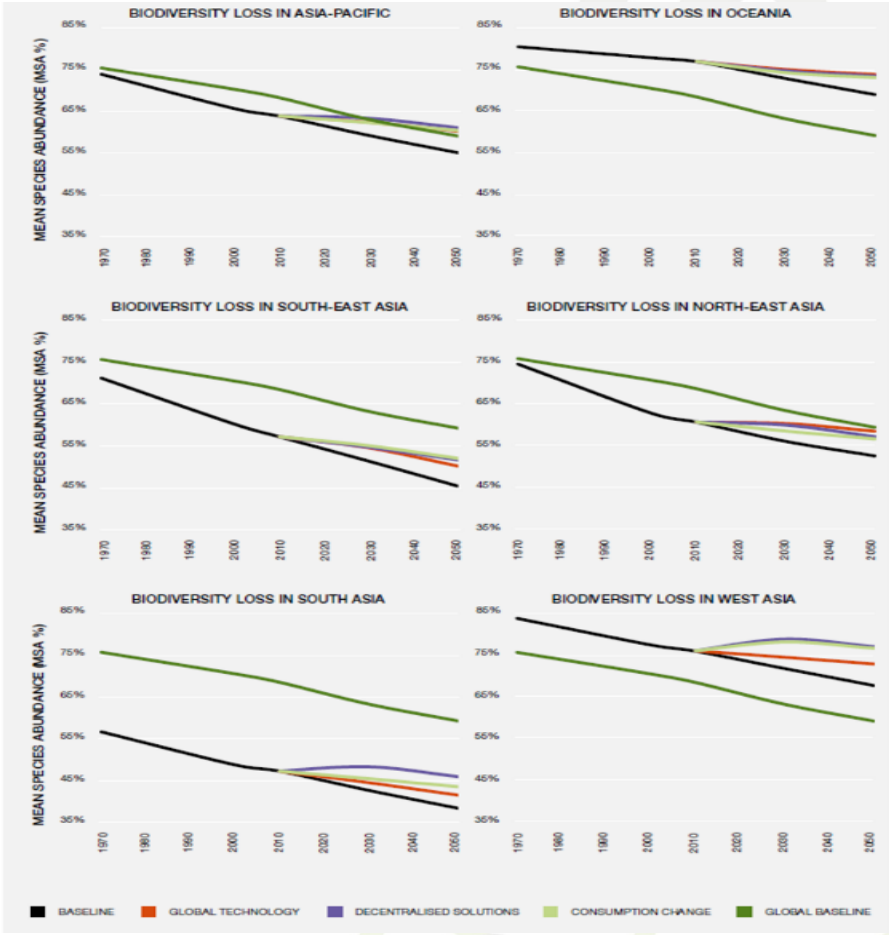
- Progress in forest and protected area expansion increases the probability of meeting Aichi Targets and SDGs
  - The increase in forest and protected area directly help achieve Aichi Biodiversity Target s (4, 5 & 11) and SDGs (12, 14 & 15)
  - Decline in fuel wood extraction reduces pressure on forest
  - However: key biodiversity areas still might not be covered
  - Continued positive scenario under effective forest & PA management



Average wood removals in the Asia-Pacific sub regions

Positive scenarios: enabling policies & participatory and multi-level governance

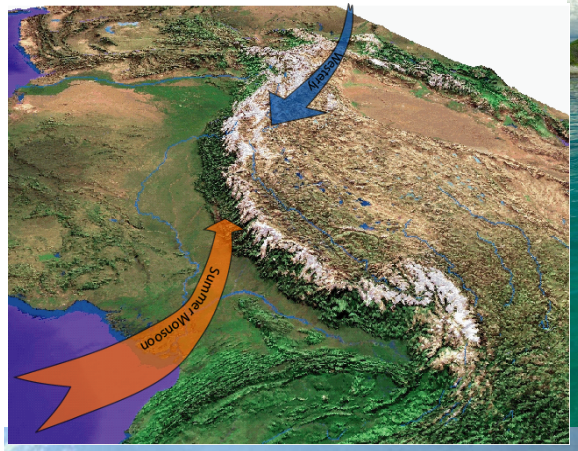
- Scenario based policy and governance reforms indicates better future
  - **Proactive policies** are found to slowdown and reverse the trend of loss
  - **Collaborative and coherent actions** provide better scenarios to harness multiple values of nature
  - **Effective and participatory governance** may reduce impact of driver interactions



Biodiversity loss in the Asia-Pacific Region in terms of mean species abundance under different scenarios

Examples of positive scenarios adapted to unique national and regional contexts

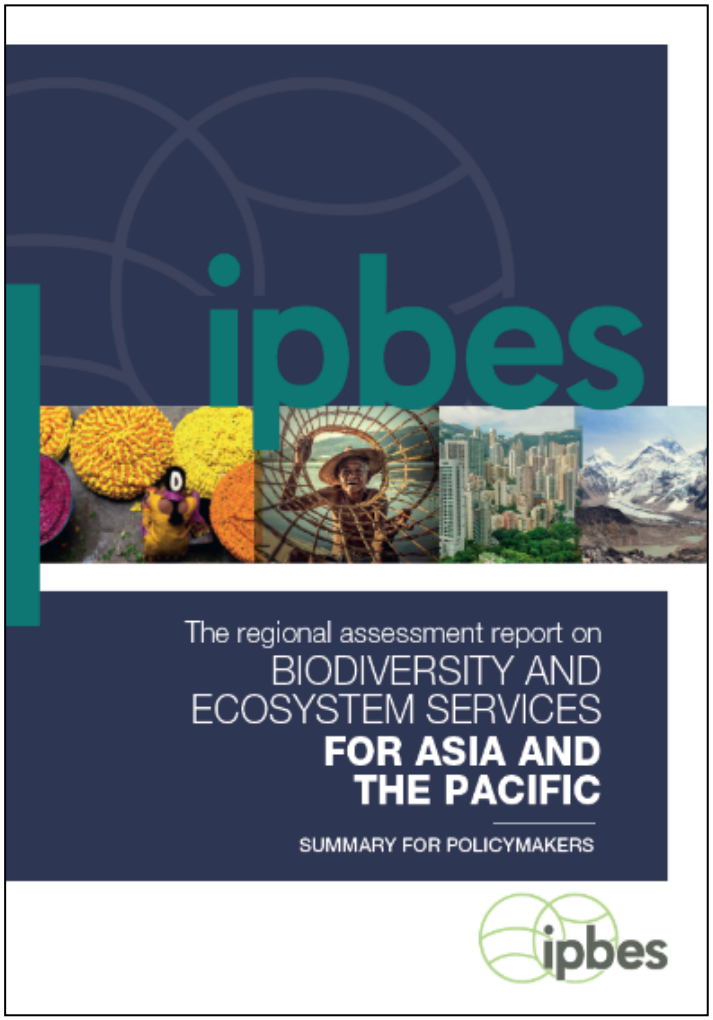
- Cross-sector and cross-boundary landscape and seascape improves conservation (e.g. tiger, coral reefs),
- Regional co-operation initiatives helps pollution control and illegal trade
- Indigenous and local community participation protects biodiversity
- Innovative partnership with private sector leverages finance.



Conclusion

1. Overall, the health of biodiversity is poor, sustained supply of ecosystem services is at risk;
2. Increasing awareness on value of biodiversity and ecosystem services
3. Old drivers of change continue to impact; new drivers are interacting and intensifying the loss
4. In general, future of biodiversity is at risk but some positive scenarios do exist to reduce and reverse the trend

Thank you for your kind attention



The full assessment report is available at: https://www.ipbes.net/assessment-reports/asia-pacific