



The science-base for post-2020 global biodiversity framework – lessons from IPBES & elsewhere

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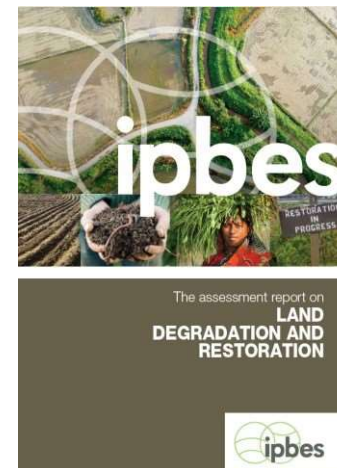
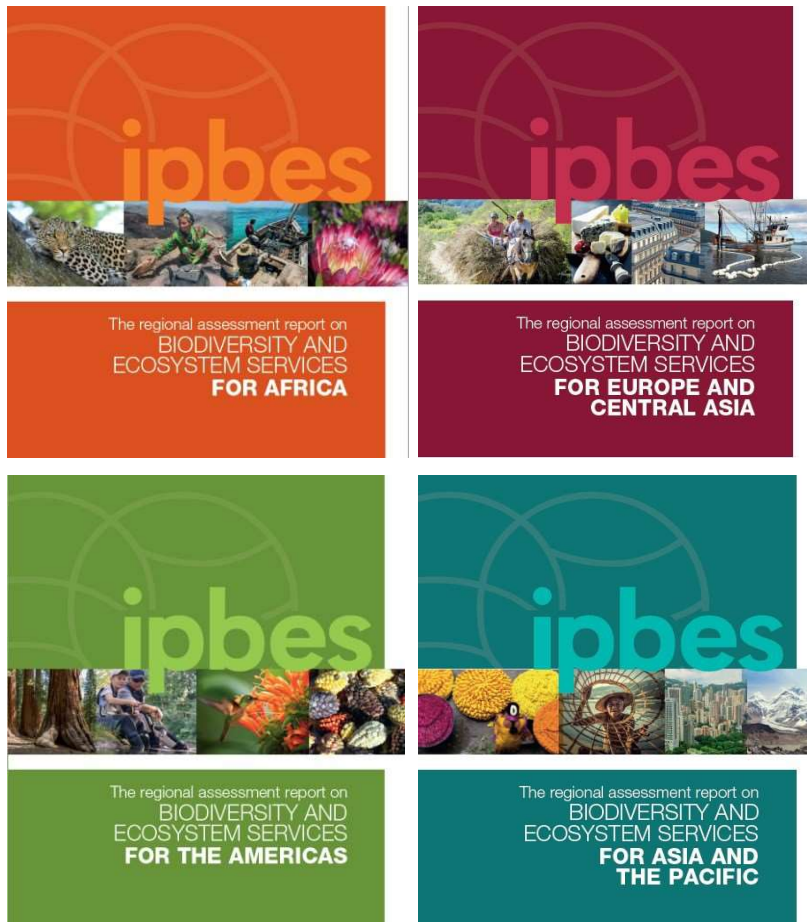
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Food and Agriculture
Organization of the
United Nations



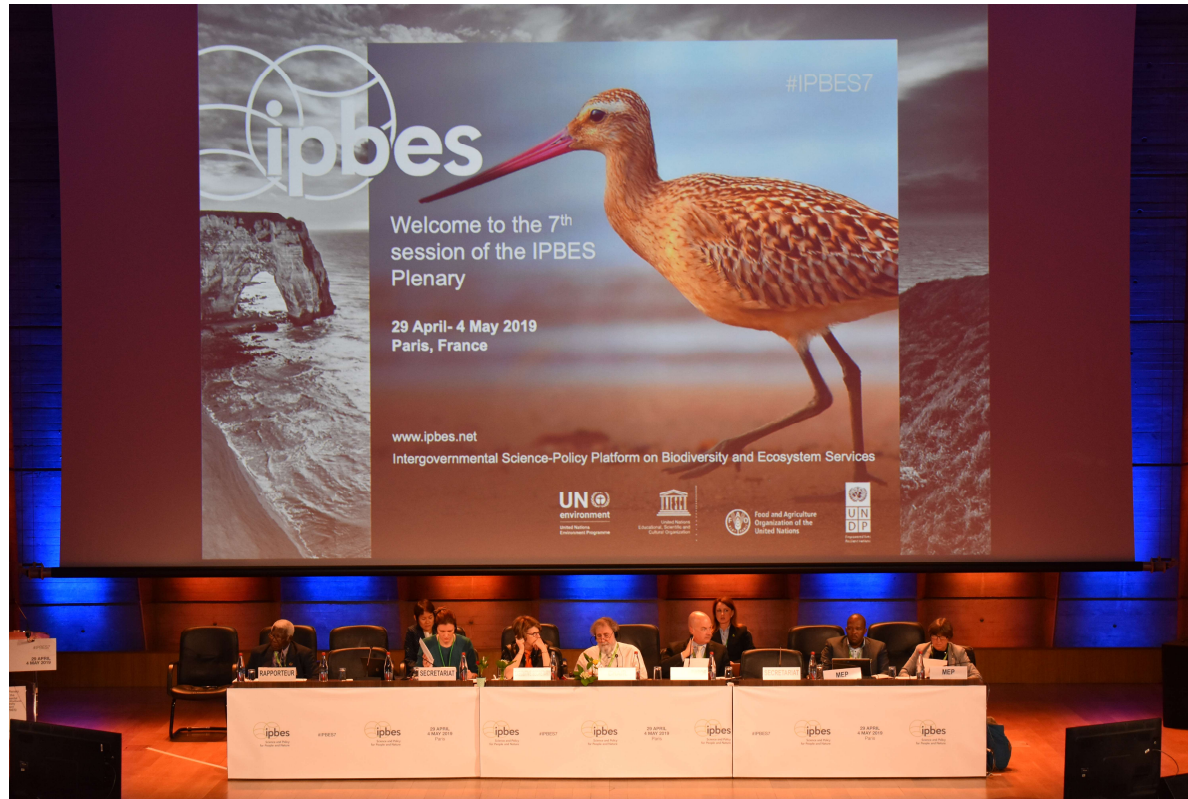
5 reports released, approved by the IPBES Plenary (March 2018)



- 550 experts
- 18,000 publications
- 20,000 comments



The Global Assessment Summary for Policymakers approved by the IPBES-7 Plenary (May 2019)



- 145 experts
- 15,000 publications
- 15, 000 comments

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Le Monde

UN MILLION D'ESPÈCES MENACÉES DE DISPARITION

IL N'EST PAS TROP TARD POUR AGIR...

► Le rythme d'extinction des espèces s'accélère dangereusement, menaçant désormais un million d'entre elles, avertissent les scientifiques

► Parmi elles, 500 000 espèces terrestres sont d'ores et déjà considérées comme des « morts ambulants », car leurs territoires s'amenuisent

► L'homme est le principal responsable de cette extinction de masse, en raison de la destruction et de la surexploitation des milieux naturels

► Les experts mettent en cause un modèle de consommation insoutenable et appellent un « changement en profondeur »

PAGES 6 À 8, 10ÈRES - PAGES 28-29

M ÉDITORIAL
L'HUMANITÉ FACE À
SES RESPONSABILITÉS

PAGE 31

France Télécom Radiographie
d'un système de harcèlement moral

Sept prévenus, dont d'anciens dirigeants de l'entre-
aux morts des villages», écrit
notre chroniqueuse judiciaire

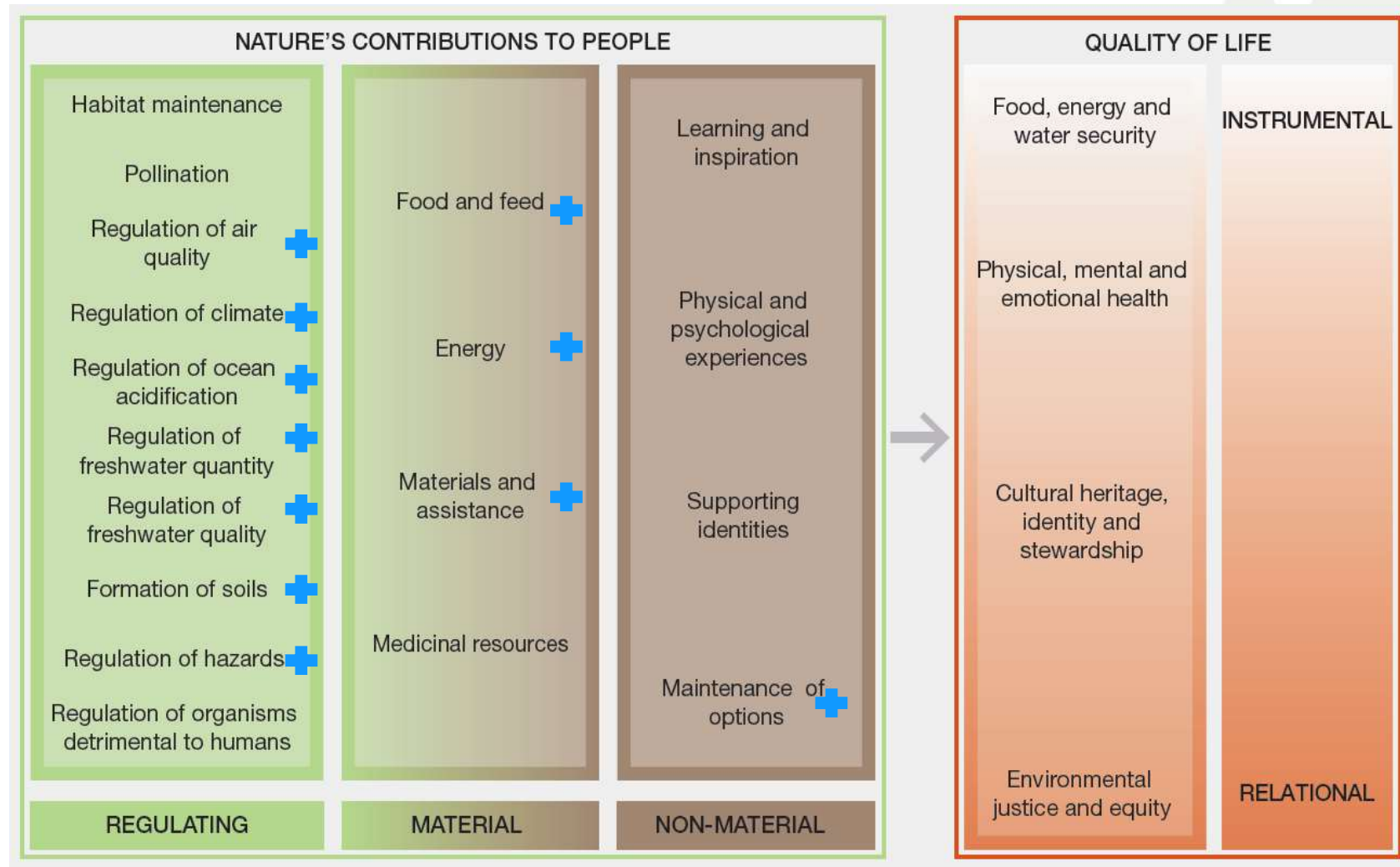
Europe
Sur la piste
des Afghans
déboutés

TRÊVE FRAGILE APRÈS L'ESCALADE ENTRE ISRAËL ET GAZA



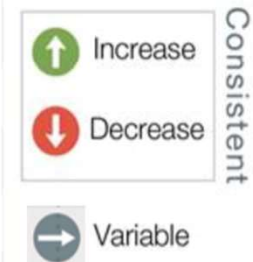
Un cessez-le-feu est
entré en vigueur, lundi
6 mai, à l'aube, entre les
factions armées de Gaza
et l'armée israélienne,
après un week-end

Nature's contributions to people

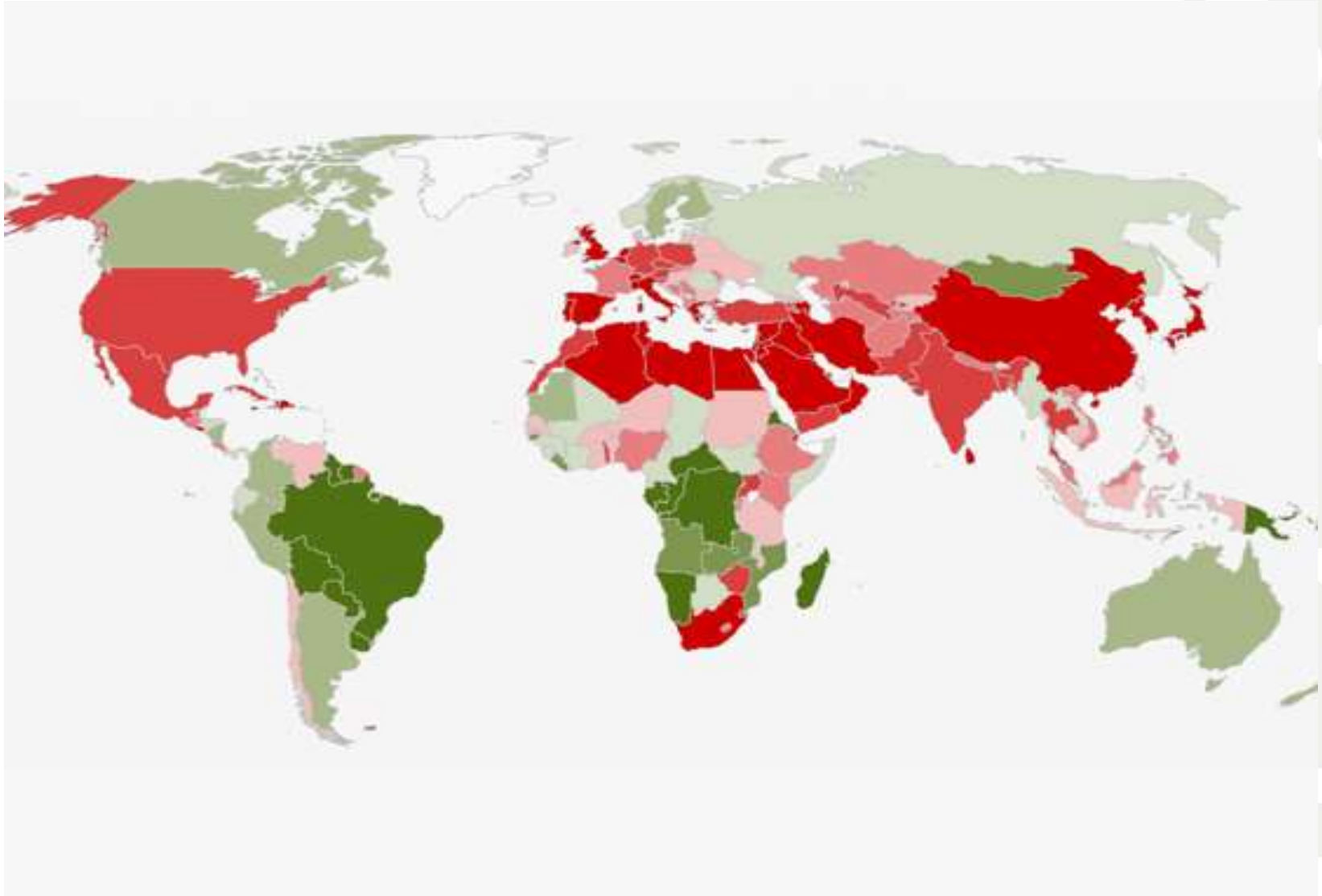


		DIRECTIONAL TREND			Across regions
Nature's contributions to people		50-year global trend			
		Decrease	← No change →	Increase	
	1 Habitat creation & maintenance	↓			Consistent
	2 Pollination & dispersal of seeds	↓			Consistent
	3 Regulation of air quality		↘		Variable
	4 Regulation of climate		↘		Variable
	5 Regulation of ocean acidification			→	Variable
	6 Regulation of freshwater quantity		↘		Variable
	7 Regulation of freshwater quality		↘		Consistent
	8 Regulation of soils		↘		Variable
	9 Regulation of hazards & extreme events		↘		Variable
	10 Regulation of organisms	↓	↘		Consistent
	11 Energy		↘	↗	Variable
	12 Food & feed	↓		↗	Variable
	13 Materials & assistance		↘	↗	Variable
	14 Medicinal, biochemical, & genetic resources	↓	↘		Consistent
	15 Learning & inspiration	↓			Consistent
	16 Physical & psychological experiences		↘		Consistent
	17 Supporting identities		↘		Consistent
	18 Maintenance of options	↓			Consistent

TREND ACROSS REGIONS



Ecological footprint and biocapacity



Ecological deficit / reserve (red, deficit, green, reserve; data in steps of 50% of deficit or reserve) Global Footprint Network 2018

Nature and its vital contributions to people, which together embody biodiversity and ecosystem functions and services, are deteriorating worldwide

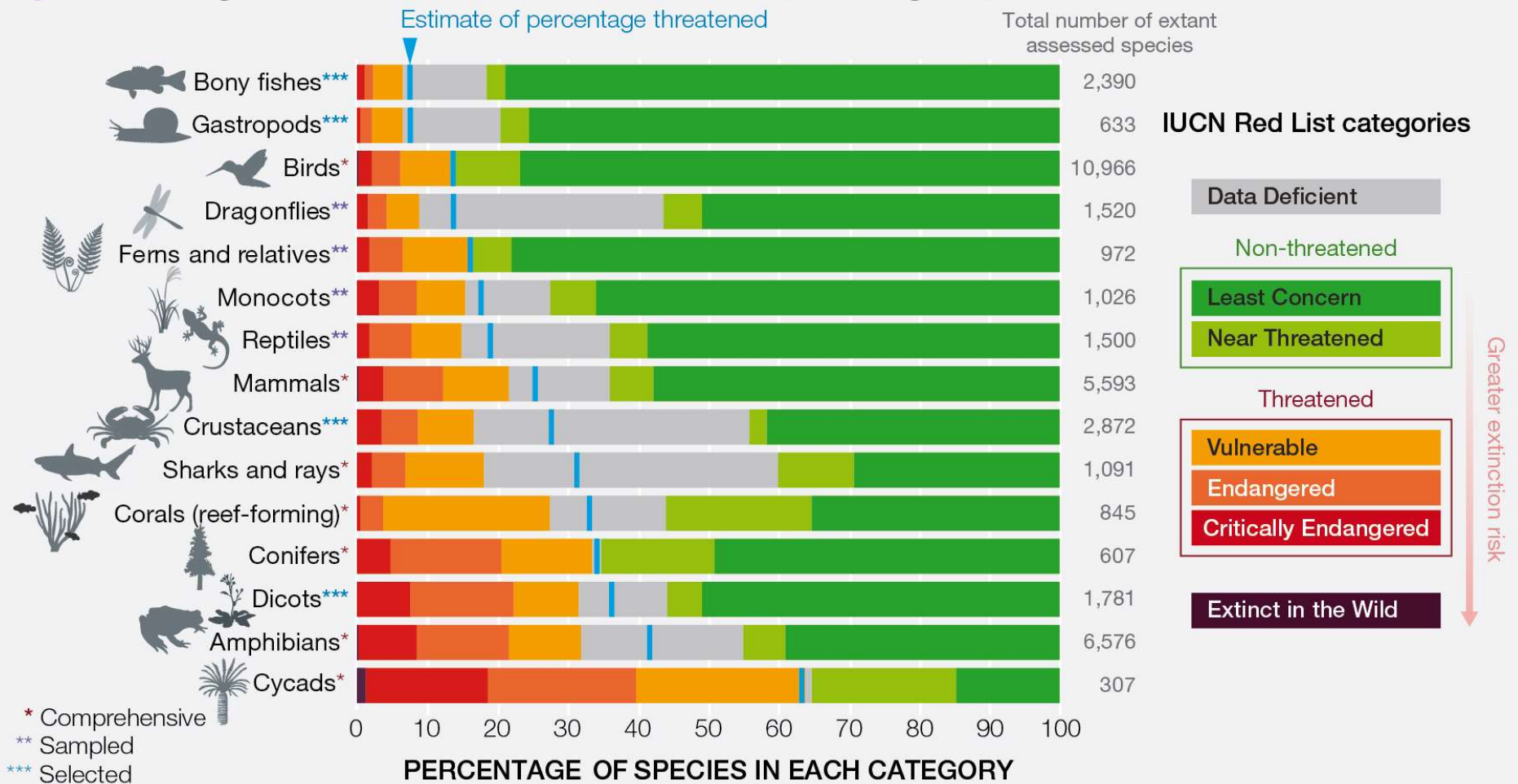
- Biodiversity and nature's contributions to people are essential for a good quality of life
- Biodiversity underpins nature's contributions to people and is a strategic asset for sustainable development
- However, benefits are unevenly distributed, accessed and experienced by people and communities
- Biodiversity has significant market and non-market economic value, and non-economic (social/cultural) value.
- People's interactions with nature are shaped by very diverse values.
- Full valuation useful for decision-making, if fully considering and respecting local and regional cultural values.

Biodiversity loss is lost and the underlying drivers have accelerated during the past 50 years

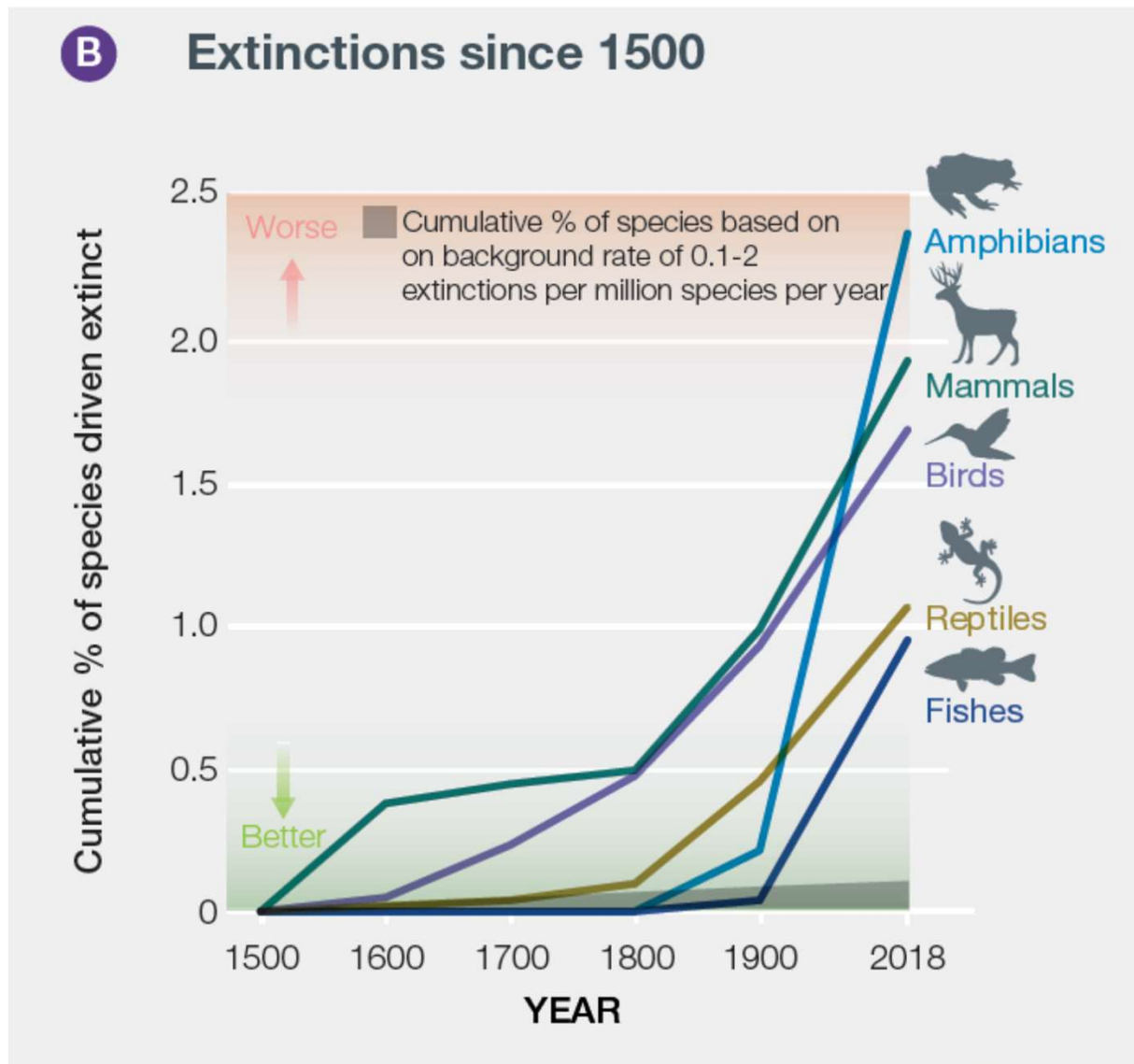
- Biodiversity loss is going on in all regions and the spatial extent and biodiversity status of natural ecosystems has declined in all regions
- Extinction risk is increasing in terrestrial, coastal, marine and freshwater habitats due to anthropogenic drivers in all regions.
- About 20% of assessed species per region in the IUCN Red List are threatened, for endemic species this proportion is about 25%.
- Key emblematic wildlife is generally declining.
- Invasive alien species have increased in number and abundance.
- The situation has become markedly worse in all regions during the last 20 years.
- Some targeted interventions also caused positive trends, such as local increases in forest cover or in populations of some large mammals.

More species of plants and animals are threatened with extinction now than at any other time in human history

A Current global extinction risk in different species groups



More species of plants and animals are threatened with extinction now than at any other time in human history



Biodiversity status for Europe and Centra Asia

		PAST					PRESENT				
		WE	CE	EE	CA	ECA	WE	CE	EE	CA	ECA
TERRESTRIAL	Agroecosystems	↓	↘	↘	↓	↓	↘	↘	↕	↕	↘
	Alpine and subalpine systems	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
	Boreal peatlands	↓	•	↓	•	↓	↘	•	↘	•	↘
	Deserts	↘	•	↘	↘	↘	↘	•	↘	↘	↘
	Forest-steppe, steppe and other southern peatlands	↓	↓	↓	↓	↓	↘	↘	↘	↘	↘
	Mediterranean forests and scrubs	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
	Permafrost peatlands	→	•	→	•	→	↘	•	↘	•	↘
	Snow and ice-dominated systems	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
	Subterranean habitats	↘	↘	↘	↘	↘	↘	↓	↓	↓	↓
	Temperate and boreal forests and woodlands	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
	Temperate grasslands	↓	↓	↓	↓	↓	↓	↘	↕	↕	↕
	Temperate peatlands	↘	↘	↘	•	↘	→	→	→	•	→
	Tropical and subtropical dry and humid forests	↓	↓	↓	↓	↓	↕	↕	↕	↕	↕
	Tundra	↘	•	↘	•	↘	↘	•	↘	•	↘
	Urban ecosystems	↓	↓	↓	↓	↓	↘	↘	↓	↓	↘
INLAND SURFACE WATER	Aral Sea	•	•	•	↓	↓	•	•	•	↘	↘
	Caspian Sea	•	•	↘	↘	↘	•	•	↘	↘	↘
	Inland surface water	↓	↓	↓	↓	↓	↘	↕	↓	↓	↘
	Saline lakes	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
MARINE	North East Atlantic	Baltic Sea	Mediterranean Sea	Black and Azov Seas	Arctic Ocean	North West Pacific Ocean	ECA deep-sea				
PAST	↘	↘	↓	↓	↕	↘	↕				
PRESENT	↘	↓	↓	↘	↘	↘	↘				

↑ Strong and consistent increase in indicator

↗ Moderate and consistent increase in indicator

↓ Strong and consistent decrease in indicator

↘ Moderate and consistent decrease in indicator

→ Stable indicator

↕ Variable trend in indicator

• Not applicable

Confidence level

→ Well established

→ Established but incomplete/unresolved

→ Inconclusive

Assessment of past (~1950–2000) and current (~2001–2017) trends in biodiversity status of marine, inland surface water and terrestrial ecosystems for the four subregions and the whole of Europe and Central Asia (Figure SPM-6)

Direct drivers of change for Africa

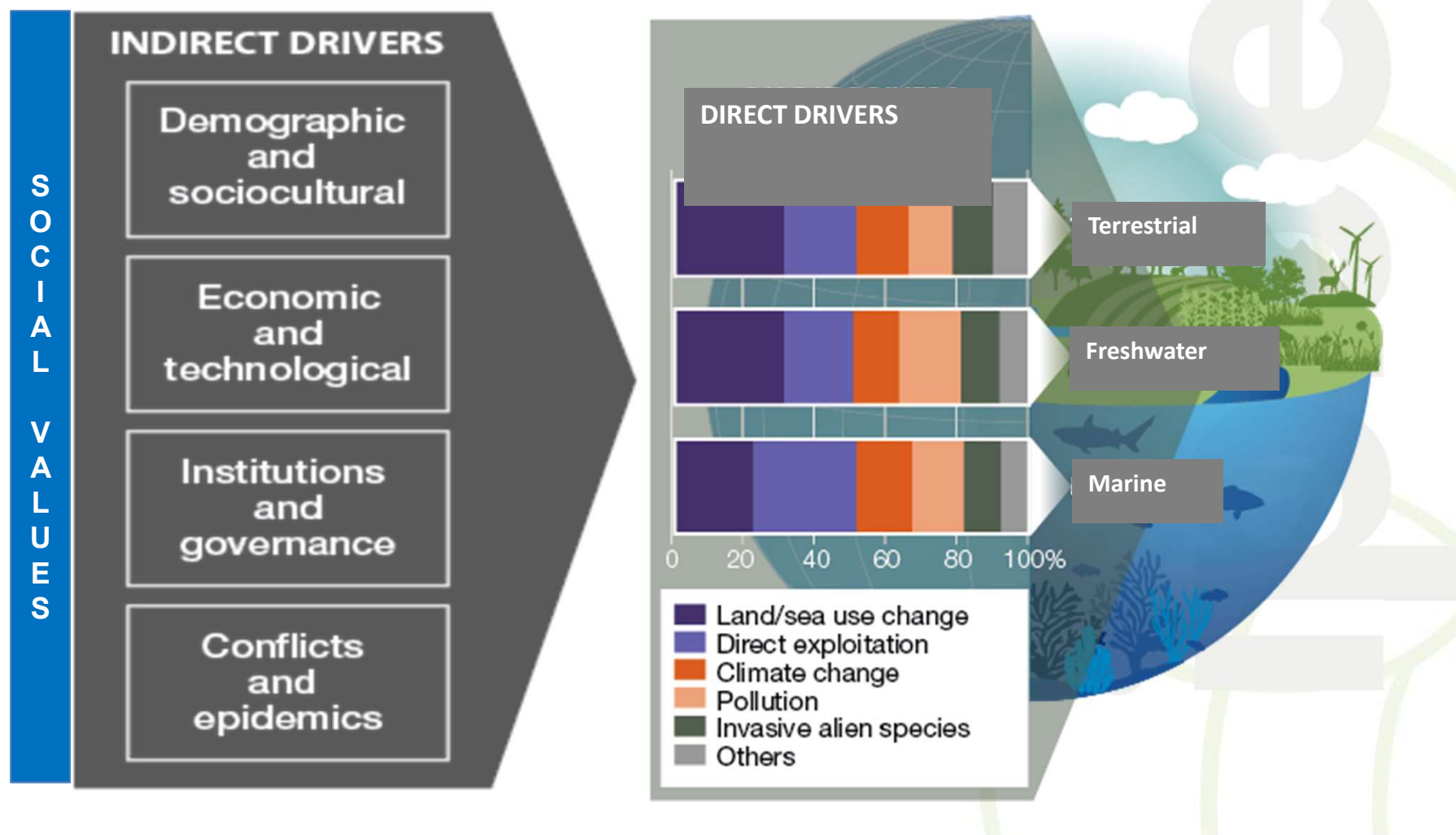
Subregions	ECOSYSTEM TYPE	DRIVERS OF BIODIVERSITY CHANGE							
		Direct drivers						Indirect drivers	
		Climate change	Habitat conversion	Overharvesting	Pollution	Invasive alien species	Illegal wildlife trade	Demographic change	Protected areas
CENTRAL AFRICA	Terrestrial/Inland waters	↗	↑	↑	↑	↑	↑	↑	↗
	Coastal/Marine	↗	↑	↑	↗	↗	↑	NI	↔
EAST AFRICA AND ADJACENT ISLANDS	Terrestrial/Inland waters	↑	↗	↑	↗	↗	↑	↑	↗
	Coastal/Marine	↑	↔	↗	↗	↗	↑	↑	↔
NORTH AFRICA	Terrestrial/Inland waters	↑	↗	↗	↗	↑	↔	→	→
	Coastal/Marine	↗	↗	↗	↗	↑	NI	→	→
SOUTHERN AFRICA	Terrestrial/Inland waters	↗	↗	↑	↗	↑	↗	↗	↗
	Coastal/Marine	↗	↗	↗	↗	↑	↗	↗	↗
WEST AFRICA	Terrestrial/Inland waters	↑	↑	↑	↗	↗	↑	↗	→
	Coastal/Marine	↑	↗	↗	↗	→	↑	↗	→

Width of an arrow = Level of agreement for countries sampled
 Arrow = Trend of the respective impact of the driver

↑ High Increase ↗ Moderate Increase → Low Increase ↓ Decrease NI = No Information available ↔ Unchanged/Under control

Trends in drivers of biodiversity change in Africa per sub-region and ecosystem type (Table SPM 1 Africa assessment)

Underpinning the proximate causes of deterioration in nature are the root causes, or **indirect drivers of change**.























A photograph of a sunset over a body of water. In the foreground, a person is standing in a small boat, holding a long pole. To the left, there is a stilt house. In the background, another stilt house is visible. The sky is filled with clouds, and the sun is low on the horizon, creating a warm, golden glow. The water reflects the light from the sky and the structures.

Recognizing the knowledge, innovations and practices, institutions and values of indigenous peoples and local communities and their inclusion and participation in environmental governance









Enhances their quality of life, as well as nature conservation and sustainable use, relevant to broader society

However, indigenous and local knowledge is under pressure and declining in all regions.

Progress towards the Aichi Biodiversity Targets

Goal	Target (abbreviated)	Progress towards elements of each target			
		Poor	Moderate	Good	Unknown
Drivers	 1 Awareness		~ ~		
	 2 Planning & accounting	✗	~ ~		
	 3 Incentives	✗ ✗			
	 4 Production & consumption	✗ ✗			
Pressures	 5 Habitat loss	✗ ✗			
	 6 Fisheries	✗ ✗			?
	 7 Agriculture & forestry	✗ ✗	~		
	 8 Pollution	✗ ✗			
	 9 Invasive alien species	✗ ✗		✓	?
	 10 Coral reefs etc	✗ ✗			
Status	 11 Protected & conserved areas		~ ~ ~ ~	✓ ✓	
	 12 Extinctions prevented	✗ ✗			
	 13 Genetic diversity		~ ~ ~ ~		?
Benefits	 14 Ecosystem services	✗			?
	 15 Ecosystem restoration				? ?
	 16 Access & benefit sharing		~	✓	
Implementation	 17 Strategies & action plans		~ ~	✓	
	 18 Indigenous & local knowledge		~		? ?
	 19 Biodiversity science		~		?
	 20 Financial resources		~		

Progress towards the UN Sustainable Development Goals

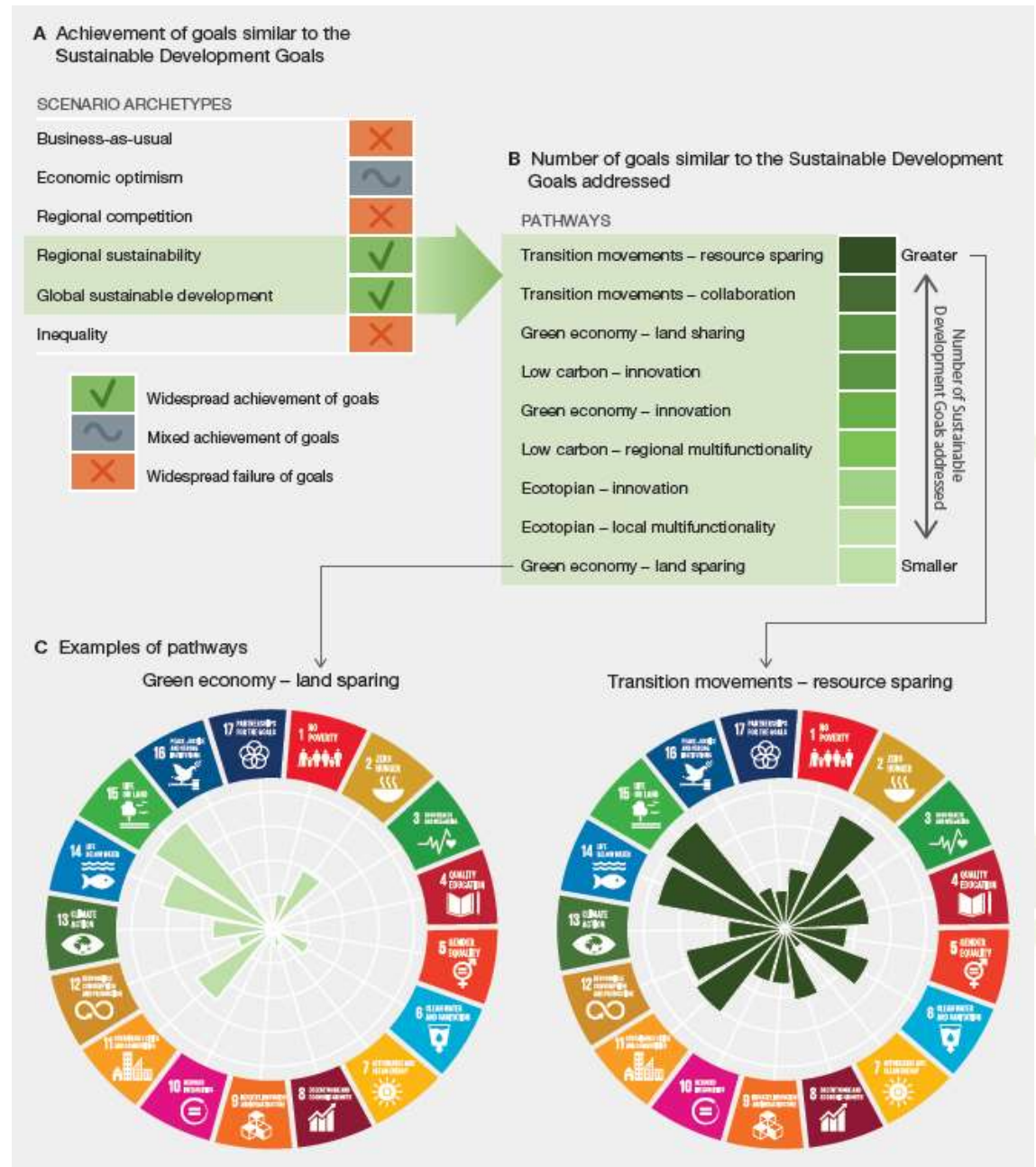
Selected Sustainable Development Goals		Recent status and trends in aspects of nature and nature's contributions to people that support progress towards target *			Uncertain relationship
		Poor/Declining support	Partial support	Unknown	
 1 NO POVERTY	No poverty	↓ ↓			U U
 2 ZERO HUNGER	Zero hunger	↓	→ → →		
 3 GOOD HEALTH AND WELL-BEING	Good health and well-being			? ?	U U
 6 CLEAN WATER AND SANITATION	Clean water and sanitation	↓ ↓ ↓	→		
 11 SUSTAINABLE CITIES AND COMMUNITIES	Sustainable cities and communities	↓ ↓ ↓ ↓	→		
 13 CLIMATE ACTION	Climate action	↓	→	? ? ?	
 14 LIFE BELOW WATER	Life below water	↓ ↓ ↓ ↓	→ → →		
 15 LIFE ON LAND	Life on land	↓ ↓ ↓ ↓ ↓ ↓	→ → → → →		

* There were no targets that were scored as good/positive status and trends

Scenarios and pathways toward and beyond 2030

The most effective pathways stress long-term societal transformation

Extent to which goals such as the Sustainable Development Goals are expected to be achieved under the six scenario types (Figure SPM 11 - Europe and Central Asia Assessment)

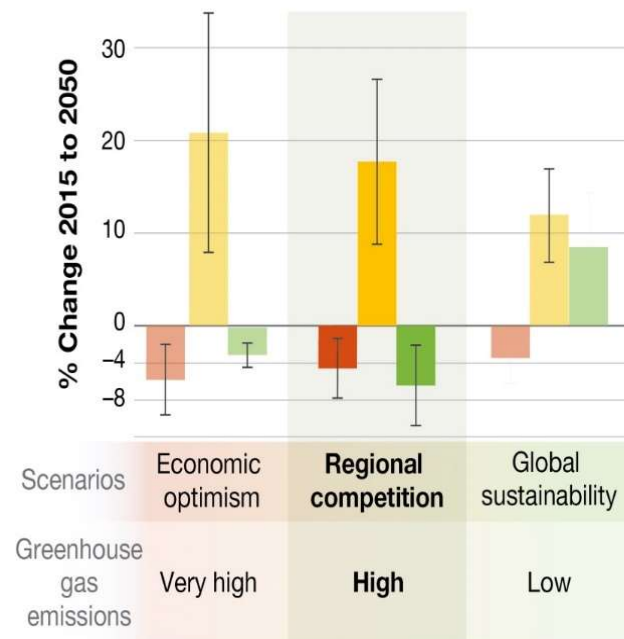


Future scenarios/Plausible futures & Sustainable pathways

- Until 2050, **business-as-usual scenarios** are projected to result in a continued loss of biodiversity, with climate change becoming a dominant driver for most ecosystems.
- Most scenarios consider only few drivers, notably climate change, leading to underestimates of biodiversity loss.
- **Scenarios optimized for economic growth or regional competition** result in significant loss of biodiversity and nature's contributions to people.
- Continued loss of biodiversity, especially when coupled with projected changes in climate, is likely to undermine the achievement of many of the Sustainable Development Goals (SDGs) and many of the climate-related goals.
- **Sustainability scenarios** characterized by environmental concern, changes in consumption patterns, social equity and human welfare, and a balanced supply of the various contributions of nature to people have much more positive outcomes.

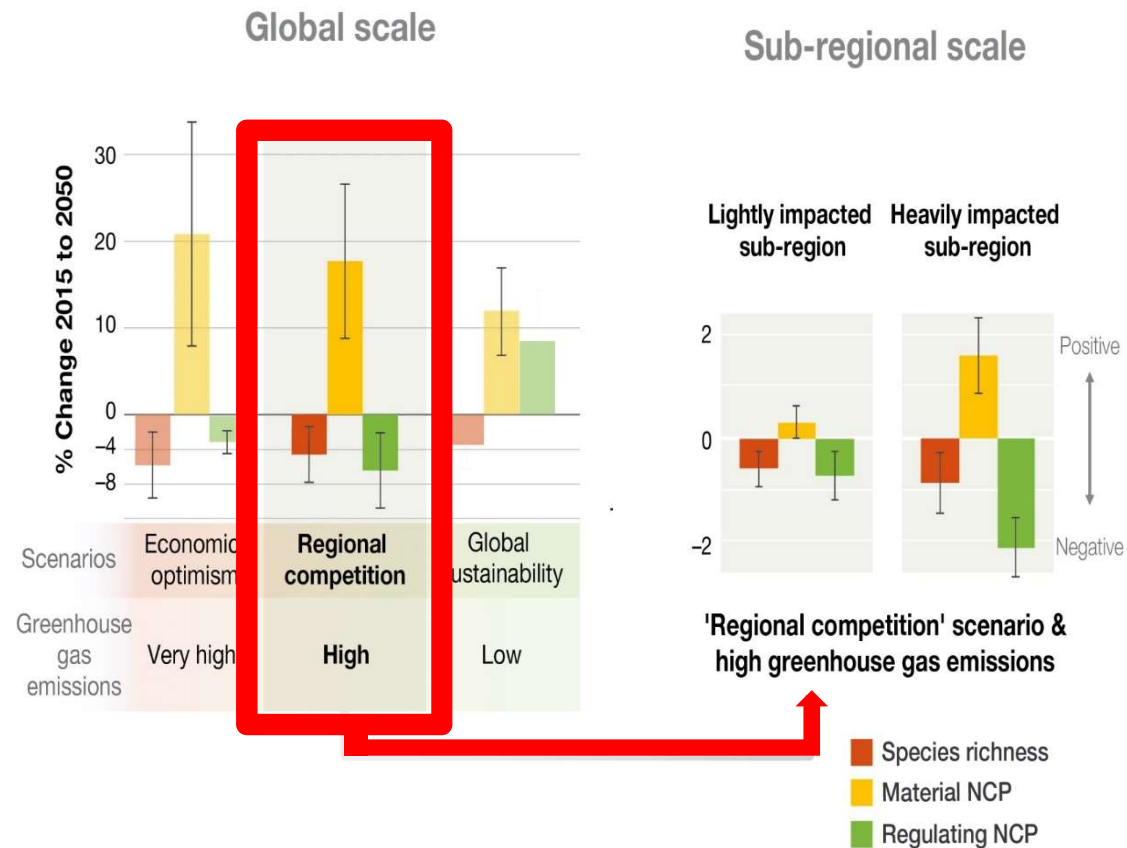
Projected changes in biodiversity and nature's material and regulating benefits, due to climate & land use change by 2050

Global scale



- Species richness
- Material NCP
- Regulating NCP

Projected changes in biodiversity and nature's material and regulating benefits, due to climate & land use change by 2050



2030 Agenda for Sustainable Development

“We are setting out a supremely ambitious and transformational vision. We envisage a world free of poverty, hunger, disease and want, where all life can thrive.”

17 Goals, 169 Targets

2050 Vision for Biodiversity

"Living in Harmony with Nature"

"By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people"

Goals ? Targets/milestones for 2030?



Transformative change - A fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values

Societal goals – including those for food, water, energy, health and the achievement of human well-being for all, mitigating and adapting to climate change and conserving and sustainably using nature – **can be achieved** in sustainable pathways **through the rapid and improved deployment of existing policy instruments and new initiatives** that more effectively enlist individual and collective action **for transformative change**

By its very nature, transformative change can expect opposition from those with **interests vested** in the status quo, but such opposition can be overcome for the broader public good.

Scenarios which include transformative change are compatible with the 2030 sustainability objectives and the 2050 Vision for Biodiversity

A key constituent of sustainable pathways is the evolution of global financial and economic systems to build a global sustainable economy

One that steers away from the current limited paradigm of economic growth

**Changes in production and consumption of energy and food
Low to moderate population growth
Nature-friendly and socially fair climate adaptation and mitigation**



Many societal responses and successful examples of rapid transformative change are already happening.

Bold actions and broad commitment from local to global levels are urgently needed



Meeting global societal goals through urgent and concerted efforts addressing the direct drivers and especially the root causes (indirect drivers) of nature deterioration.

Governance, economic systems, equity, cross-sectoral planning, incentives, narratives and societal values

Interactions and synergies in transformational change

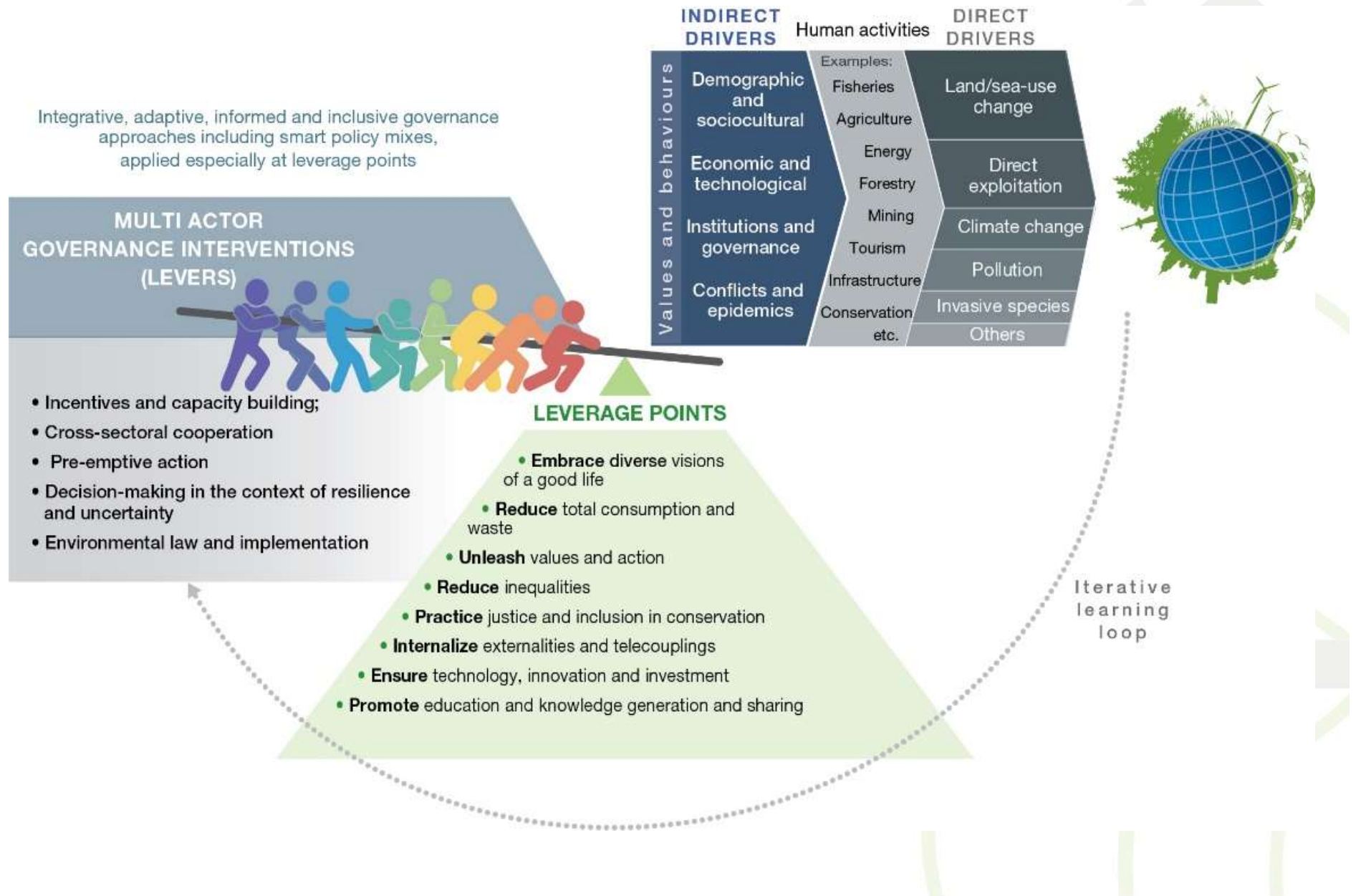
Challenges related to climate change, nature deterioration and achieving a good quality of life for all are interconnected.

- The causes and the consequences of biodiversity loss and of climate change are linked and interacting very closely.
- Hence, realising synergies and minimising trade-offs between biodiversity-related and climate-related decisions and actions is essential and highly promising.

And, they need to be addressed synergistically, from local to global levels.

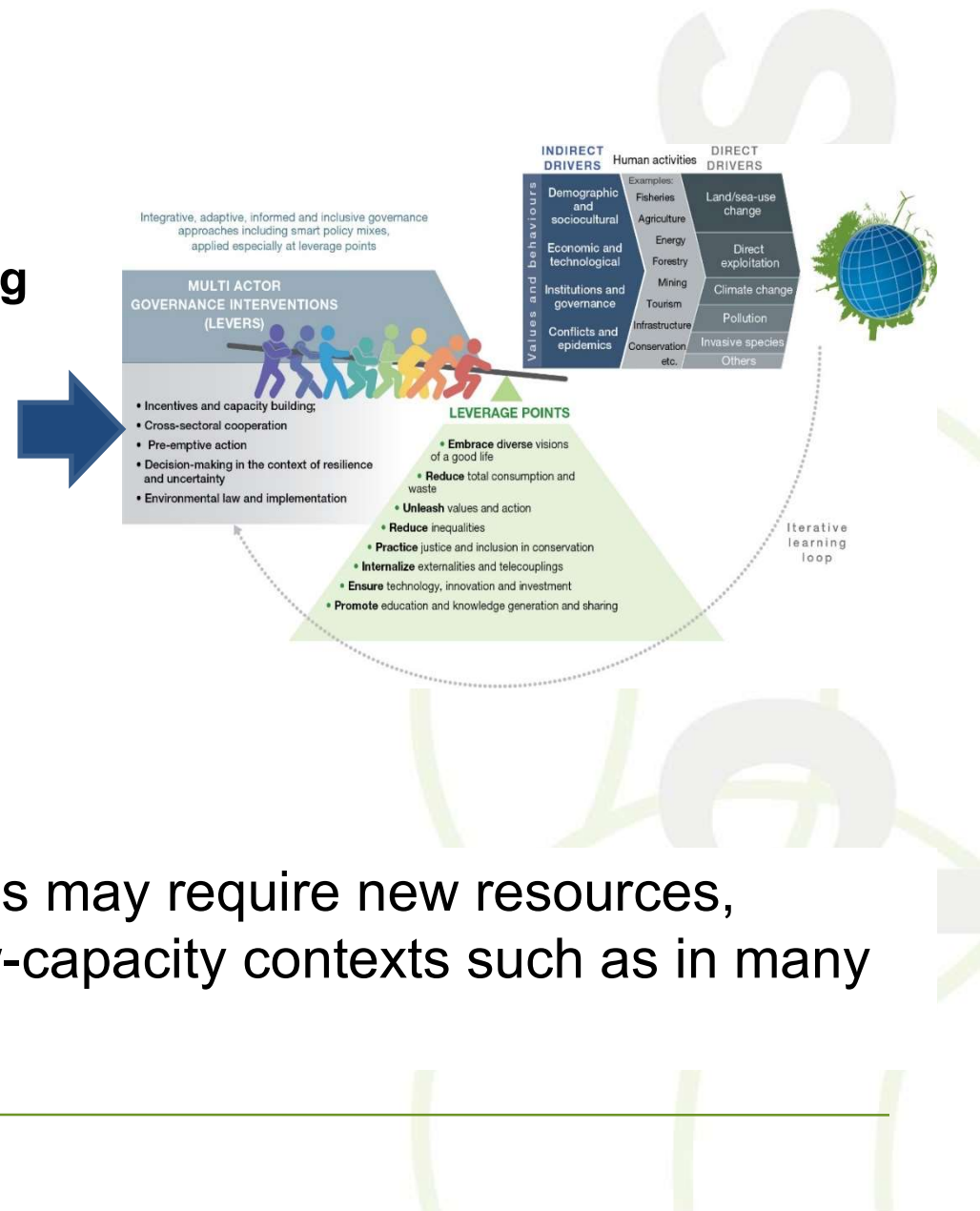
Food, water, energy, health, human well-being for all, mitigating and adapting to **climate change**, and **conserving** nature can be achieved together in sustainable pathways.

Transformative Change



FIVE MAIN INTERVENTIONS for transformative change

- (1) incentives and capacity-building
- (2) cross-sectoral cooperation
- (3) pre-emptive and precautionary action
- (4) decision-making for resilient social-ecological systems
- (5) Strengthen environmental law and implementation



All five main interventions types may require new resources, particularly, but not only, in low-capacity contexts such as in many developing countries

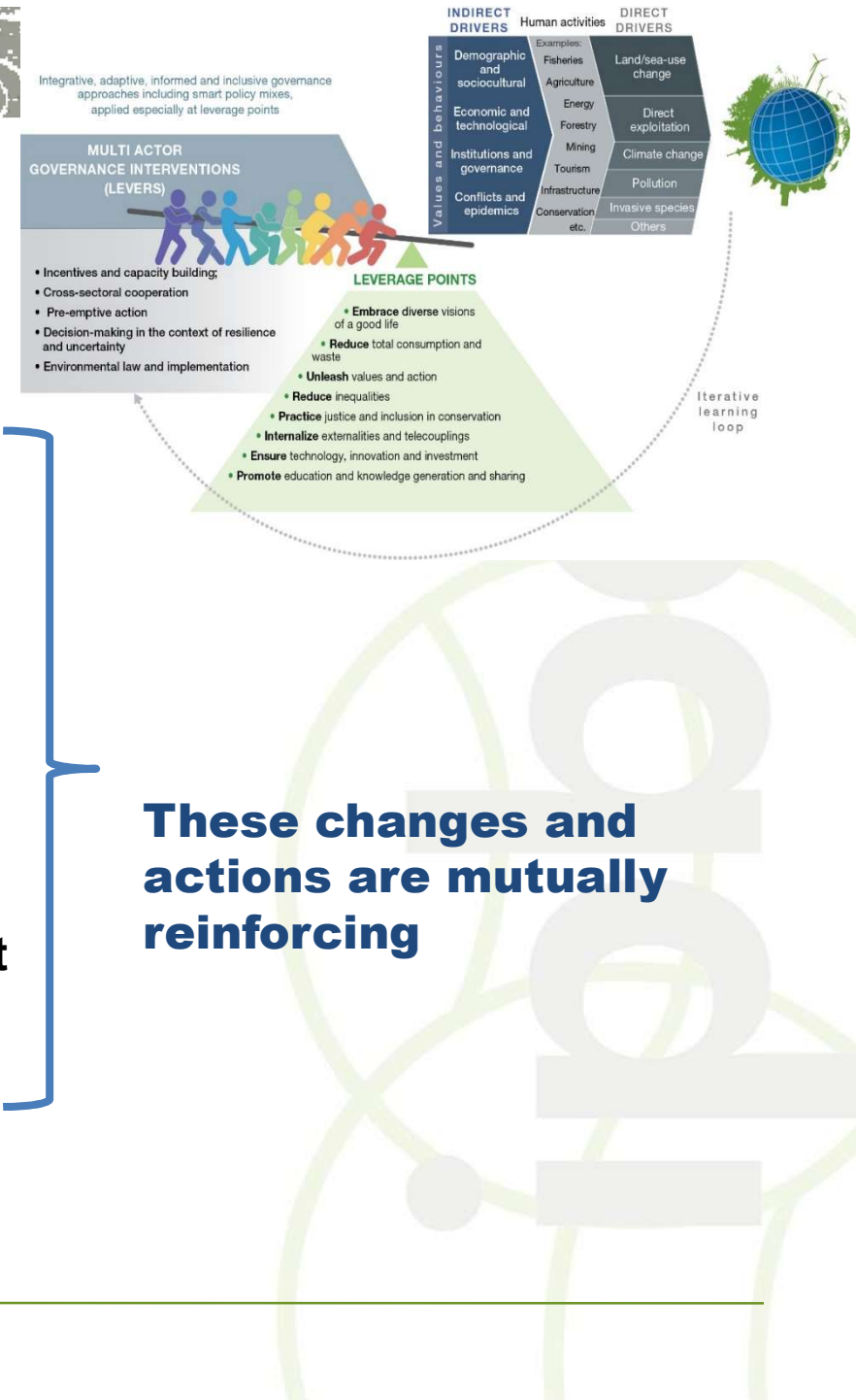


**Sustainable pathways can be achieved through
complementary **top-down** and **bottom-up** action on
eight priority points of intervention**

**Leverage points are key points of intervention in
social-ecological systems**

8 leverage points = efforts, where interventions yield exceptionally large effects!

- (1) visions of a good life
- (2) reduce total consumption and waste
- (3) unleash diverse and responsible values and related action
- (4) address inequalities
- (5) justice and inclusion in conservation
- (6) externalities and telecouplings
- (7) technology, innovation and investment
- (8) education and knowledge generation and sharing.

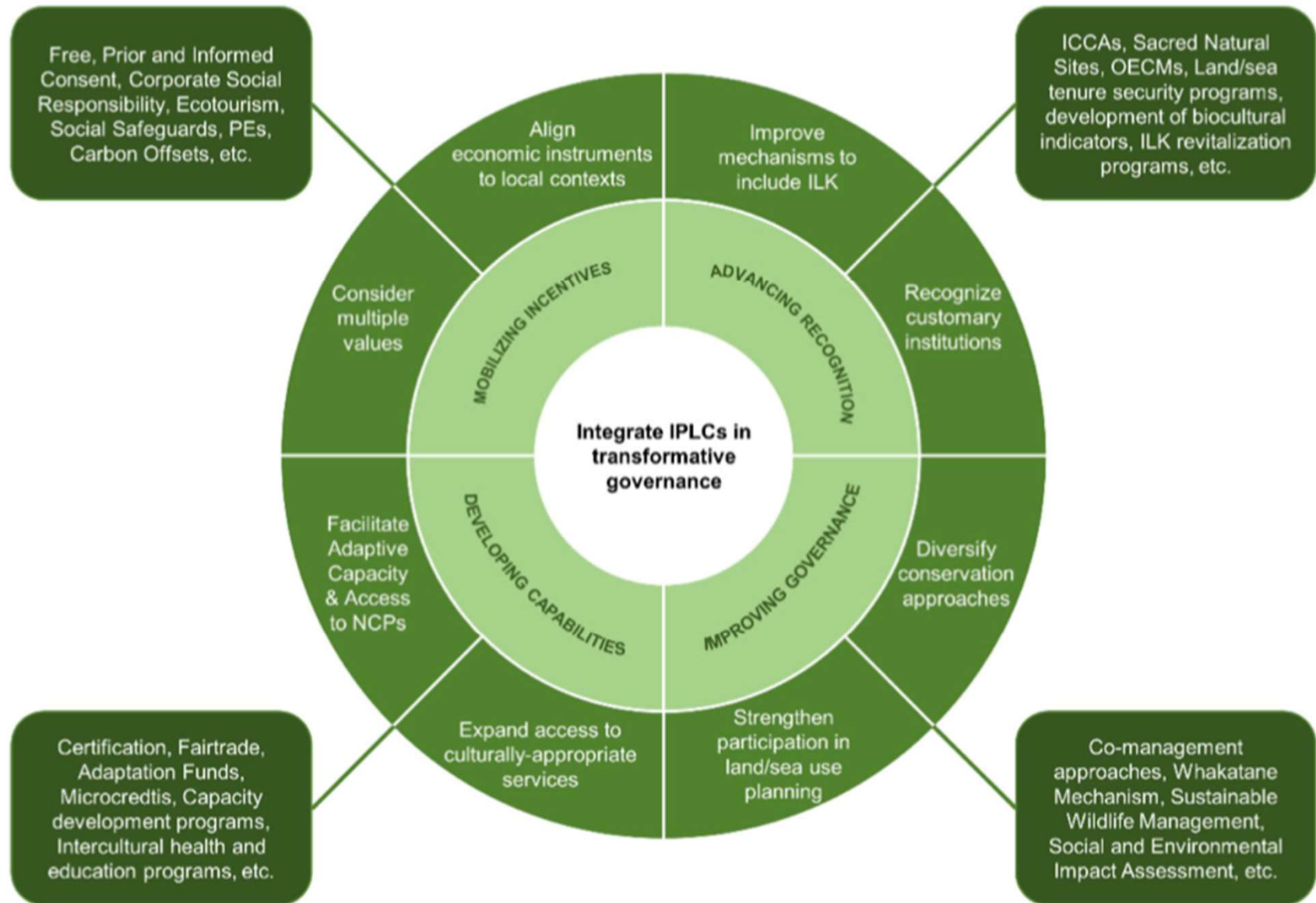




Need for rapid implementation of existing instruments and decisions for transformative change

Example issues for cross-sectoral, integrated management at multiple levels

- Food production and conservation goals: complementary and interdependent
- Sustainable fisheries: integrated management on land, in freshwater and oceans
- Land-based climate change mitigation: attention to trade-offs
- Nature-based solutions in cities: crucial for global sustainability



Conclusions for post-2020 agenda of the Convention for Biological Diversity

- Biodiversity loss is a highly important sustainable development issue, and a climate issue.
- Human well-being depends on addressing biodiversity loss and human-induced climate change now.
- Current biodiversity-related decisions affect current and future generations, with poor people being the most vulnerable.
- Achieving 2050 vision and SDGs require transformative change
- Developing an effective post-2020 agenda fantastic opportunity and high responsibility:
 - Monitorable targets taking up identified opportunities/actions
 - Targets for adequately protected area and sustainably used area

Conclusions for this workshop

27. Eight areas are envisaged for attention:

- (a) Station 1: Targets and objectives for keeping healthy terrestrial ecosystems and their vital contribution to people;
- (b) Station 2: Measures addressing direct and indirect drivers of biodiversity loss – mainstreaming biodiversity into society;
- (c) Station 3: Targets and objectives for keeping healthy marine ecosystems and their vital contribution to people;
- (d) Station 4: Implementation framework: resource mobilization, capacity-building, technical and scientific cooperation, and communication;
- (e) Station 5: Objectives and measures for reducing the rate of extinction of species and their vital contribution to people;
- (f) Station 6: Addressing shared objectives: gender equality, women's empowerment and social inclusion; indigenous peoples and local communities; and human rights;
- (g) Station 7: Objectives and measures for safeguarding genetic resources and their equitable use;
- (h) Station 8: Accountability framework: monitoring, assessment, reporting and review.

**Capture key elements of transformative change
(key types and points of interventions)**

IPBES Future Work Programme until 2030

IPBES agreed to support all the deliverables that the CBD had requested

- (a) A technical paper on the interlinkage between biodiversity and climate change – and member countries asked for this to be delivered in time for COP-15 and FCCC COP-26.
- (b) A nexus assessment on biodiversity, water, food and health.
- (c) An assessment on the determinants of transformative change, (including behavioural, social, cultural, economic, institutional, technical and technological dimensions) – member countries advanced the timetable for its delivery.
- (d) A methodological assessment on measuring business impact and dependence on biodiversity and nature's contributions to people



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Leverage Point 3: Values and Actions

The third leverage point is unleashing existing widely held values of responsibility to effect new social norms for sustainability, especially by extending notions of **responsibility** to include impacts associated with **consumption**.

Such **norm changes** require concerted effort but are feasible when infrastructure and institutions (including social arrangements, regulations and incentives) **activate values held by individuals**.

****Diverse values are consistent with sustainable trajectories, but not all have received equal attention in global sustainability discourses.**



Leverage Point 6: externalities & telecouplings

The sixth leverage point involves accounting for **nature deterioration** from local economic activities and socioeconomic-environmental interactions **over distances (telecouplings)**, including, for example, international trade.

Structural changes to economies are also key to shifting action over long time scales, including technological and social innovation regimes and investment frameworks **that internalize environmental impacts such as externalities of economic activities**, including by addressing environmental impacts in socially just and appropriate ways.

Although **market-based policy instruments** such as payments for ecosystem services, voluntary certification and biodiversity offsetting have increased in use, their **effectiveness is mixed**, and they are often contested; thus, they should be designed and applied carefully to avoid perverse effects in context

****The widespread internalization of environmental impacts, including externalities associated with long-distance trade, is considered both an outcome and a constituent of global and national sustainable economies**
