Transformative Change as System Change:

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PEOPLE AND NATURE
A journal of relational thinking

UBC

Outline

- Transformative change as system change
- What to change?
- How to lever change?

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PWIAS
PETER WALL INSTITUTE FOR ADVANCED STUDIES

Outline

- Why transformative change?
- What is it?
- How to think about it?

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Science & Environment

Five things we've learned from nature crisis study

By Matt McGrath
Environment correspondent

6 May 2019

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Global trends for insects are not known, but large declines have been recorded in some locations

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World

Nature is in its worst shape in human history, UN report says

'This is really our last chance to address all of that,' godfather of biodiversity says

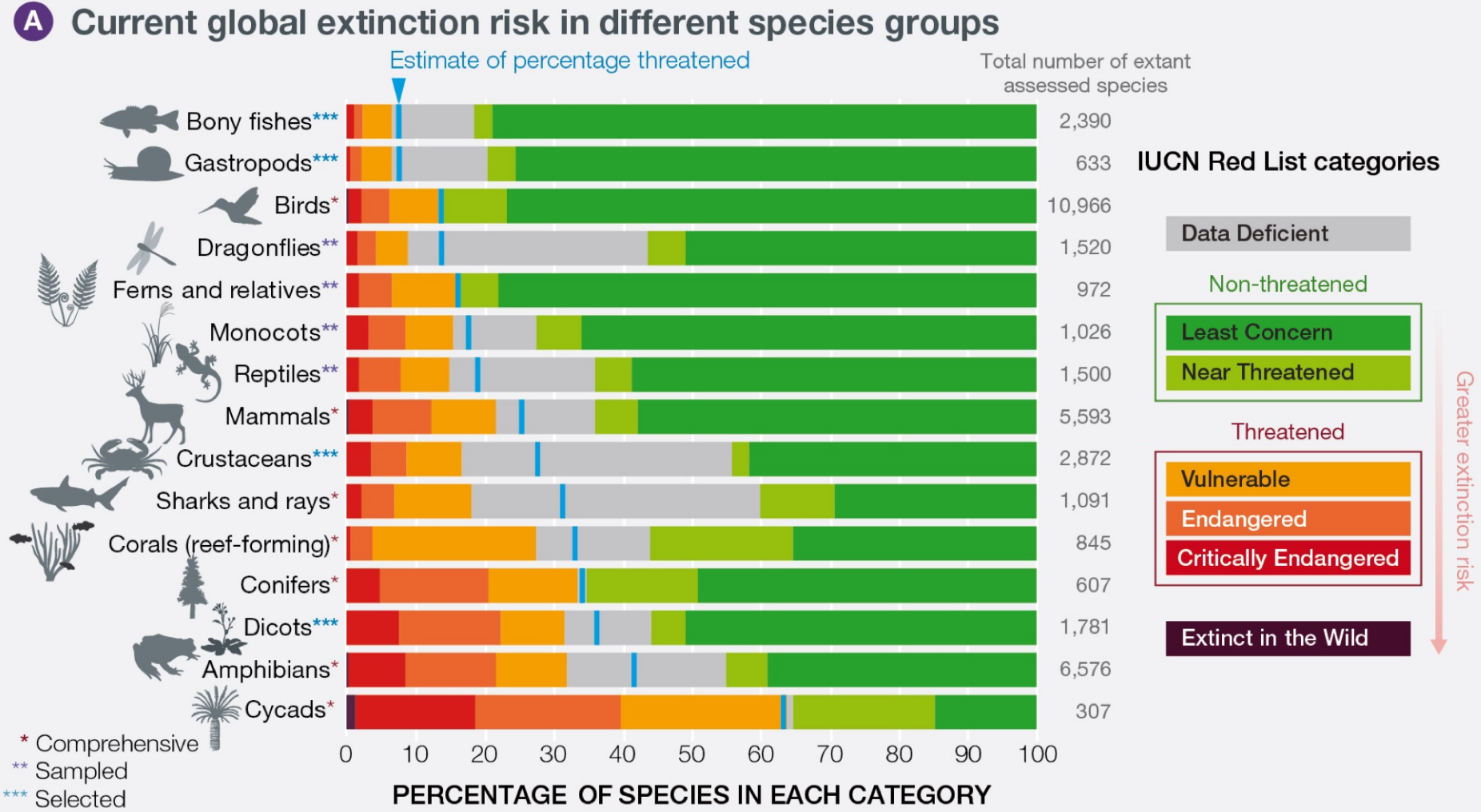
The Associated Press · Posted: May 06, 2019 6:30 AM ET | Last Updated: May 6

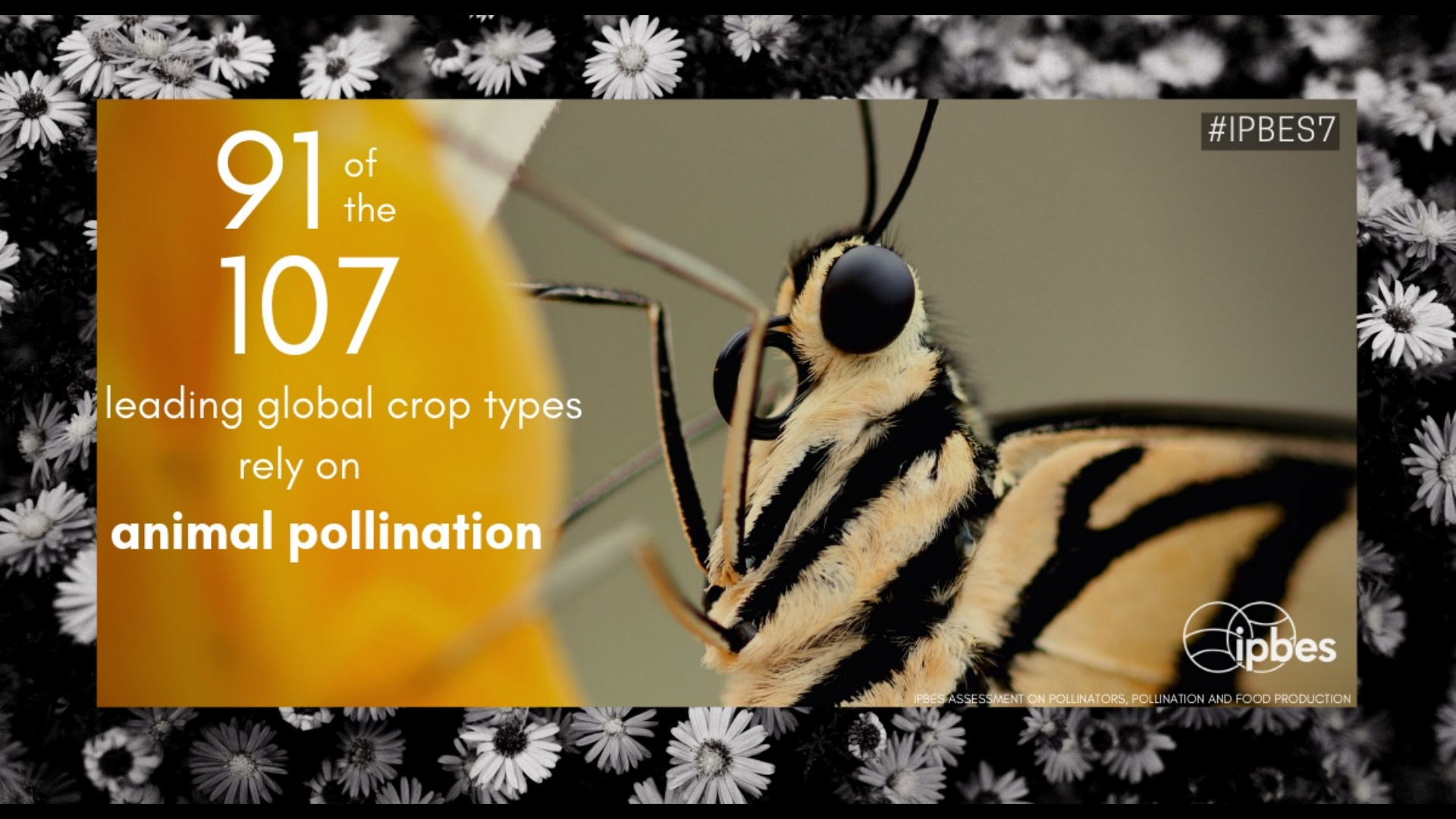
The United Nations issued its first comprehensive global scientific report on biodiversity, which explored the threat of extinction for Earth's plants and animals. (Ben Curtis, File/Associated Press)

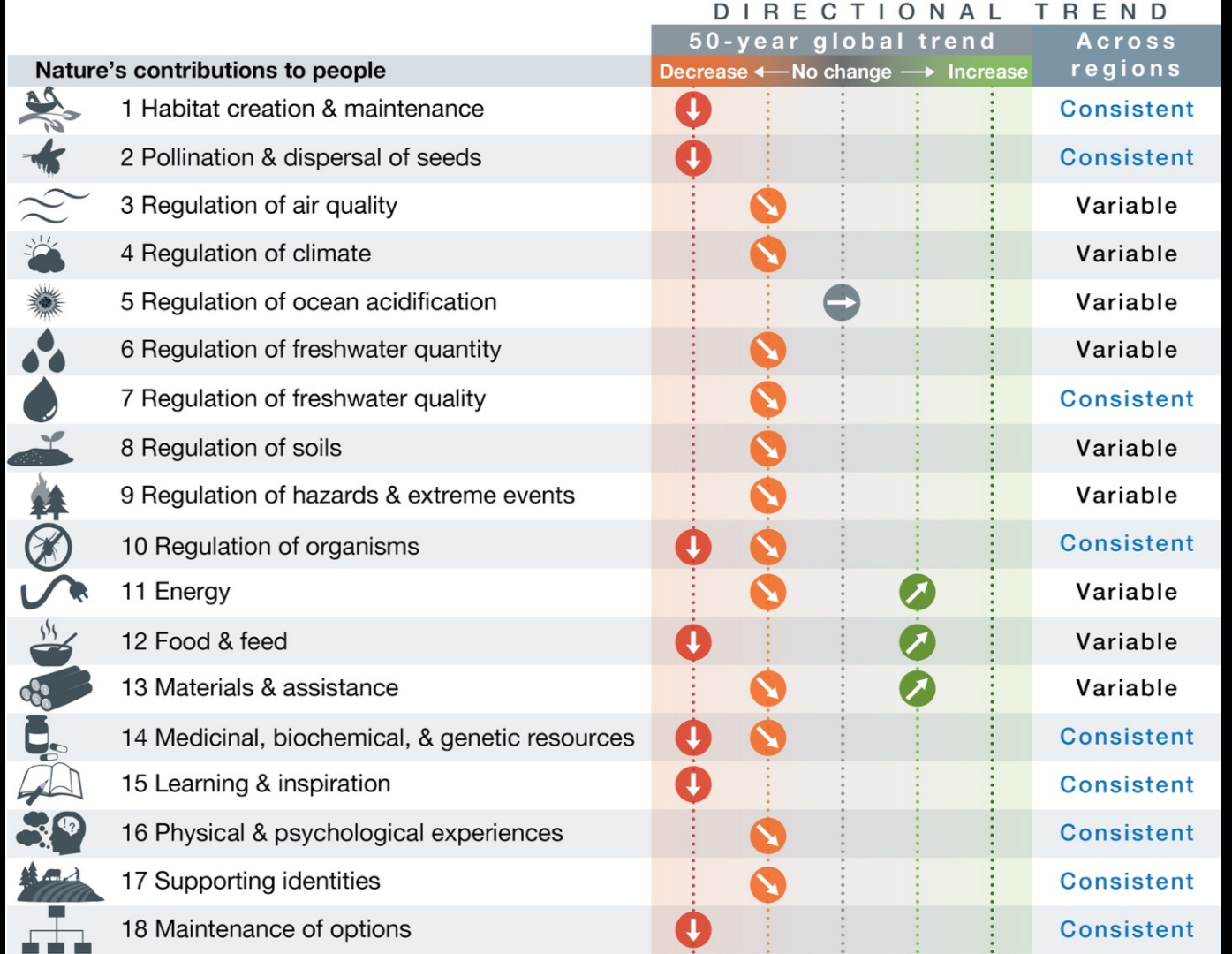
5174 comments

IPBES Global Assessment

1. Introduction
2. Status & Trends: Nature, Its Contributions, Drivers
3. Progress and Prognosis towards Goals
4. Scenarios & Models
5. Pathways towards a Sustainable Future
6. Options, Obstacles, Opportunities


A Current global extinction risk in different species groups
Estimate of percentage threatened
Total number of extant assessed species
Bony fishes***
Gastropods***
Birds*
Dragonflies**
Ferns and relatives**
Monocots**
Reptiles**
Mammals*
Crustaceans***
Sharks and rays*
Corals (reef-forming)*
Conifers*
Dicots***
Amphibians*
Cycads*
2,390
633
10,966
1,520
972
1,026
1,500
5,593
2,872
1,091
845
607
1,781
6,576
307
IUCN Red List categories
Data Deficient
Non-threatened
Least Concern
Near Threatened
Threatened
Vulnerable
Endangered
Critically Endangered
Extinct in the Wild
Greater extinction risk
* Comprehensive
** Sampled
*** Selected
0 10 20 30 40 50 60 70 80 90 100
PERCENTAGE OF SPECIES IN EACH CATEGORY


91 of the 107
leading global crop types rely on
animal pollination
#IPBES7
ipbes
IPBES ASSESSMENT ON POLLINATORS, POLLINATION AND FOOD PRODUCTION


DIRECTIONAL TREND
50-year global trend
Across regions
Nature's contributions to people
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


Is the world on track to meet the global goals for nature and sustainability?
#GlobalAssessment
6 May
ipbes

Aichi Biodiversity Targets

Sustainable Development Goals

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		~		

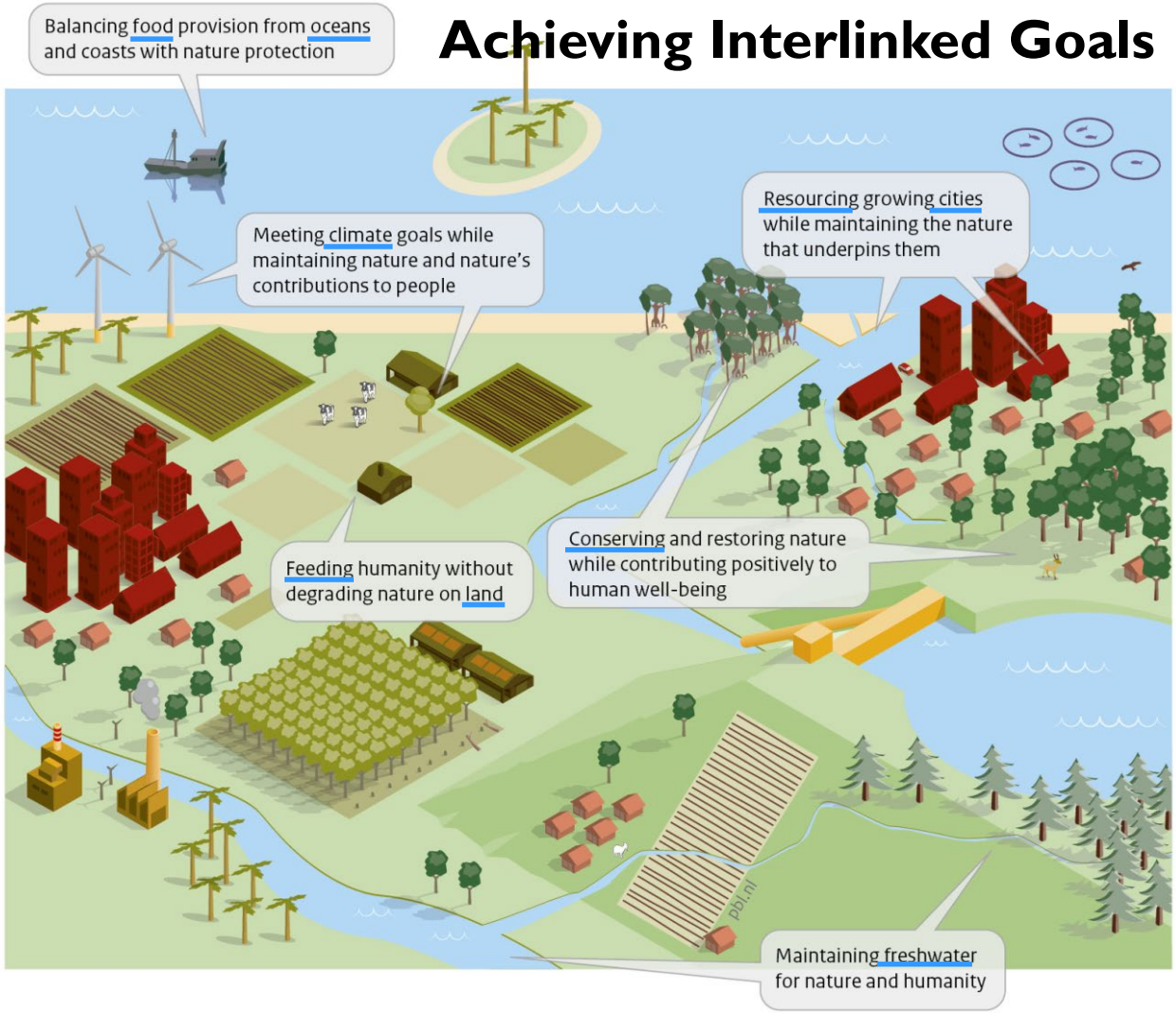
Selected Sustainable Development Goals	Recent status and trends in aspects of nature and nature's contributions to people that support progress towards target *			Uncertain relationship
	Poor/Declining support	Partial support	Unknown	
1 NO POVERTY — No poverty	↓ ↓			U U
2 ZERO HUNGER — Zero hunger	↓	→ → →		
3 GOOD HEALTH AND WELL-BEIN — Good health and well-being			? ?	U U
6 CLEAN WATER AND SANITATIO — Clean water and sanitation	↓ ↓ ↓	→		
11 SUSTAINABLE C AND COMMUNIT — 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

Methods

- Iterative expert input process
- Identify initial levers & LPs from literature review
- Parallel processes, with three rounds of peer review:
  - Nexus analysis of scenarios
  - Expert-led literature reviews
- Workshops to refine: lump, split, amend

Achieving Interlinked Goals



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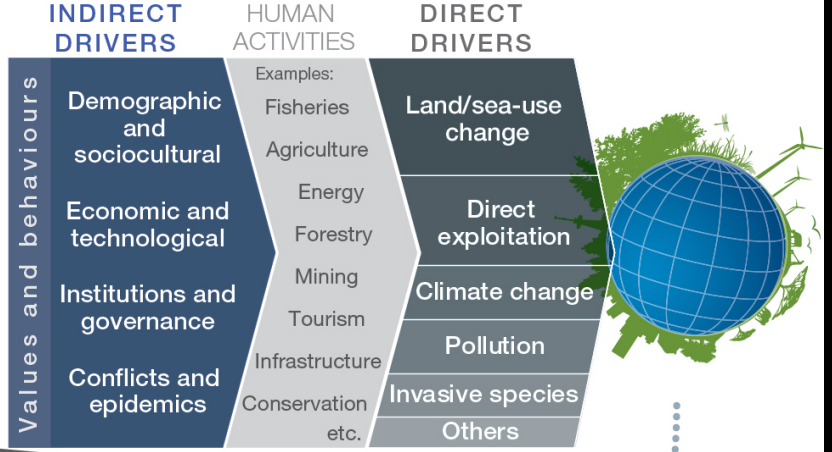
Source: PBL

Insights from Scenarios

- Conservation and sustainable use—key but insufficient
- Successful pathways addressed demand-side, institutions
- Consumption patterns are a fundamental driver … but they too are driven
- Behaviour change pervades all aspects of transformative change
- Inequalities and inclusiveness are key underlying problems
- Larger structural issues underpin all of the above factors
- Governance instruments and approaches are fundamental

System Change

Integrative, adaptive, informed and inclusive governance approaches including smart policy mixes, applied especially at leverage points



- Incentives and capacity building;
- Cross-sectoral cooperation
- Pre-emptive action
- Decision-making in the context of resilience and uncertainty
- Environmental law and implementation

LEVERAGE POINTS

- **Embrace diverse** visions of a good life
- **Reduce** total consumption and waste
- **Unleash** values and action
- **Reduce** inequalities
- **Practice** justice and inclusion in conservation
- **Internalize** externalities and telecouplings
- **Ensure** environmentally friendly technology, innovation and investment
- **Promote** education and knowledge generation and sharing

Iterative learning loop

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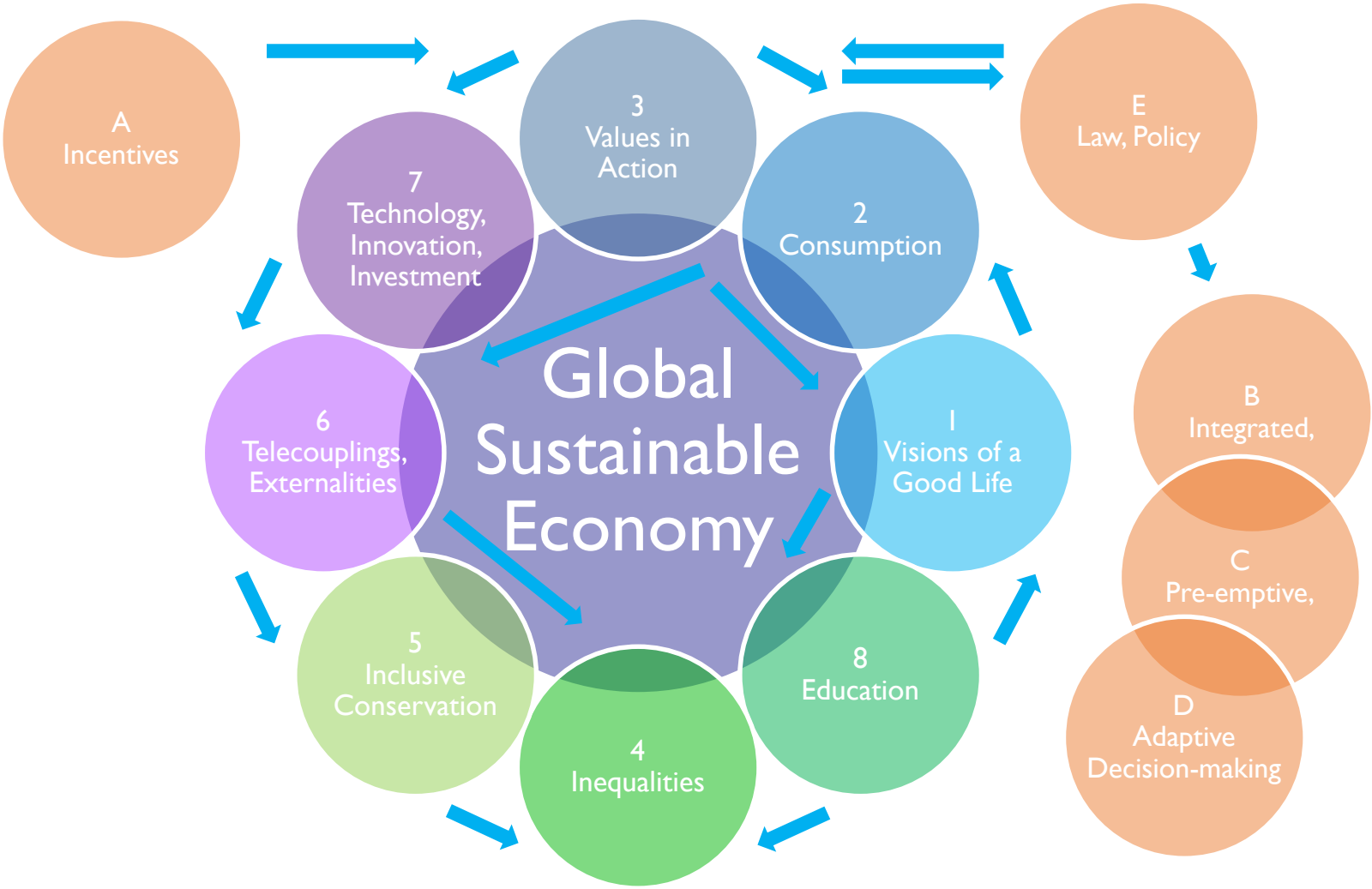
Putting it All Together

Shutterstock via IPBES


A
Incentives
3
Values in
Action
E
Law, Policy
7
Technology,
Innovation,
Investment
2
Consumption
Global
Sustainable
Economy
6
Telecouplings,
Externalities
1
Visions of a
Good Life
B
Integrated,
C
Pre-emptive,
5
Inclusive
Conservation
8
Education
D
Adaptive
Decision-making
4
Inequalities

Discussion

- No objective way to assess levers & leverage points
- Levers act broadly, on LPs and more
- Political will key, but can be built
- Existing initiatives could benefit from a levers/LPs lens

Four Key Gaps

- Values have played a limited role
- Ongoing need for incentive reform
- Dearth of attention to institutional structure & approach
- Behaviour-change programs impeded

Negotiations

Shizuka Hashimoto

Obstacles

Petition · A Citizen's Call for a

https://www.change.org/p/a-citizen-s-call-for-a-global-sustainable-economy

change.org Start a petition My petitions Browse Membership

A Citizen's Call for a Global Sustainable Economy
3K supporters

Petition details

A Citizen's Call for a Global Sustainable Economy

CHANS lab, Institute for Resources Environment and Sustainability, UBC started this petition to European Parliament and 5 others

In the jobs vs. environment debate, neither side is wrong: the problem is the forced choice, and the 20th-Century economy that spawned it.

A major new UN report (the IPBES Global Assessment) revealed that humanity now faces a crucial turning point in how we manage the economy amidst pressing environmental degradation including wildlife declines, global climate change and associated storms, fires, and droughts. Institutions of the

2,811 have signed. Let's get to 5,000!

Husein Moloo signed 3 hours ago

harry Cowan signed 10 hours ago

Thanks to your support this petition has a chance at winning! We only need 2,189 more signatures to reach the next goal - can you help?

Take the next step!

Citizen's Call

- Implement all components of the Global Sustainable Economy,
- Reining in the power of businesses, overcoming vested interests via
- Enhanced, strategic civic and consumer action
  - Informed by unbiased distillation of complex contentious issues
  - Unleashed by new supply-chain solutions

This is not the end, but a beginning

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Questions

- What kinds of systems need to be changed?
- How do we recognize transformative change?
- Must all changes be dramatic in transformative change?