

Making Peace with Nature

A scientific blueprint to tackle the climate,
biodiversity and pollution emergencies

UNEP's 'Synthesis Report'



Norwegian Ministry
of Climate and Environment

Commemorating 50 years of international environmental governance

A synthesis of findings from some 25 major global assessments, including IPCC, IPBES, GEO and IRP

Prepared by more than 50 leading experts from nearly 30 countries familiar with the major assessments

Based on the work of thousands of experts and the many governments involved in the assessments

The environmental challenges have grown in number and severity since the Stockholm Conference in 1972

A blueprint for different actors on tackling the climate, biodiversity and pollution emergencies



Making Peace with Nature

A scientific blueprint to tackle the climate, biodiversity and pollution emergencies

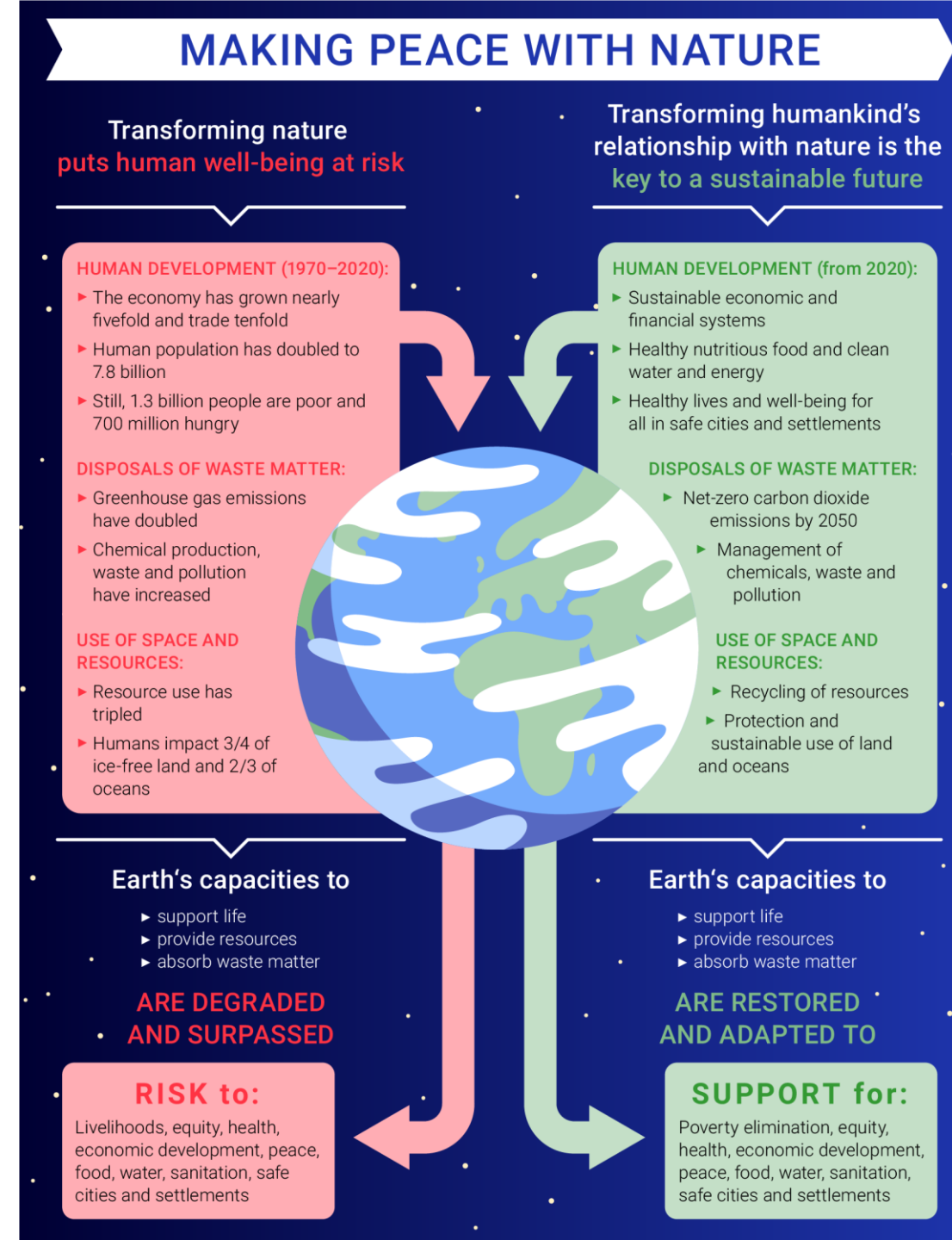
Transforming humankind's relationship with nature

Over the last 50 years:

- Trade has grown tenfold, the global economy has grown nearly fivefold and the world population has doubled
- Average prosperity has doubled, but about 1.3 billion people remain poor and some 700 million are hungry

The unequal and resource intensive development model degrades and surpasses Earth's finite capacity to sustain human well-being.

We must restore and adapt the Earth's capacity. The coming decade is crucial, and the challenge systemic.



Humans now have a major impact on the Earth

Of the combined biomass of mammals on Earth, human population now constitutes about a third and livestock nearly two thirds, while wild mammals now amount to less than 5 per cent



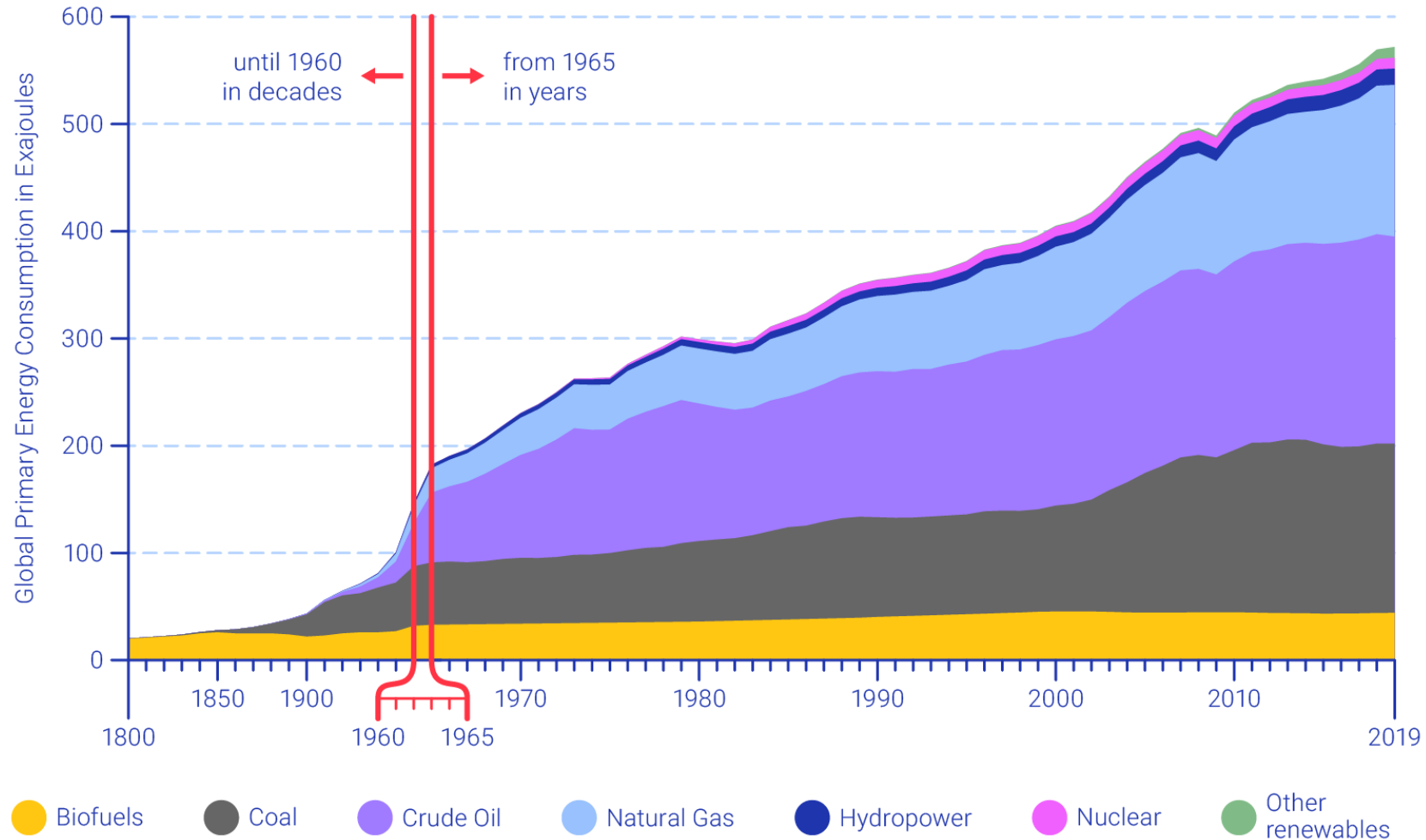
▲
Humans
0.06 Gigatons

▲
Domesticated animals
0.10 Gigatons

▲
Wild mammals
0.007 Gigatons

Extraction of natural resources and production of energy has tripled the past 50 years

2.5. Global Primary Energy Consumption by source

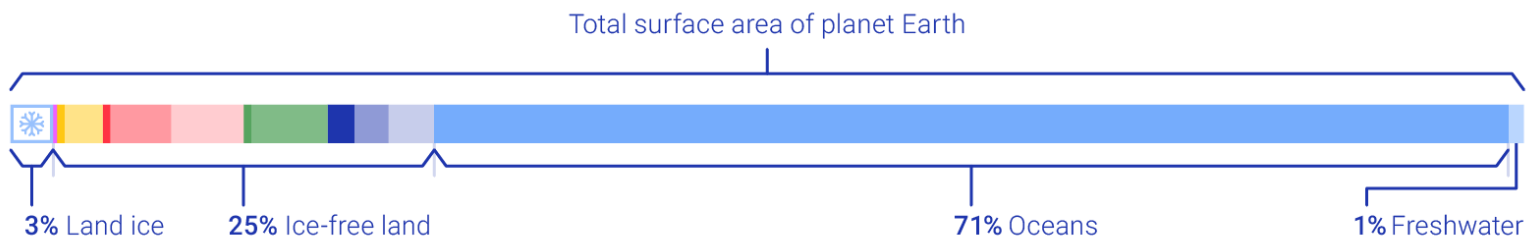
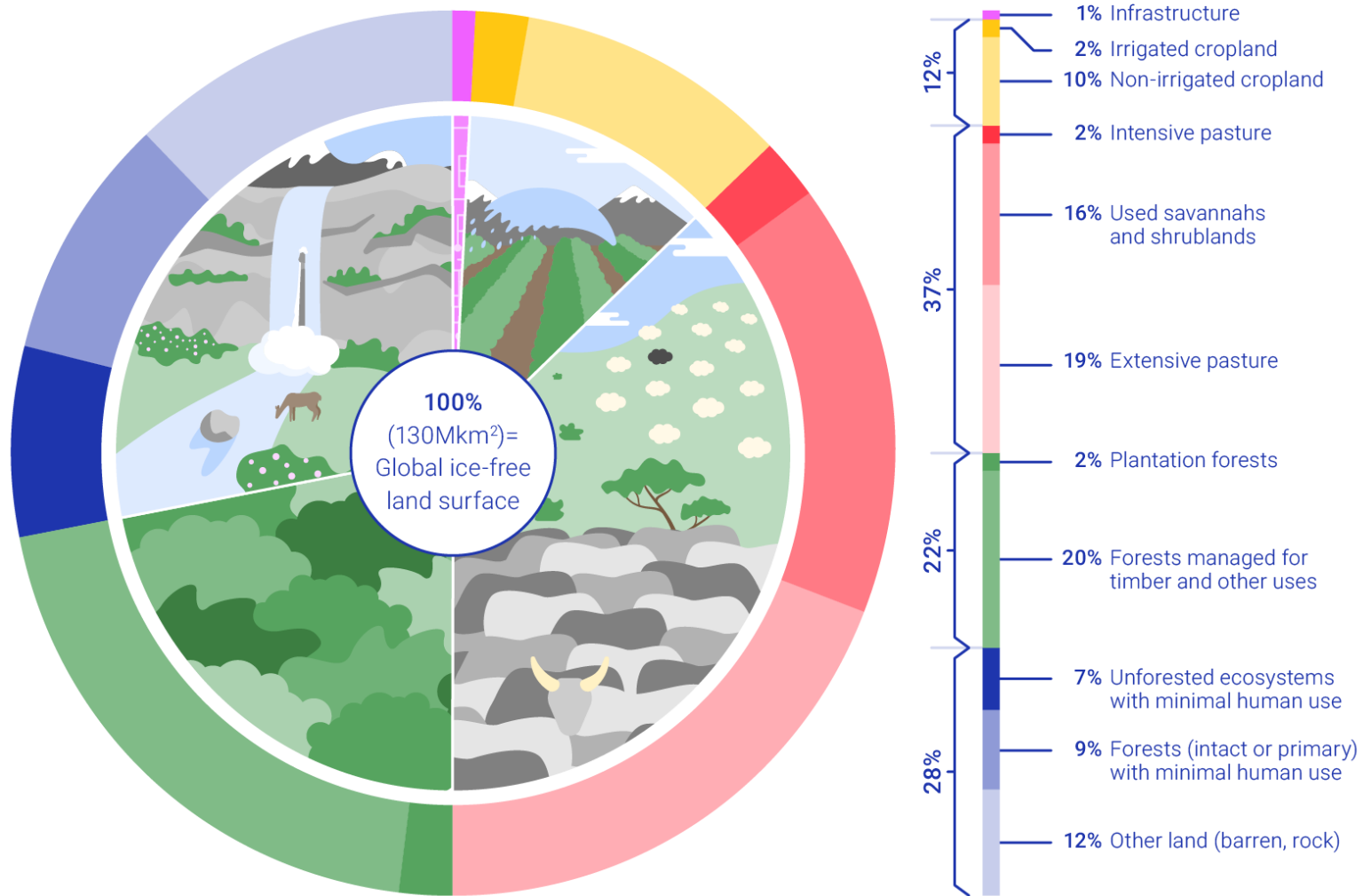


Humanity has a major impact on 3/4 of land and on 2/3 of oceans

1/4 of global warming results from activities related to land-use

1/4 land has been radically transformed

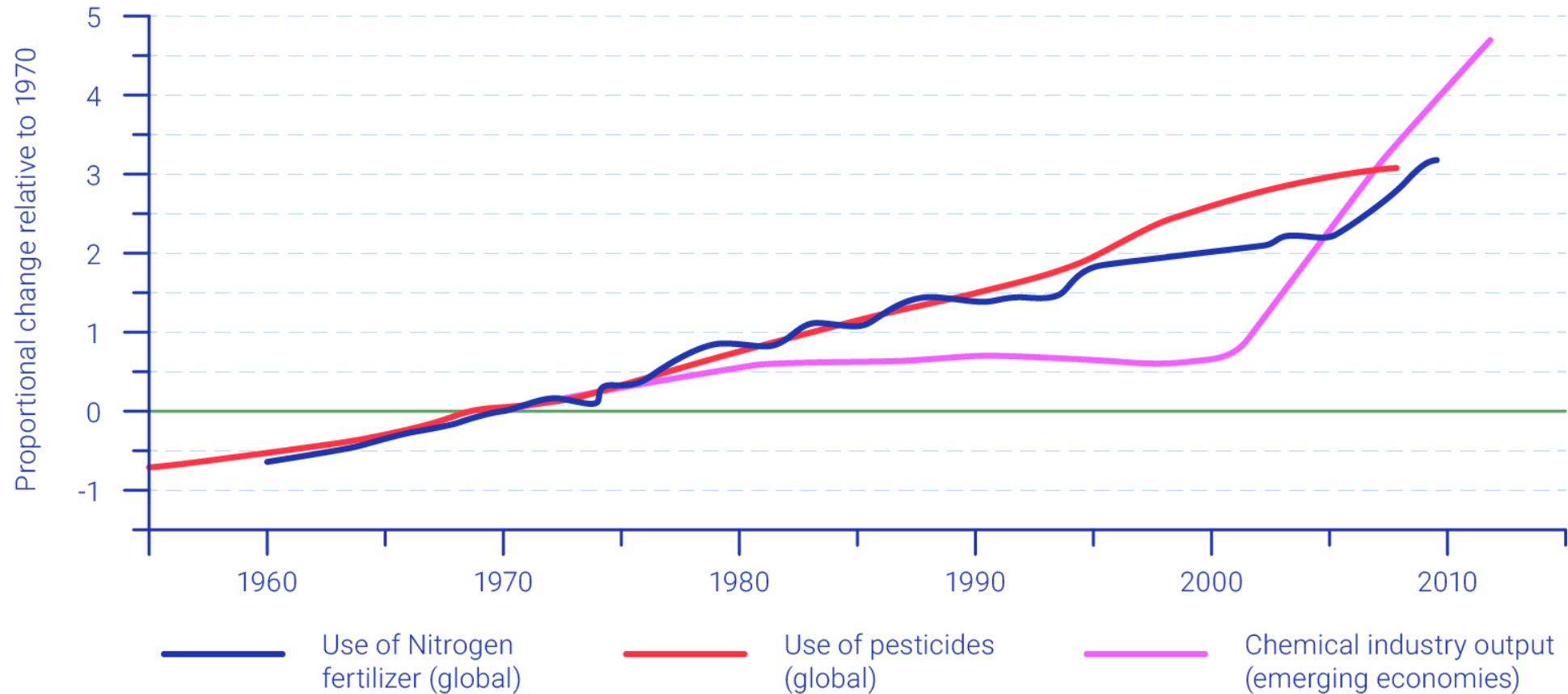
Remaining near-natural land is projected to be only 10 per cent by 2050



The production and release of chemicals is increasing fast

Some of these chemicals threaten human health and the environment

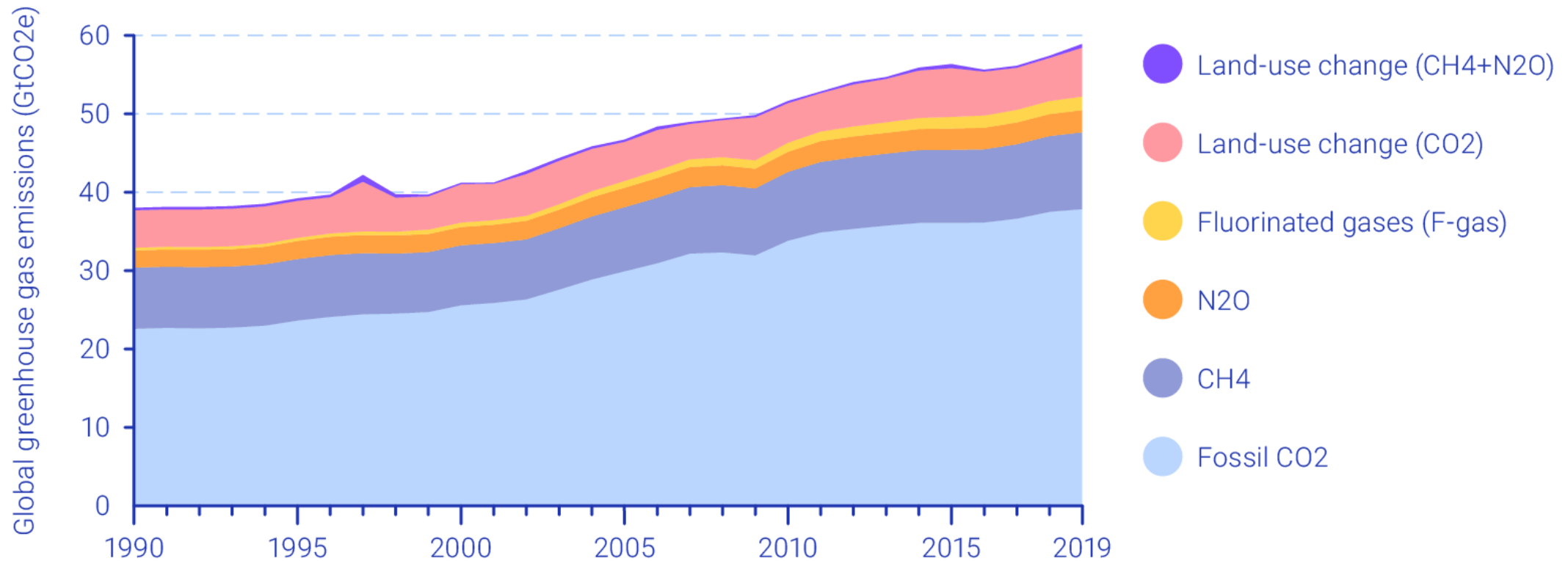
3.5. Chemical Intensification 1955 – 2015



Human Emissions of Greenhouse Gases Continue to Increase

The world is already more than 1°C warmer than a century ago, accelerating sea level rise, with more frequent and intense extreme events, threatening people and nature

2.8. Global greenhouse gas emissions from all sources

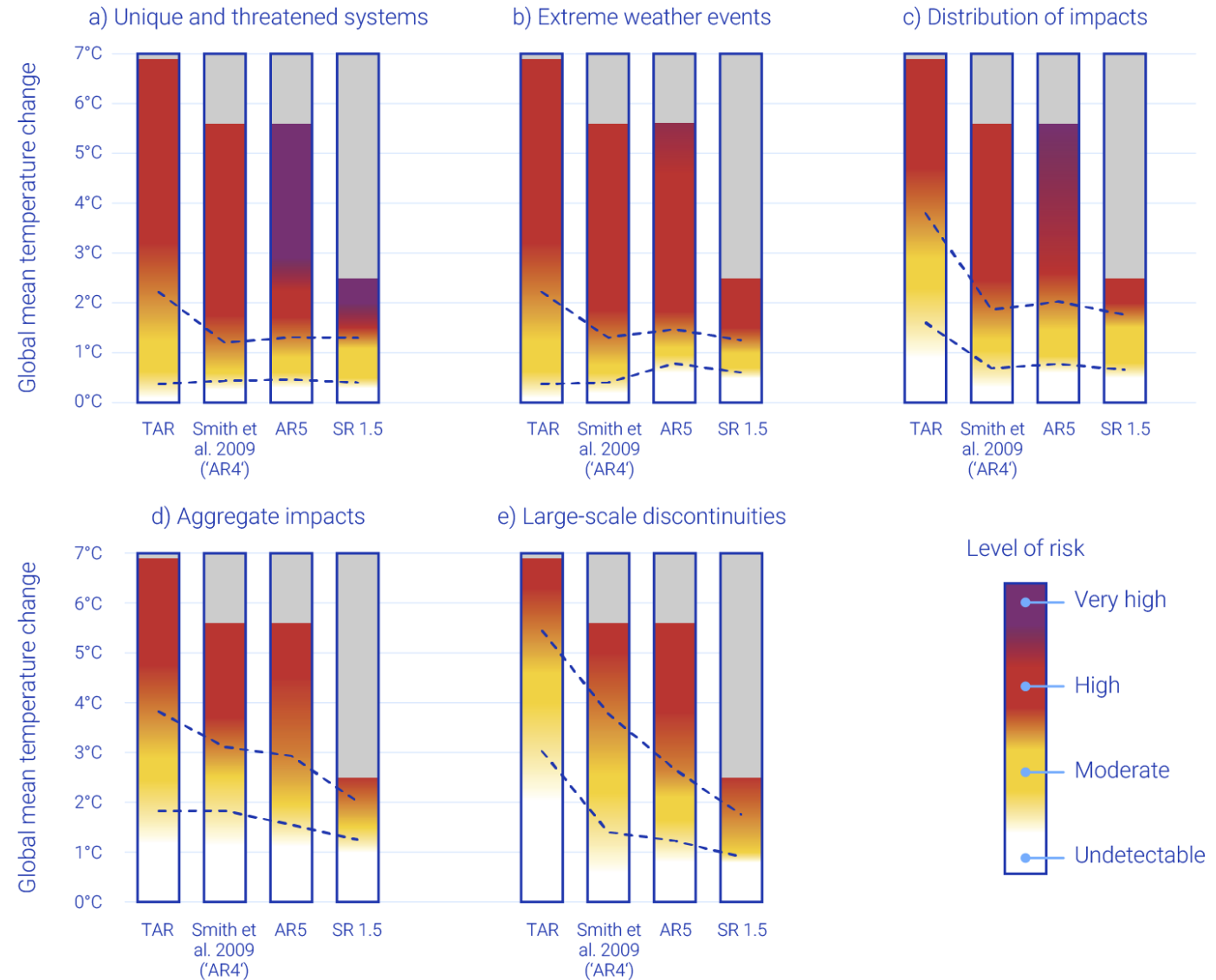


Risks associated with climate change

Risks of climate change are more severe than previously thought

And are occurring with smaller changes in temperature

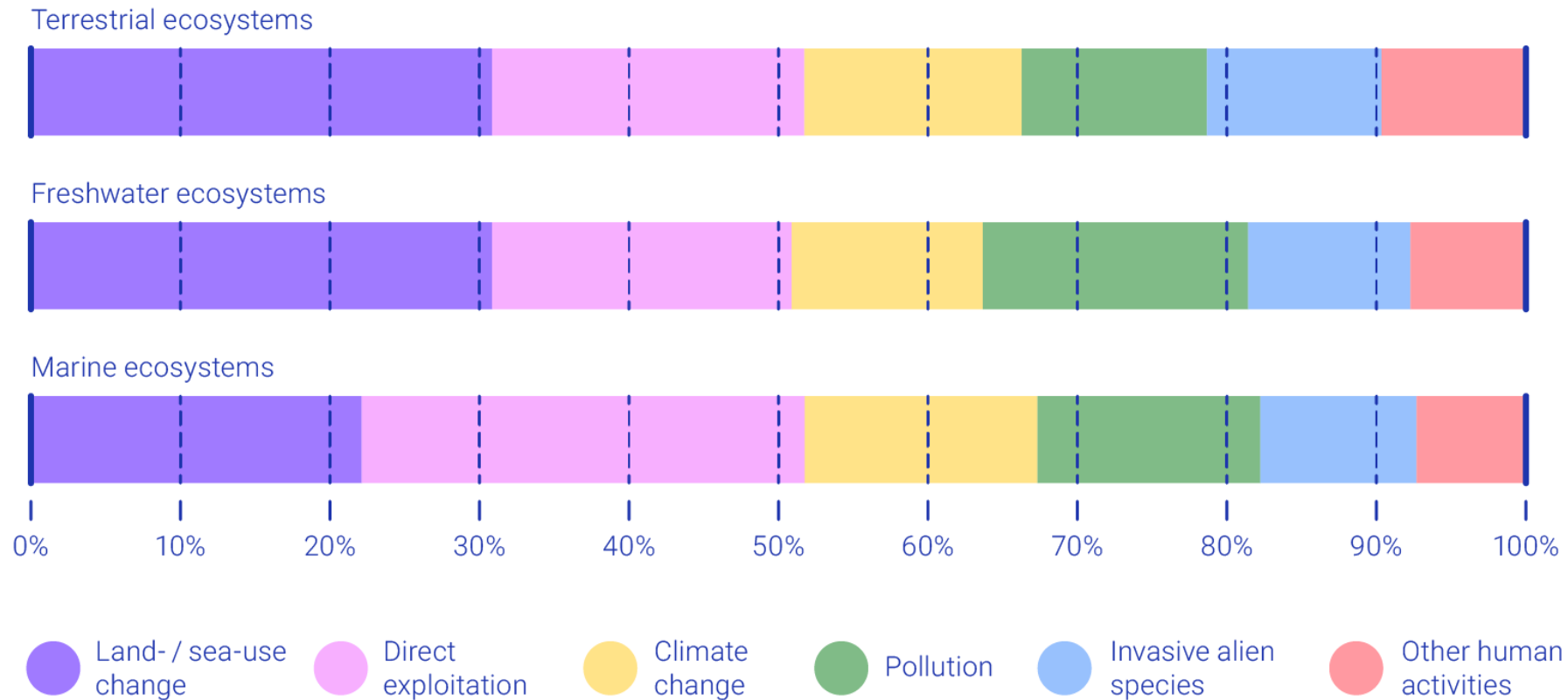
1.1. Comparison of risk thresholds across Intergovernmental Panel on Climate Change (IPCC) Assessments



Biodiversity continues to decline at an alarming and accelerating rate

1 million of the world's estimated 8 million plants and animals species are threatened with extinction - population sizes and abundance are dropping - ecosystems are being degraded - ecosystem services are eroding

3.1. Relative global impact of direct drivers on major ecosystems



3.2. Assessment of progress towards the Aichi Biodiversity Targets

Progress towards the Aichi Targets

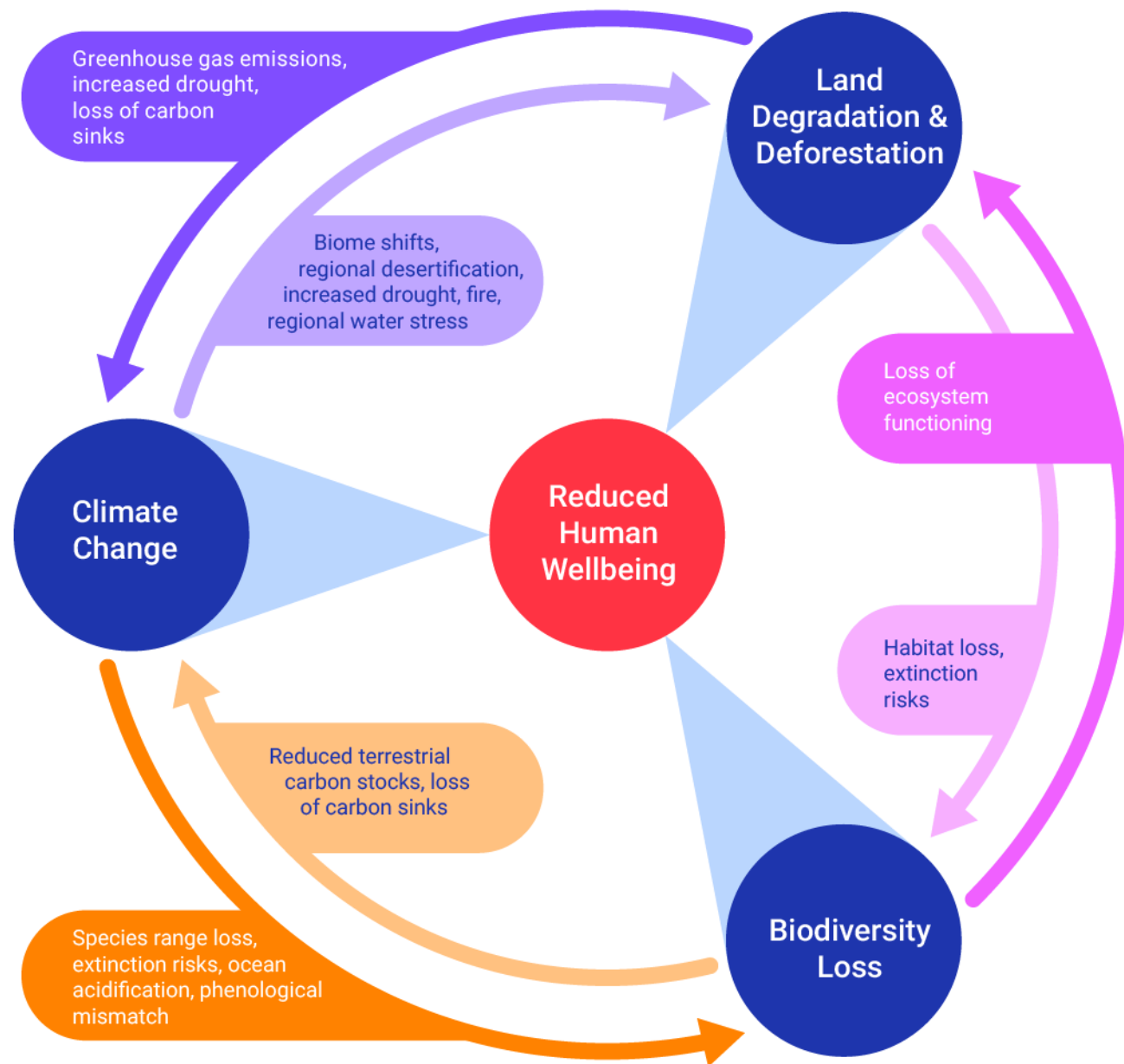
None of the Aichi Targets have been fully met



The environmental emergencies are intertwined

Earth's environmental emergencies and development challenges should be addressed together to achieve sustainability

International environmental agreements need to be aligned and become more mutually supportive



Environmental degradation threatens the achievement of the SDGs

In 2018, damages from climate-related natural disasters cost about \$155 billion

Worldwide, 3.2 billion people are adversely affected by land degradation

Pollution causes about 9 million premature deaths annually, primarily from indoor and outdoor air pollution

Environmental degradation threatens the achievement of the SDGs

Impeding poverty elimination, inequality reduction, economic development and peace

- ▶ Exacerbated multi-dimensional poverty
- ▶ Accentuated inequality, including gender inequality
- ▶ Lost income opportunities
- ▶ Increased risk of conflict over resources
- ▶ Increased risk of displacement and outmigration

Threatening human health

- ▶ Increased undernutrition, heat stress and air pollution-related diseases
- ▶ Exacerbated food- and water-borne infections and zoonotic diseases
- ▶ Reduced ability of nature to provide medicines and support physical and mental well-being

Hampering efforts to make cities and communities sustainable

- ▶ Increased vulnerability to natural disasters
- ▶ Stresses on urban infrastructure
- ▶ Rising air and water pollution
- ▶ Rising waste disposal problems

Weakening food and water security

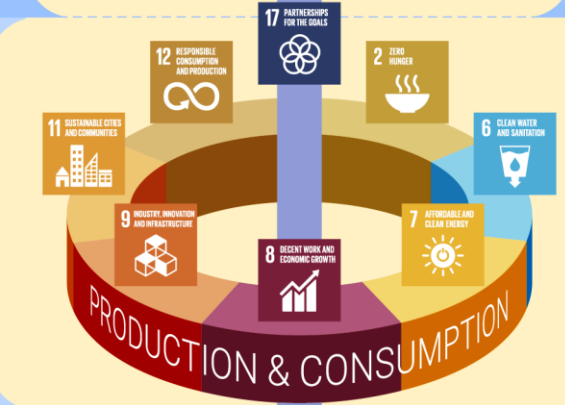
- ▶ Increased food-system vulnerability
- ▶ Reduced agricultural productivity
- ▶ Reduced nutritional value of crops
- ▶ Lower catch in fisheries
- ▶ Increased water scarcity

Changing climate

- ▶ Higher temperatures
- ▶ More extreme weather events, e.g. flooding, droughts, storm surges and heatwaves
- ▶ Rising sea level
- ▶ Changing precipitation patterns
- ▶ Ocean acidification

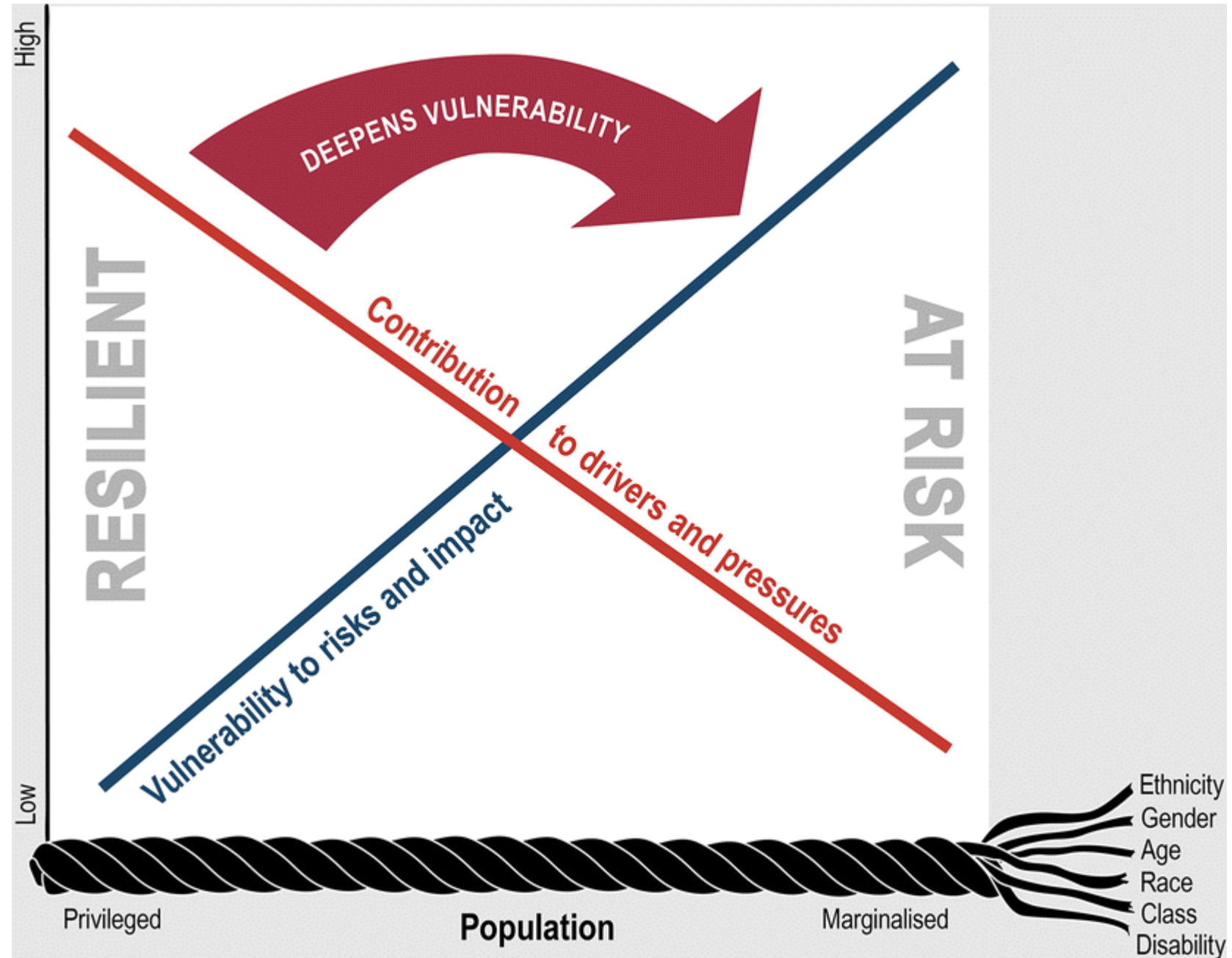
Biodiversity loss and ecosystem degradation

- ▶ Loss of species richness and accelerated species extinction
- ▶ Loss of genetic resources in domestic and wild species
- ▶ Loss of ecosystem functions, such as pollination, seed dispersal, soil formation and biological productivity



Equity and Justice

- Human wellbeing depends on nature, and nature's benefits and risks are inequitably distributed.
- Need to promote a just and equitable transformation.



Source: building on IPCC 2014; GEO-6 Technical Summary 2021; Gupta, *et al.* 2020

Transforming humankind's relation with nature is the key to a sustainable future

Human knowledge, ingenuity, technology and cooperation can transform societies and economies and secure a sustainable future

This transformation will involve a fundamental change in the technological, economic and social organization of society, including world-views, norms, values and governance

Major shifts in investment and regulation are key to just and informed transformations that overcome inertia and opposition from vested interests

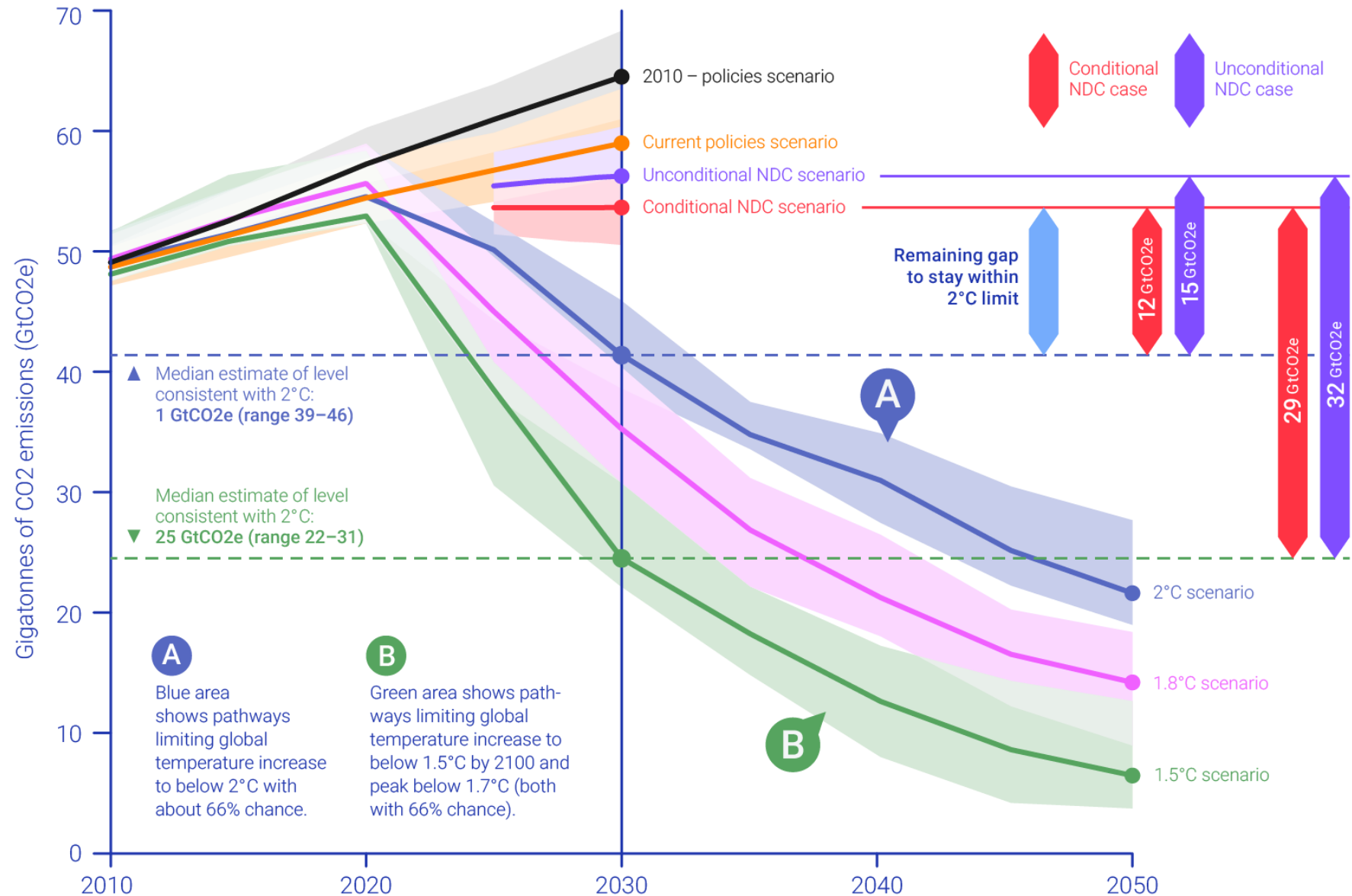
The COVID-19 crisis provides an impetus to accelerate transformative change

Earth's environmental emergencies are all interconnected, and should be addressed together to achieve sustainability

Closing the Greenhouse Gas Emissions Gap

CO₂ emissions need to be:

- reduced by 45% by 2030 and
- net zero by 2050
- to limit global warming to 1.5°C – and*
- decline by 25% by 2030 and
- reach net zero by around 2070
- to limit warming to 2°C*

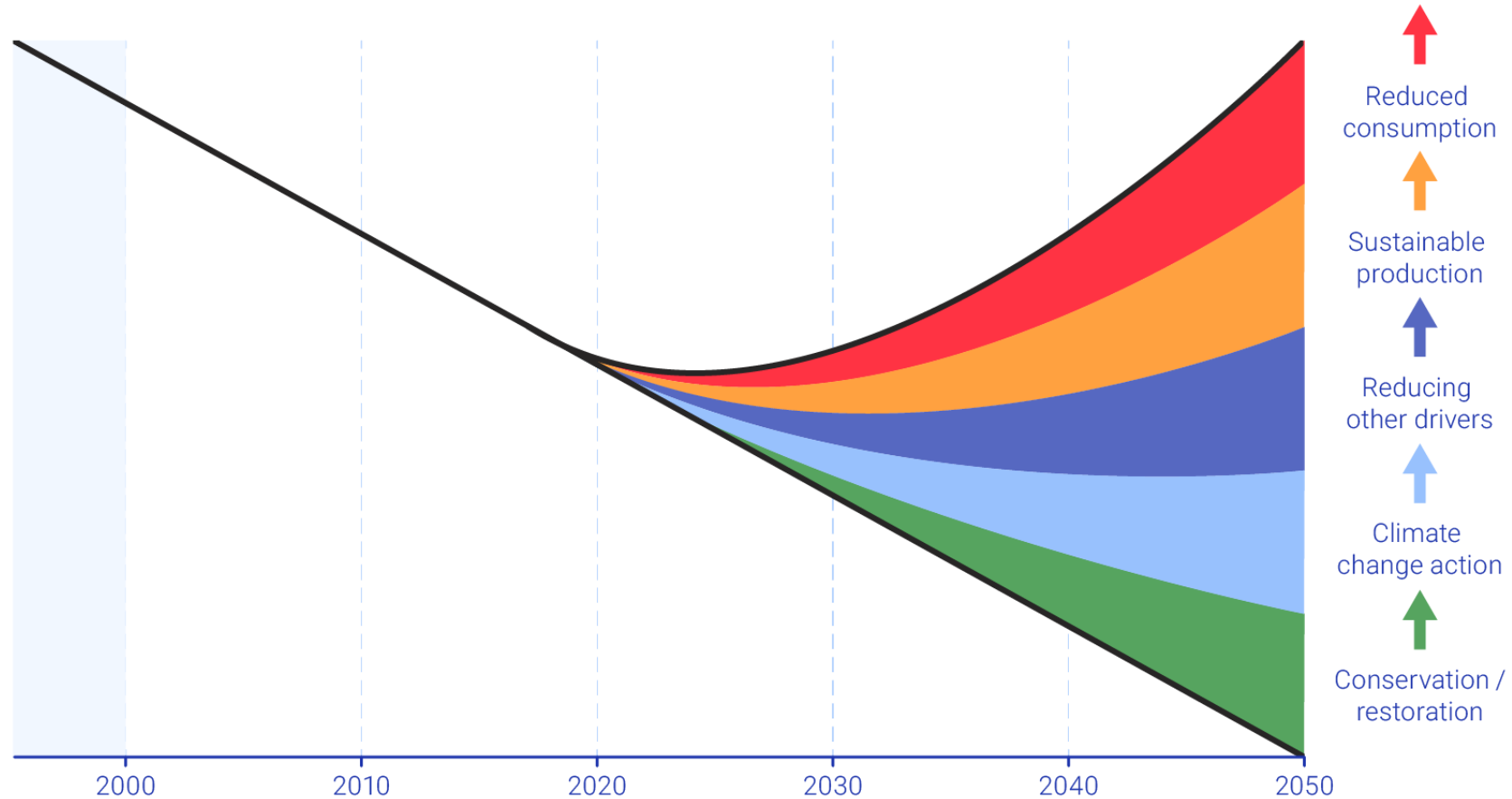


Aligned actions for protecting and restoring life on Earth

6.3. Aligned actions for protecting and restoring life on Earth

The loss of biodiversity can only be halted and reversed by providing space dedicated for nature while also addressing drivers such as:

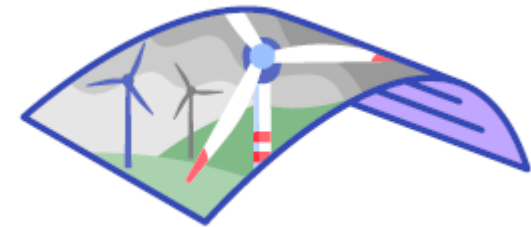
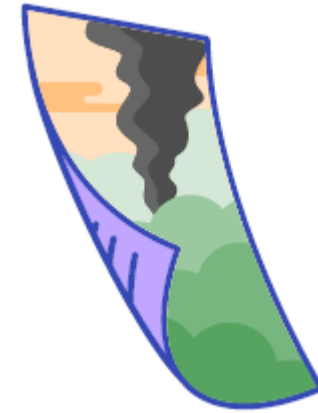
- changing land and sea use,
- over-exploitation,
- climate change,
- pollution and
- invasive alien species



Transformed economic, financial and productive systems can lead and power the shift to sustainability

Society needs to include natural capital in decision-making, eliminate environmentally harmful subsidies and invest in the transition to a sustainable future

Biodiversity, climate and other environmental finance could be ramped up by redirecting some of the direct and indirect subsidies to fossil fuels, agriculture, fisheries and transport

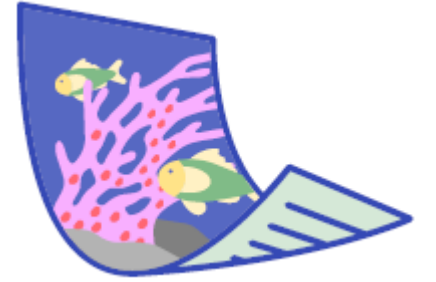


The food, water and energy systems can and should be transformed to meet growing human needs in an equitable, resilient and environmentally friendly manner

A primarily plant-based diet has the potential to reduce current GHG emissions by 2-20 per cent.

Investments in energy efficiency that can deliver cost savings of US\$2.9-3.7 trillion per year by 2030

Keeping the planet healthy is key to providing health and well-being for all



Zoonotic Diseases

- About 75% of all new infectious diseases have their origin in animals
- 700,000 potential viruses in animals and birds could pose a threat to human health
- The risks of future zoonotic pandemics could be reduced by managing human activities and applying a holistic one-health approach



Role of actors

A: Governments at all levels hold a leading role

B: Intergovernmental Organizations facilitate joint efforts

G: Scientific and Educational Organization develops knowledge and understanding

1. Address Earth's environmental emergencies and human well-being together

2. Transform economic and financial systems so they lead and power the shift toward sustainability

3. Transform food, water and energy systems to meet growing human needs in an equitable, resilient and environmentally friendly manner

C: Financial Organizations direct investments

F: Individuals, households, civil society and youth groups, and indigenous peoples and local communities) put theory into practice

D: Private sector innovates and implements

E: Non-Governmental Organizations (NGOs) conceive ideas and raise awareness

#PeacewithNature

Information, resources and contacts:
<https://www.unep.org/resources/making-peace-nature>

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Norwegian Ministry
of Climate and Environment

