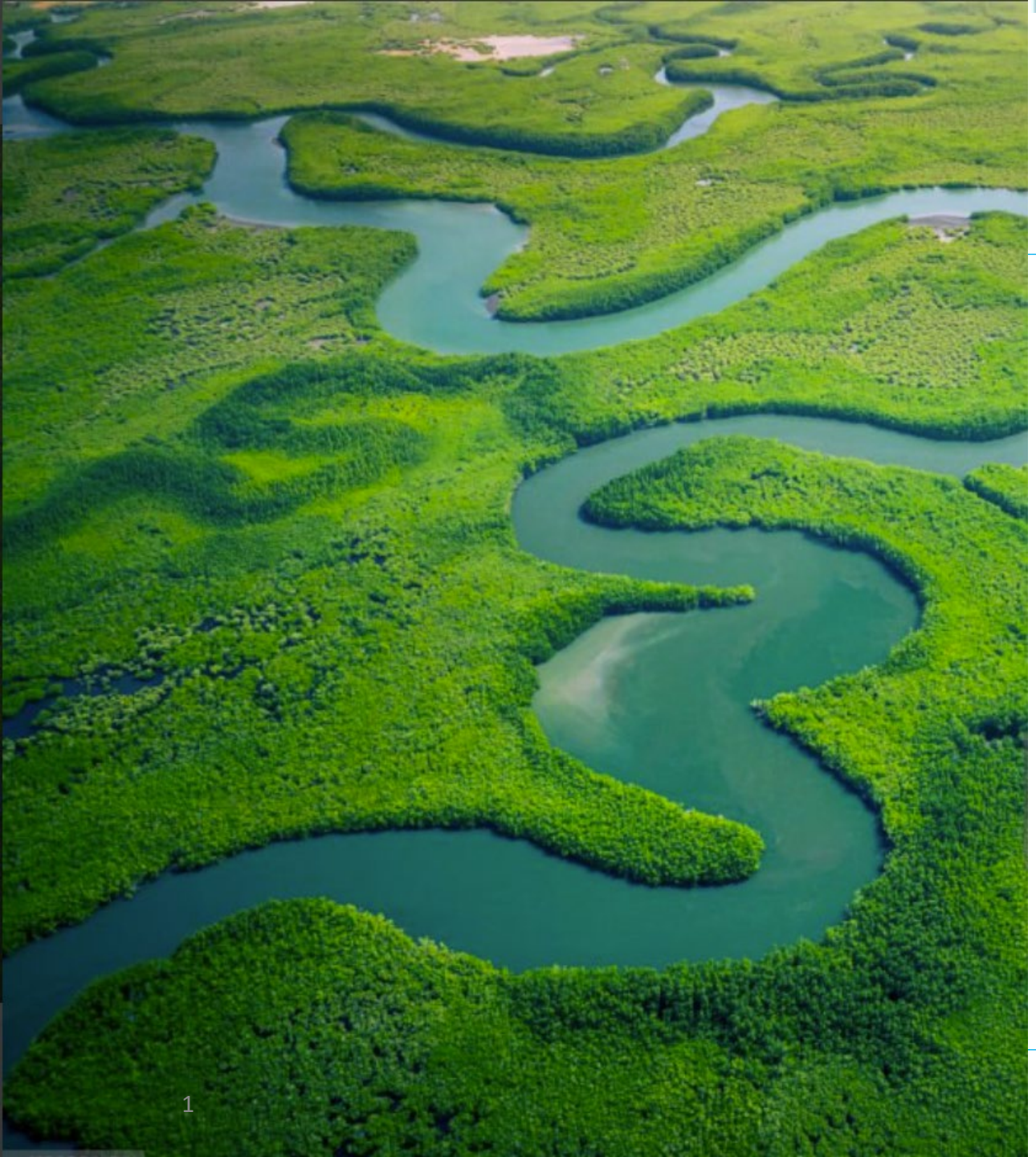

Briefing on the Global Resources Outlook 2024 report

Committee of the Permanent Representatives Subcommittee meeting

Nairobi, 4 December 2023

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Global Resources Outlook 2024

Bend the curve on resource use

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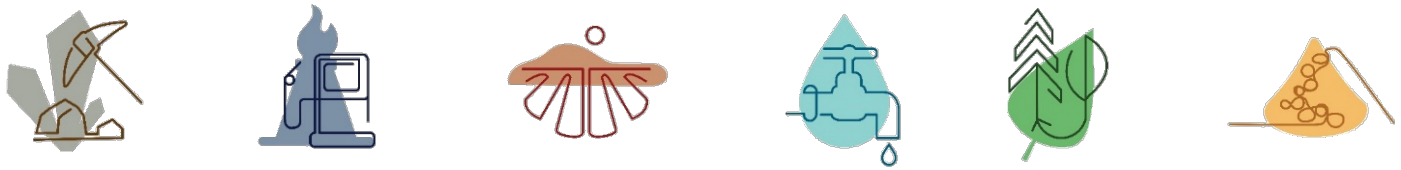
Who is the IRP?

The International Resource Panel – IRP was launched in 2007 by the United Nations Environment Programme to establish a science-policy interface on the sustainable use of natural resources and in particular their environmental impacts over the full life cycle

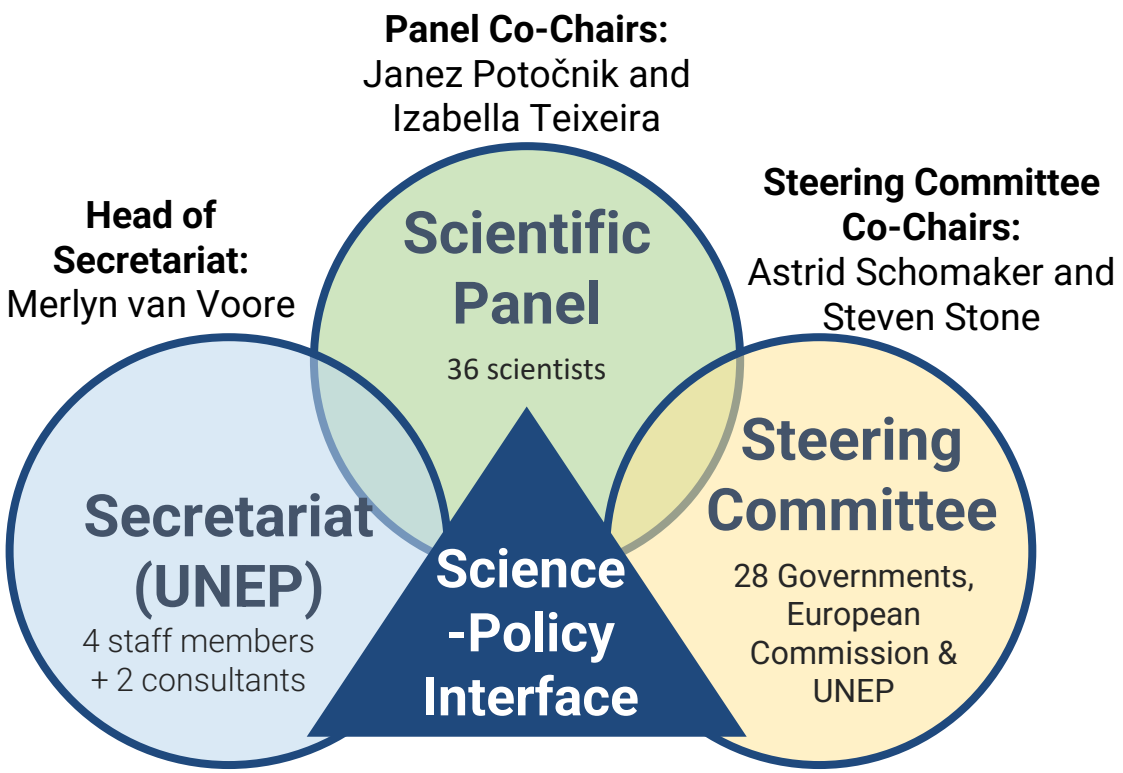
Climate Change

Biodiversity

Natural Resources



IRP set up and partners



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Relationship with UNEA & UNEP MTS

- Will be presented to UNEA-6 in response to the 2019 UNEA Resolution 4/1on *Innovative pathways to achieve sustainable consumption and production*
- Relevant also to UNEA Resolution 5/11 on *Enhancing circular economy as a contribution to achieving sustainable consumption and production*
- And UNEA Resolution 5/9 on *Sustainable and resilient infrastructure*
- The Global Resources Outlook 2024 contributes to the UNEP MTS by sharing evidence-based policy-relevant options to inform and drive financial and economic shifts towards sustainable consumption and production patterns.

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Global Resources Outlook 2024

Presentation of Key Messages

Presenter: Hans Bruyninckx

IRP Panel Member & Lead Author GRO24
Professor of Environmental Governance, University of Antwerp
Adjunct Senior Research Fellow, Institute for Environment and Sustainability, National University of Singapore
Former Director European Environment Agency

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What do we mean we say ‘resources’

Biomass: crops for food, energy and bio- based materials, as well as wood for energy and industrial uses

Fossil fuels: covering coal, gas and oil, among other

Metals: such as iron, aluminum and cooper, among other

Non-metallic minerals: sand, gravel, limestone and minerals used for industrial applications

Land

Water

Material Resources (Biomass, Fossil fuels, metals and non-metallic minerals)

Natural Resources (Material Resources + land and water)

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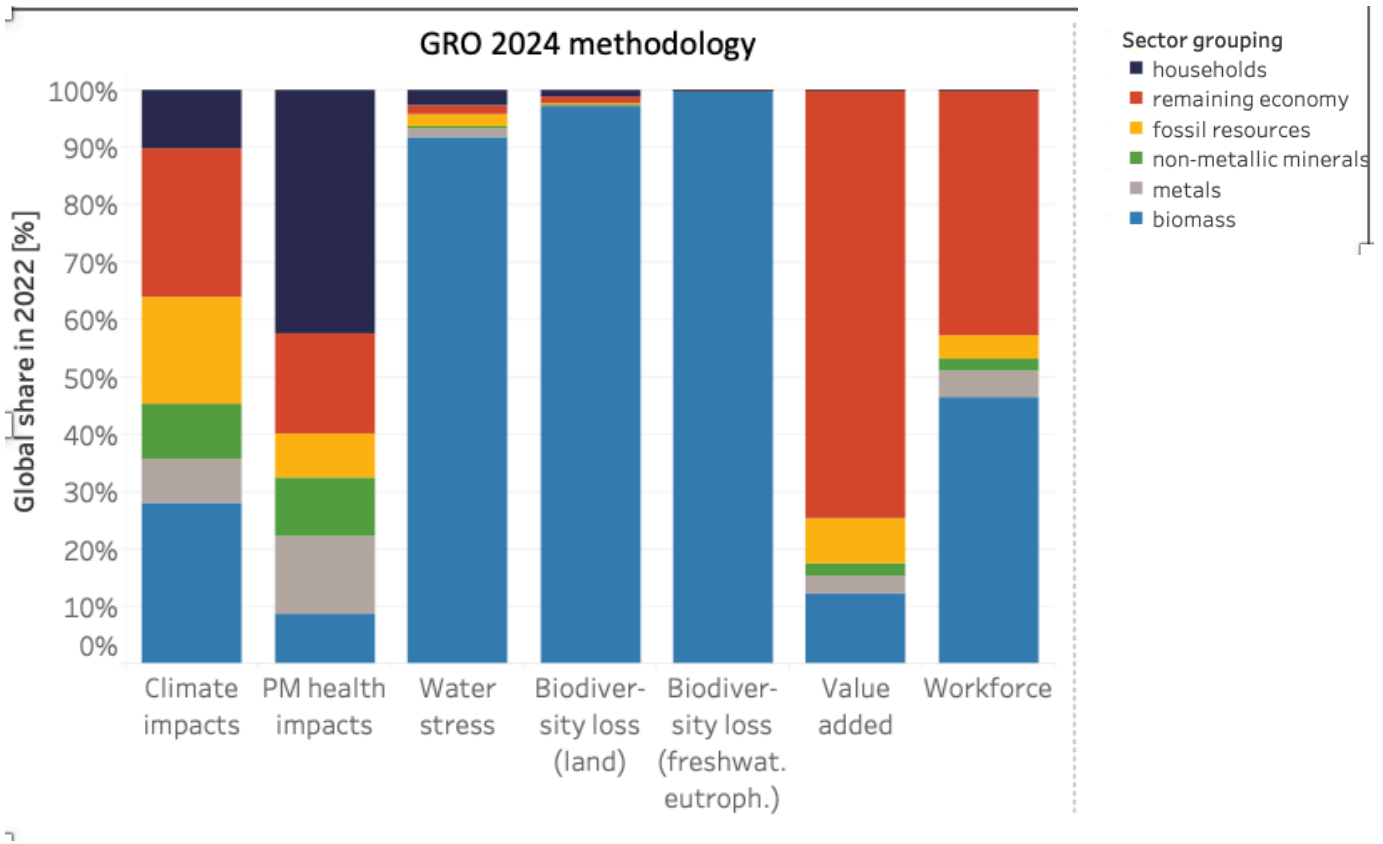
1. Increasing resources use is the main driver for the triple planetary crises.

Extraction & processing of material resources accounts for:

- over 90% of impacts on land-use related biodiversity loss and water stress
- over 55% of greenhouse gas emissions
- up to 40% of particulate matter related pollution.



2. Material use has increased more than three times over the last fifty years. It continues to grow on average over 2.3% per year.

Expected to increase, including for meeting the SDGs for all and to build-up essential infrastructure.

Following historical trends, resource extraction could increase almost 60% by 2060 as compared to 2020 levels.

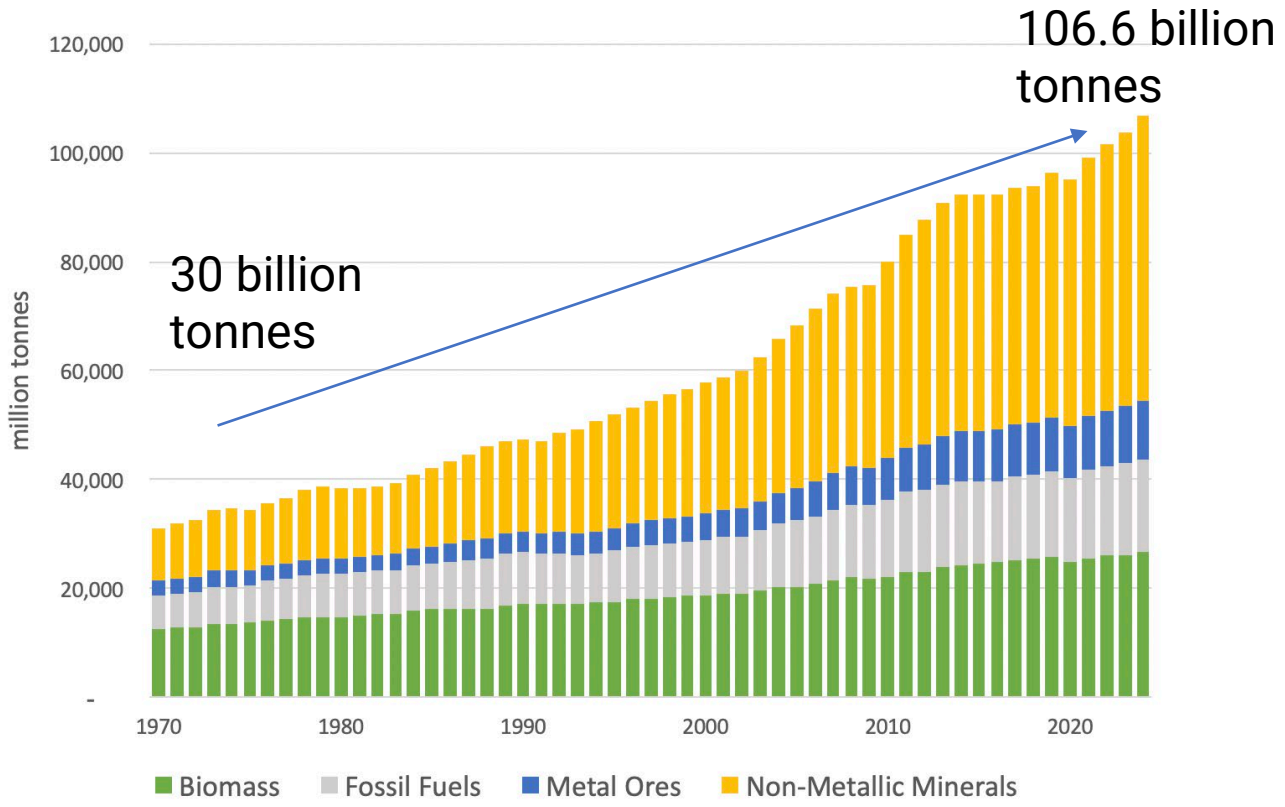


Figure 2: Global material extraction, four main material categories, 1970 – 2024, million tons. *(Source: Global Material Flows Database UNEP 2023)*

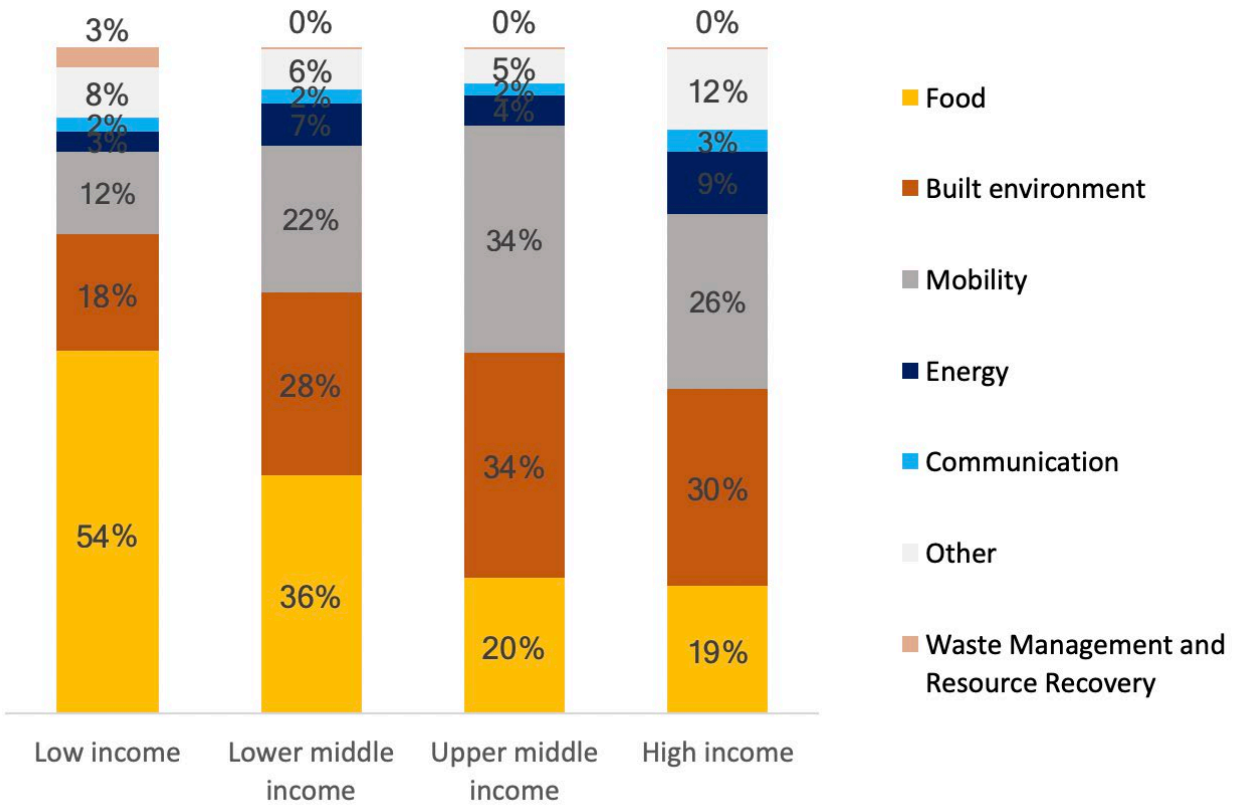
The material needs for the built environment, mobility, energy and food show stark differences between country income groups.

Built environment and mobility (construction, transport sector and its infrastructure): 59 billion tonnes

Food: 23.6 billion tonnes

Energy (electricity, power, heat): 6.1 billion tonnes

Together = 90% of total global material demand, **but differ in importance by income group**

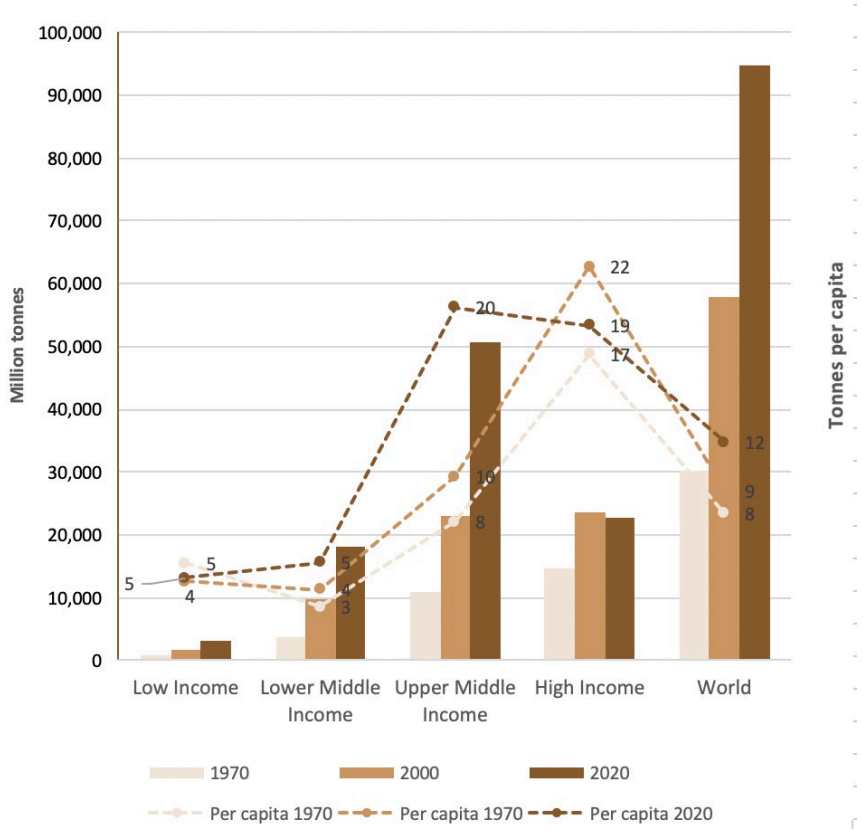


3. High income countries use six times more materials per capita and are responsible for ten times more climate impacts per capita than low- income countries.

Inequality in material use must be addressed as a core element of any approach to enhance sustainable production and consumption of resources globally.

Since 2000:

- High-income: Highest material footprint of all groups, relatively constant. Climate impact per capita = 10 x low-income group.
- Middle-income: material footprint doubled, approaching high-income levels. Climate impact per capita = roughly 50% of high-income group; 6 x low-income group.
- Low-income: Remain comparatively low, and mostly unchanged.



Total and per capita domestic material consumption (DMC) by income groups

4. Climate and biodiversity impacts from material extraction and processing exceed targets based on staying within 1.5 degrees and avoiding biodiversity loss.

Integrating resource use in the *implementation* of multilateral environmental agreements is necessary to meet agreed climate (UNFCCC), biodiversity (CBD) and land degradation neutrality (UNCCD) outcomes.

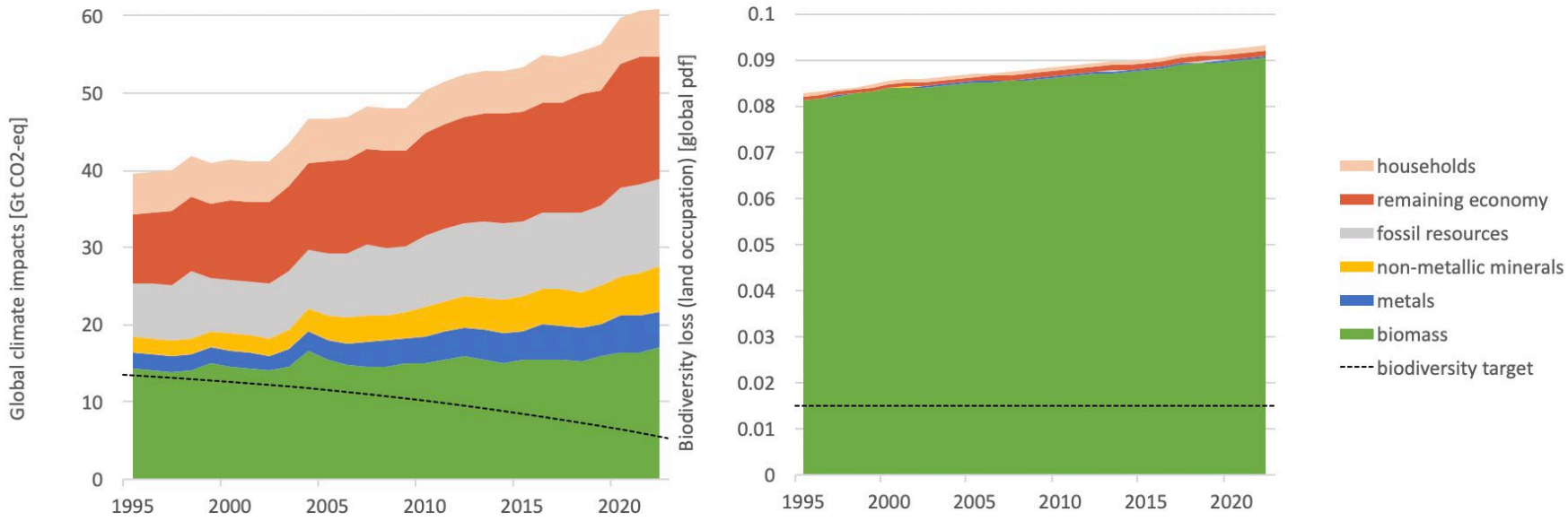
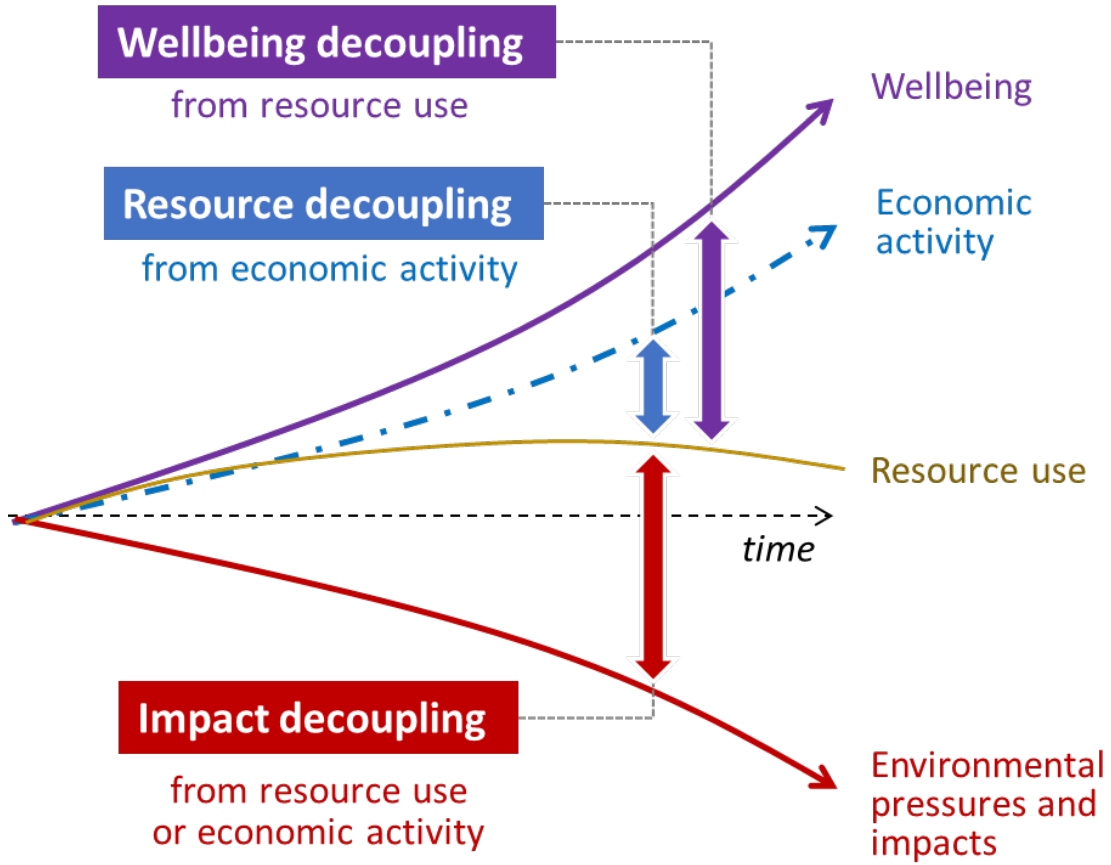


Figure 3.5: Time series of climate change (left) and land-related biodiversity loss (right) split by material resource group (including cultivation/extraction and processing) and downstream use (remaining economy and households). The black striped lines show the targets.

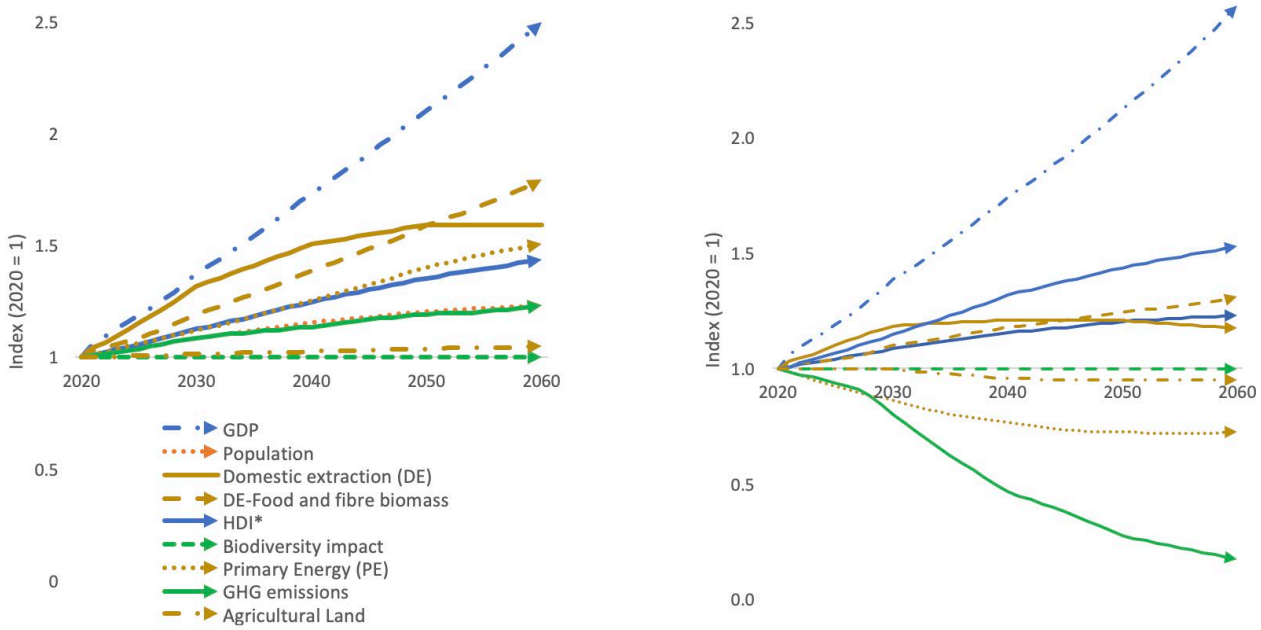
5. Delivering on the SDGs for all requires resources use. But the extent of and the related environmental impacts of that use can decrease by decoupling - providing for human needs while using fewer natural resources.



6. Compared to current trends, it is possible to reduce resource use while growing the economy

Sustainability Transition scenario, compared to outcomes if *Historical Trends* are followed:

- Economy 3% larger
- Higher HDI outcomes for all income groups
- Reduced growth in resource use by 30%
- GHG emissions -83%
- Energy demand -27%
- Area of agricultural land -5%



Historical Trends **scenario (left) vs.** ***Sustainability Transition*** **scenario (right)**

7. Bold policy action is critical to phase out unsustainable actions, speed up innovative ways of meeting human needs and promote the necessary transitions

CRITICAL ASPECTS FOR TRANSITIONS	**Institutionalizing resource governance** and defining **resource use paths**	**Directing finance** towards sustainable resource use	Making **trade** an **engine** of **sustainable resource use**	**Mainstreaming sustainable consumption** options	**Creating circular, resource-efficient** and **low impact solutions** and **business models**
RECOMMENDATIONS FOR ACTION	• Global and national institutionalization of natural resource use within global sustainability agendas and action on environmental agreements • Definition of global and national resource use paths	• Internalizing the environmental and social costs of resource extraction • Redirecting, repurposing and reforming public subsidies for sustainable resource • Channelling private finance towards sustainable resource use • Incorporating resource-related risk into Public and Central Bank mandates	• Trade governance for fairness and sustainable resource use • Enabling local resource value retention in producer countries	• Developing action plans to improve access to sustainable goods and services • Regulating marketing practices leading to overconsumption, and raising awareness	• Setting up monitoring systems to identify priorities and develop ambitious circular economy action plans • Developing and reinforcing regulation to boost circular economy business models • Building circular economy capacity and coalitions

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8. The prevailing approach of focusing almost exclusively on supply side (production) measures must be supplemented with a stronger focus on demand side (consumption) measures.

Provisioning system	Food	Built environment	Mobility	Energy
Recommendations	• Reducing the demand of the most impactful food commodities • Reducing food loss and food waste • Protecting and restoring productive land while meeting demand for nutrition	• Assuring sustainability of the new building stock • Retrofitting the existing building stock • More intensive use of buildings	• Cities moving towards active mobility and public transportation • Reducing carbon-intensive frequent traveling modalities • Decreasing emissions intensity of transport modalities	• Decarbonizing electricity supply through the scaling up of low-resource renewable energies and increased energy efficiency
Outcomes from policies modelled in Scenarios	Can decrease the land needed for food by 5% compared to 2020 levels while more equitably ensuring adequate nutrition for all	Can decrease building material stocks by 25% by 2060, leading to a 30% decrease in energy demand, and 30% decrease in GHG emissions compared to current trends.	Can reduce related material stock requirements (-50%), energy demands (-50%) and GHG emissions (-60%) by 2060 compared to current trends.	Can drive a sharp decrease in energy demand, with reductions of climate impacts by more than 80 per cent.

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9. The scientific community is united on the urgency for action and evidence-based decisions that protect the interests and wellbeing of all

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Thank you

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