



## Global Resources Outlook 2024

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# Bend the trend: Pathways to a liveable planet as resource use spikes

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Brussel, 21 October, 2024

# The International Resource Panel: more than just ‘the other panel’!

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**



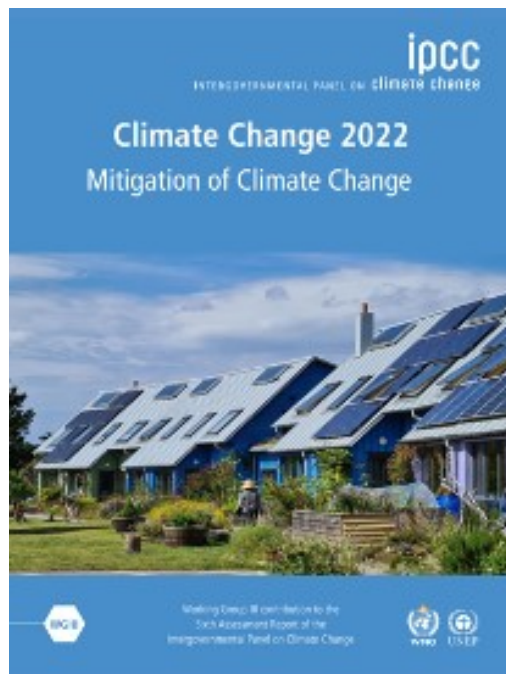
**Natural Resources**



# Resources - The Missing Link

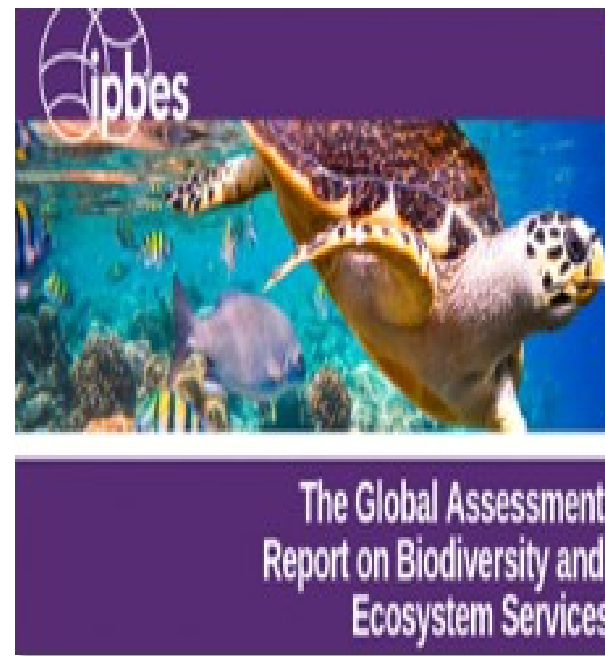
## IPCC

Climate Change



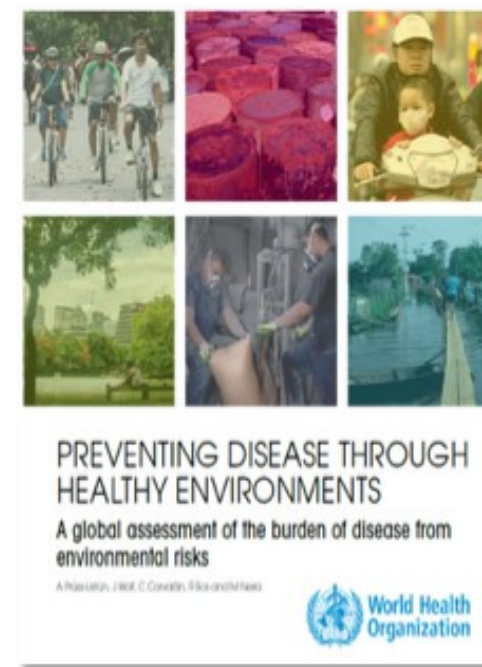
## IPBES

Biodiversity and Ecosystem Services



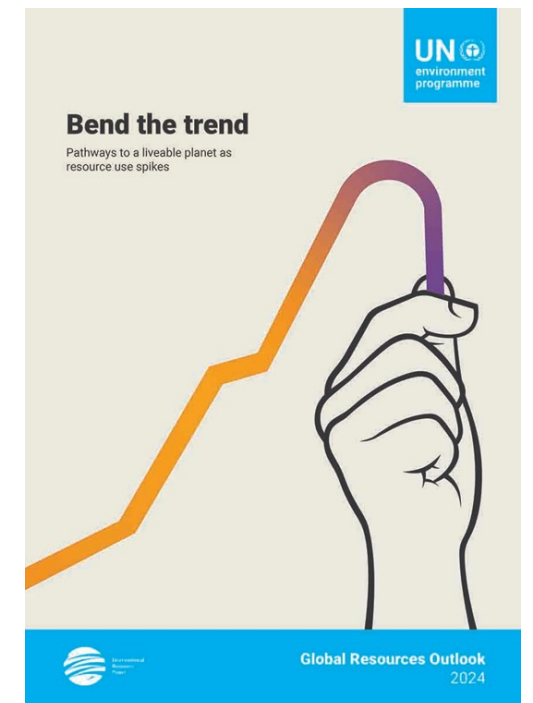
## WHO

Environment and Health

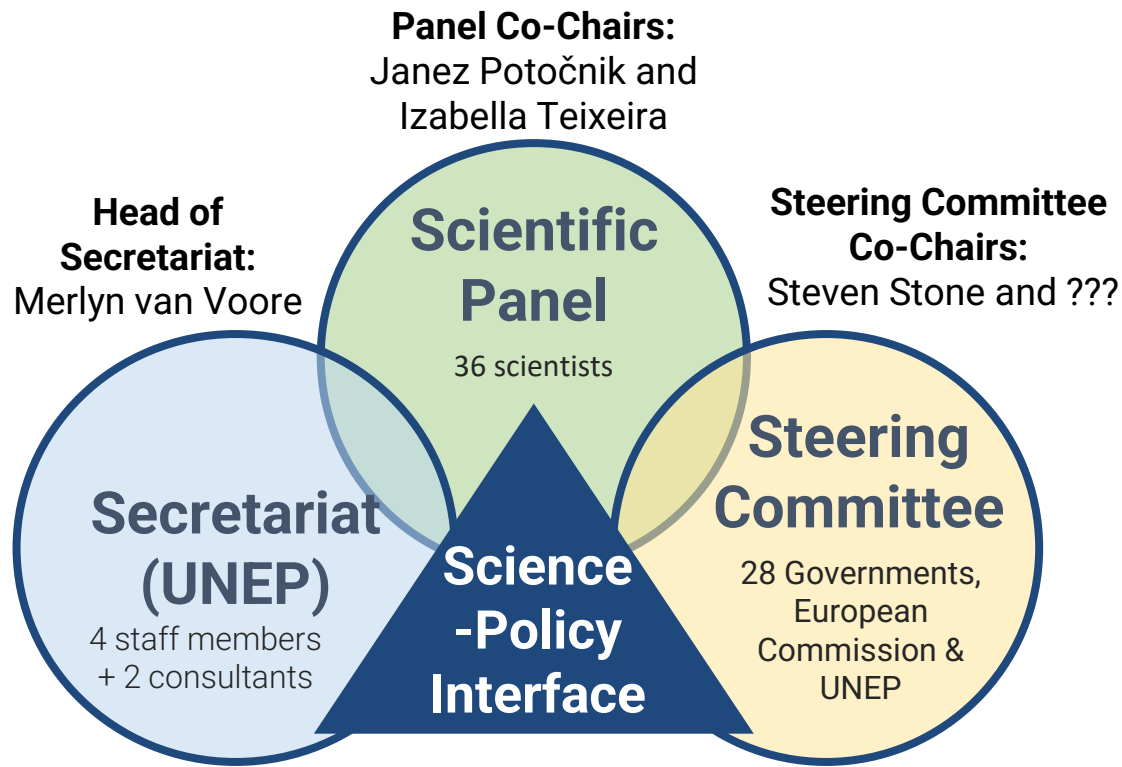


## IRP

Unsustainable Resource Use



# IRP set up and partners



[www.resourcepanel.org](http://www.resourcepanel.org)



# IRP's High Impact Priority Areas for 2022-2025

## HIPA 1

Current trends and future prospects for **global resource use** and sustainable resource management

## HIPA 2

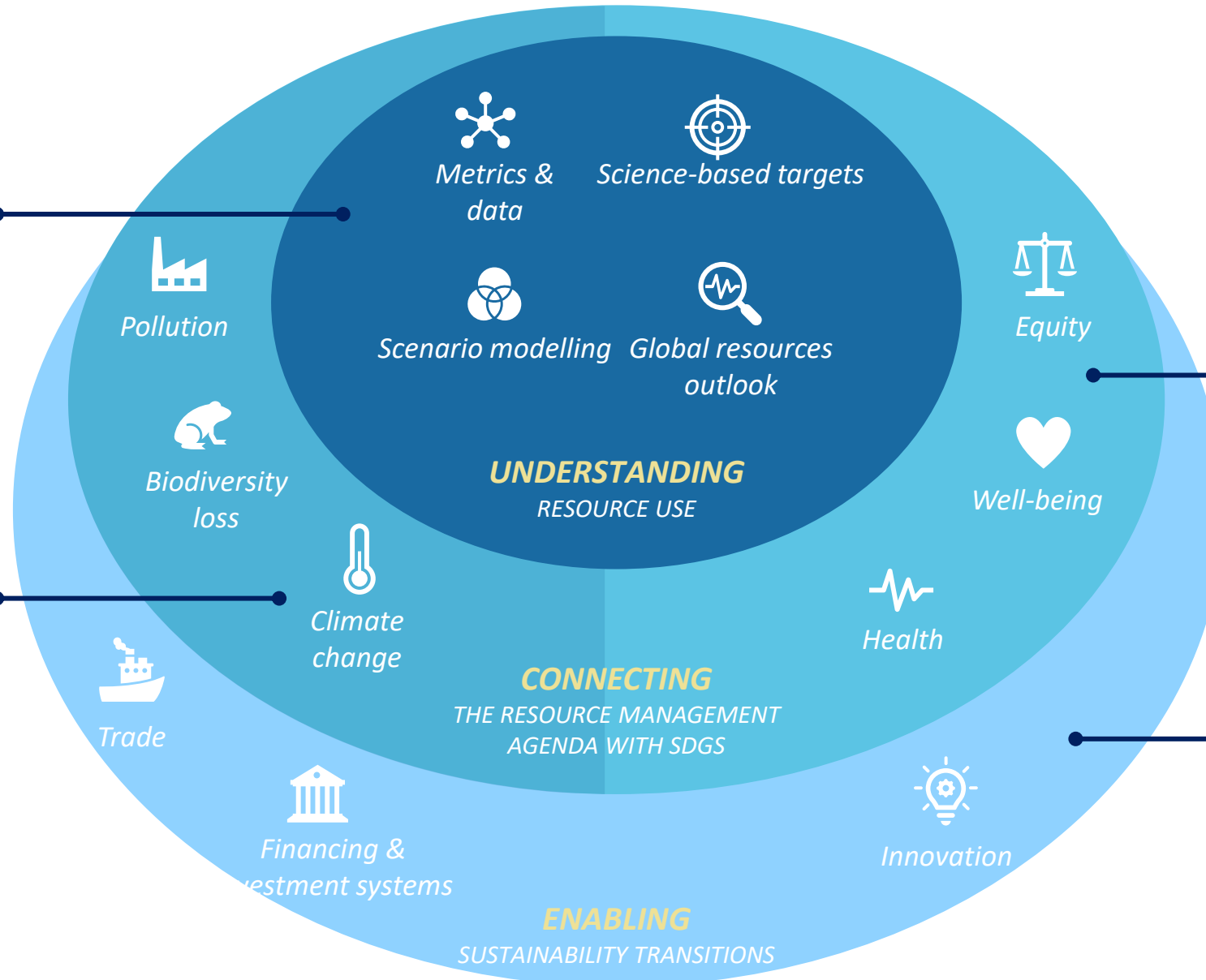
Sustainable Resource Management for effective action on **Climate Change, Biodiversity and Pollution**

## HIPA 3

Sustainable Resource Management for effective action on human **health, well-being, prosperity and equity**

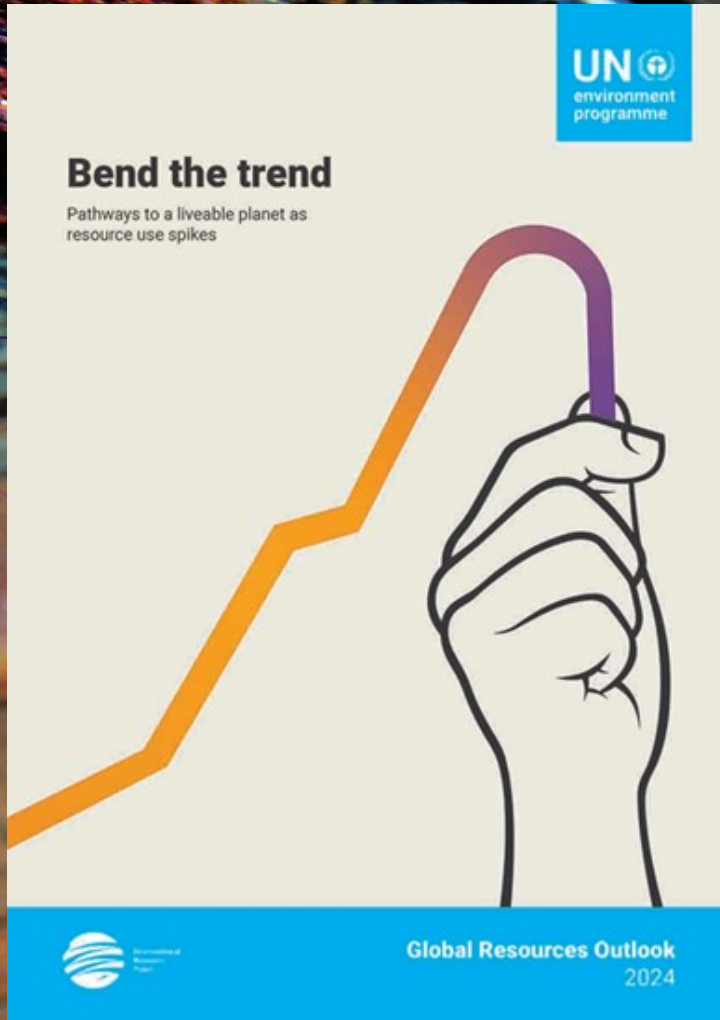
## HIPA 4

Role of **trade, finance and innovation** in enabling sustainability transitions



# Global Resources Outlook 2024

## Key Messages



# What do we mean when we say 'resources'



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



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



**Metals:** such as iron, aluminum and copper, among other



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



**Land**



**Water**



## Bend the trend

Pathways to a liveable planet as  
resource use spikes

Summary for policymakers



# Key messages: Headlines

A projected 60 per cent growth in resource use by 2060 could derail efforts to achieve not only global climate, biodiversity, and pollution targets but also economic prosperity and human well-being.



**Increasing resource use is the main driver of the triple planetary crisis.**



**Material use has increased more than three times over the last 50 years. It continues to grow by an average of more than 2.3 per cent per year.**



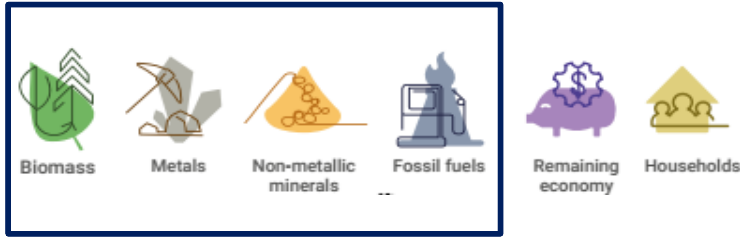
**Climate and biodiversity impacts from material extraction and processing greatly exceed targets based on staying within 1.5 degrees of climate change and avoiding biodiversity loss.**





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

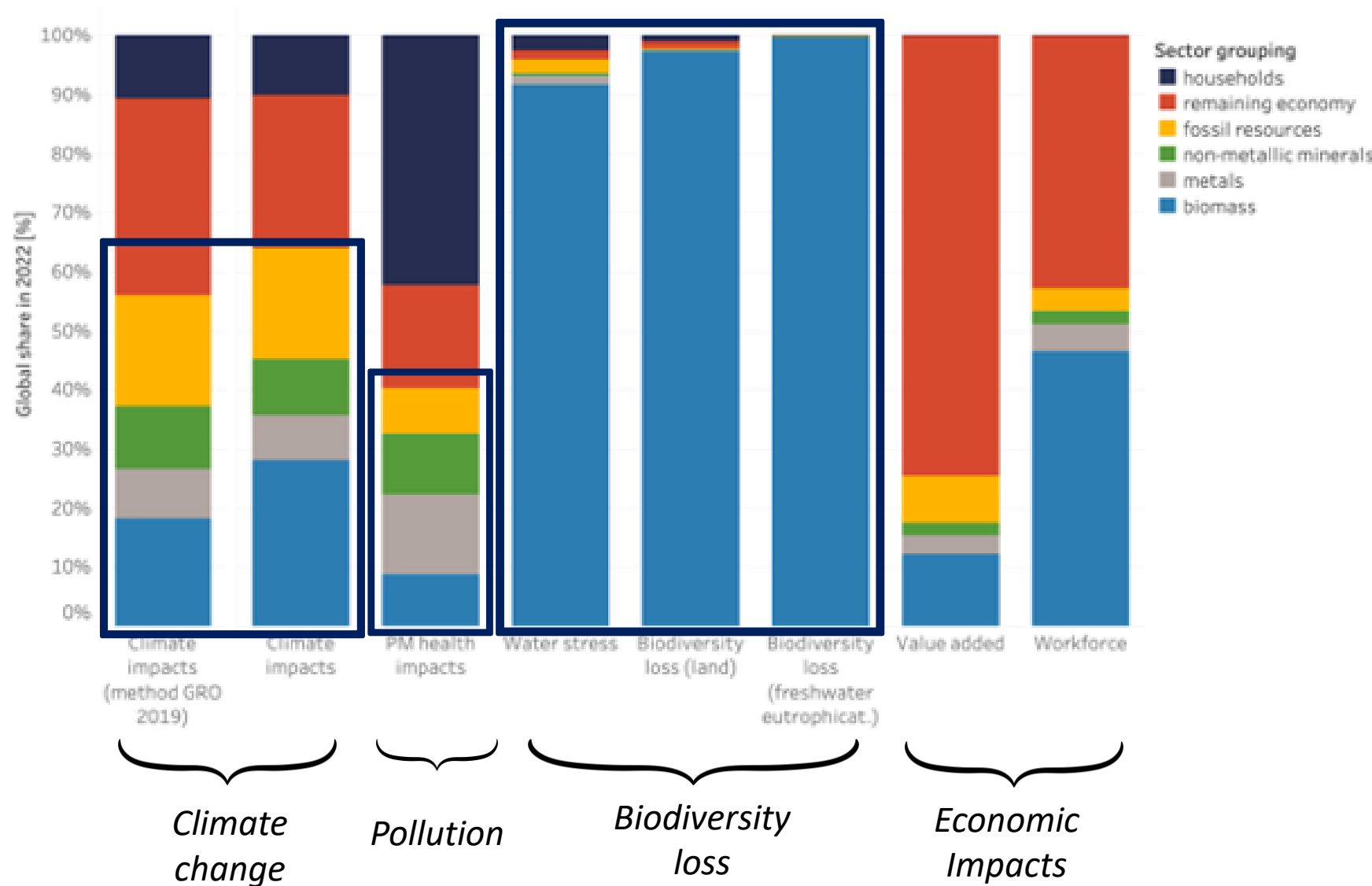
Environmental impacts of materials in the value chain in **extraction and processing phase**



60% of global **climate change impacts** including land use change

40% of air pollution **health impacts**

More than 90% of **water stress** and global land and water eutrophication related **biodiversity loss**

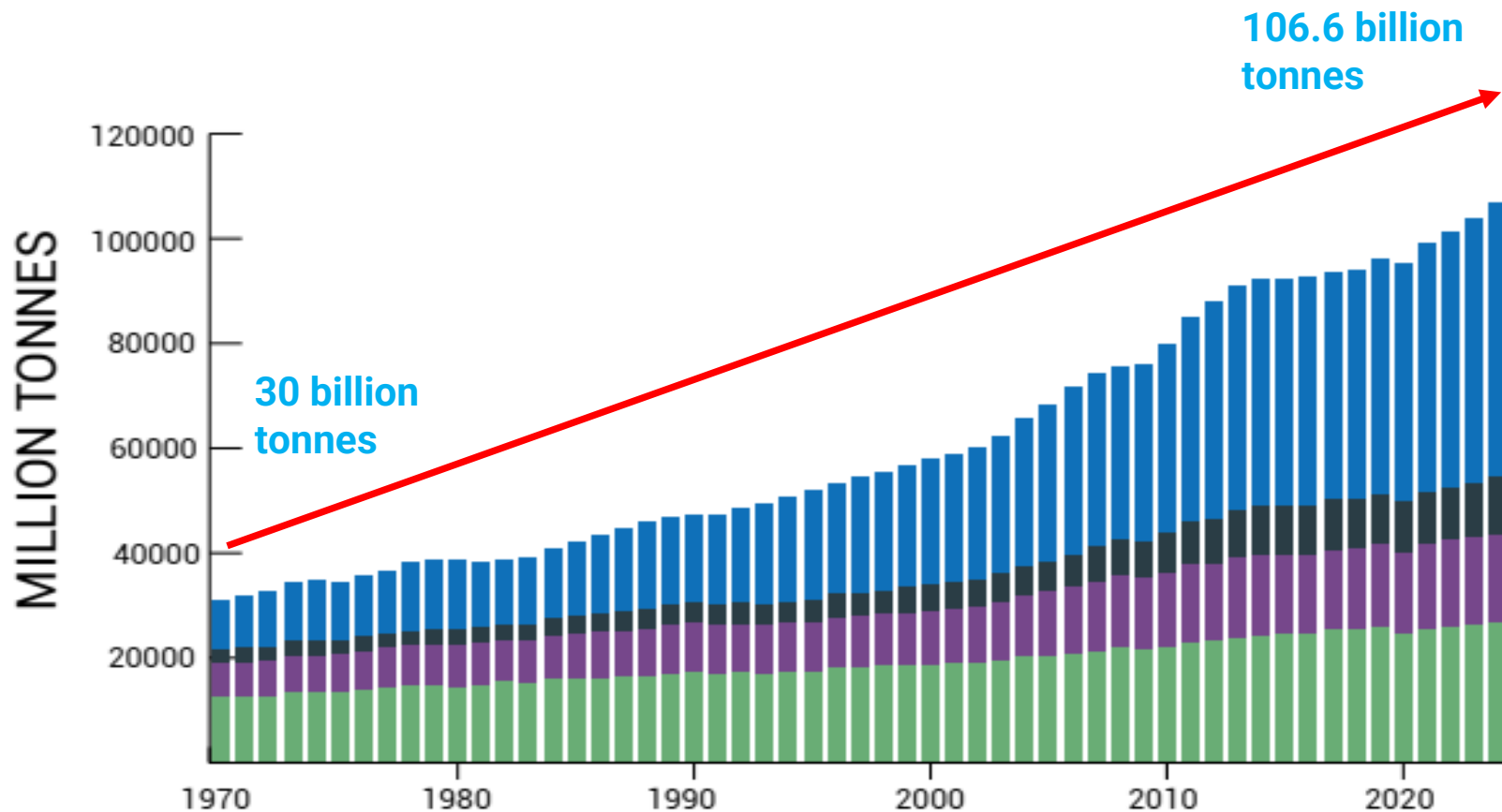




Material use has increased more than three times over the last 50 years. It continues to grow by an average of more than 2.3 per cent per year.

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

Could increase **60%** by **2060** as compared to 2020 levels, under BAU.



**Reducing the resource intensity of food, mobility, housing and energy systems is the best and only way of achieving the SDGs, the climate goals, and ultimately a just and livable planet for all.**



**Delivering on the SDGs for all requires decoupling, so that the environmental impacts of resource use fall while the well-being contributions from resource use increase.**



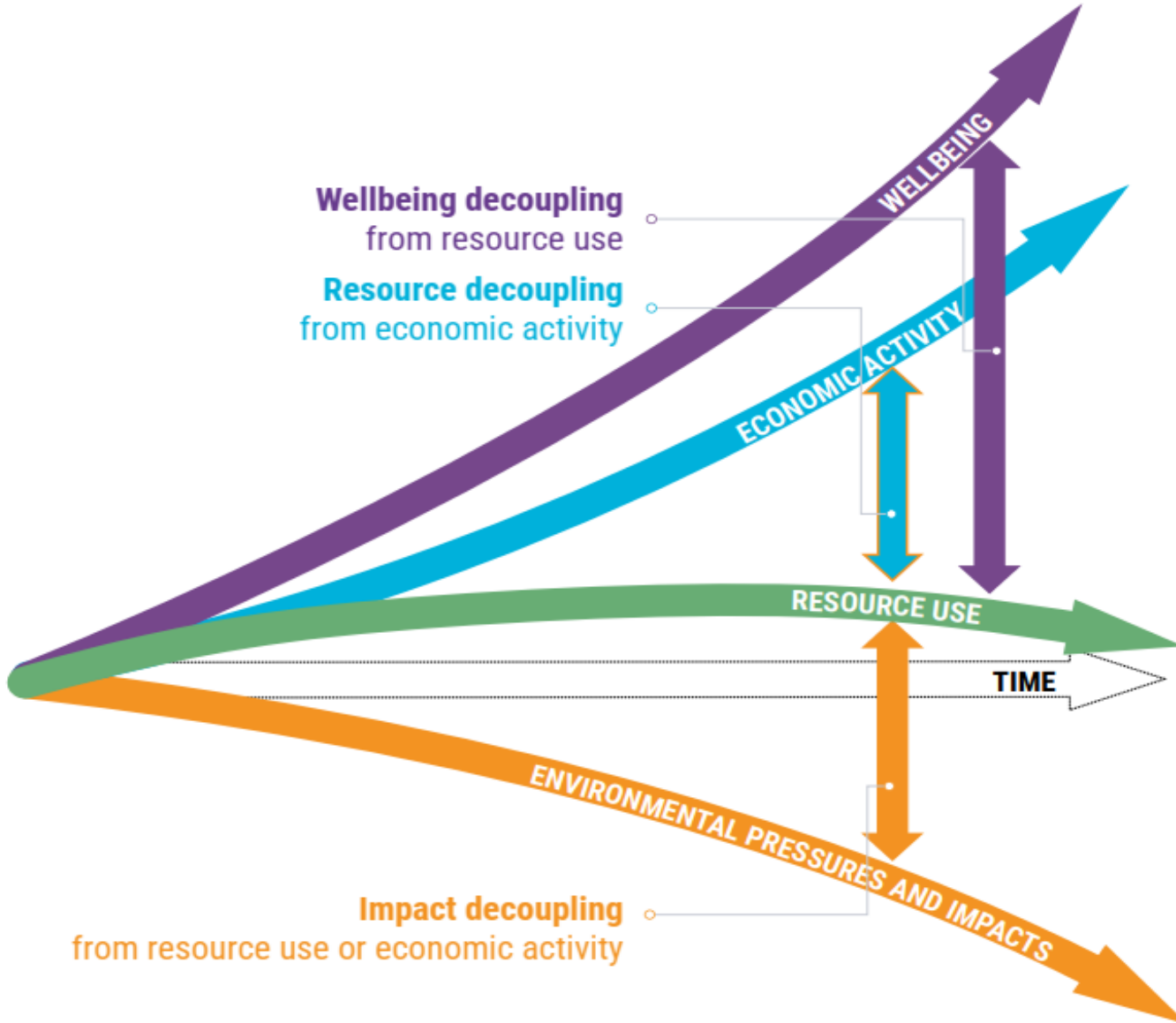
**High-income countries use six times more materials per capita and are responsible for ten times more climate impacts per capita than low-income countries.**



**Compared to historical trends, it is possible to reduce resource use while growing the economy, reducing inequality, improving well-being and dramatically reducing environmental impacts.**



Delivering on the SDGs for all requires **decoupling**, so that the environmental impacts of resource use fall while the well-being contributions from resource use increase.



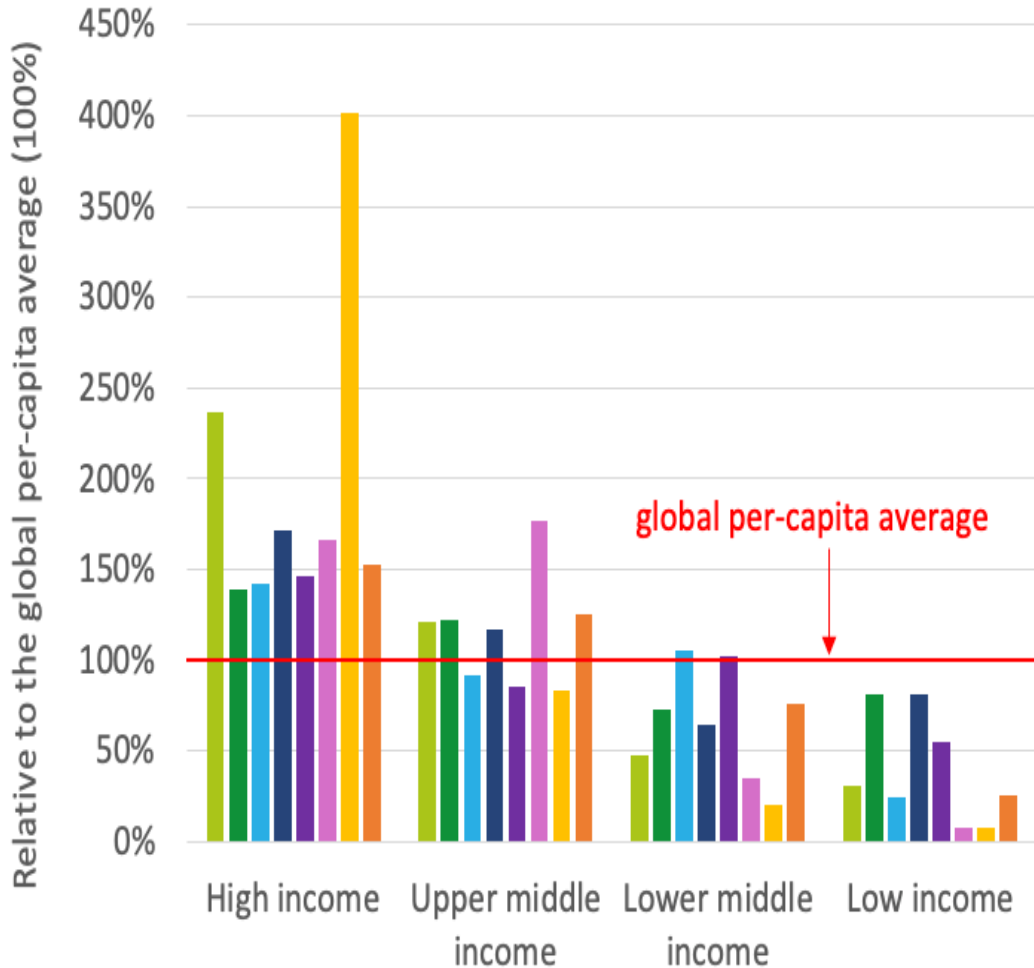
Where **high resource consumption** footprints exist, we need **absolute decoupling** (reduction of resource use in absolute terms).

Where resource use is expected to grow to **enable dignified living**, we need **relative decoupling** (resource use increases more slowly than human well-being and economic outcomes).

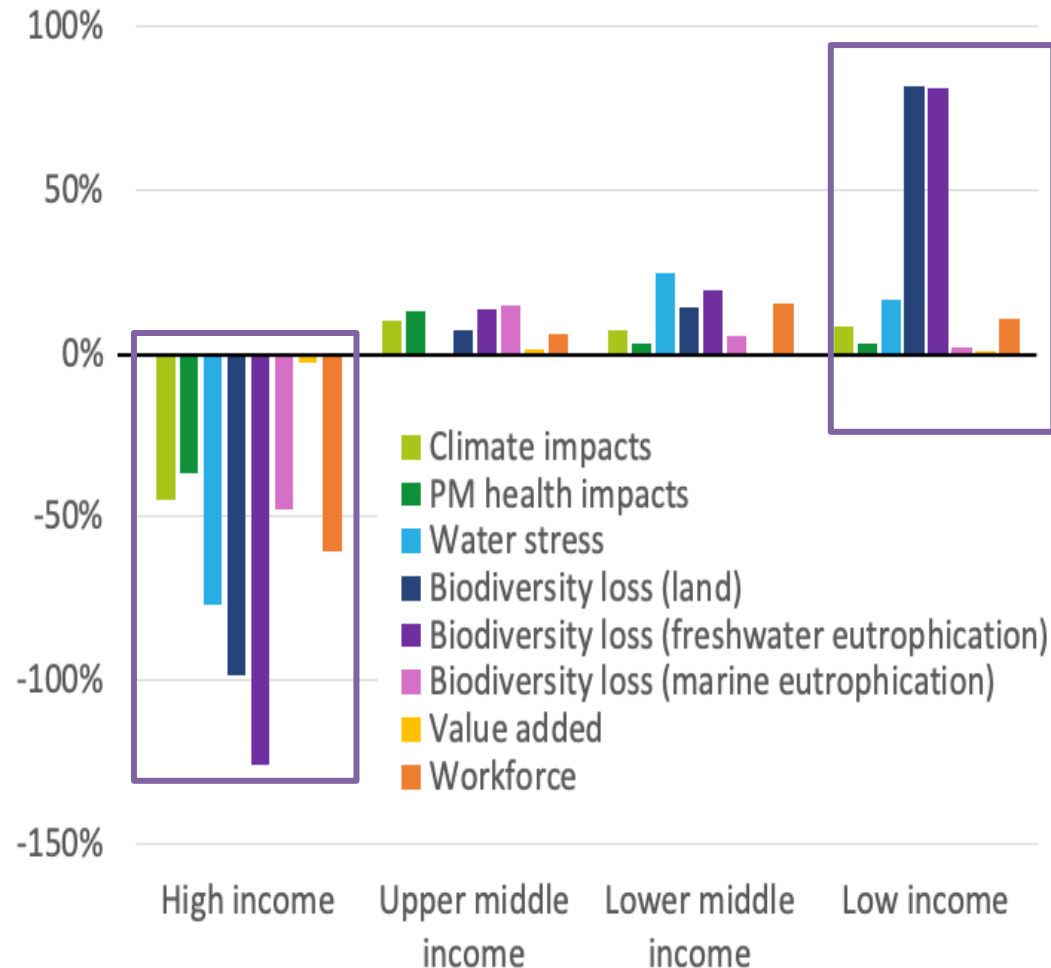
For all, **impact decoupling** is a precondition for **any resource use trajectory** to be considered sustainable (limiting environmental and health impacts to levels agreed in MEAs).

*Impacts: High income countries still show the highest impact footprints per capita, and are outsourcing to low- and middle-income countries*

Per-capita footprints



Net displaced impacts



*Low-income countries are experiencing high levels of biodiversity loss due to high-income countries consumption*



Compared to historical trends, it is possible to reduce resource use while growing the economy, reducing inequality, improving well-being and dramatically reducing environmental impacts.

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

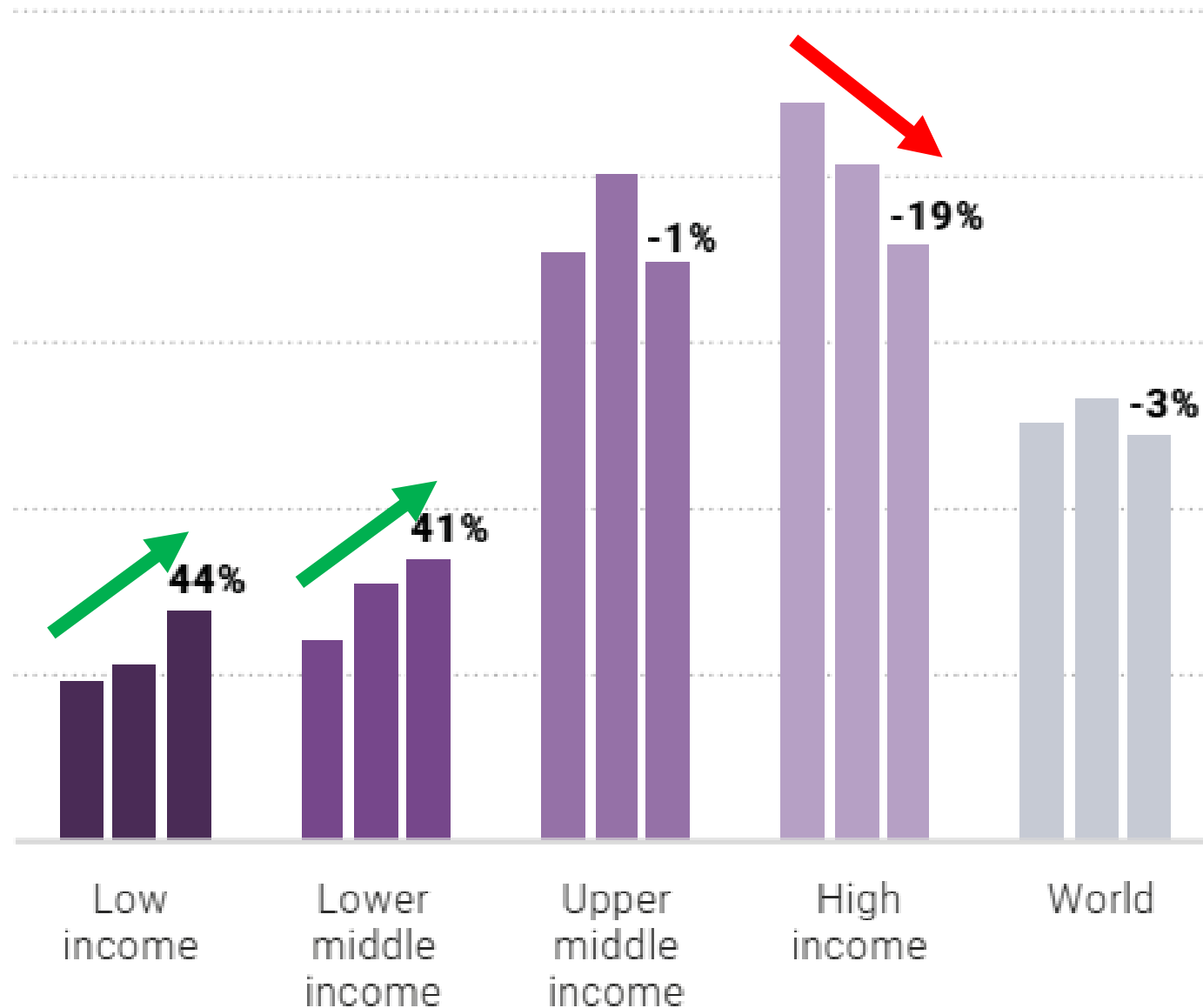
- Economy 3% larger
- Higher HDI outcomes for all income groups
- Reduced growth in resource use by 30%
- GHG emissions -83%
- Energy demand -27%
- Area of agricultural land -5%



# Scenario outlook: Scenario is built up as three 'shifts' plus measures to support Just Transition contrasted against Historical Trends



# Reductions in high consumption contexts means that resource use can grow where it is most needed



Material footprint (MF) per capita by income group, 2020, 2040 and 2060



Reorienting demand and allowing resource use to grow where it is most needed will open pathways to achieving the SDGs and a shared and equitable prosperity for all.



**Bold policy action is critical to phase out unsustainable activities, speed up responsible and innovative ways of meeting human needs and promote social acceptance of the necessary transitions.**



**The prevailing approach of focusing on supply-side (production) measures must be supplemented with a much stronger focus on demand-side (consumption) measures.**



**The scientific community is united around the urgency of resolute action and bold evidence-based decisions that protect the interests and well-being of all, including future generations.**



**Bold policy action is critical to phase out unsustainable activities, speed up **responsible and innovative ways of meeting human needs** and promote social acceptance of the necessary transitions.**

“The messages from this report could not be clearer: It is no longer whether a transformation towards global sustainable resource consumption and production is necessary, but how to urgently make it happen.”

 International Resource Panel

  
**Janez Potočnik**  
IRP Co-Chair

  
**Izabella Teixeira**  
IRP Co-Chair

  GLOBAL RESOURCES OUTLOOK 2024 REPORT



# Solutions: Main Recommendations for implementing the Just Sustainability Transition scenario



## *Institutionalizing resource governance and defining resource use paths*

- 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



## *Directing finance towards sustainable resource use*

- Internalizing the environmental and social costs of resource extraction
- Redirecting, repurposing and reforming public subsidies for sustainable resource
- Channeling private finance towards sustainable resource use
- Incorporating resource-related risk into Public and Central Bank mandates



## *Making trade an engine of sustainable resource use*

- Trade governance for fairness and sustainable resource use
- Enabling local resource value retention in producer countries



## *Mainstreaming sustainable consumption options*





- Developing action plans to improve access to sustainable goods and services
- Regulating marketing practices leading to over-consumption, and raising awareness



## *Creating circular, resource-efficient and low-impact solutions and business models*

- 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

# Strategies for reducing resource use across the provisioning systems

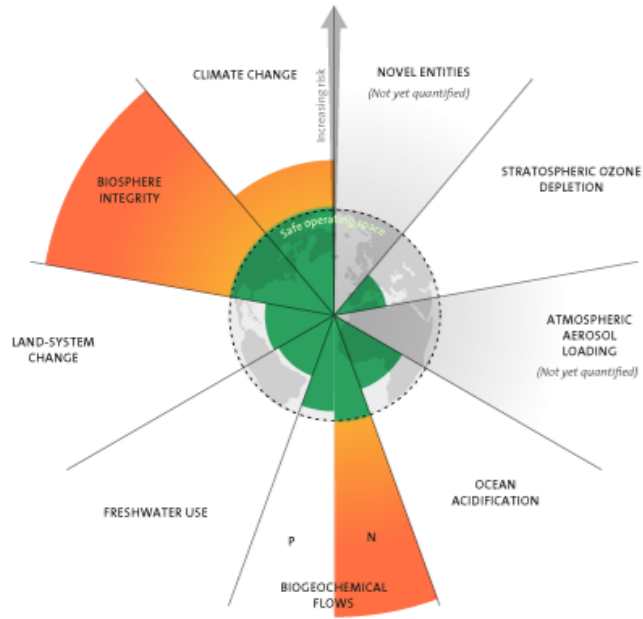
| Provisioning system                          | <br><b>Food</b>   | <br><b>Built environment</b>  | <br><b>Mobility</b>   | <br><b>Energy</b>   |
|--|--|--|--|--|
| Recommendations                              | <ul style="list-style-type: none"> <li>• Reducing the demand of the most impactful food commodities</li> <li>• Reducing food loss and food waste</li> <li>• Protecting and restoring productive land while meeting demand for nutrition</li> </ul> | <ul style="list-style-type: none"> <li>• Assuring sustainability of the new building stock</li> <li>• Retrofitting the existing building stock</li> <li>• More intensive use of buildings</li> </ul> | <ul style="list-style-type: none"> <li>• Cities moving towards active mobility and public transportation</li> <li>• Reducing carbon-intensive frequent traveling modalities</li> <li>• Decreasing emissions intensity of transport modalities</li> </ul> | <ul style="list-style-type: none"> <li>• Decarbonizing electricity supply through the scaling up of low-resource renewable energies and increased energy efficiency</li> </ul> |
| Outcomes from policies modelled in Scenarios | <p>Can decrease the land needed for food by 5% compared to 2020 levels while more equitably ensuring adequate nutrition for all</p>  | <p>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.</p>                               | <p>Can reduce related material stock requirements (-50%), energy demands (-50%) and GHG emissions (-60%) by 2060 compared to current trends.</p>   | <p>Can drive a sharp decrease in energy demand, with reductions of climate impacts by more than 80 per cent.</p>   |



9. The scientific community is united around the urgency of resolute action and bold evidence-based decisions that protect the interests and well-being of all, including future generations.

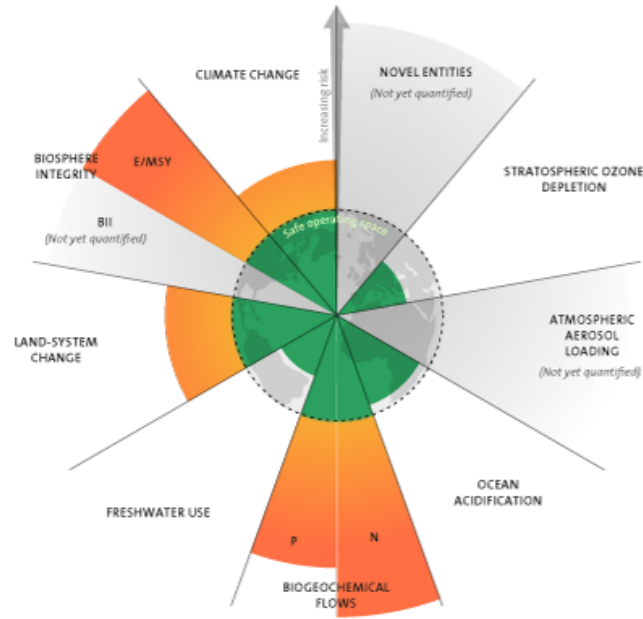


2009



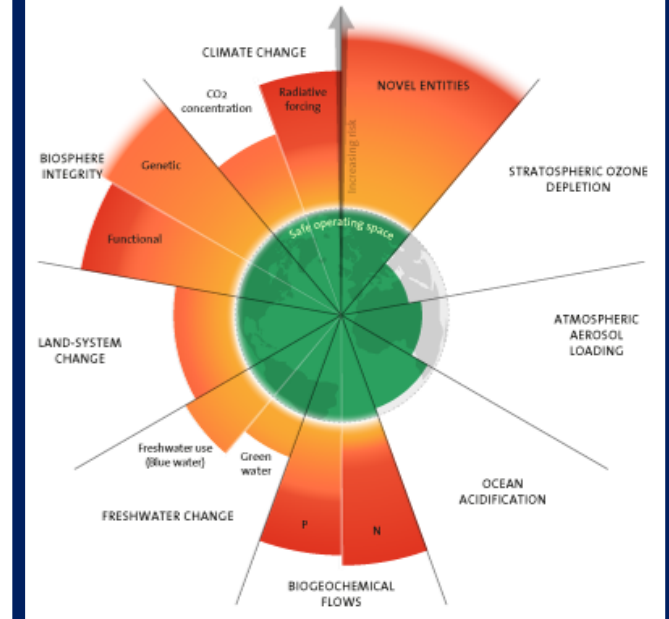
3 boundaries crossed

2015



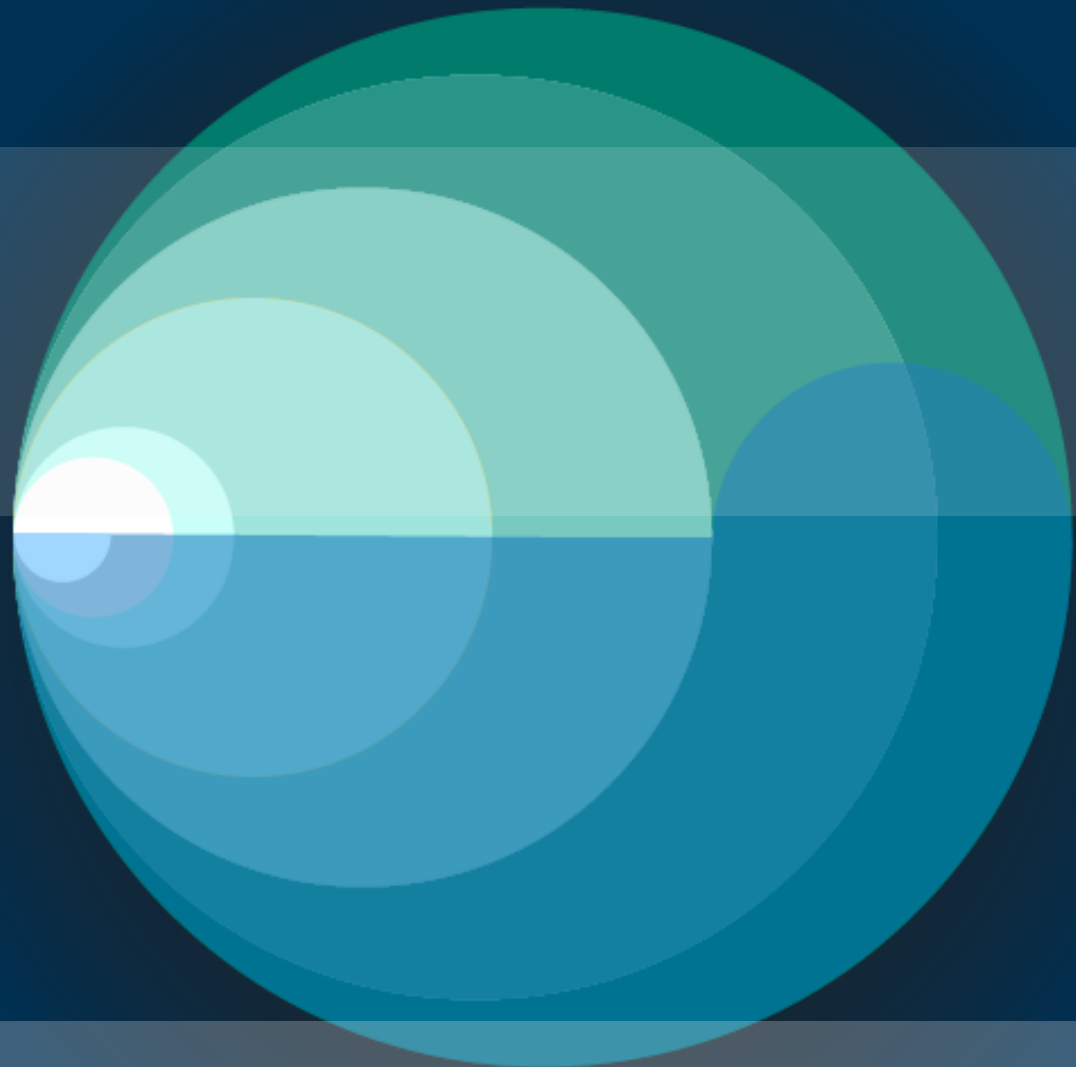
4 boundaries crossed

2023



6 boundaries crossed

Source: Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023



# **‘Accelerating the circular economy in Europe’**

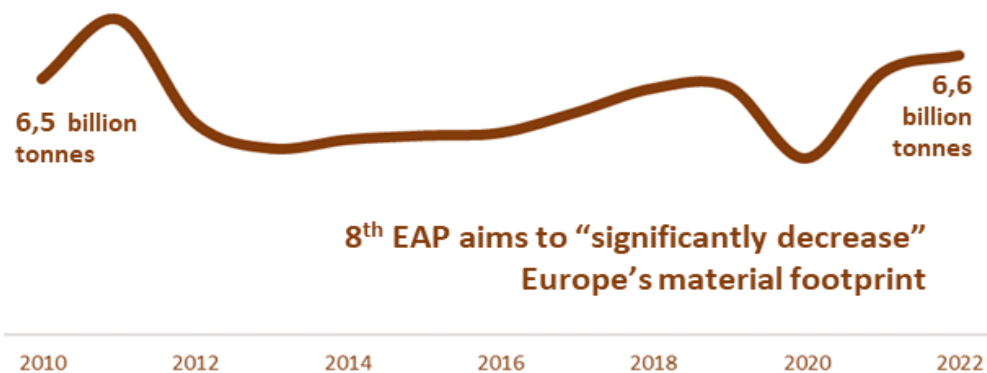
## State and Outlook 2024 - EEA report



# Circularity in Europe: state of play

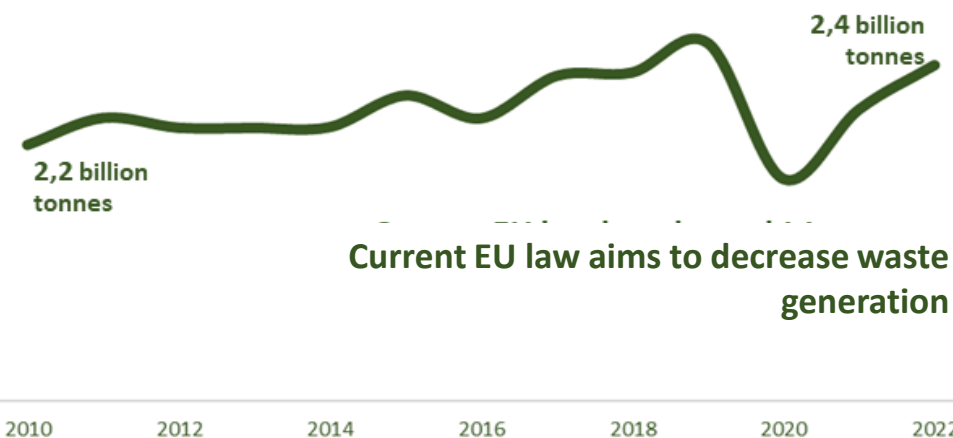
## 1

### Material footprint, EU27



## 2

### Generation of waste, EU27



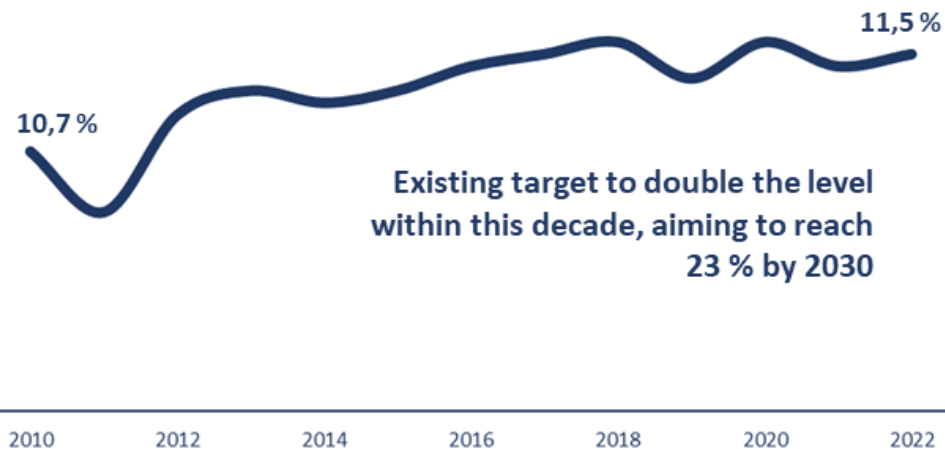
## 3

### Overall recycling levels of waste, EU27



## 4

### Use of circular materials, EU27





# Overall key messages

Considering the inherent impact of resource extraction and processing, and the impossibility of 100% circularity, it is crucial to prioritise the

**reduction of resource use** and

move towards **a less material-**

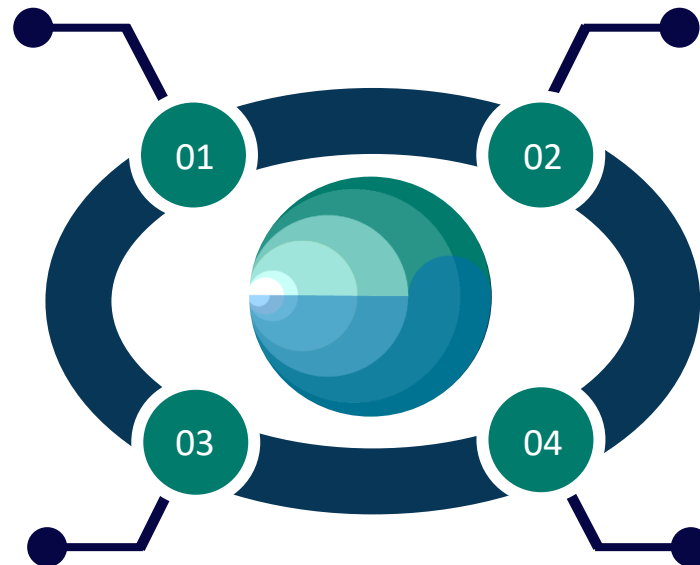
**intensive European economy.**

Large-scale success of a circular economy relies heavily on **returning substantial**

**quantities of high-quality**

**secondary raw materials** to

productive use.



**Maximising the utility of**

**existing products** requires

significantly more intensity of use per product and much longer product lifetimes.

Europe alone cannot curb unsustainable resource use at planetary scale, therefore, a **robust**

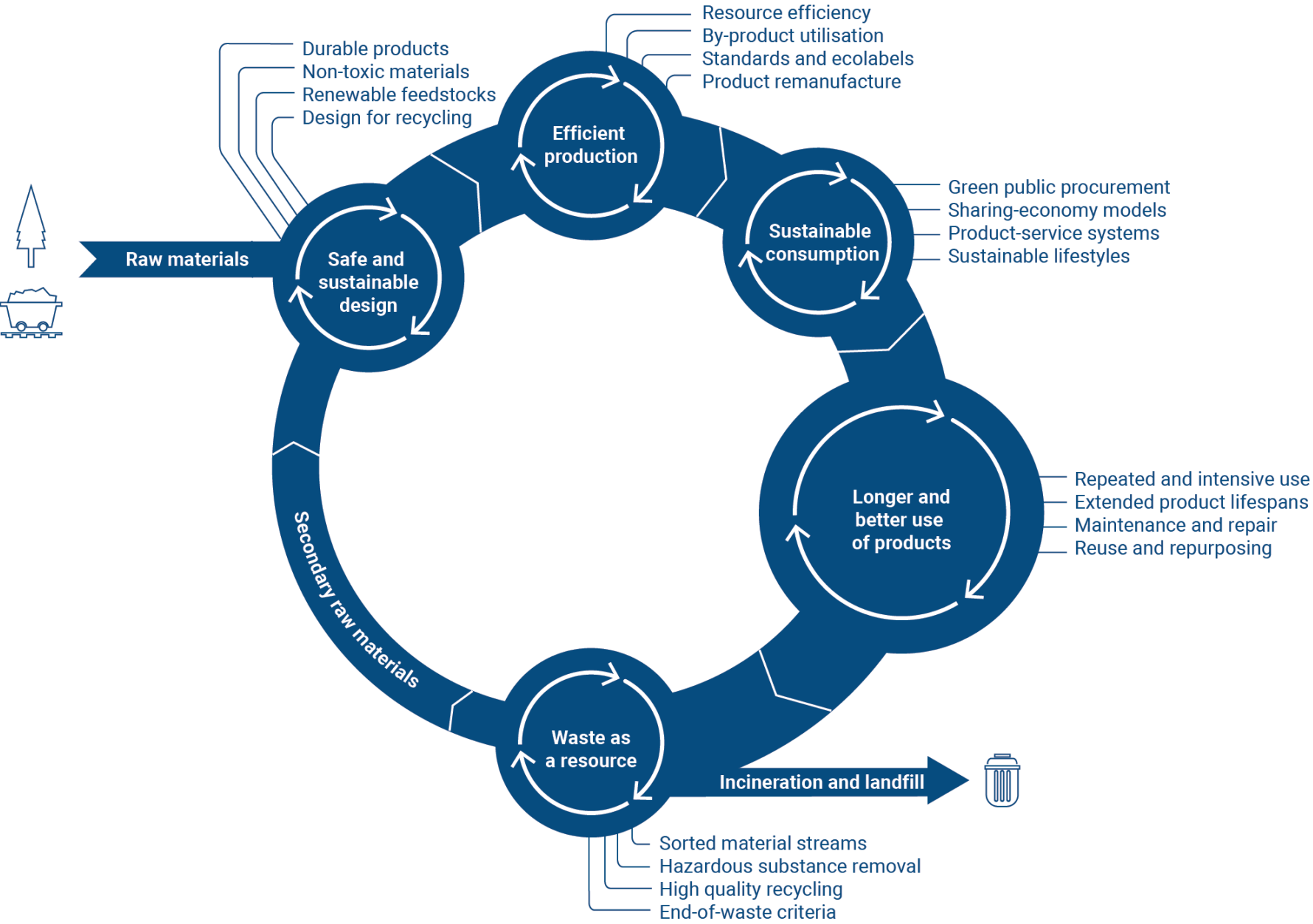
**global governance framework**

on resource use and circular economy will be essential.

European Environment Agency



# A transformation throughout the life cycle



Realising this vision by activating the potential of the touchpoints requires **action across Europe’s economy and society**. At each touchpoint, adopting circular actions will enhance sustainability and move away from wasteful exploitation of finite natural resources.

# Next steps to accelerate the circular economy in Europe



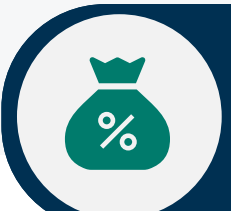
**More binding and target-oriented policy**



**High quality recycling**



**Safe and sustainable by design products**



**The right economics**



**Value chain-specific strategies**



**Demand-side action and sufficiency**



**Global leadership**





## Conclusions

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- Our resource use is a main driver for the triple planetary crisis
- ‘Forgotten dimension’
- Highly unequal resource use and unequal impacts
- Ambitious pathways for sustainable resource use are necessary
- This is central in delivering a sustainable and just future
- But is dependent on **strong governance choices**
- Science based targets; monitoring; instruments; integration; fiscal measures; market signals; demand side measures; sufficiency approaches...
- In other words an ambitious systemic approach to resource use.

# Thank you

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