



German Advisory Council on Global Change

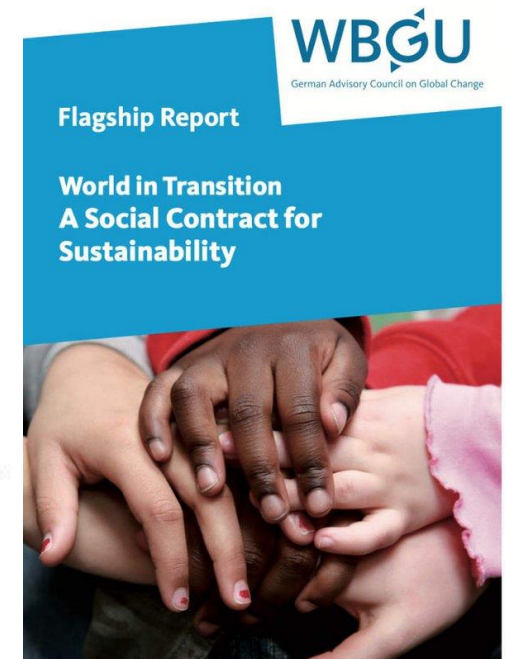
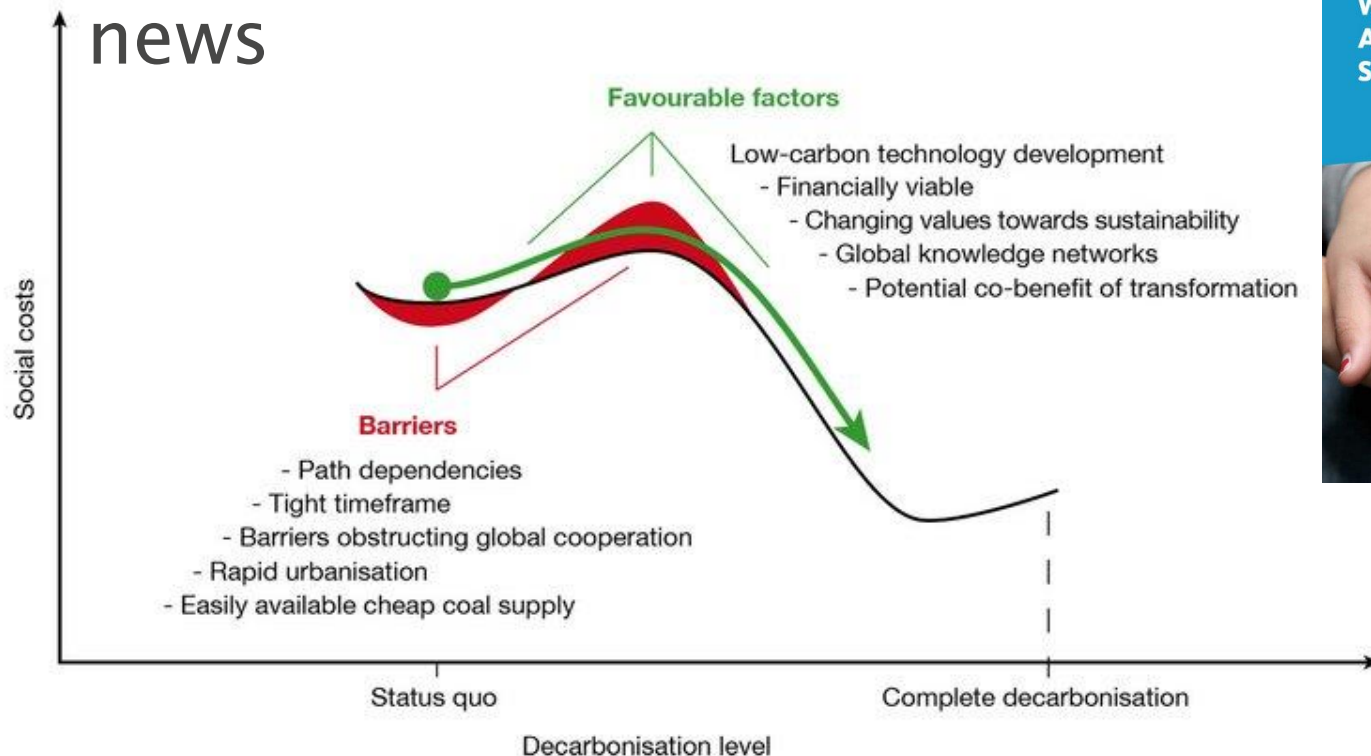


Prof. Dr. Sabine Schlacke  
Greifswald University

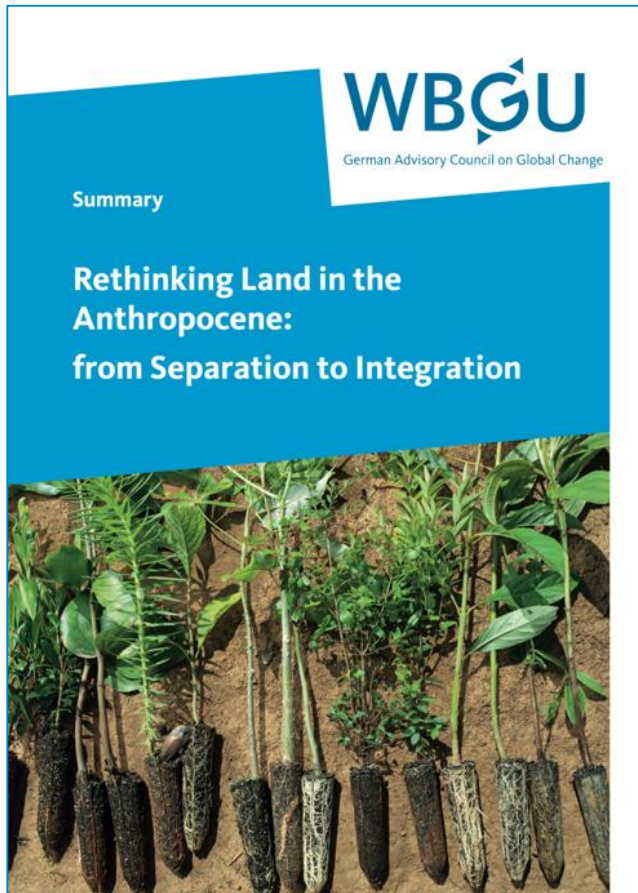
# Rethinking Land in the Anthropocene

# Flagship Report 2011: World in Transition – A Social Contract for Sustainability

## Five good news and five difficult news



# WBGU Flagship Report 2020

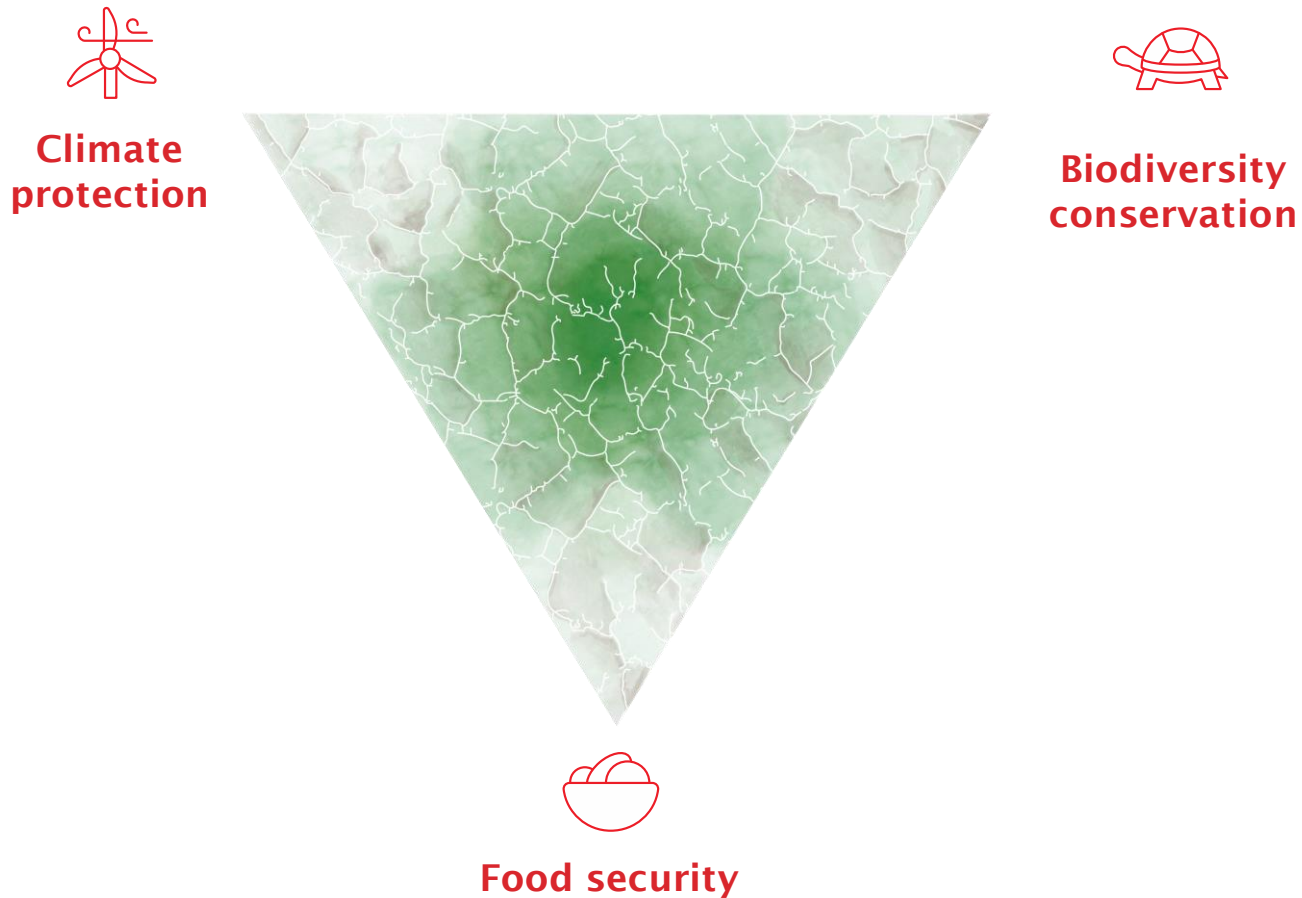


FROM  
**TRILEMMA** TO  
INTEGRATION

**MULTIPLE-  
BENEFIT  
STRATEGIES**  
FOR SUSTAINABLE  
LAND  
STEWARDSHIP

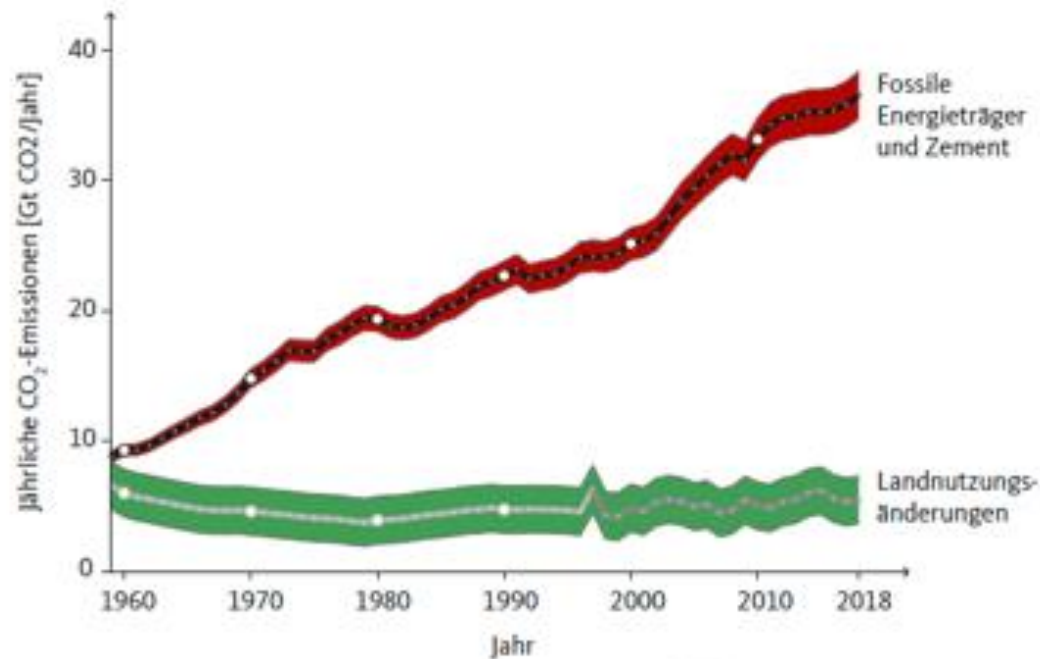
**TRANSFORMATIVE  
GOVERNANCE**  
FOR  
SOLIDARITY-BASED  
LAND  
STEWARDSHIP

# “Trilemma” of Land Use



# Land and climate

## Change needed in our approach to land



- Land can contribute to climate protection, but cannot solve the problem and is itself dependent on climate protection

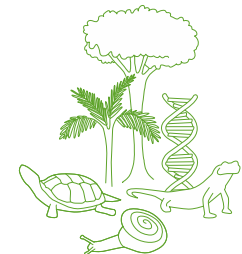


Source: WBGU

# Land and the **Biodiversity** Crisis

## Humans are causing worldwide mass extinction

- Extinction rate today 100-1000x compared to pre-human times
- Biggest drivers: changing land use, overexploitation, climate change, pollution, invasive species
- Loss of invaluable ecosystem services



Quelle: WBGU

# Land and the **Food Crisis**

## Today's food system is not sustainable

- Although sufficient production quantitatively, but
  - ... not accessible to all,
  - ... often unhealthy (high calorie, low micronutrient)
- About a quarter of humanity has too little
- Another quarter suffers from overconsumption
- Food production has significant environmental externalities



# “Trilemma” of Land Use



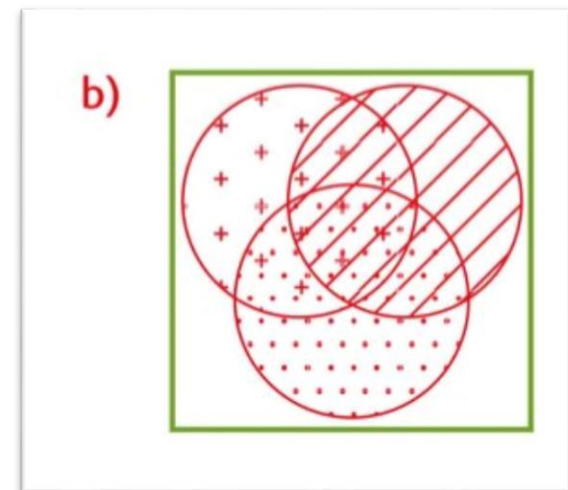
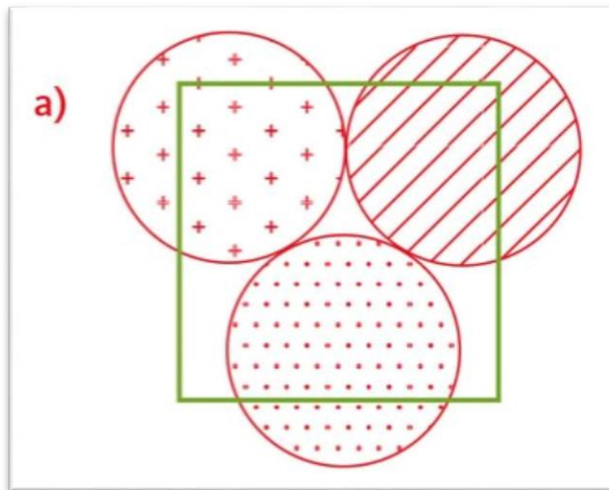
**Climate  
protection**



**Biodiversity  
conservation**



**Food security**



Source: WBGU

# Implementation of multi-benefit strategies in the context of the integrated landscape approach



- Multifunctionality and multiple benefits
- Participation and reciprocity of stakeholders
- Shared framework for monitoring and evaluation
- Adaptive management

Source: WBGU

# Five multiple-benefit strategies



**Ecosystem  
restoration**



**Protected-area  
systems**



**Diversified  
agriculture**



**Changing  
dietary habits**



**Timber-based  
construction**

Source: WBGU

# 1 – Foster Ecosystem restoration



- > **Restoration** can make land-based CO<sub>2</sub>-removal synergistic

## 2 – Expand and upgrade protected-area systems



- > An **effective protection** of 30% of the global land area is vital for overcoming the biodiversity and climate crises

# 3 – Diversify farming systems



Greening of industrial agriculture using the EU as an example



Sustainable increase in the productivity of subsistence agriculture using sub-Saharan Africa as an example



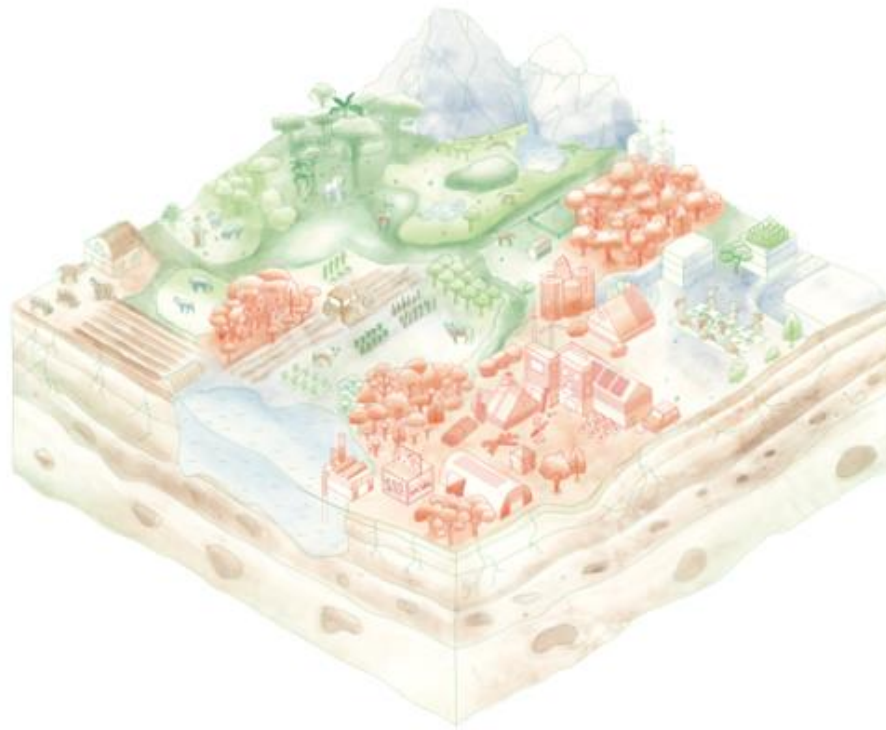
Orientation of agricultural trade towards sustainability and resilience

- > A diversified, **ecologically intensive agriculture** can secure food, protect the climate, enable landscape resilience and maintain biodiversity

## 4 – Transform dietary habits

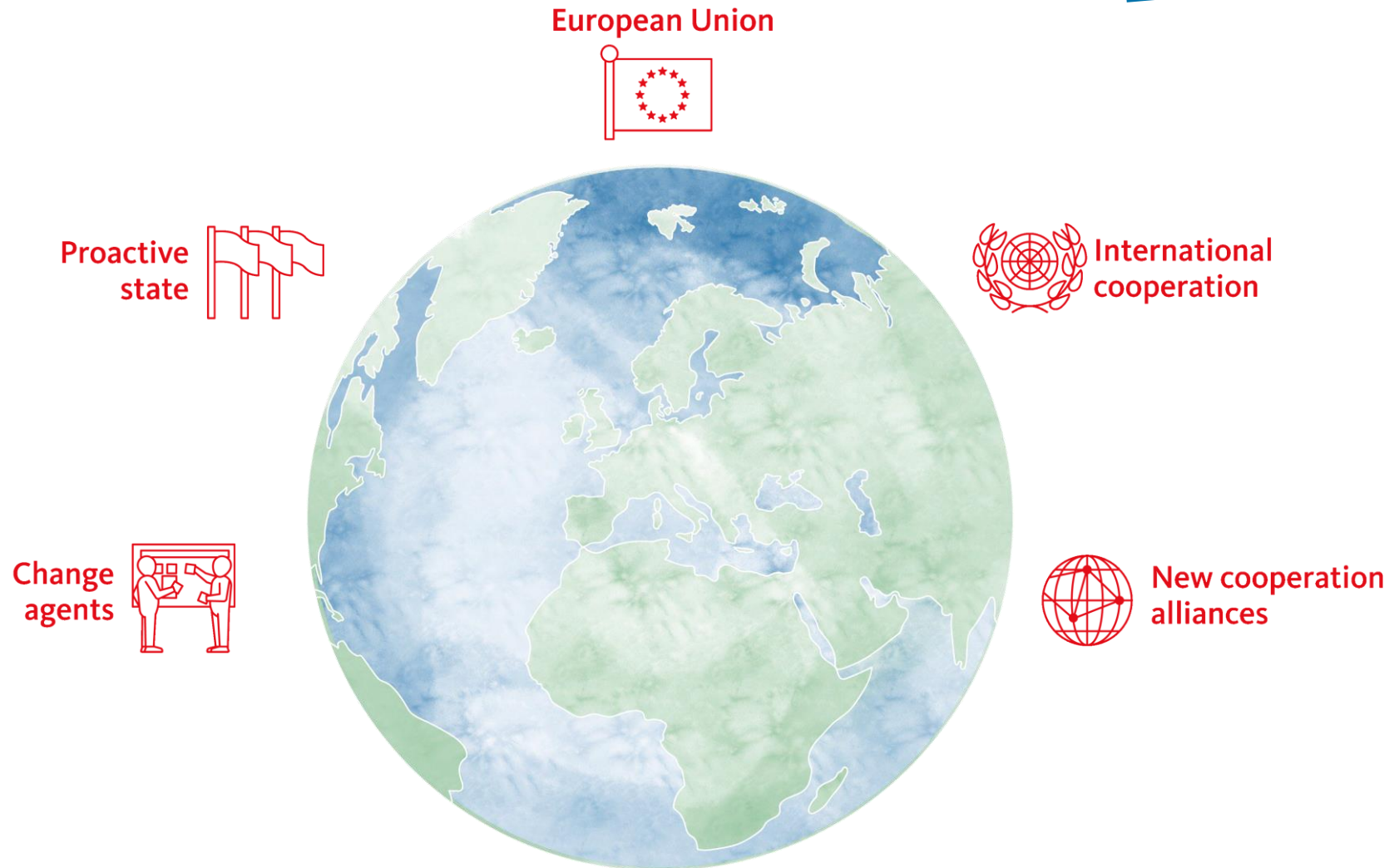


## 5 – Shape the **bioeconomy** responsibly and promote **timber-based construction**



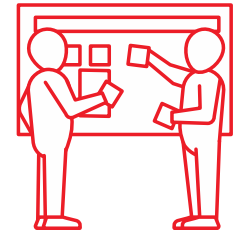
- **Sustainable bioeconomy** needs a limiting framework and prioritises material use cycles, e.g. timber-based construction.

# Five governance strategies



# 1 – Support change agents

- > Numerous examples of individual and institutional change agents employing **new land-related practices**



(Projekt © TU Dresden, IWD Manuel Wewer)

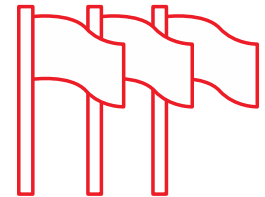


(Photo by Andréia Martins/AMLD)

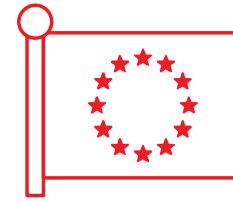
- > BUT: the right framework conditions are needed to **support such pioneering activities**

## 2 – Set national political framework conditions

- > States should **pro-actively** ensure
  - > that **negative impacts** of their land-related actions are taking into account
  - > that **positive contributions** are rewarded
- > **Consistent, whole-government approaches** help, incl.:
  - > (sectoral) **incentive and pricing instruments**
  - > (sectoral) **sustainability standards**
  - > enhanced spatial and **landscape planning**
  - > improved **indicators and monitoring**

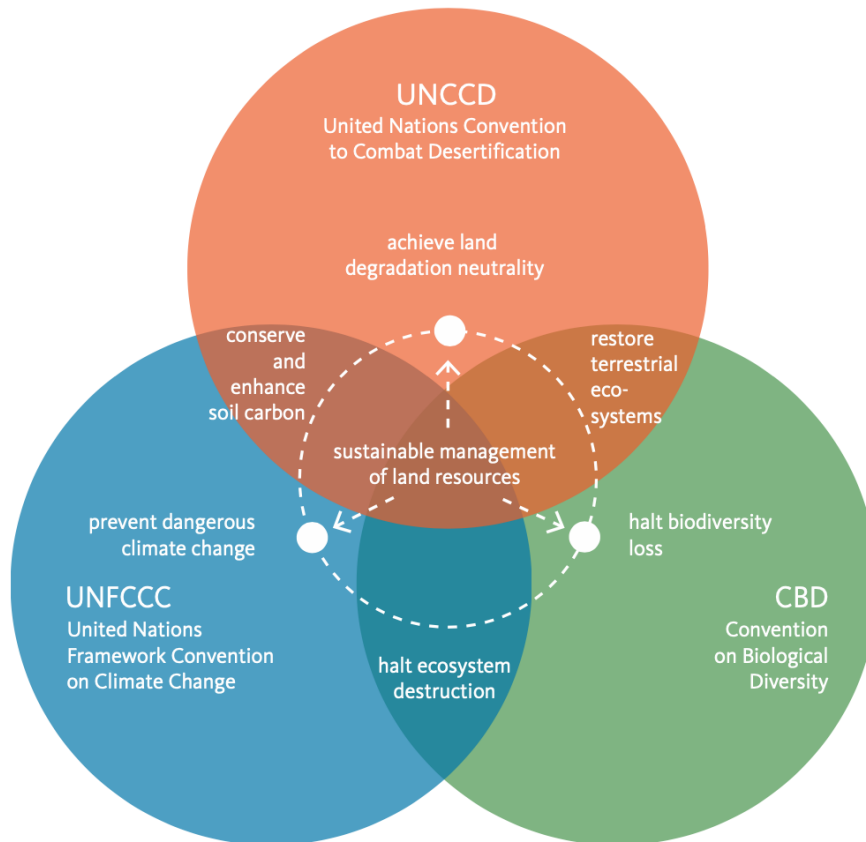


### 3 – Tackle land-use transformation in the EU



- > EU and comparable state coalitions are **particularly well suited for** land-use transformation over a large area and **scaling up** activities
- > Agriculture and forestry policies should promote ecology and sustainability more broadly – e.g. the EU's Common Agricultural Policy should become a **Common Ecosystem Policy**
- > The EU and other comparable state coalitions are key to integrate the **protection of global commons** in international negotiations and trade policies

# 4 – Strengthen international cooperation



- > A **joint conference** of the Rio Conventions and a strong CBD post-2020 framework can promote the land transformation
- > Two **new binding protocols for the CBD** on conservation and sustainable Use

# 5 – Establish new cooperation alliances

Regional alliances



**Regional alliances** that aim for the cross-border implementation of integrated landscape approaches

Supranational alliances



**Supranational alliances** that unite countries to jointly pursue sustainable land stewardship and agree on common values and regulation to achieve this aim

Global conservation alliances



**Global conservation alliances** that aim at conserving and restoring valuable ecosystems of special relevance

# Conclusion: Towards a **global** land-use transformation

**SYSTEMIC**  
INTERRELATIONS AS A  
KEY TO GLOBAL  
SUSTAINABILITY

**SYNERGISTIC**  
INTERACTION: FROM  
SEPARATION TO  
INTEGRATION

**SOLIDARITY-BASED**  
ASSUMPTION OF  
RESPONSIBILITY



# Many thanks for your attention

German Advisory Council on  
Global Change (WBGU)

Wissenschaftlicher Beirat der  
Bundesregierung Globale  
Umweltveränderungen (WBGU)



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