

WELCOME TO THE TRA 6 LECTURE SERIES INNOVATION PATHWAYS TO SUSTAINABILITY

„MANAGING LAND USE AS KEY CHALLENGE OF THE TRANSFORMATION TO SUSTAINABILITY“

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German Advisory Council on Global Change

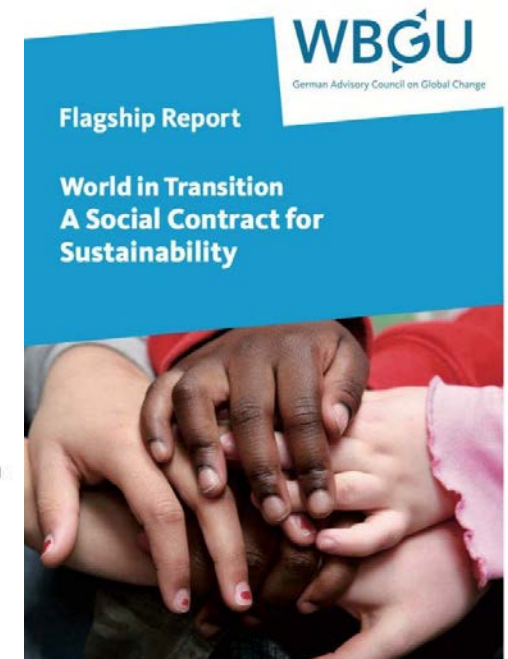
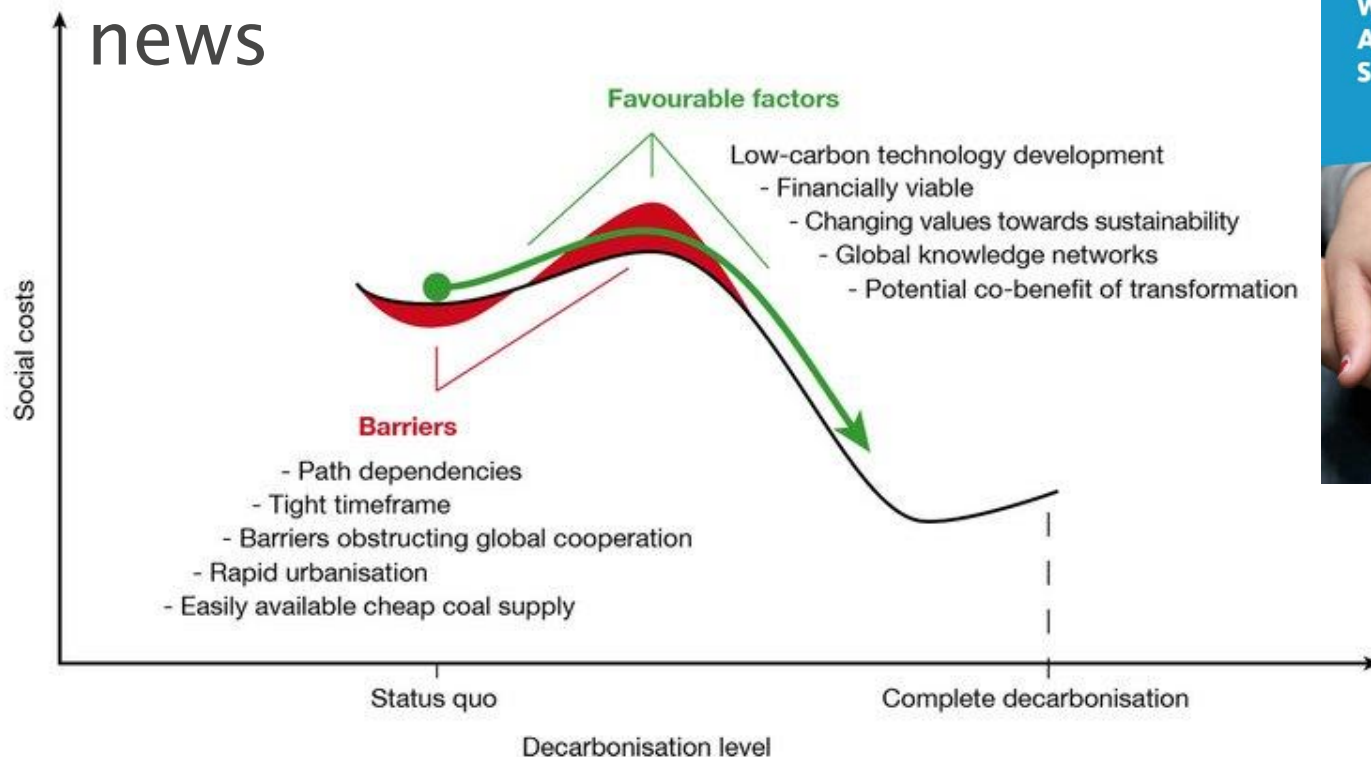


Prof. Dr. Sabine Schlacke
Münster University

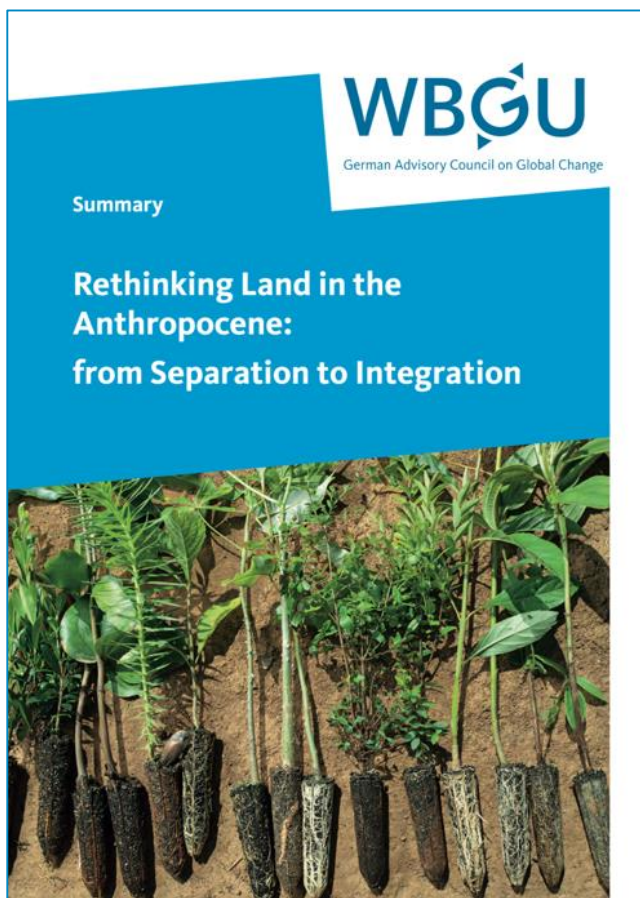
Rethinking Land in the Anthropocene

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

Five good news and five difficult news



WBGU Flagship Report 2020

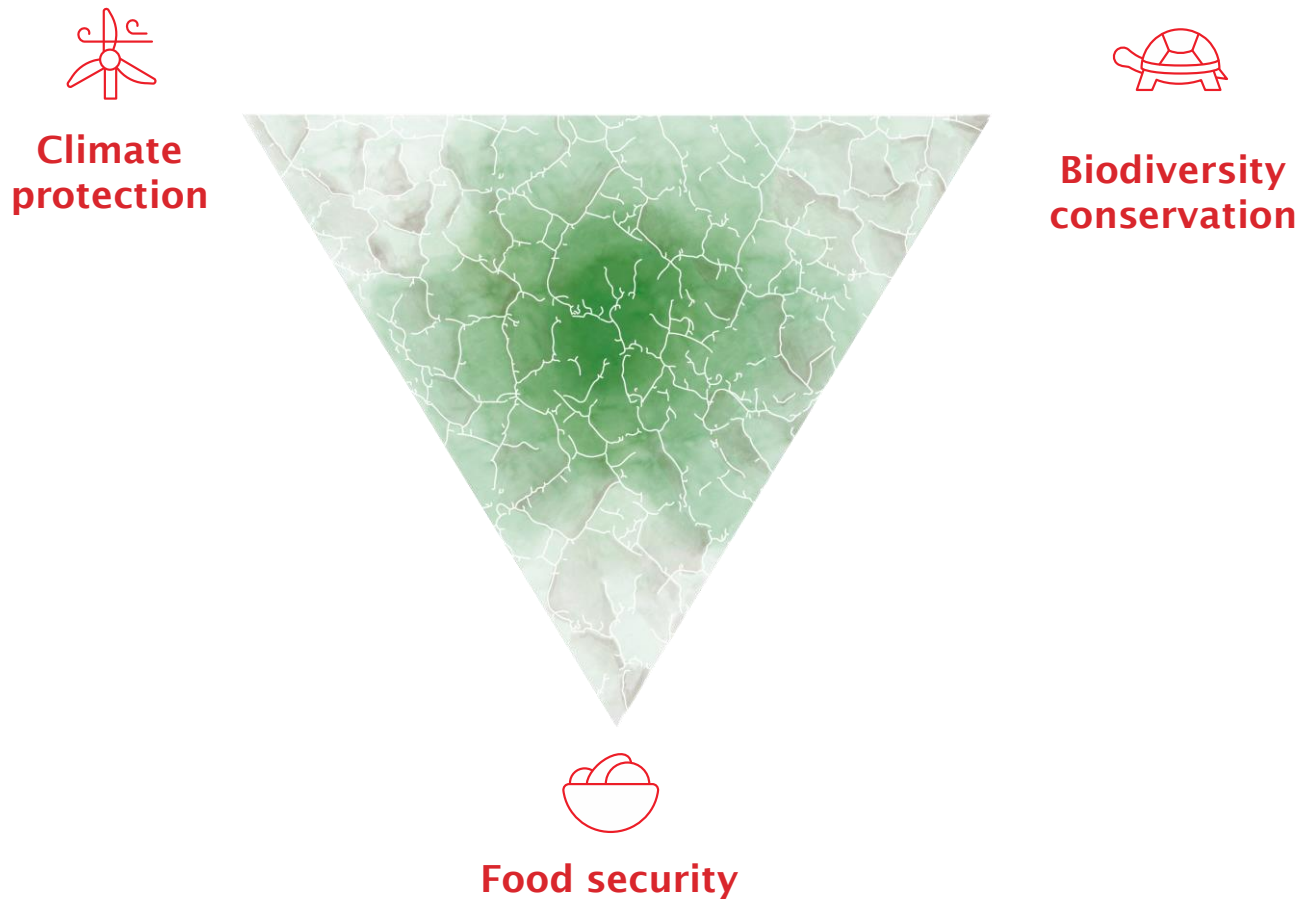


FROM
TRILEMMA TO
INTEGRATION

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

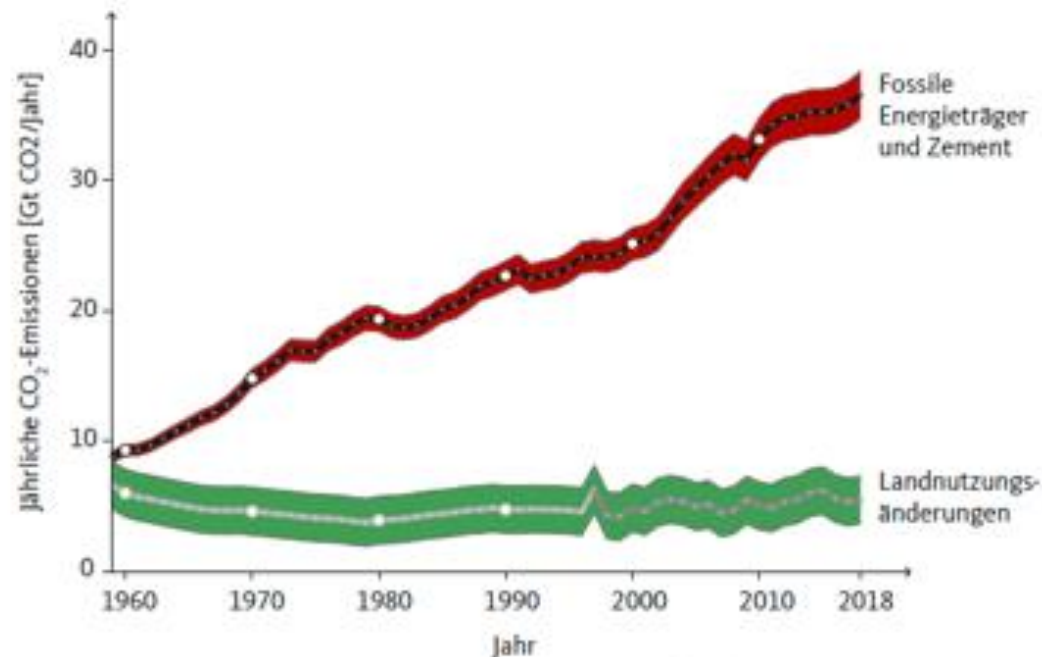
**TRANSFORMATIVE
GOVERNANCE**
FOR
SOLIDARITY-BASED
LAND
STEWARDSHIP

“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

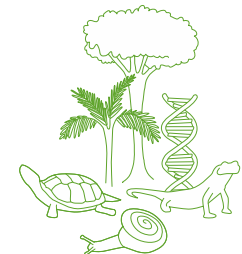


Source: WBGU

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



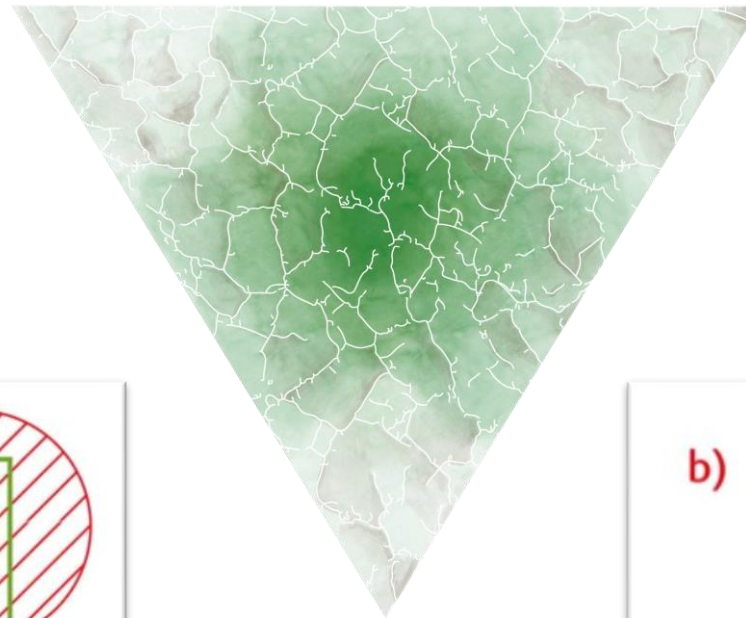
“Trilemma” of Land Use



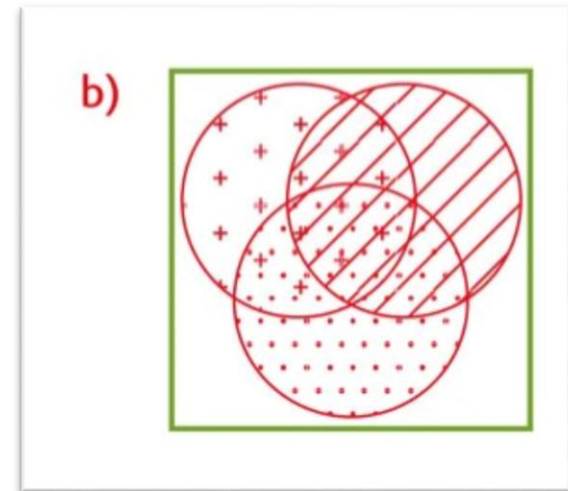
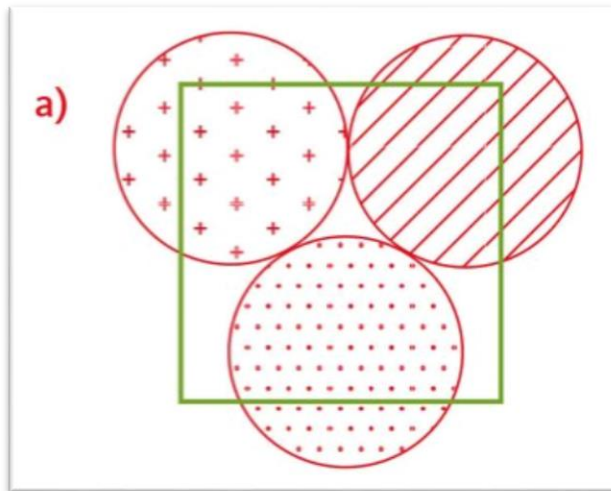
**Climate
protection**



**Biodiversity
conservation**



Food security



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 CO₂-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



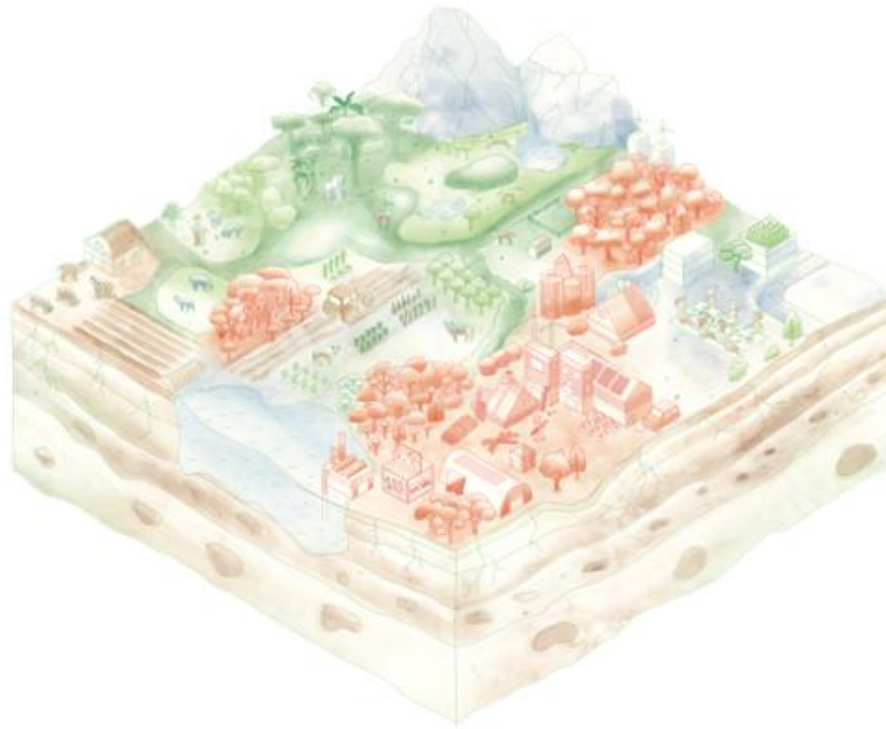
Orientation of agricultural trade towards sustainability and resilience

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

4 – Transform **dietary habits**

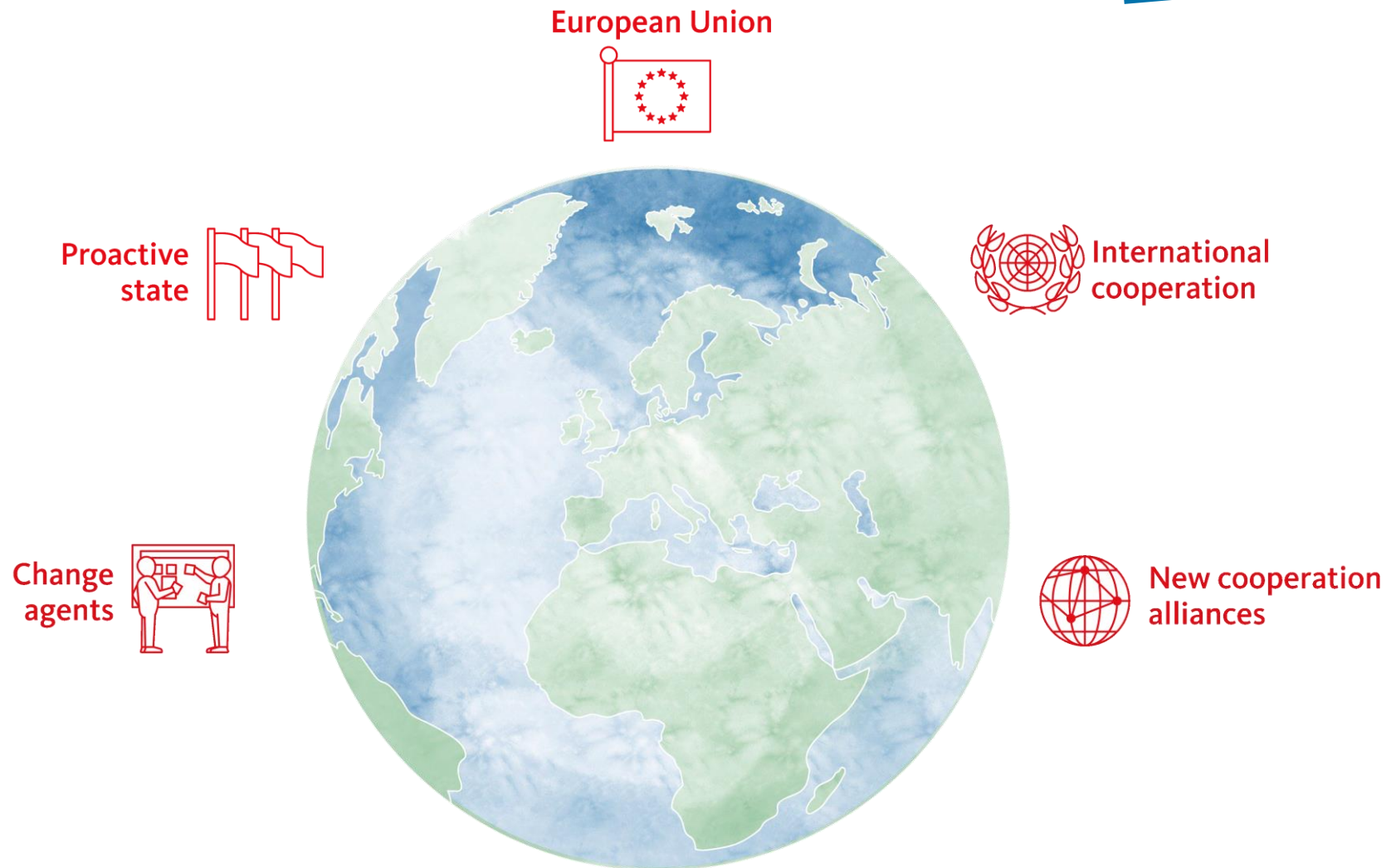


5 – Shape the **bioeconomy** responsibly and promote **timber-based construction**



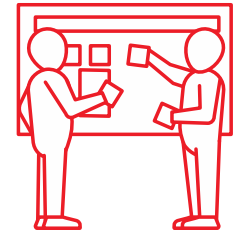
- **Sustainable bioeconomy** needs a limiting framework and prioritises material use cycles, e.g. timber-based construction.

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)



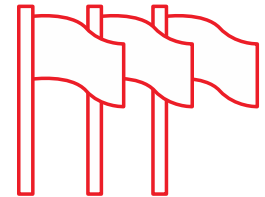
(Photo by Andréia Martins/AMLD)

- > 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**



Instruments and processes of the proactive state

(National) policy mix

Sectoral **incentive and pricing instruments (Section 4.2.1)** for sustainable land stewardship

Sectoral **sustainability standards (Section 4.2.2)** for sustainable land stewardship

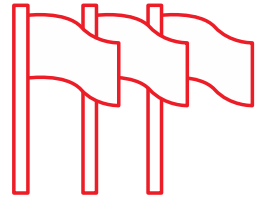
Further develop **spatial and landscape planning** in the sense of the integrated landscape approach (**Section 4.2.3**)

Improve **indicators and monitoring (Section 4.2.4)**

Consistent system made up of frameworks, trade and distribution policy (**Section 4.2.5**)

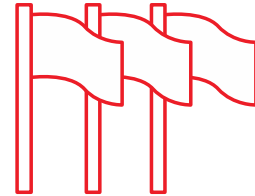
Instruments and processes of the proactive state

Further develop **spatial and landscape planning** in the sense of the integrated landscape approach (**Section 4.2.3**)



Instruments and processes of the proactive state

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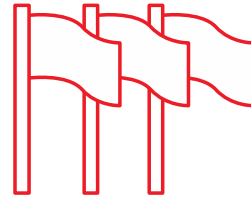


Spatial planning (ROG)

- From coexistence to integration on the land
- Strengthening the possibility of multifunctional land use in planning law
- Tie regional planning to climate protection goals
- Designate priority and reserved areas for the protection and of climate protection or multifunctional ecosystem services

Instruments and processes of the proactive state

Further develop **spatial and landscape planning** in the sense of the integrated landscape approach (**Section 4.2.3**)

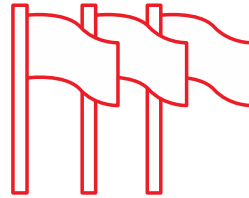


Landscape planning (BNatSchG)

- Strengthen the weight of landscape planning in relation to other planning activities
- Strengthen the weighing directives in favor of biodiversity conservation, climate protection and ecosystem services
- Tie regional land use planning to landscape planning

Instruments and processes of the proactive state

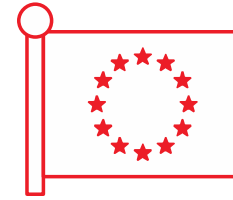
Further develop **spatial and landscape planning** in the sense of the integrated landscape approach (**Section 4.2.3**)



Local planning (BauGB)

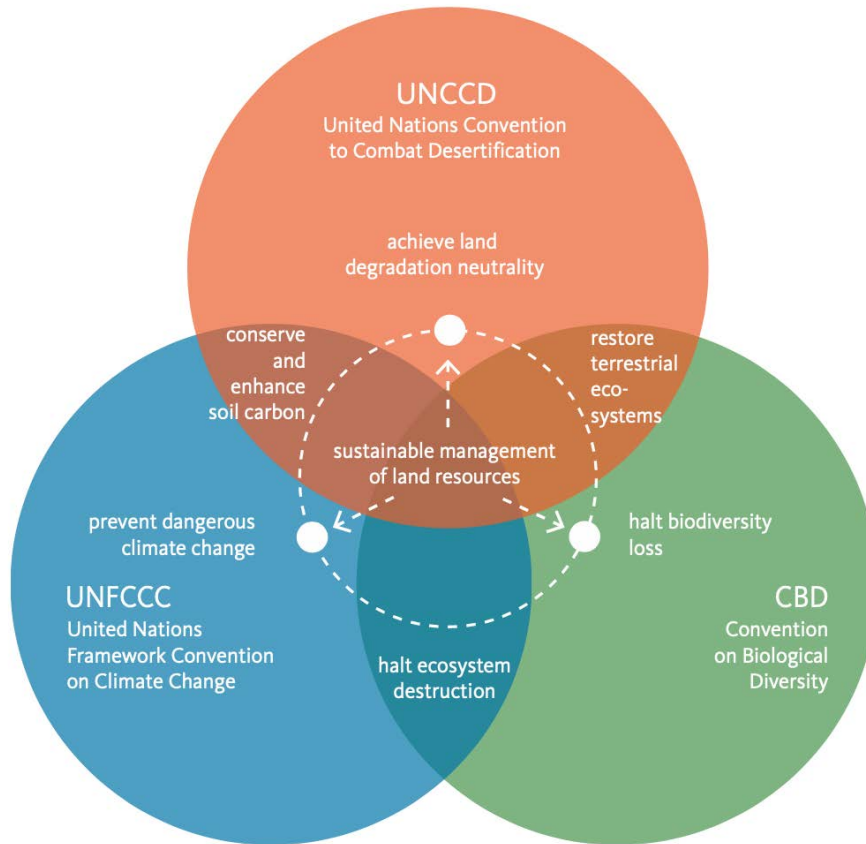
- Tie to landscape planning
- Use land use plan + development plan for citywide protection of ecosystem services

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



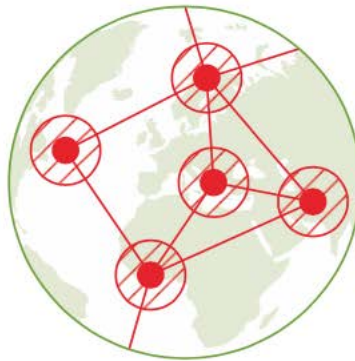
- > A **joint conference** of the Rio Conventions and a strong CBD post-2020 framework can promote the land transformation
- > Two **new binding protocols for the CBD** on conservation and sustainable Use

5 – Establish new cooperation alliances

Regional alliances



Supranational alliances



Global conservation alliances



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

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 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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