



# **Nexus – Research and “How To” for Action**

**From 2011 Bonn Nexus Conference to 2014 follow up  
in support of sustainable development goals**

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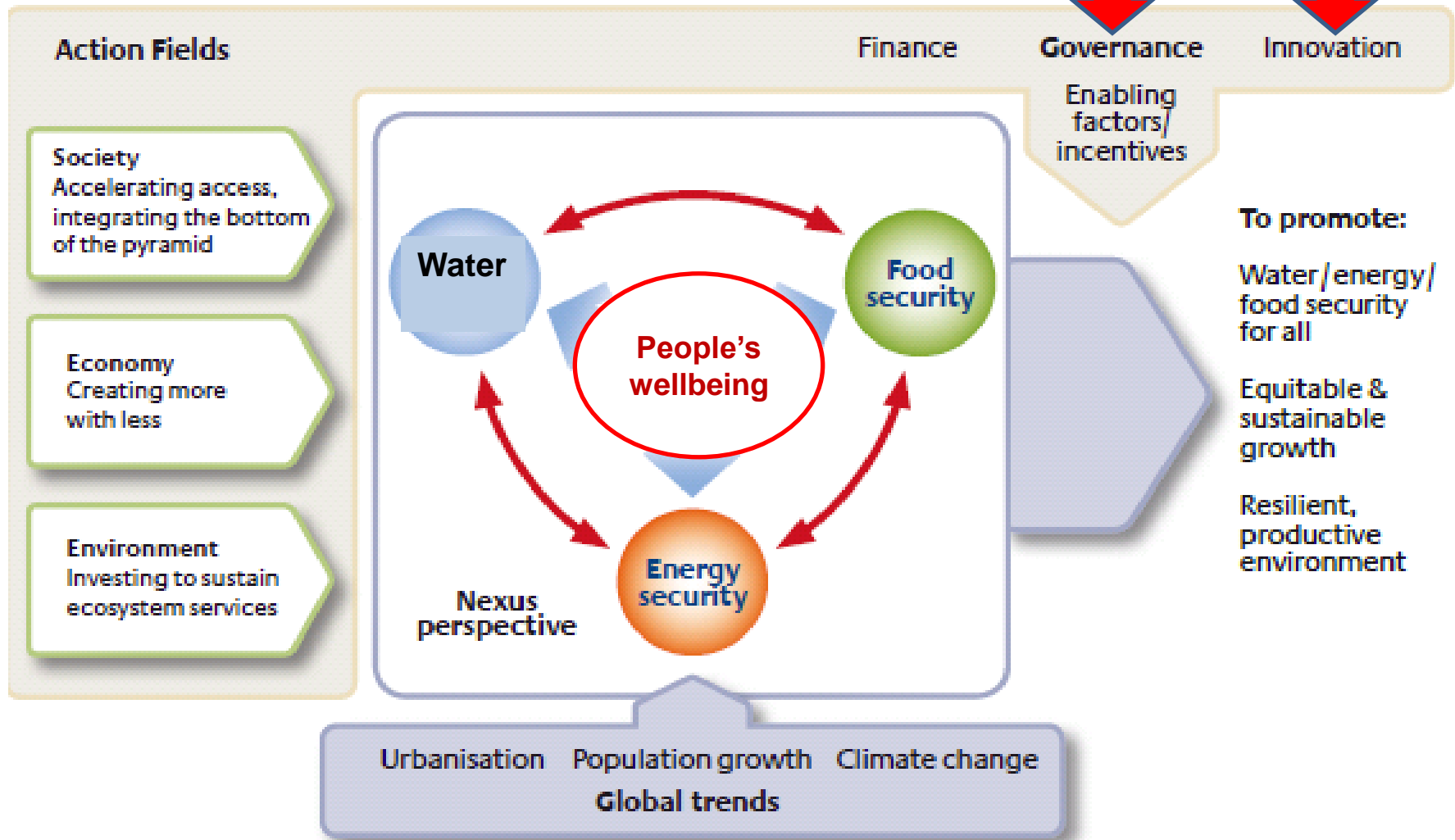
March 5, 2014 Chapel Hill

Nexus 2014 Water, Food, Climate, Energy Conference

*Learning from the Past, Building a New Future: Nexus Scientific Research*

# Nexus Approach: People at the Center !

## Governance, and Innovation facilitating impact



# Messages from the 2011 Bonn Nexus Conference (1)

## **Principles:**

1. Putting people at the center of the nexus
2. Work toward legislative frameworks, good gov., reducing corruption
3. Involve local communities

## **How to?**

Incentives, policy coherence mechanisms, institutional frameworks, education, information, research and empowerment

# Messages from the 2011 Bonn Nexus Conference (2)

## **Nexus opportunities require and entail**

- Overcome sector silos / tap synergies
- Get coherence
- Accelerate access to w-f-e
- Create more with less
- End waste, minimize losses
- Value natural infrastructure / ecosystems
- Mobilize consumers

# The Nexus 2014 Declaration

Declaration is great! Can impact on SDG  
Thinking and effective Implementation

Consider more emphasis on:

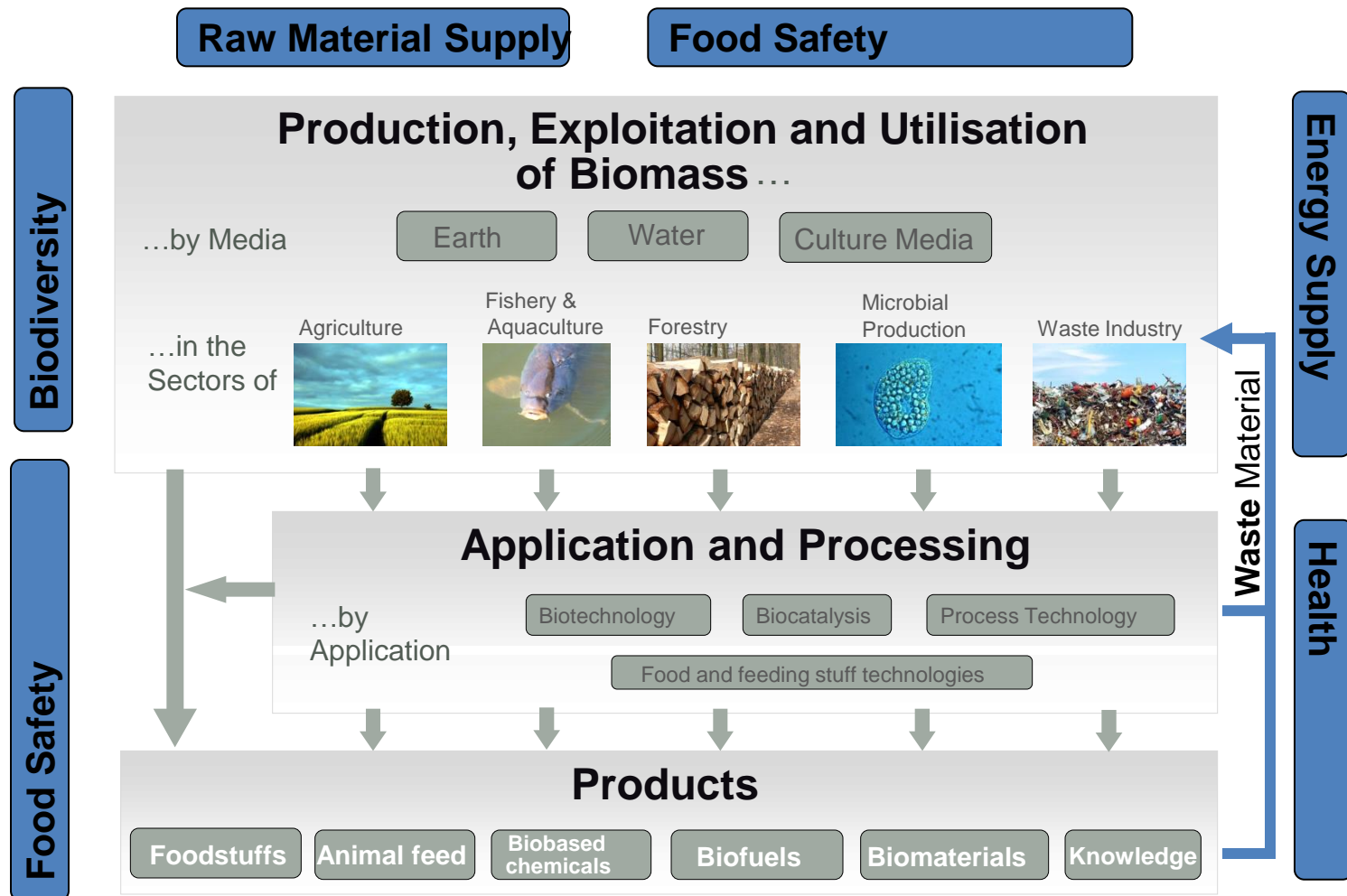
- Science and Technology;
- Health & Sanitation;
- Connect to industrialization and growth (see OWG/SDG) through resource efficient transformations.
- Governance and management of Nexus;

# Nexus research to address 3 key issues

1. Trans-sectoral actions for SD investment (bioeconomy)
2. Governance (decentralization and scale)
3. Innovation (new research opportunities)

# Key Issue No. 1: Trans-Sectoral Actions

## Example : Bioeconomy (connecting water, food, energy in “value nets” needs multi-stakeholder systems)



# Key Issue No. 2: The Nexus governance challenges

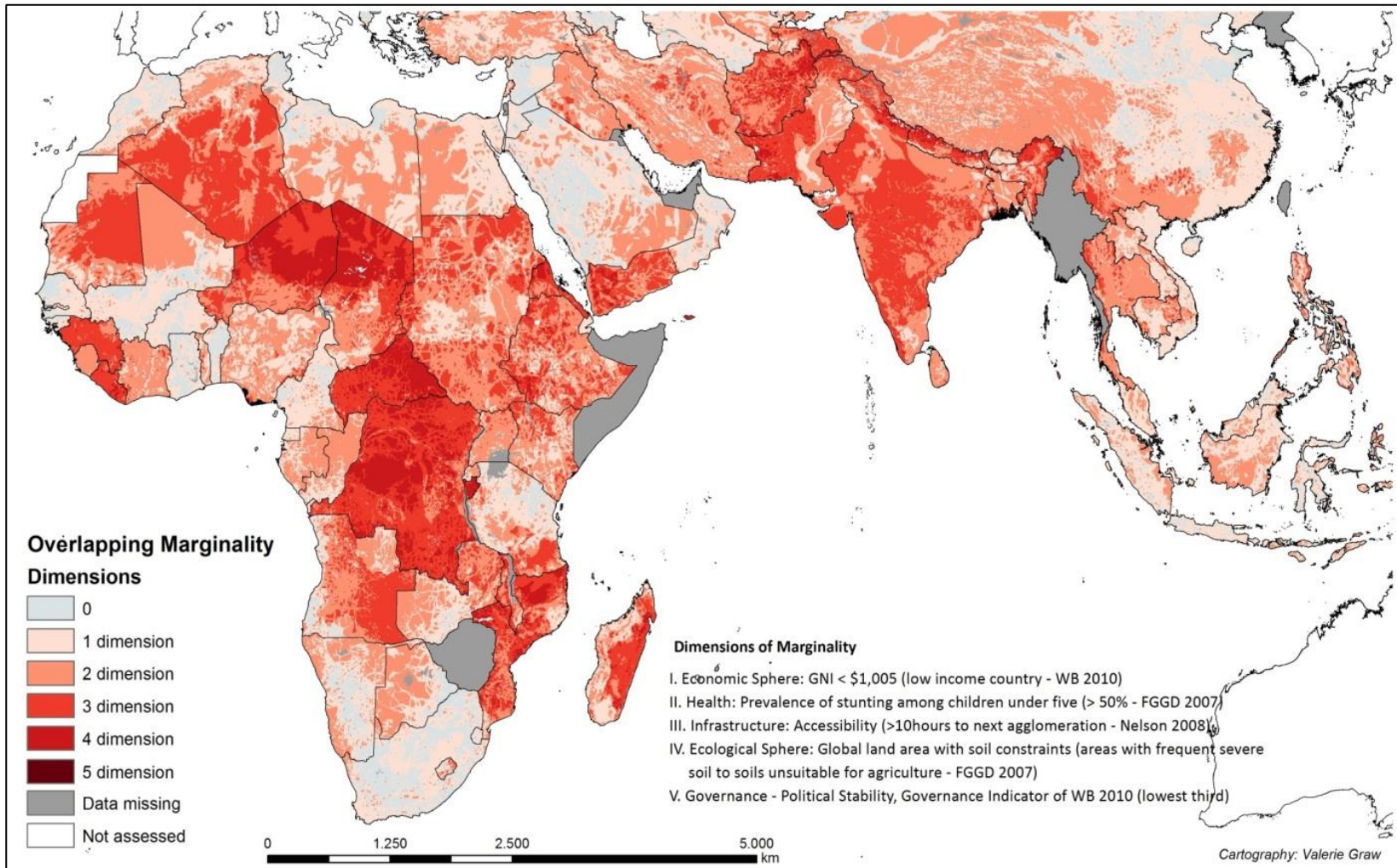
Governance done in isolation

- Water: public, private and contested
- Food: private and neglected
- Energy: public, private and regulated and mismanaged
- Climate: rarely ungoverned

Challenge to govern nexus aspects... but how?



# Governance Accross Scales (must be governed in centralized and decentralized ways; for instance adjusted to marginality patterns in ecology context (food, soil, water, etc.)



Source: Graw & Husmann, Chap.5, in von Braun, Gatzweiler, 2013

An online book, free for all at: <http://www.springer.com/environment/book/978-94-007-7060-7>

# What Nexus scales?

## Food-Water-Energy Nexus is

- mostly local,
- some national,
- some transnational
- some global

**>>> big implication for Nexus themes in SDGs**

# Emphasis on local governance in combination with global (SDG) rule-making

- Requires well functioning decentralization – fortunately positive world wide trend toward better decentralization
- The three elements of effective decentralization matter for nexus governance:
  1. Administrative decentralization
  2. Political decentralization
  3. Fiscal decentralization

# What nexus governance?

- 1<sup>st</sup> best - establish Nexus governing bodies? = Not likely
  - 2<sup>nd</sup> best - establish intra-governmental consultative mechanisms for Nexus-governance = many exist already
    - not bigger / better silos, but flexible accross sectors
    - direct government-to-government networks, rather than international organizations
    - move from context specific “best practices” to “good fit”
- >>> Big implications for Nexus approach in SDGs

# Key Issue No 3: Nexus innovation across sectors, and scales, and regions

Needs science policy in support of trans-disciplinarity to tap Nexus opportunities.

Examples:

1. Comprehensive foot-print analyses (e.g. global externalities of scarce water foot prints in multi-country models)
2. Comprehensive food security – climate change research (not as currently: 85% focused on production effects, neglecting access, volatility, extreme events, nutrition)
3. Information and behavioral change support in complex adverse Nexus environments, e.g. WATSAN – Agriculture multi-use water systems in peri-urban zones

**>>>Big implications for Nexus themes in SDGs**

# The way forward with nexus approach

**The opportunity:** Nexus approach facilitates results oriented connection among key SDGs, and effective SDG implementation >2015

## **The needs:**

- Facilitate stakeholders' voice (i.e. business and political bodies)
- Identify governance mechanisms; respect great diversity ("best fit")
- Drive Nexus innovation and research agenda toward the highest expected returns to science investments *between* sectors

# **The way forward with nexus approach**

**The doubts:** sectoral forces are very strong;  
They will try to capture their piece of Nexus  
or fight for their special interest domains

## **The fact:**

- We must overcome hurdles on the way forward with Nexus
- The SDGs will not function without a Nexus approach guiding their implementation