



International Conference

Sustainability in the Water-Energy-Food Nexus

19 -20 May 2014 in Bonn, Germany



Bringing Science to Bear on the Gaps in the WEF Nexus

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Policy & Institutional Responses

How to Achieve WEF Security?

Connecting to the economic development narrative

- Mobilizing capital and investments
- Post-2015 development agenda (sustainable dev. goals, SDGs)

Human and social dimensions

- Human rights, human wellbeing and livelihoods
- Building human and technological capacity

Integrating the security nexus

- Policy and ministerial integration
- Transboundary cooperation

But... where are the roadblocks?



Asymmetries in the WEF Nexus - 1

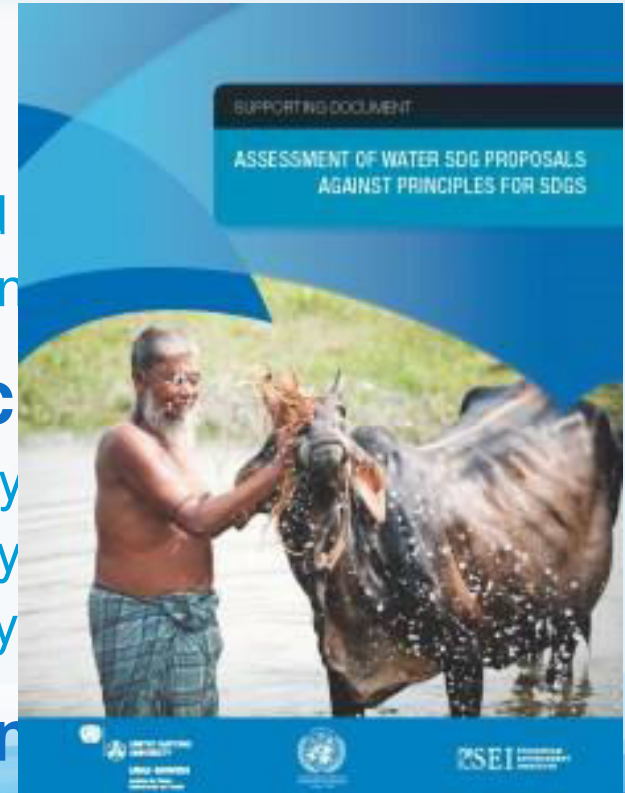
Public perception

- Right/public good vs. commercial good
- History of provisioning and development

Drastically different economic

- Global water “market”: \$560 billion / y
- Global energy market: \$6,000 billion / y
- Global food sector: \$4,800 billion / y

Relative “strength” of governm





Asymmetries in the WEF Nexus - 2

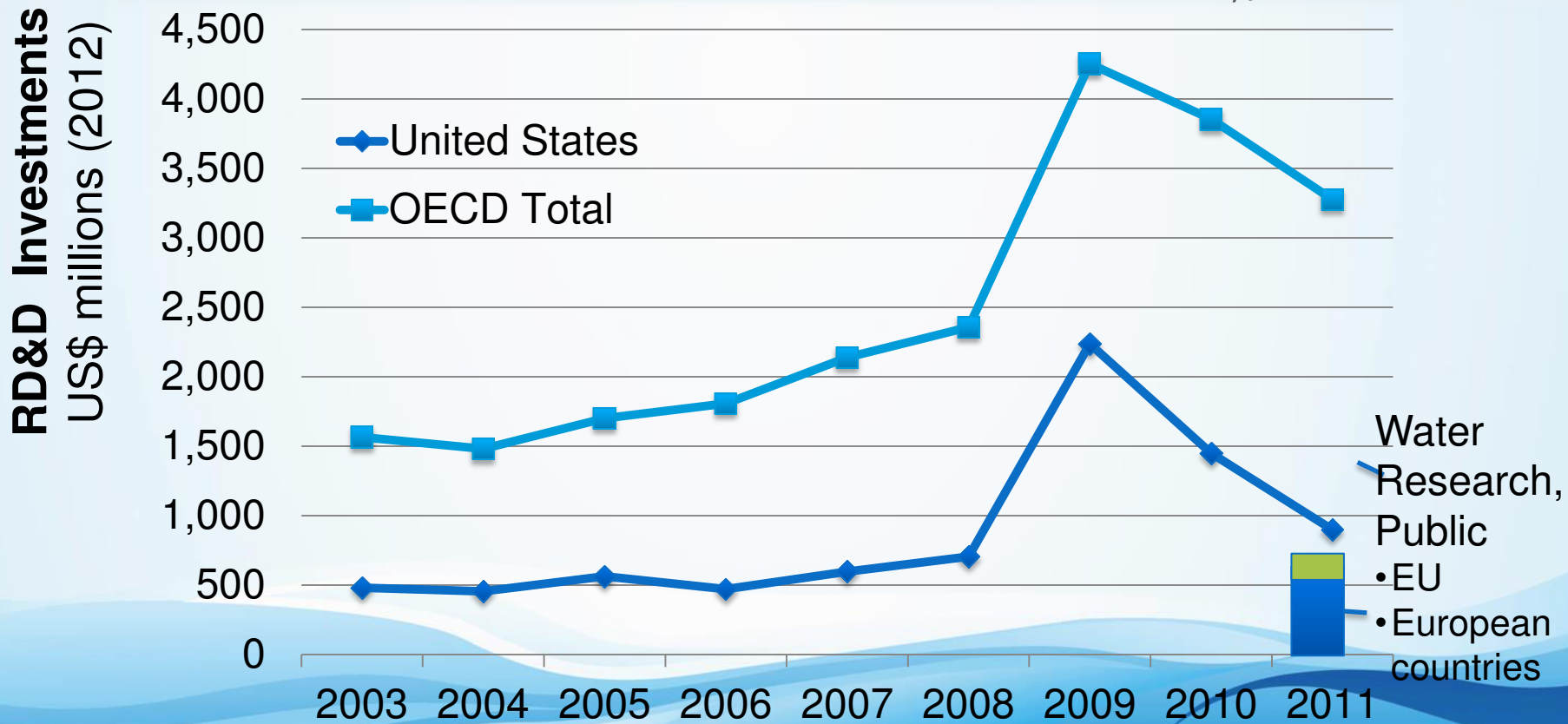
Geographical scope and scale

Research & development investments





Research Investments - Energy & water



Source: IEA



Emerging Research Domains

Challenge Areas for Nexus Research - 1

1. Identifying and quantifying tradeoffs

- Disconnects in policy development
- Analysis of asymmetries (local to national contexts)

2. Benefit-sharing

- Estimating leveraged benefits
- WEF benefit sharing in transboundary situations
- Benefits to climate change adaptation (and mitigation)
- Increased societal resilience and disaster risk reduction

3. Risk analysis

- Understanding linked risks: climate change, water security, societal instability, economic crises
- Quantifying and valuating risks



Emerging Research Domains

Challenge Areas for Nexus Research - 2

4. Development agenda

- Post-2015 development agenda – *interlinked targets*
- Economic and policy instruments – *connecting across scales*
- Consideration of social equity – *bottom billion*
- Dynamic, interlinked modeling and scenarios

5. Resource efficient technologies

- Assessing inefficiencies in value chains – *contextual comparison across technologies*
- Financing and enabling technologies





Connecting to Post-2015 Agenda

Providing evidence base for WEF integration

Determining linked indicators & measurement

Demonstrating implementation scenarios





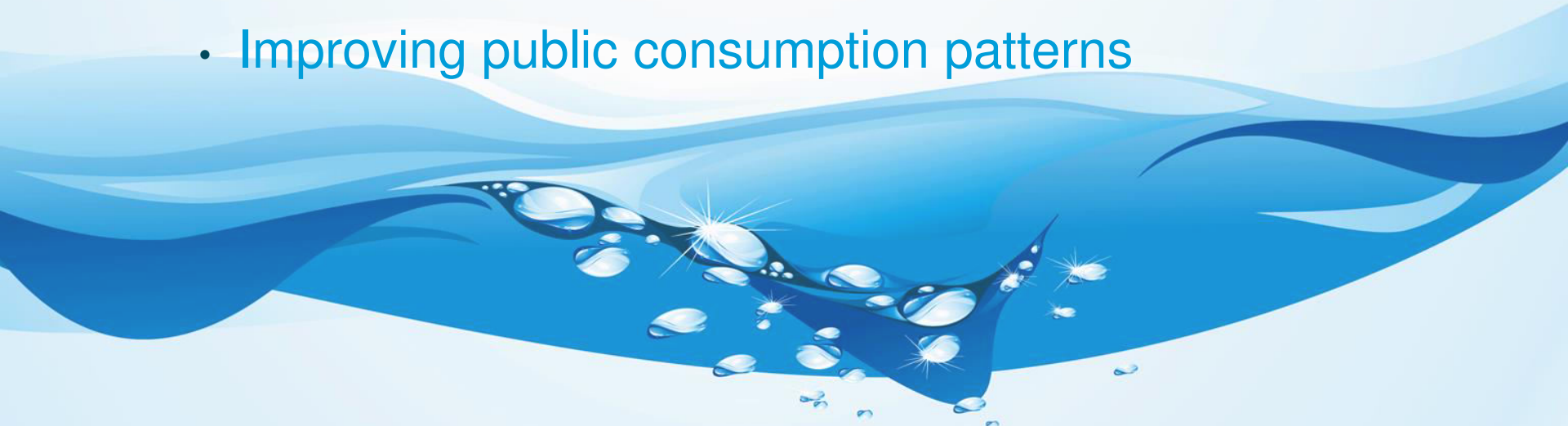
Risks & Opportunities in Research

Risks

- Skewed public perceptions (fracking, dams, biofuels)
- Asymmetries, lobbies over-riding public interests

Opportunities

- Driving policy agenda
- Economic boost and alternative livelihood creation
- Improving public consumption patterns





Players in WEF Research

Academia and scholarly research community

National and international think tanks

The United Nations system

- A “UN-Nexus” coordination mechanisms?
- UNEP, UNU, FAO, UNIDO, UNDP, IRENA, UNDESA...



POLICY-RESEARCH BRIDGING



UNITED NATIONS
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UNU-INWEH

Institute for Water,
Environment and Health
The UN Think Tank on Water

HUMAN DEVELOPMENT

A WORLD FREE
OF WATER PROBLEMS

ECOSYSTEMS

CAPACITY BUILDING

KNOWLEDGE ENHANCEMENT

Thank you

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