

TOWARDS UNDERSTANDING THE INTEGRATIVE APPROACH OF THE WEF NEXUS

Prepared by Dr. Mohammad Al-Saidi
Senior Researcher, ITT, TH Köln
WEF Nexus Forum 15-16 June 2016

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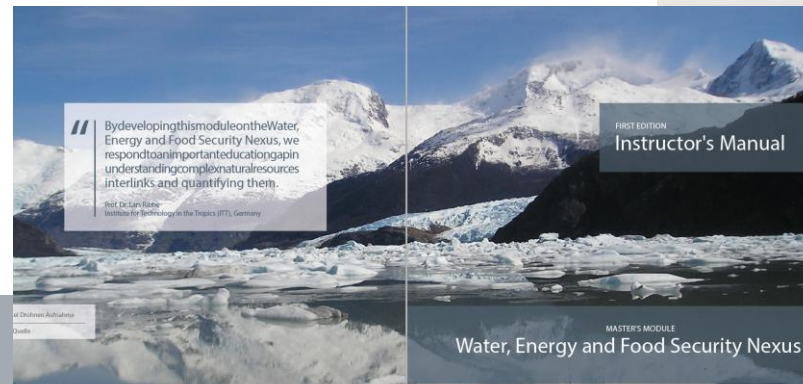
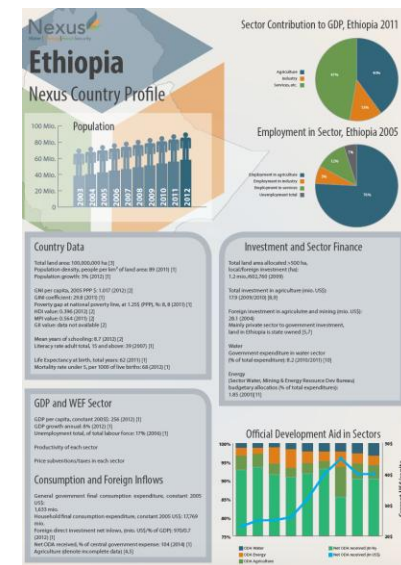
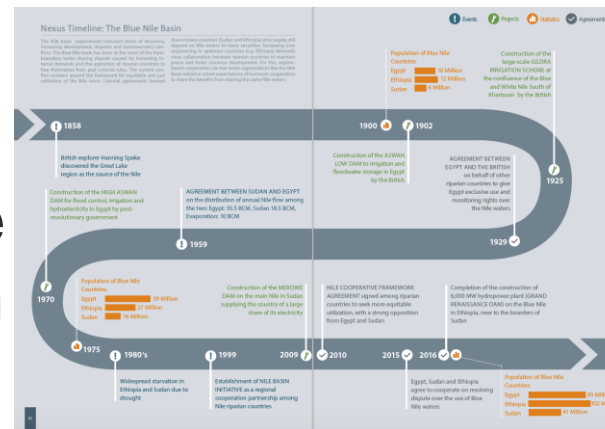
Evaluation of the Nexus Debate

WEF NEXUS RESEARCH FOCUS



- A part of the research structure of the TH Köln with members from different faculties: promotion of education, research projects and publications, e.g.:

- Nexus Module
- Nexus Outlook – online based publications with Nexus case studies
- Nexus Country Profile
- Diverse scientific publications



1 STUDY – LITERATURE REVIEW NEXUS

- Aim of the Study:

Investigate the drivers of the Nexus

Analyze the understandings of the Nexus in recent literature

Make an initial evaluation of the Nexus debate

- More than 300 publications on the Nexus reviewed
- Indepth study of 35 key publications
- Categorization of publication according to different indicators regarding their perception of the Nexus

1 THREE DRIVERS OF THE NEXUS

1. **Increasing Resource Links due to growing scarcities:** the notion of growing demands, risks and insecurities combined with debates on tipping points and thresholds
2. **Recent resource supply crises:** e.g. drought in China in 2010 and 2011, heat wave in Europe in 2003 and 2007
3. **Failures of sector-driven management paradimngs:** failures and criticism of IWRM

1 SCIENTIFIC PRECEDENTS FOR NEXUS

Process Tracing of IWRM and Nexus Perspectives in Comparison

	IWRM paradigm	Nexus paradigm
Milestones in Global Environmental Policy	<ul style="list-style-type: none"> - UN World Water Conference in 1977, Argentina - International Conference on Water and Environment in Dublin 1992 - Rio Conference in 1992 	<ul style="list-style-type: none"> - World Economic Forum Annual Meeting 2001 - Bonn Conference 2011 - Rio plus 20 conference in 2012 - Conferences
Underlying theories / concepts	Integrated Management, mainly based on ecological economic concepts (Daly, Constanza, Boulding, Georgescu-Roegen, Holling, Odum)	Integrated Management?!
Adocacy institutions	Global Water Partnership (GWP) 1996; World Water Council (WWC) 1996	?

SCIENTIFIC PRECEDENTS FOR THE NEXUS

Science Debate *Sustainability Science*

- Resource values
- Modernization and industrialization impacts on resource securities

- Externalities
- Resource sustainability
- Intergenerational equity

- Ecosystems thinking
- Socio-ecological systems

- Systems resilience and metabolism
- Ecological innovations
- Softpaths to intensification and sustainability

500BC until 19th century

1950s & 1960s

1970s

1980s

1990s

2000s

Today

Public Debate *Environmental Policy*

- Resource access and development
- Nature engineering

- Growth boundaries
- Public and private management
- Participatory management

- Sustainable development
- Adaptive governance
- Resource security
- Integrated natural resources

- Ecological risks (management) & uncertainties
- Green growth
- Nexus integrative approach

1 SCIENTIFIC PRECEDENTS FOR NEXUS

Three elements of the Nexus as Integrated Management:

- (1) Intersectorality of resource use issues
- (2) Interdependence and interdisciplinarity of management decisions
- (3) Interactionality of impacts of resource allocations

NEXUS UNDERSTANDINGS

Understandings of Issue Integration under the Nexus

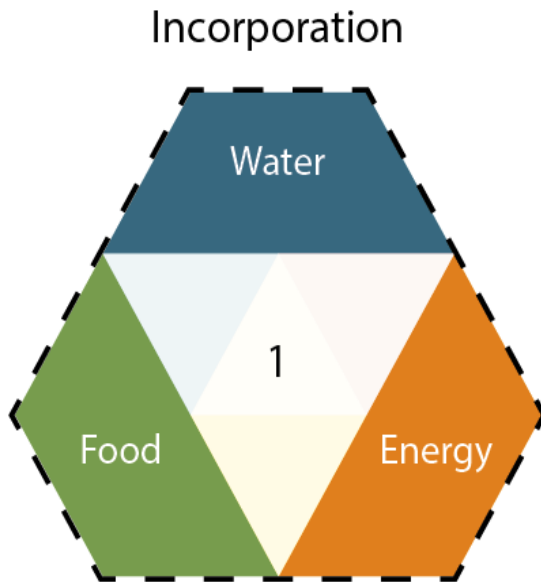
Bringing the issues of the three sectors into one system

‚Bird eye view‘ of the Nexus

e.g. macro-level indicator-based assessments; integrated analysis,

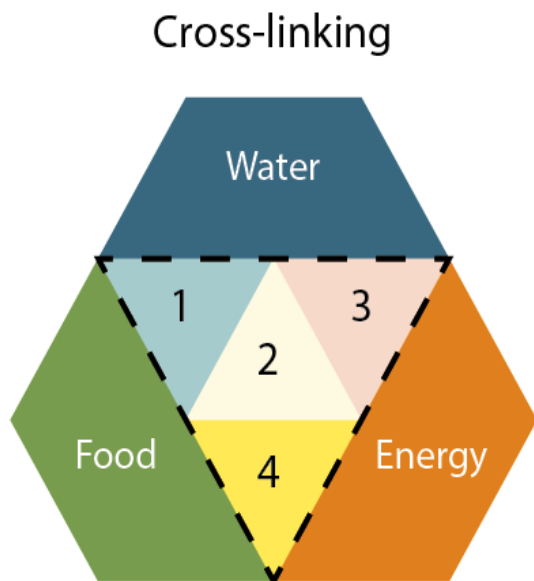
metabolism approaches, multi-sectoral system analysis, institutional and socio-

economic analysis



NEXUS UNDERSTANDINGS

Understandings of Issue Integration under the Nexus



Practical view in concentrating on concrete interlinks and highlight priority issues

‘Inside-out view’ of the Nexus

e.g. global assessment of priority linkages,

indepth country and regional linkages,

different sub-nexus assessments, livelihoods

assessments

2

NEXUS UNDERSTANDINGS

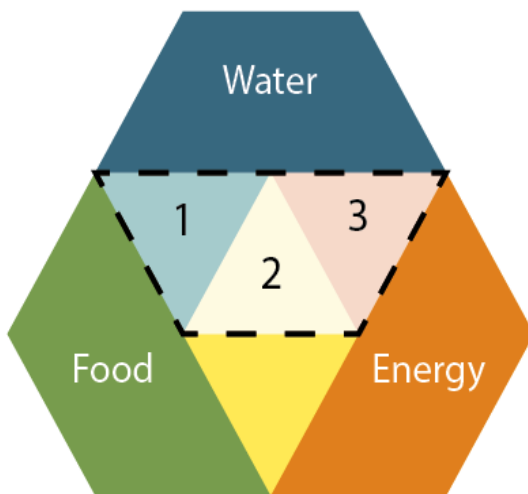
Understandings of Issue Integration under the Nexus

The sectoral view of operational managers and sector decision making who try to include key related issues into their strategies

‘prism view’ of the Nexus

e.g. water governance assessments, basin assessments, environmental footprints

Assimilation



USEFULNESS OF NEXUS FOR RESOURCE PLANNING

Nexus understanding	Purpose in management value chain
Incorporation	Policy formulation, resources planning, allocation and investments
Crosslinking	Environmental Coordination and Regulation
Assimilation	Operational (Sectoral) Management

2 NEXUS UNDERSTANDINGS

People and Institutional Integration

Management Level/ Nexus Understanding	Institutional Arrangements	Participation Forms
Policy Formulation & Investment Planning Incorporation	Joint National Plans (e.g. Integrated Resource Plans or IRPs in South Africa), Nexus National Strategies, Nexus -SDGs Implementation Strategies Super-Ministries (Water-Energy/Electricity Ministries –Lebanon, Saudi Arabia etc.) in; Water, Energy and Irrigation Ministry in Ethiopia	National Councils (e.g. National Planning Commission Nepal, South Africa etc.) Environmental (e.g. National Commission)
Coordination Regulation & Cross-Linking	Joint Laws (e.g. Energy and Environment Laws), Dams Guidelines	Reform Committees Steering
Operational Management Assimilation	Integrated National Water Plans, River Basin Organizations, Nexus Smart Sector Policies (e.g. water and energy smart agricultural policies)	Stakeholder Platforms (e.g. Water Basin Committees) Advisory Boards

Evaluation of the Nexus paradigm:

- ✓ Ability to change current policy debates
- Issue and Thinking Novelty
- ✓ Practicability and measurability
- x Clearness and implementation roadmap