



Messages from the Bonn2011 Conference: The Water, Energy and Food Security Nexus – Solutions for a Green Economy*

A new approach - the water, energy and food security nexus

Concerns about limited access to water, sanitation, energy and food – often primarily a consequence of inappropriate governance structures and poor management - and thus inequalities in distribution – are compounded by growing concerns about their future availability and sustainability:

- About 0.9 billion people lack access to safe drinking water,
- 2.6 billion people lack access to adequate sanitation,
- 1.3 billion people lack access to electricity,
- 2.7 billion have no access to modern and healthy forms of cooking,
- close to 1 billion people are undernourished.

Adding two more billion people to an increasingly urbanized and wealthy planet will put significant additional pressure on energy, water and food demands with growing trade-offs among these three development goals; and will accelerate ecosystem degradation. Water, energy, and food sectors are interconnected in important ways, and actions in one sector may either help or harm the other two. Disconnected approaches and silo thinking are more likely to make matters worse.

Action is urgent. If we continue with business as usual we will have – in less than two decades – globally 40% less freshwater resources available than we need for ensuring water, energy, and food security for all and a global development beyond poverty alleviation. Realizing long-term water, energy and food security for all is possible within planetary boundaries. Business as usual cannot achieve this – a transformation is necessary and new opportunities must be identified. We must move towards a nexus perspective:

A nexus perspective increases the understanding of the interdependencies across water, energy, food and other policies such as climate and biodiversity. The nexus perspective thus helps to move beyond silos and ivory towers that preclude interdisciplinary solutions. It opens the eyes for mutually beneficial responses and the potential of cooperation. We need to think and act interlinked to realize direct and indirect synergy potentials.

Understanding the nexus is needed to develop policies, strategies and investments to exploit synergies and mitigate tradeoffs among these three development goals with active participation of and among government agencies, the private sector and civil society. In this way, unintended consequences can be avoided.

In sum, the nexus perspective provides an informed and transparent framework for determining and resolving trade-offs to meet increasing demand without compromising sustainability. It is thus important to incorporate the nexus perspective in Rio + 20 as well as in local, national and other international planning activities focusing on either water, food, or energy.

* convened by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Federal Ministry for Economic Cooperation and Development (BMZ)



Nexus opportunities

Applying a nexus approach is an urgent must to identify the policy levers to implement a common future agenda and to create new opportunities for achieving water, energy and food security while reducing tensions between sectoral objectives. Realizing these opportunities requires action for change in key fields:

Increase policy coherence

by ensuring that synergies and trade-offs among water, energy and food are identified both in design and implementation of policies, plans and investments. And by incentivizing co-operation and coordination for mutually beneficial approaches, multiple benefits and fewer unintended or adverse consequences.

Accelerate access

by progressively realizing – in a more coordinated way – the human rights obligations related to water, sanitation, energy and food to reap the resulting health, productivity and development benefits. And by prioritizing access for the poor and the marginalized in sector strategies, planning and investments.

Create more with less

by increasing resource productivity, establishing mechanisms to identify the optimal allocation of scarce resources for productive purposes, and sustainably intensifying the use of land and water to achieve equitable social, economic and environmentally sound development.

End waste and minimize losses

by reducing waste and losses along supply chains to capture significant economic and environmental gains within and across sectors and reduce demands on water, land and energy. And by changing mindsets and incentivizing technological development to turn waste into a resource and manage it for multiple uses.

Value natural infrastructure

by investing to secure, improve and restore the considerable multi-functional value of biodiversity and ecosystems to provide food and energy, conserve water, sustain livelihoods and contribute to a green economy while strengthening the basic role that nature plays in supporting life, well-being and cultures.

Mobilize consumer influence

by acknowledging and actively utilizing the catalyzing role that individuals have in choosing consumption patterns on water, energy and other resource footprints and improving efficiency of resource use both through their direct actions and in influencing the way business is done.

Principles

Implementing a nexus approach must be guided by overarching principles, namely:

- 1) Putting people and their basic human rights at the centre of the nexus,
- 2) Creating public awareness and the political will to establish effective legislative frameworks, promoting good governance, greatly reducing and eventually eliminating corruption,
- 3) Involving local communities, including indigenous and women's groups fully and effectively in the planning and implementation processes related to water, energy and food nexus for local ownership and commitment.



How to make it work?

While the opportunities of the nexus perspective and their social, environmental and economic benefits are real, implementation requires the right policies, incentives and encouragement, institutions up to the task, leadership as well as empowerment, research, information and education. Accelerating the involvement of the private sector through making the business case for sustainability and the nexus is essential for driving change and getting to scale. In any case, a true nexus approach can only be achieved through close collaboration of all actors from all sectors.

Set the right incentives

- Accelerate access for the poor and marginalised to water, energy and food, for example, by establishing pro-poor sector financing and implementation mechanisms as well as pro-poor tariff systems.
- Identify financing arrangements that encourage and reward innovations or replications of promising initiatives and solutions of mutually beneficial character for the three sectors.
- Include systems of valuing biodiversity and ecosystem services.
- Review existing subsidies and remove those that are harmful to water, energy and food security and productivity while implementing support mechanisms for vulnerable groups (the poor, women, smallholder farmers) that are decoupled from resource use.
- Manage demand to better reflect scarcity of resources, i.e. correctly price resource use either via the market or through government intervention.
- Use the potential of regional and global integration by enhancing markets, trade and sustainable investments to allow for optimal resource use and more equitable distribution of resources.
- Provide secure tenure and user rights to land and water resources, in particular for vulnerable groups.

Mechanisms for policy coherence

- Establish an enabling framework for policy dialogue and coherence across sectors not only in the public sector but also in the private sector and civil society institutions.
- Convene groups of stakeholders to work out how to build coherence in regulatory frameworks, including planning systems that take account of the interconnectivities.
- Set up procedures as part of the planning system to analyze and disseminate information on the interconnectivity between sector policies and to assess all policy options in terms of impact upon the other sectors.
- Announce and implement reviews of international and national policy frameworks and targets to reduce or eliminate those that discourage cross-sectoral integrated solutions at all levels.
- Invite a number of partners to prepare a medium – to long-term “Nexus Strategy” based on what all parties can contribute to national Water, Energy and Food “Outlooks”; in the process, set measurable targets. The Nexus Strategy should include policy priorities, address all relevant actors and set a regular monitoring program for assessing achievements.

Institutional frameworks

- Begin by announcing and implementing cross-sectoral discussions and work toward new institutional arrangements, at the top of national decision making and international agencies, to better cope with cross-sectoral challenges and tomorrow’s interlinked problems.



- Make best use of existing cross-sectoral institutions, such as planning agencies, to achieve targeted cooperation and to inform sectoral implementation while concentrating on the fundamental need to improve sector performance.
- Take steps to promote public-private-civil society partnerships, increasing cooperation and empowerment to jointly identify and implement solutions across the three sectors.
- Assess all available options regarding their impacts on water, energy and food security of the poor before taking major decisions on projects in the water and sanitation, energy and food sectors.
- Copy those who have been able to accelerate the path from research to dissemination to early adoption and provide a framework that is conducive to scaling up of appropriate nexus technologies, innovations, and practices. Ensure a level playing field for new approaches and technologies.
- Develop better measures to monitor and evaluate the added value of integrated nexus planning and mutual beneficial outcomes.
- Develop and implement strategies and related arrangements to enhance resilience to natural disasters and adaptive capacities which recognize the potential multiple impacts disasters can have due to interdependencies between water, energy and food.

Education, Information, Research and Empowerment

- Mobilize the research communities by acknowledging that the nexus perspective is science and knowledge intensive, a cross-sectoral nexus research agenda has to guide and accompany evidence based action, and foster related partnerships with emerging economies.
- Promote understanding of interlinkages between water, sanitation, energy and food sectors and development of response strategies and investment portfolios within and across sectors.
- Foster data collection, assessment and research as well as more and better integrated modelling to fully understand where the critical nexus interactions lie and what they are most susceptible to, in order to assist in informing policies.
- Promote access to information and raise awareness of resource use.
- Train and challenge all actors to take a nexus perspective in decision making and planning and educate the young to think interlinked.

From Bonn to Rio and beyond

Bonn2011 has provided a first platform for consideration of the close interlinkages of water, energy and food security and the benefits of a nexus perspective in a multi-stakeholder process. The specific message from Bonn2011 is clear: outcomes of Rio + 20 in June 2012 should adequately take into account and address the interdependencies between water, energy and food and act upon the challenge to make the nexus work for the poor and for all of us. The nexus approach is very much at the heart of the overall challenge of transforming our economies to green economies by changing growth patterns to become more sustainable.

Making this happen will require to identify the forces that are driving the adoption of a nexus approach and to build alliances with them; this includes supporting leaders and champions at every level to take ownership and to develop the business case for integrated and sustainable solutions.

Considering any change of approach is a particular challenge in today's economic climate. Yet the consequences of inaction will progressively limit our ability to deliver on our commitments and result in increasingly severe consequences for people's welfare, economic growth, jobs, and the environment. The costs of inaction are too high. We need to act now.