

Understanding the Nexus Challenge –Link to Cleantech

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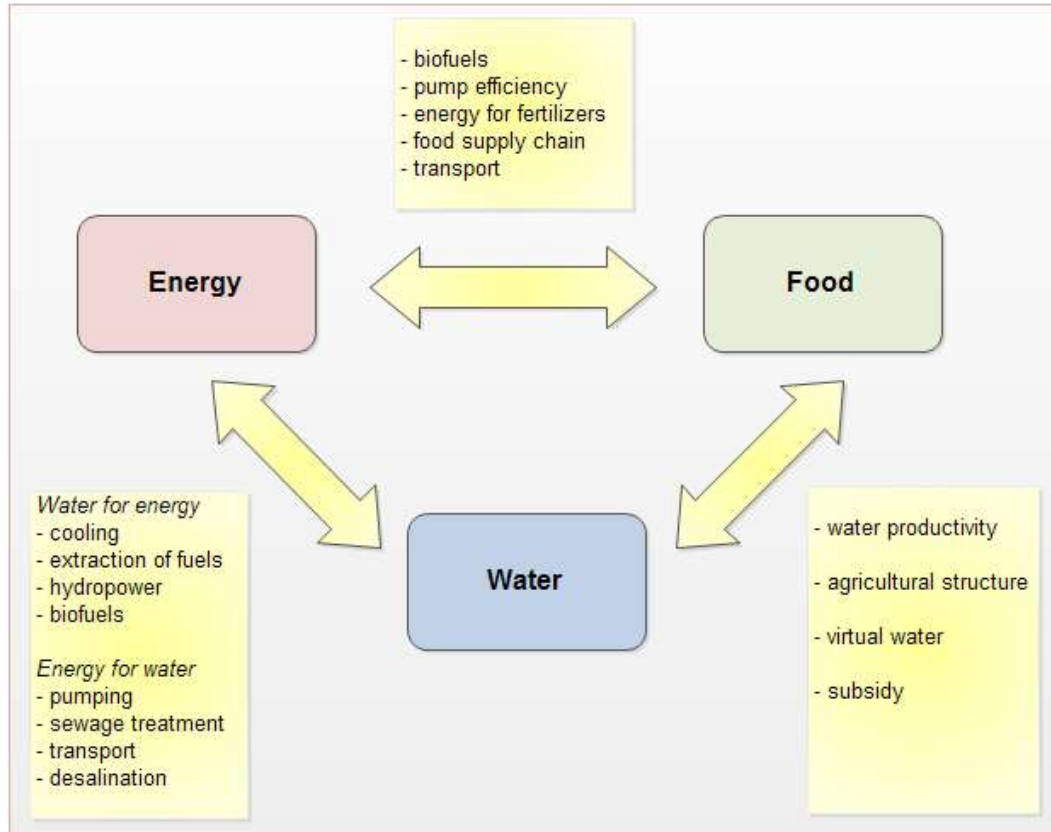


WHAT IS HAPPENING?

- The world population is predicted to grow from 7 billion in 2010 to 9.1 billion in 2050.
- Water demand is projected to increase by 55% over current levels
- Energy demand by 80% (Demand for renewable energy will increase by 60%)
- Food demand by 70%
- In 2008 –Kenya had an overall drop in GDP of 10% due to drought
- China’s electricity generation in 2035 will be 3 more times what it was in 2008
- Currently more than 50% of irrigated agriculture takes place in areas of high or extremely high water stress.
- Roughly 30% of the food produced worldwide – about 1.3 billion tons - is lost or wasted every year, which means that the water used to produce it is also wasted

LINKING ENERGY, WATER AND FOOD RESOURCES

Energy, water and food are inextricably linked

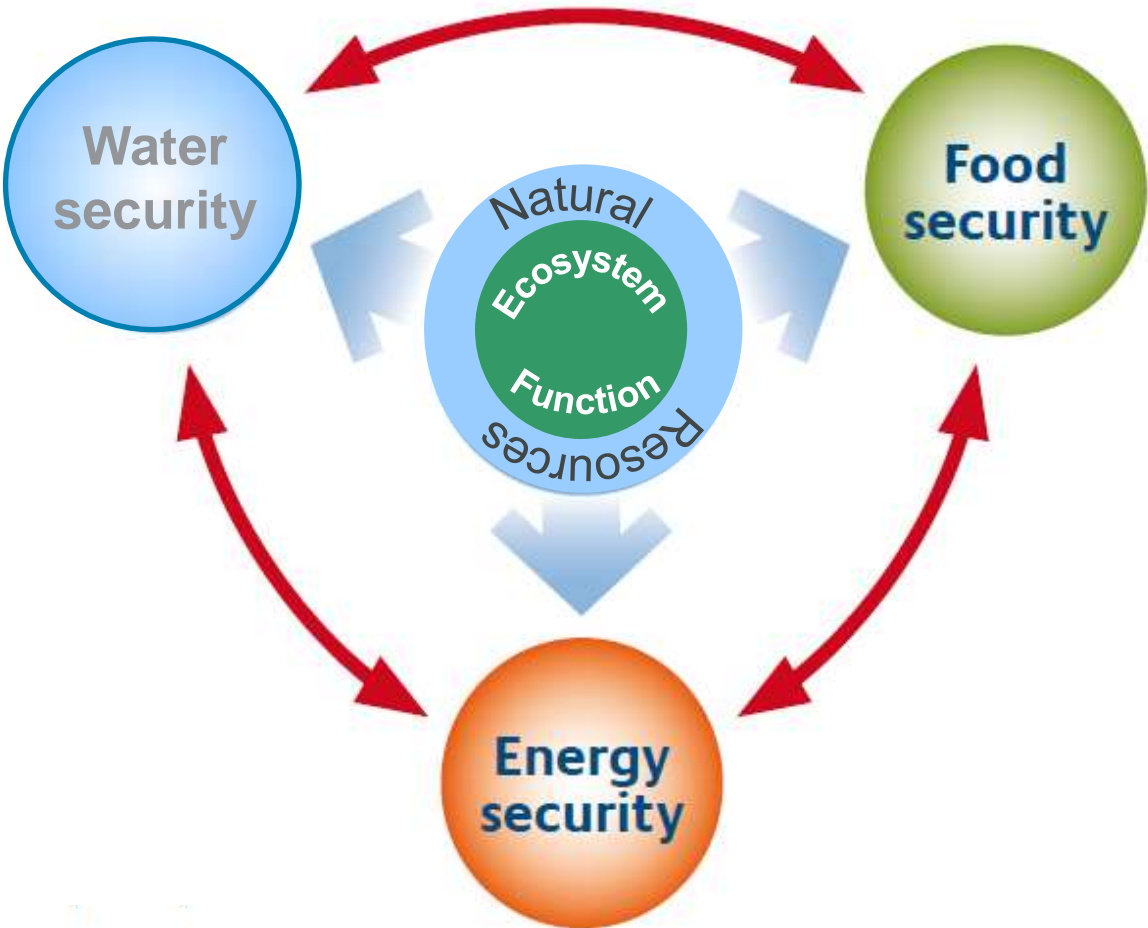


- **Water for energy** currently amounts to about 8% of global water withdrawals (45% in industrialized countries, e.g. in Europe).

- **Food production** and supply chain is responsible for around 30% of total global **energy** demand

- **Food production** is the largest user of **water** at the global level, responsible for 80–90% of consumptive water use from lakes, rivers and aquifers

THE NEXUS



Adapted from SEI 2011

WHAT IS CLEAN TECHNOLOGY?

- Innovation in investment as well as technology which improve operational performance, productivity, or efficiency while reducing costs, inputs, energy consumption, waste, or environmental impacts.
- Opens new avenues to integrate solutions for (water-energy-food) nexus from technologies, built infrastructure and services from ecosystems.
- Investment focus can include water purification, eco- efficient production techniques, renewable energy, green technology, and sustainable business.
- Examples: cleantech for agriculture can mean precision irrigation, pump efficient solutions, use of treated waste water for irrigation and wetland management to reduce impacts from agricultural runoff.

BREAKING DOWN SILOS

- Different objectives, frameworks, tactics
- Improving water and energy efficiency requires collaboration across sectors
- Technology and innovation from one sector could be applied in other sectors
- Need policy tools which encourage development and applications of appropriate technology



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SOLUTIONS FOR THE NEXUS:

Building Partnerships to Optimise Infrastructure & Technology for Water, Energy & Food Security

11-13 NOVEMBER 2014 BEIJING, CHINA



Symposium Themes:

-  **Clean technology (Cleantech) for water, energy and food infrastructure solutions**
-  Social development and support water stewardship and corporate engagement
-  Influencing pathways of investments for in the nexus
-  Natural infrastructure/ecosystems in the nexus
-  Power dynamics (policy and institutional change/collaboration)





Thank you!

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