# Nexus Dialogue on Water Infrastructure Solutions

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# The Dialogue

## Partnerships for innovation in water, energy and food security

waternexussolutions.org

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# Nexus Dialogue on Infrastructure Solutions

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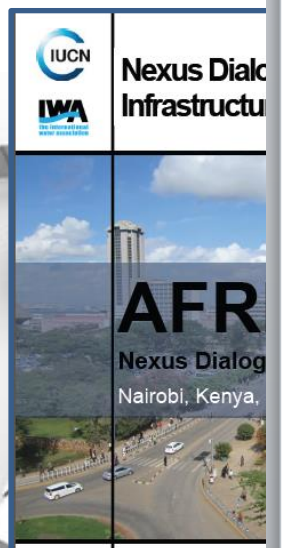


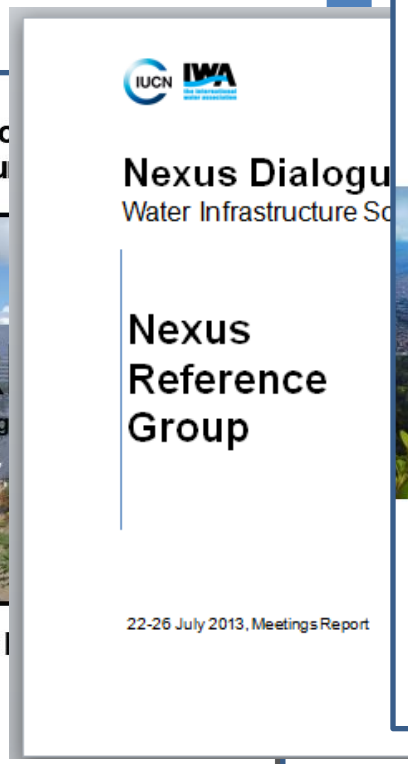



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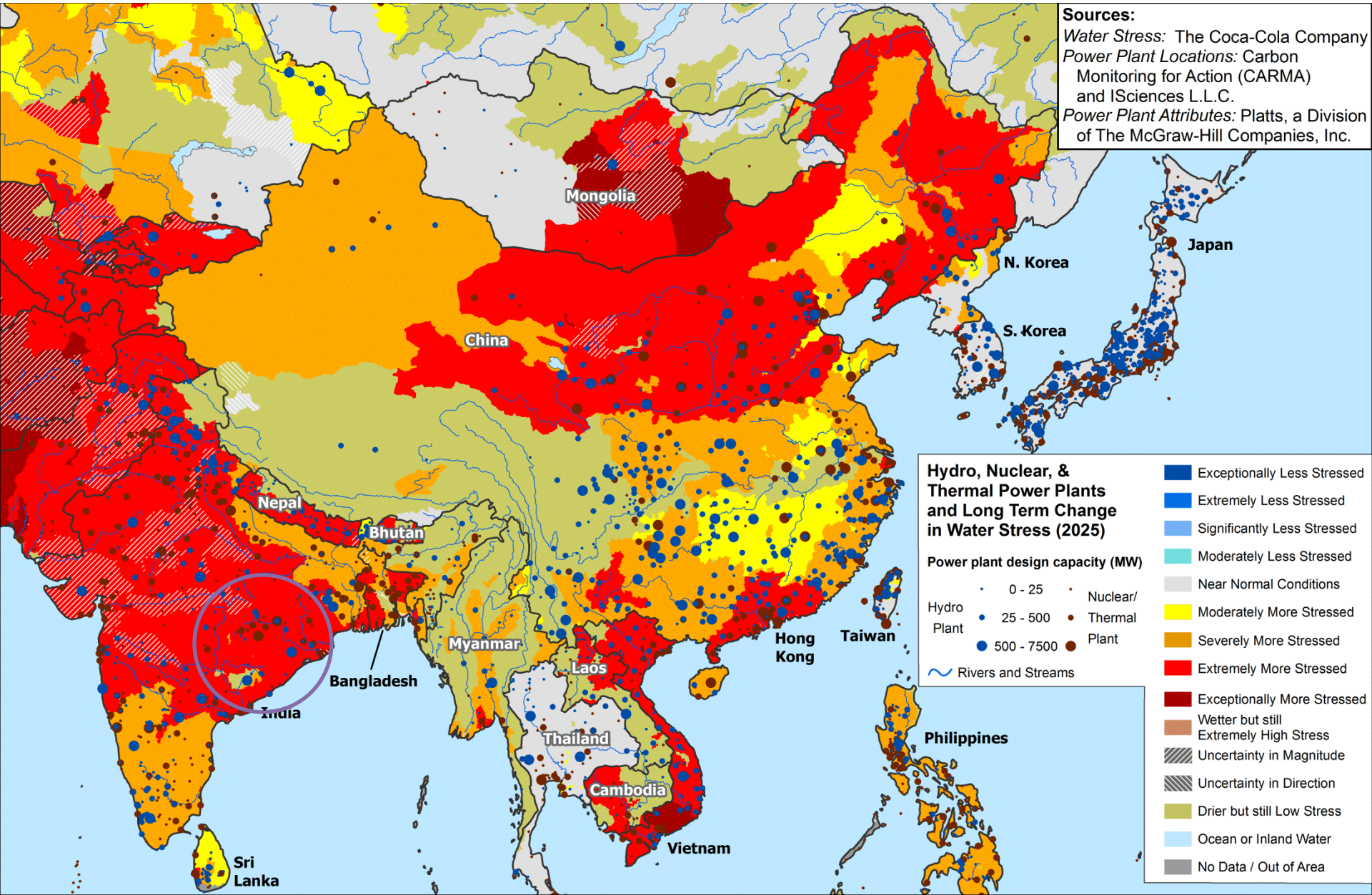
# Long Term Water Stress

(and the location of power plants, based on 2025 IPCC Scenario A1B)



# What is happening?

Globally, by 2050:

- Water demand is projected to increase by 55% over current levels
- Energy demand by 80%
- Demand for renewable energy will increase by 60%
- 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
- In sub-Saharan Africa, levels of access to electricity in rural areas are typically much lower than coverage of water supply and sanitation (Burkina Faso, 1%; Kenya: 8%; Uganda 5%; Tanzania 4%, (SE4All, 2013)). Of the 1.3 billion people with no access to electricity, 95% of them are in sub-saharan Africa
- 2011-2030 – to close the energy poverty gap need US$980 billion

# Water in the economy….

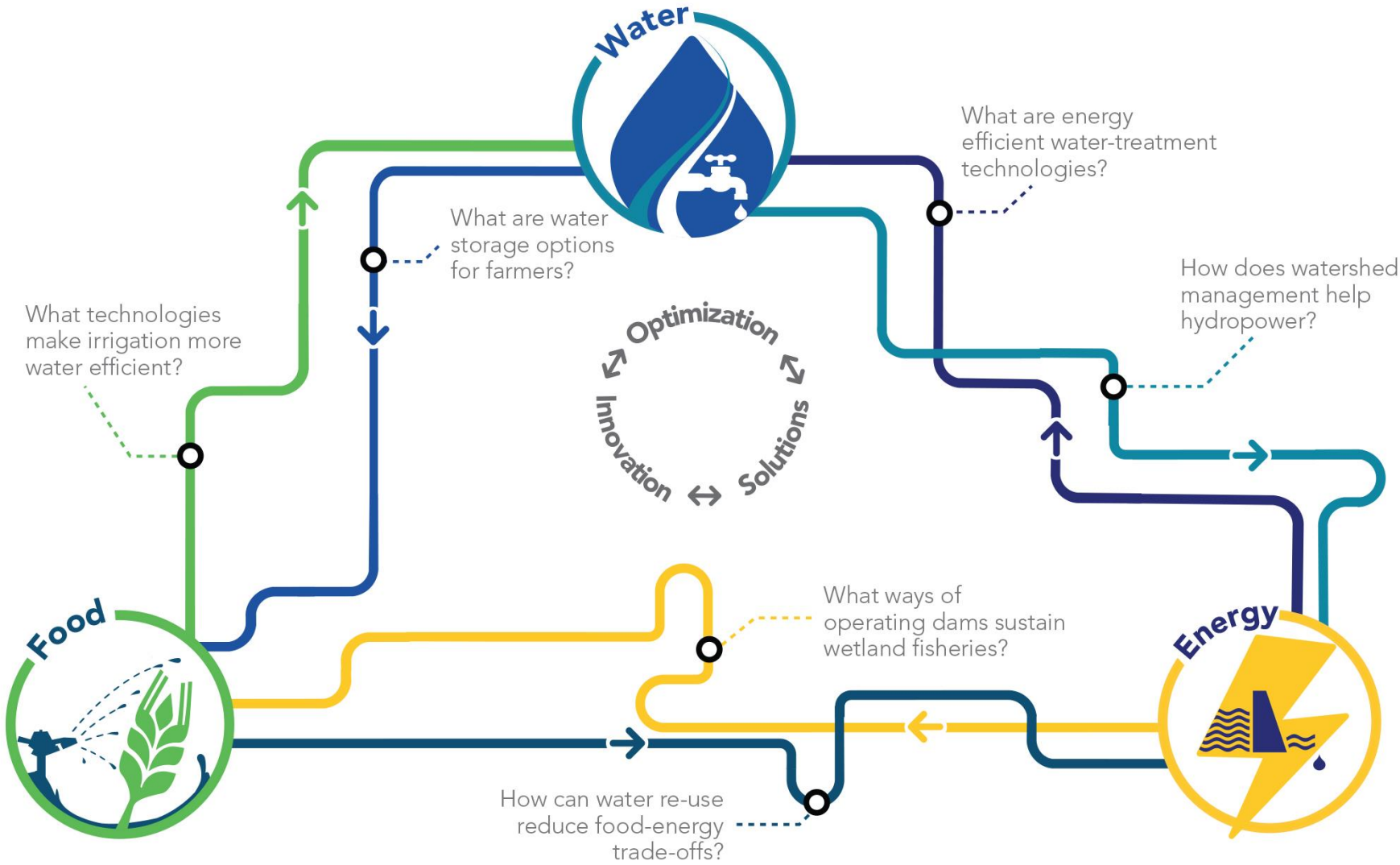
- Turkey: cotton and textiles represent 20% of export income
- Peru: asparagus largest export crop represents 40% of export revenue from agriculture – in one valley
- S. Africa the Western Cape – 12.5% of land area, responsible for high value crops, represents 55-60% agriculture exports –needing irrigation, and therefore energy
- Kafue in Zambia: Kafue Gorge power station produces 50% of total electricity
- France: 75% of surface water storage is for hydropower
- Gujarat……

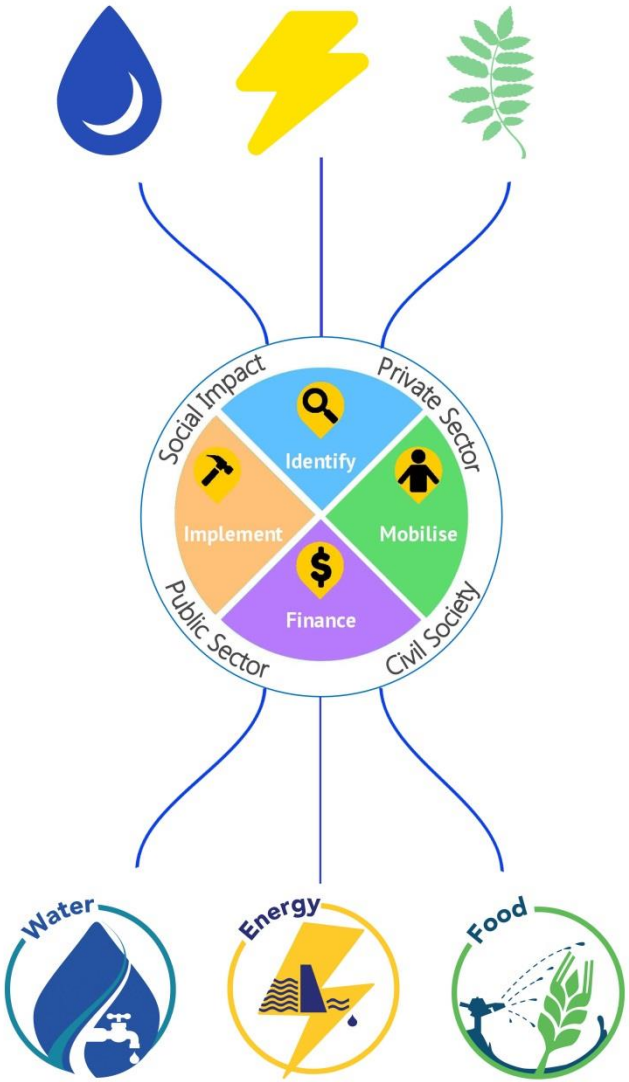
*Its hard to keep on top of…..*

# We silo ourselves

- Different objectives, frameworks, tactics
- IWRM plans (all of them) consider energy a user, or a beneficiary of an allocation, and not a water manager
- Cost recover of water use by energy sector is poor
- Energy operates differently
- Agriculture remains fairly silent '*en masse*', but many solutions locally

# Interactions between water, energy and food

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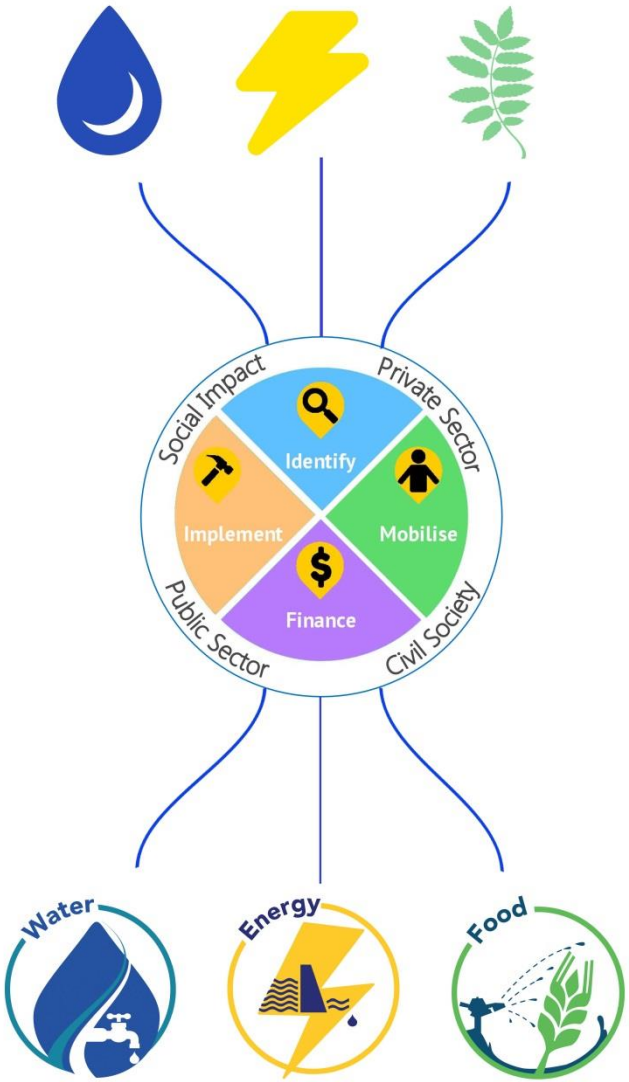
Food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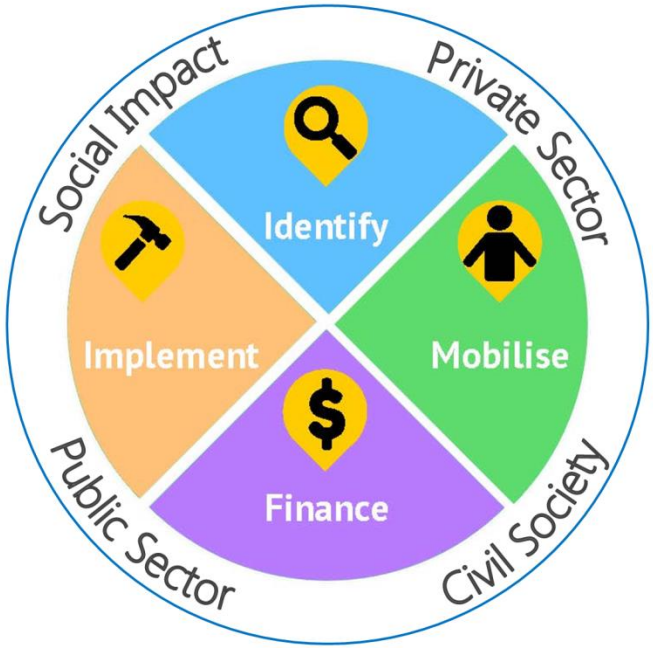
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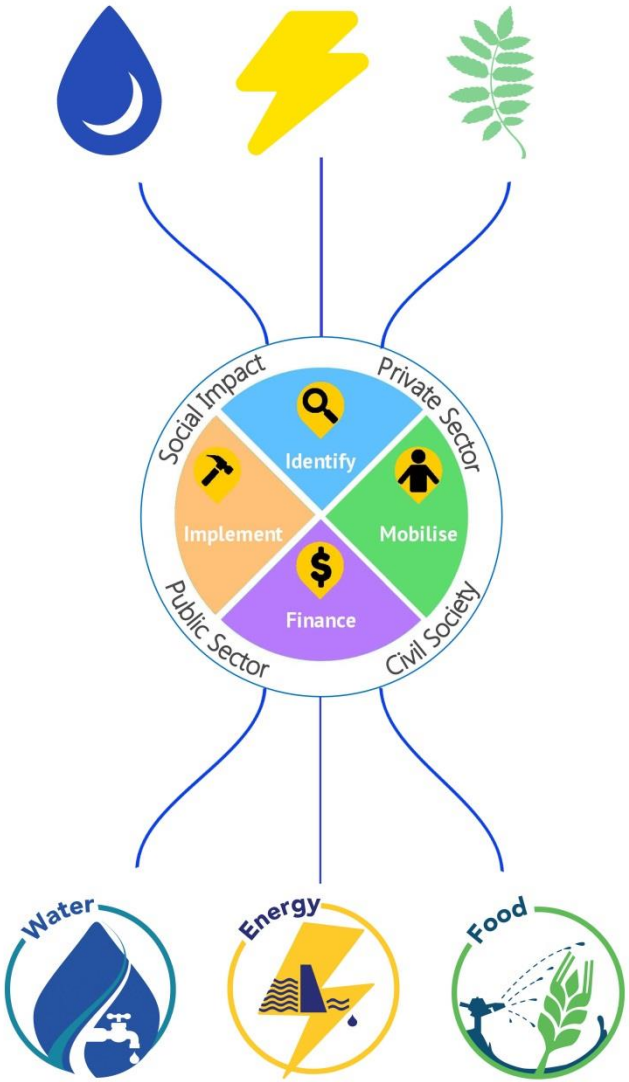
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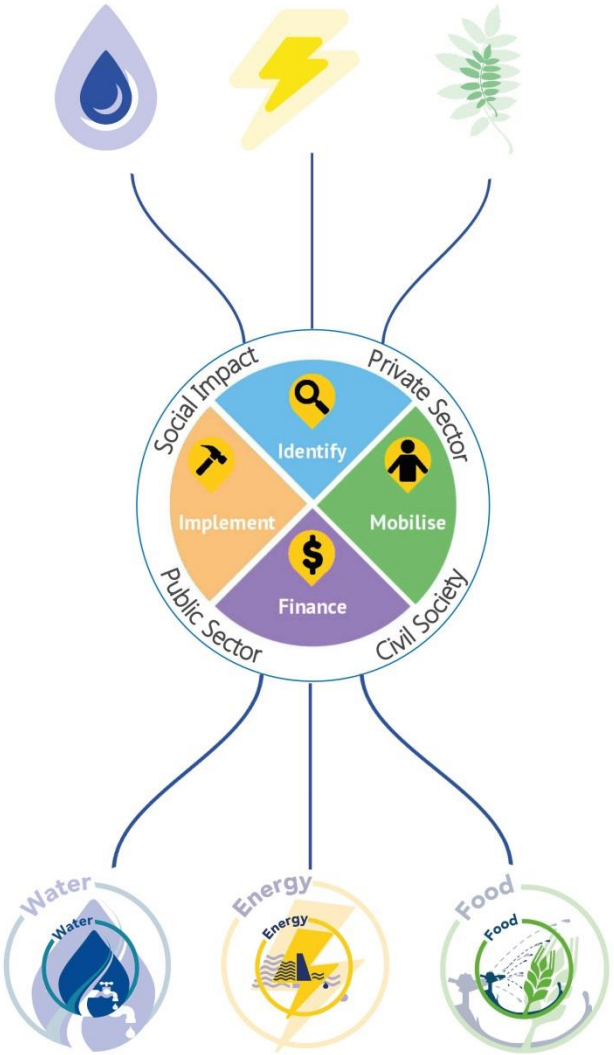
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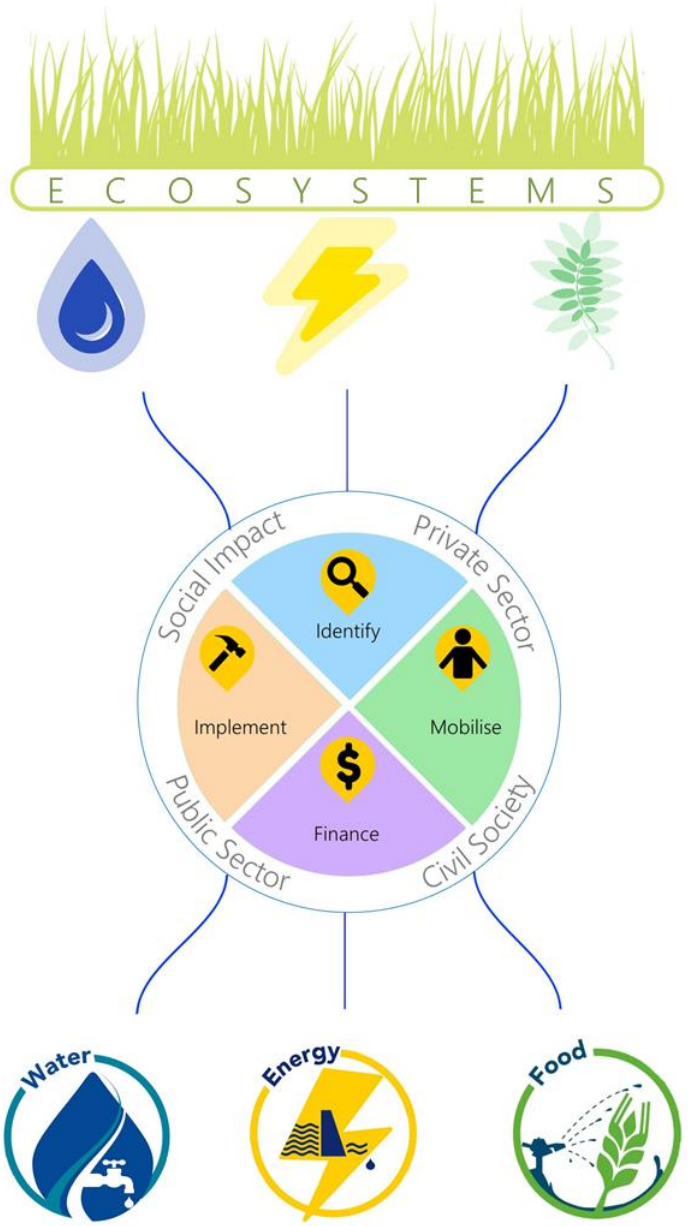
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Public Sector
Civil Society
Identify
Mobilise
Implement
Finance
Water
Energy
Food

International Conference

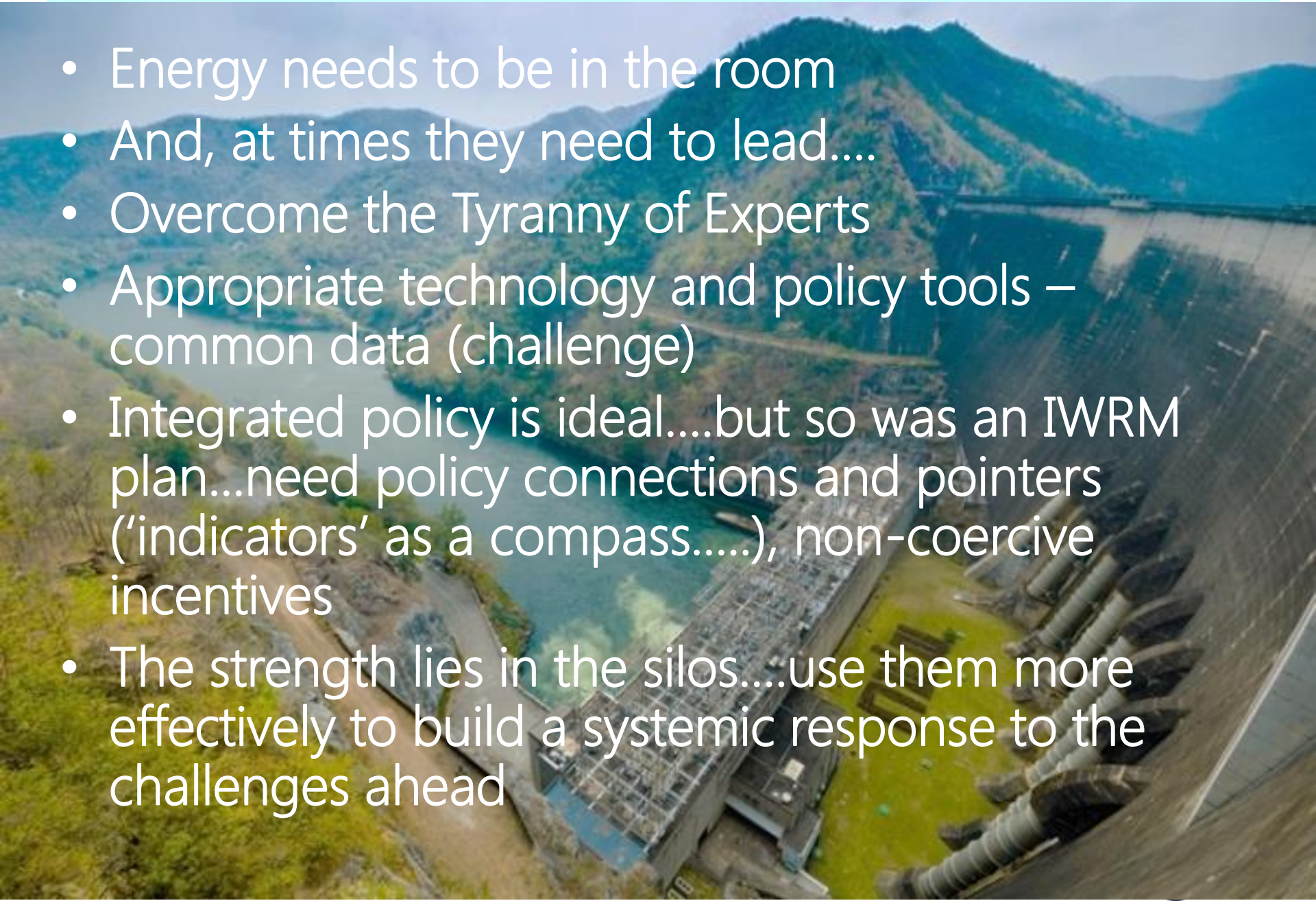
11-13 NOVEMBER 2014 BEIJING, CHINA

# SOLUTIONS FOR THE NEXUS:

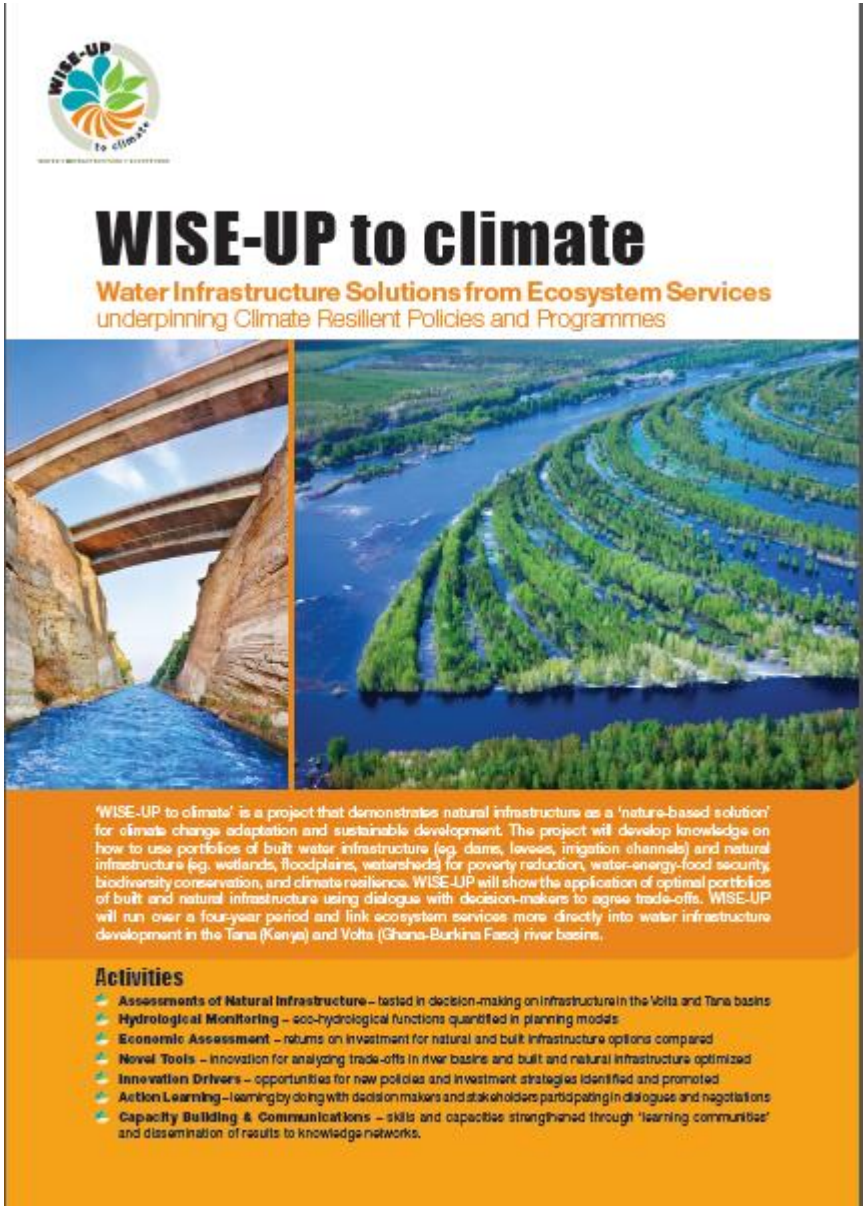
## Building Partnerships to Optimise Infrastructure & Technology for Water, Energy & Food Security

- **Conference Themes:**
  - Using the nexus to accelerate development
  - Cleantech nexus infrastructure and technology solutions
  - Collaboration and institutional arrangements for a nexus approach
  - Influencing pathways of investments for nexus infrastructure and technology

- **More information coming soon: waternexussolutions.org**
- **Follow us on social media channels: @WaterNexus**



- Energy needs to be in the room
- And, at times they need to lead….
- Overcome the Tyranny of Experts
- Appropriate technology and policy tools – common data (challenge)
- Integrated policy is ideal….but so was an IWRM plan…need policy connections and pointers (‘indicators’ as a compass…..), non-coercive incentives
- The strength lies in the silos….use them more effectively to build a systemic response to the challenges ahead




## Shared basin vision approach

Adaptive capacity increased through:

**recognition and inclusion of ecosystem services provided by natural infrastructure in investment strategies for climate change adaptation** and through

**optimisation with built infrastructure planning and development**.

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# Thank you

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