

# Governing the Water-Energy-Food Nexus: Opportunities for Basin Organisations

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# Context (1)

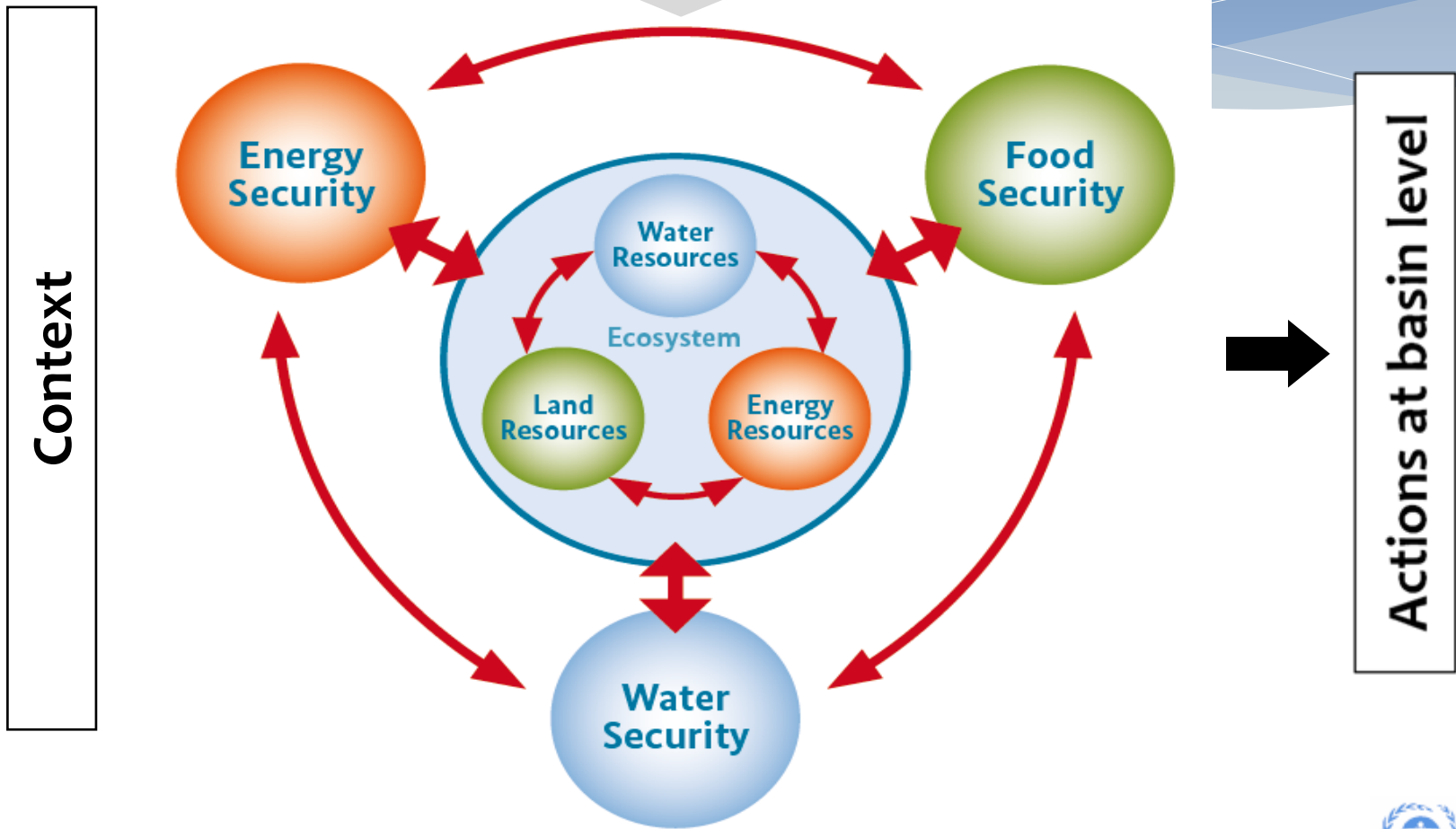
- \* Interconnections Water-Energy-Food
  - \* 8% of global energy used for water
  - \* Global water withdrawals
    - \* 15% for energy
    - \* 70% for agriculture
- \* Water, energy, and food security depend on well-functioning ecosystems
- \* Water use and pollution, burning of fossil fuels, and food production impact on ecosystems
- \* Nexus approach helps to balance

# Context (2)

Finance

**Governance**

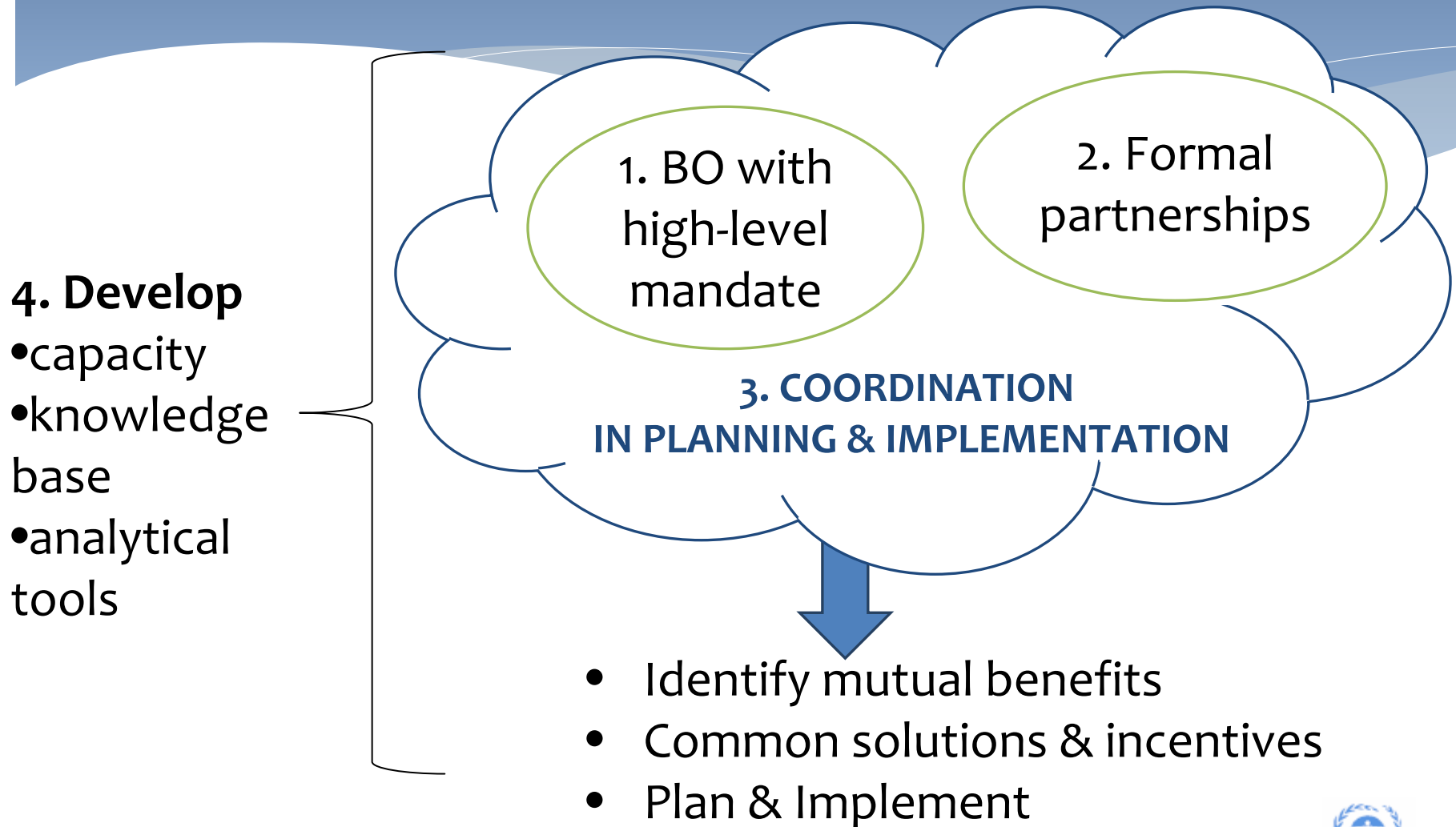
Innovation



# Opportunities

- \* Comparative advantage of BOs in nexus governance through experience with IWRM
- \* Benefits for BOs
  - \* Mitigation of environmental impacts
  - \* Multiple benefits from multipurpose measures
  - \* Water, energy and cost savings, increased efficiency
  - \* Increased collaboration and awareness
- \* Nexus challenges for BOs
  - \* Bioenergy and food crops
  - \* Energy for water / Water for energy
  - \* Food security: water-food-ecosystems
  - \* Water security, flood control

# Recommendations for BOs



# 1. High level mandate

- \* Essential to coordinate and cooperate between the water, energy, food and environment sectors
- \* For implementation, local-level actors relevant
- \* Successful examples
  - \* Mekong River Commission (MRC), e.g. Initiative on Sustainable Hydropower
  - \* International Commission for the Protection of the Danube River (ICPDR), e.g. EU Renewable Energy Directive



## 2. Formal partnerships

- \* Across sectors: water, energy, food, environment
- \* Across levels: local, national, transboundary, global
- \* With private sector: constructors, food industry etc.
- \* Various modalities, e.g.
  - \* broad stakeholder participation process
  - \* advisory boards
  - \* public-private partnerships
- \* Successful examples
  - \* Latin American water funds, e.g. Quito Water Fund: PES
  - \* Jucar River Basin/municipality Benaguasil, Spain: innovative and green stormwater control

# 3. Coordination

- \* Common understanding of practices, priorities, concerns
- \* Identification of mutual benefits
- \* Development of common solutions
  - \* Could encompass sector-specific measures
- \* Joint or coordinated implementation
- \* Successful examples
  - \* Green infrastructure, environmental flows
  - \* The Penobscot river restoration project, USA
  - \* Lesotho Highlands Development Authority (LHDA)
  - \* Inner Niger delta



# 4. Capacity building

- \* Knowledge base
- \* Analytical tools
  - \* Valuation of ecosystem services
- \* Institutional capacity
- \* Successful examples
  - \* Mekong River Commission data portal, atlas and viewers of Great Lakes Commission, Danube River Commission, Inner Niger Delta
  - \* Guidance documents, e.g. the 2013 'Primer for Monitoring Water funds' for the Latin-American Water Funds Partnerships

# Key findings

- \* Good governance of the Water-Energy-Food Nexus
  - \* Improves water, energy, food security
  - \* Fosters synergies
  - \* Manages trade-offs
  - \* Supports sustainable development
  - \* Maintains ecosystem services
- \* BOs have key role to play, especially in
  - \* Sustainable hydropower
  - \* Balancing (bio)energy with food production
  - \* Incorporate energy needs of water

# Recommendations for BOs

1. BOs need high level mandate to coordinate and cooperate between water, energy, food, environment sectors
2. Build partnerships across sectors, across levels, with the private sector
3. Identify mutual benefits, coordinate planning and joint implementation of common solutions
4. Build capacity on knowledge base, analytical tools, institutional development

Thank you  
Any questions?

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