Food, Energy, Environment and Water (FE²W) Network

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UNESCO – International Hydrological Programme (IHP)

United Nations Educational, Scientific and Cultural Organization

International Hydrological Programme

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Background

FE²W NETWORK

- UNESCO - International Hydrological Programme (IHP):

  - The **only global intergovernmental scientific programme on water resources in the UN system**
  - Created in 1975 after the International Hydrological Decade
  - Member States define needs and plans (6-year phases)
  - **Emphasis on water resources management and environmental sustainability**
  - **Global network** including
    - ✓ *UNESCO offices,*
    - ✓ *Water-related Institutes and Centres,*
    - ✓ *UNESCO-IHE Institute for Water Education,*
    - ✓ ***UNESCO's Water-related Chairs***

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Background

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- UNESCO Water Related Chairs

  - 36 Chairs around the world

  - UNESCO Chair in Water Economics and Transboundary Water Governance:
    - ✓ *Established in 2010 at the Australian National University, Australia*
    - ✓ *Officially launched the Food, Energy, Environment and Water (FE²W) Network in November 2014 at UNESCO HQs*

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Why it matters?

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- Highly-connected world where a drought in Country A may have severe impacts in a Country B located on the other side of the world.

- Banning of rice exports in one country can temporarily push millions of people in other places to become malnourished.

- Food price shock of 2007-08 was a surprise to many. It raised the number of undernourished and those in extreme poverty by more than 100 million people.

- The use of biofuels was intended to reduce greenhouse gas emissions, but in fact raised emissions and lowered the land and water available for food production in key countries.

Need for better governance to understand links between systems can cause cascading failures

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Who we are?

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- Group of leading experts from universities, multilateral organisations and non-government organisations

  - ✓ *UNESCO-IHP, World Bank, OECD*
  - ✓ *International Water Management Institute, CGIAR*
  - ✓ *Australian National University, University of Oxford, Lincoln University, McMaster University*

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Where we work?

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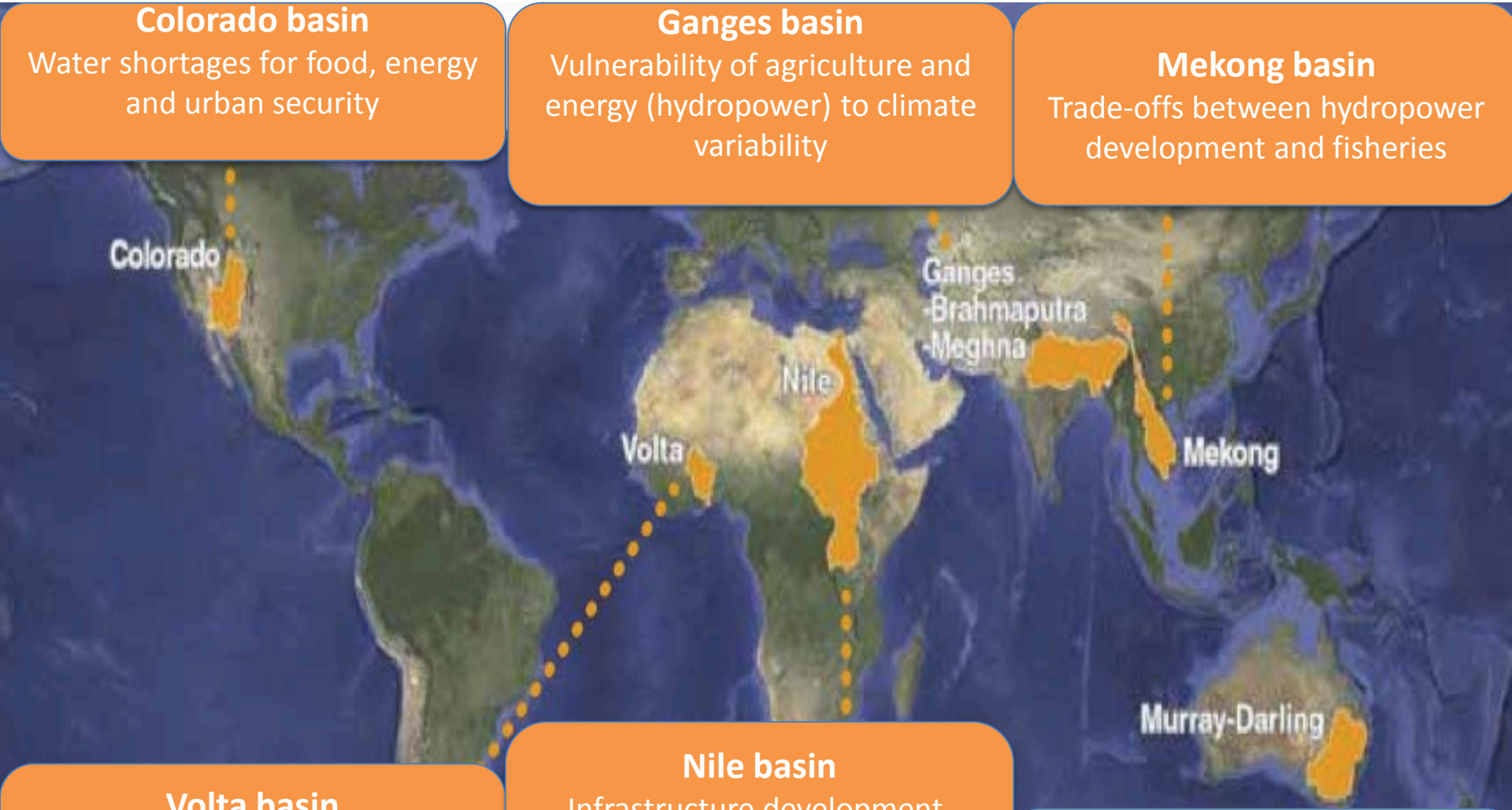
Colorado basin
Water shortages for food, energy and urban security

Ganges basin
Vulnerability of agriculture and energy (hydropower) to climate variability

Mekong basin
Trade-offs between hydropower development and fisheries



Volta basin
Improving water productivity through transboundary / integrated management

Nile basin
Infrastructure development, foreign direct investment and transboundary water management

Murray-Darling
Integrated ground and surface-water conjunctive use

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What we do?

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- ***UNDERSTAND RISKS*** *to the security of food, energy, environment and water linkages.*
  - ✓ *For example, subsidised electricity for poor farmers may drive excessive groundwater pumping that undermines water, food and energy security.*

- ***PROVIDE UNDERSTANDING*** *of the range of potential costs, benefits and feedback effects associated with different management decisions.*

- ***ASSIST AND ENGAGE DECISION-MAKERS*** *on developing, adapting, and implementing decision frameworks that consider food, energy, environment and water as integrated systems.*

- ***ENABLE ACTION*** *by decision-makers (be it a farmer or a water minister) by allowing them to balance trade-offs, reduce risks, and accommodate uncertainty.*

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How we do?

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- Risk & Opportunities Assessment for Decision-making (ROAD)

  - ✓ Delineation of the decision space and questions
  - ✓ Evaluation of threats and their triggers
  - ✓ Causal risk and opportunities assessment
  - ✓ Analysis of decision options for controls and ways to mitigate consequences, including a summary and justification for the selected decisions; and
  - ✓ Update and review following the decisions and their implementation.

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What is next?

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- From 2016 we will start sequentially rolling out projects in the different basins we are working in.

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Join us!

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