24th Annual Meeting of the GMS Working Group on Environment Consultation Workshop on GMS Climate Change and Environment Sustainability Program (CCESP) and Consultation Workshop on GMS Sustainable Agriculture and Food Security Program (SAFSP)
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Water for Food Security in a Changing Climate in the Greater Mekong Sub-region (GMS)

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- Scope
- Situation and outlook of water for food security in the GMS
- Needs and gaps for enhancing water for food security
- Recommended priority actions on a regional basis
- Discussion questions

Source: Thanh Nien News & Viet Nam Net

Scope

- For the consultation on GMS Sustainable Agriculture and Food Security Program
  - Focus on water for agricultural production
  - Describe status, outlook, needs and gaps
  - Recommend regional priority actions for consideration



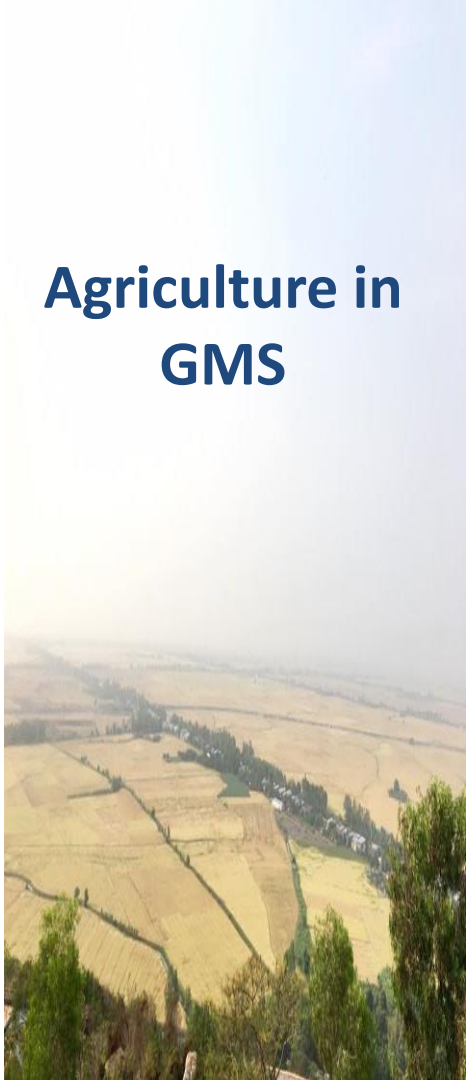
Status and outlook of water for food security

- Food security in the GMS
- Agriculture in the GMS
- Water security for agriculture in the GMS

Food security in GMS

- Malnutrition decreases
- Food-security concerns for rural poor remains
- Food demand is increasing with
  - Population growth
  - Change of diets

Agriculture in GMS



- Back-bone of GMS countries' economy
  - Cambodia: ~50% GDP, ~90% employment
  - Lao PDR: ~42% GDP, ~67% employment
- Food security for 340 millions population
- Livelihoods for 200 millions small-holder farmers
- Food for the world through trade

Water use for agriculture

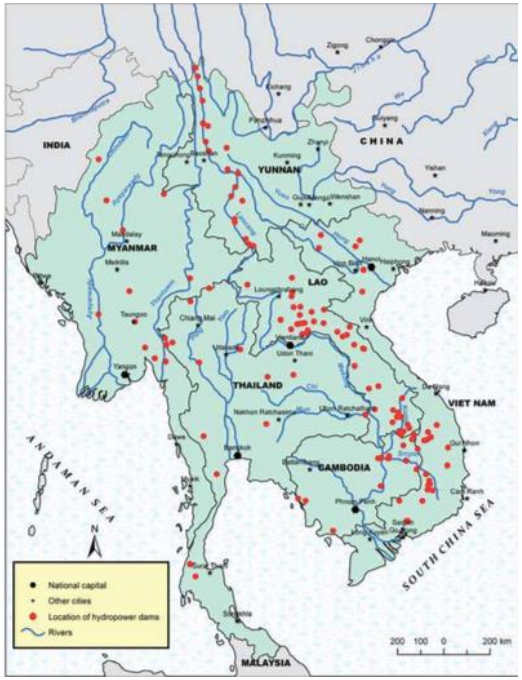
- Agriculture is largest water user
- Use efficiency not very high
- Demand is rising to match increases in agricultural production

Water availability for agriculture

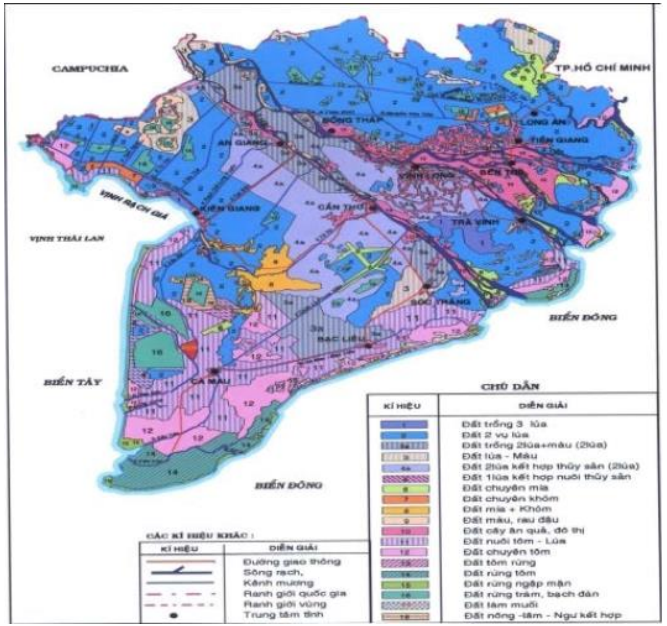
- Quantity:
  - Abundance but spatio-temporally unequal distributed: flood and drought
  - Socio-economically water scarce
- Quality:
  - Generally still good
  - Some pollution hot spots in deltas and close to cities

Change in the next decades that will affect water

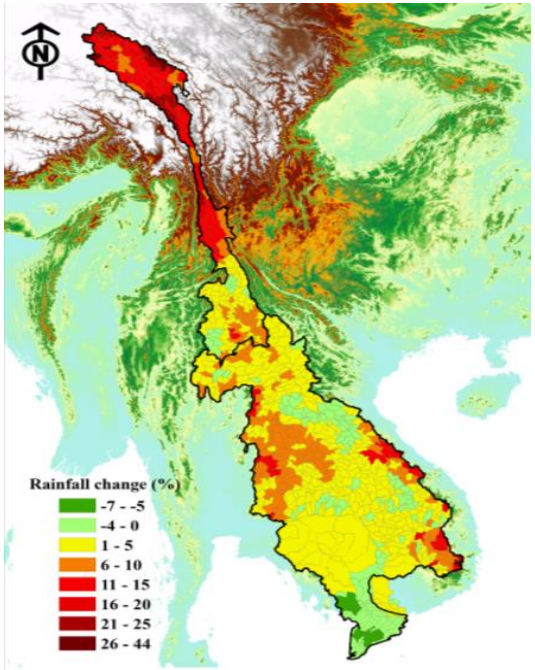
Water infrastructures



Land use change



Climate change and adaptation



Implications for water, food and energy

Climate change

Water infrastructures

Land use

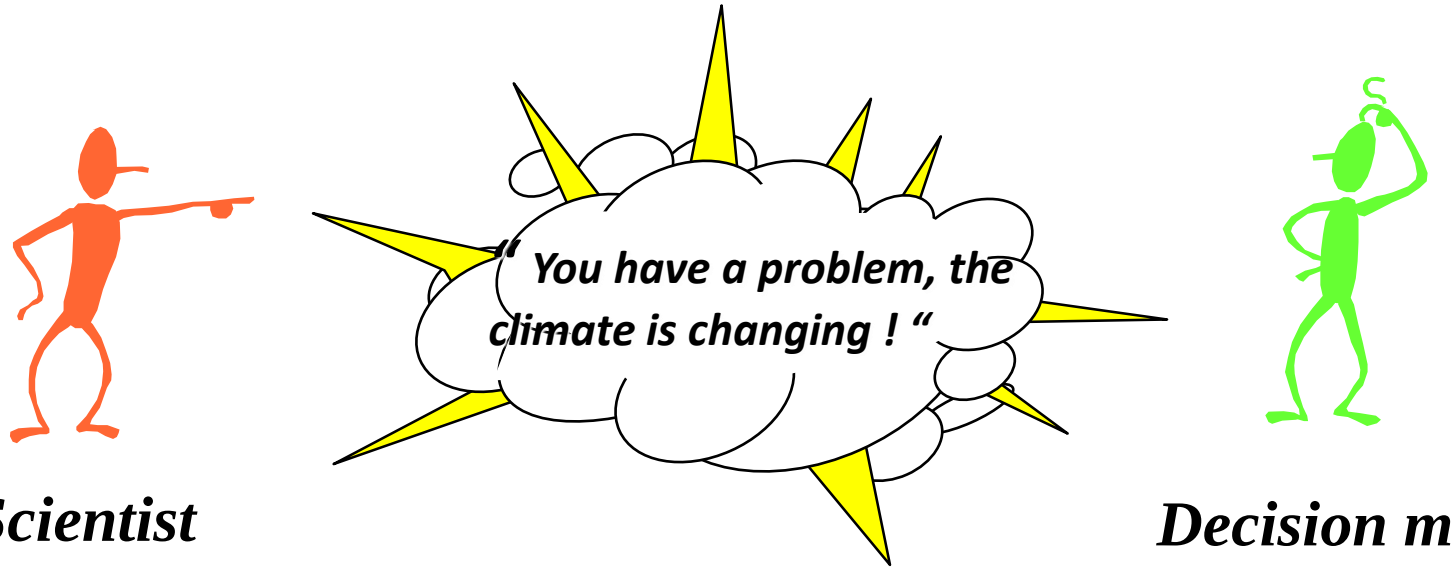
Changes in
- Rainfall
- Water balance
- Flow
- Sediment

Impacts on hydropower yields & operation

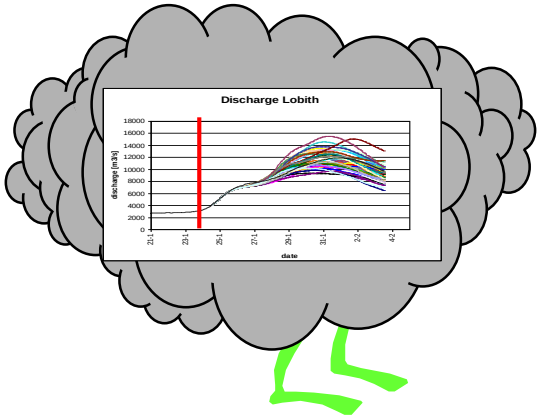
Impacts on agriculture, fisheries, ecosystems

Countries' agricultural water strategies

- Expansion of irrigated areas
  - Ex: LMB 4-5 Mha 2016 → 7 Mha 2030
- Rehabilitation and modernization of old systems
- Continue flood, drought, and salinity control infrastructures
- Improve use efficiency



Source: presentation of Dr. Jaap Kwadijk, Director of Science, Deltares, Delft, the Netherlands, 30 November 2012



Scientist

“ How much….? “

Decision maker

Source: presentation of Dr. Jaap Kwadijk, Director of Science, Deltares, Delft, the Netherlands, 30 November 2012

Needs and gaps

Water availability

Knowledge

Successes -failures

Cost - benefits

Data availability

Data

Data quality

Data sharing

Planning capacity

Adaptive management

Institutional

Transboundary

Multi-sectoral

Finance

Priority factors for regional activities

1. Support to enhance capacity of the countries in implementing national strategies
2. Address the needs and gaps
3. Focus on aspects that need regional cooperation
4. Create synergies with other initiatives of the GMS Program and other organizations



Recommended activities on a regional basis

Knowledge	Information and data services
	Assessment of water availability
Data	Seasonal drought forecasting system
	Piloting good practices in agricultural water use
Institutional	Piloting for Payment-for-Ecosystem-Services in water
	Capacity building on adaptive planning
Finance	Capacity building in access to climate finance
	Support on climate proofing of infrastructure intervention

Discussion questions

- Key challenges for your country/organization?
- Current efforts of your country/organization?
- Any best practices that could be replicated in the GMS?
- Key priorities for action (3-4)?
- Major advantages or disadvantages in adopting a regional approach?
- What can be done by ADB and other development partners?

Thank you

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