

VIETNAM – CAU RIVER BASIN ISSUES ON SUSTAINABLE WATER RESOURCE USE

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Cau River Basin

Main flow: 288 km in length

Catchment area: 6,030 km²

Population (2009): 4.2 million people in 9 different ethnics

Aver. pop. density: 385/km²

Administrative units: 34 districts/6 provinces



Project activities

Activities	Schedule	Remarks
1. Case studies		
2. Inception workshop:	October 2010	Vinh Phuc
3. National/Local Dialogues:	Nov.2010 – March 2011	Thai Nguyen, Vinh Phuc, Bac Ninh
4. National closing workshop	February 2012	Hanoi
5. Water Investment Frame Work	Sept. – Dec. 2010	

VIETNAM CASE STUDIES

1. **Technical case study:** To identify issues and challenges in the sustainable water resources use for agriculture and propose solutions
 - *Significant developments and activities related to the Cau river basin;*
 - *Propositions.*

VIETNAM CASE STUDIES-

Technical case study

Significant developments and activities related to the Cau river basin:

- Irrigation is mainly for rice;
- Upstream area: 36% of arable land is irrigated, middle and lower parts: irrigation supplies for 80-90% of arable land.
- Poverty rate increases from the plains to mountainous areas and luckily, decreases with time;
- Water pollution.

VIETNAM CASE STUDIES (cont.)

2. Legal case study:

- *Key frameworks at national, basin and provincial levels;*
- *Decision-making and management mechanisms for water allocation, demand management, distribution and water quality monitoring.*

VIETNAM CASE STUDIES (cont.)

Identification of Problems and Challenges

- *Current issues and challenges: Technical problems, water demands, management performance.*
- *Goals toward year 2020;*
- *Propositions: managerial, non-structural, structural, S&T propositions and recommendations.*

VIETNAM CASE STUDIES (cont.)

Conclusions

- Improvement of legal documents for management and law enforcement.
- Appropriate plan to upgrade and rehabilitate existing hydraulic systems to be established;
- Reformation of management organization system.

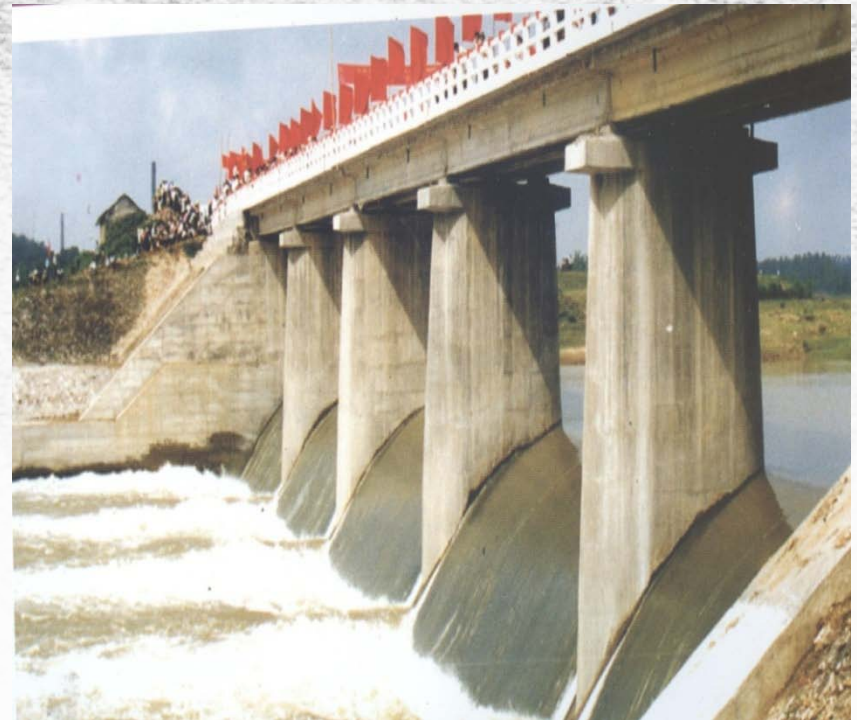
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- A faint, light gray world map is visible in the background, centered behind the text.
- **NATIONAL/LOCAL DIALOGUES**
 - **AND WORKSHOPS**

- Two workshops and four national/local dialogues.
- **Participants:**
 - State agencies: DWR and Committee of Water Resources Planning Management under MARD, Environment Administration and Environmental Protection Committee under MONRE;
 - Local provincial agencies: DARDs, DONREs, IMCs.
 - Professional associations; WUAs/WUGs. etc.
- **Methodology:**
 - Group discussion;
 - Plenary discussion;
 - Brainstorming.
 - Checklist and questionnaires.



Issues found from Dialogues

- **Water availability:**
Water Not enough for agriculture production and other demands, uneven annual and seasonal flow, flashflood and landslide, and water



Hydraulic constructions are degraded.

- **Management issues:**

- 3 RBOs in Cau RB;
- Overlapped functions between DARD and DONRE;
- Weak coordination, especially in water sharing in dry season.



- Different irrigation management models;
- Lack of farmer participation.
- Applicability of Water policies for localities and communities.



Environmental pollution

Impacts of climate change



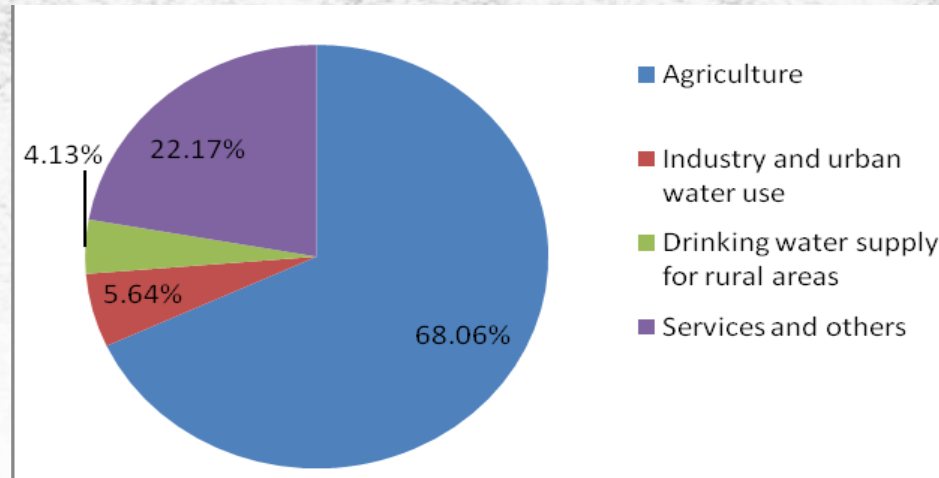
Proposed solutions

- *Policy formulation: Master plan and plan of water allocation, action plan for climate change adaptation ;*
- *New construction of water storage facilities and Upgrading irrigation systems to reduce water losses;*
- *Elevation of Water use efficiency (irrigation methods and crop patterns);*
- *Improvement of management capacity for local IMCs, enhancement of WUAs (including awareness raising);*
- *Strengthening of law enforcement: penalty of irrigation system violation and water pollution.*

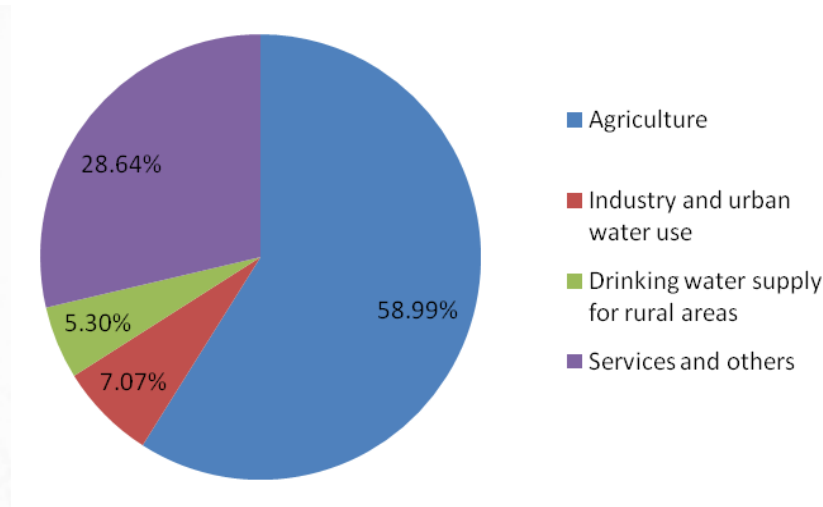
- **WATER INVESTMENT FRAMEWORK**
 - **FOR CAU RIVER BASIN**

Water use allocations

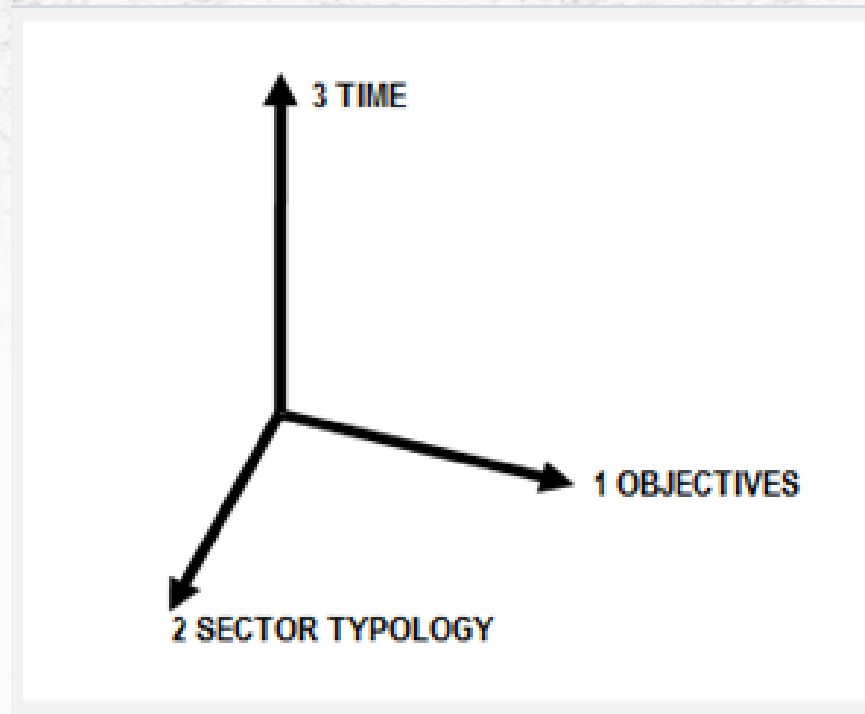
by 2010



by 2020



Water Investment Framework



The Three Axes of an Investment Framework

Water objectives of Cau river basin



Water objectives of Cau river basin

- Protection and development of water resources;
- Diversified and effective exploitation and use of water resources;
- Minimized water related damages;
- Improved water resources management capacity;
- Strong institutional and coordination framework;

Sectorial typology

- Agriculture,
- Environment
- Water supply and environment sanitation, health
- Human habitation
- Transport and communication
- Industry
- Tourism

3. Investment phasing (time)

a) Short-term period

- Development of policies and institution relating to water resources management and participatory management of hydraulic works
- Completion of river basin organizations. Elaboration of operational activities.
- Awareness raising for all water users.

b) Medium-term period

- Formulation of Cau river basin water resource development planning
- Upgrading degraded hydraulic works, rural water supply systems, dredging irrigation/drainage canals.
- Construction of smallscale reservoirs, flood warning system
- Providing guidelines of saving water and improved water use efficiency.
- Promoting management and monitoring of programs relating to Cau river basin

3. Investment phasing (time)

c) Long -term period

- Implementing national target programs and approved projects.
- Implementing river basin management, protection measures and water resources development, improvement of available water resources.
- Maintaining environmental flow, treatment of waste water
- Climate change adaptation measures, ensuring water and food security

Estimate investment budget for CRB

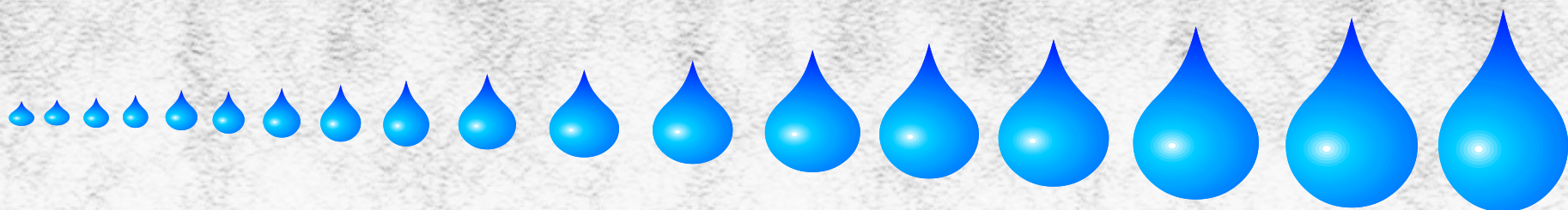
Unit: 1,000 mill. VND

Typology	Short-term 2011-2015	Medium term 2016-2020	Long term - after 2020	Total
Water Resources	11,283.76	6,985.57	2,205.58	20,474.91
Environment protection	2,009.9			2,009.9
Total estimation	13,293.66	6,985.57	2,205.58	22,484.81



Other remained issues

- Postponed implementation of water planning due to disagreement in impacted areas of reservoir development (Nghinh Tuong river);
- Large rehabilitation of water works is late for lack of budget (Dang Xa sluice for water quality improvement in Ngu Huyen Khe river);



THANK YOU FOR YOUR ATTENTION!

