

The logo for NARBO (Network of Asian River Basin Organizations) features the word "NARBO" in a bold, yellow, sans-serif font with a blue outline. The letters are set against a blue background with a white globe icon behind them.

Network of Asian River Basin Organizations



CAU RIVER BASIN ORGANIZATION

The Role of Reservoirs

(The key for success)

Presented by: Le Thanh Chung, Director of CRBO

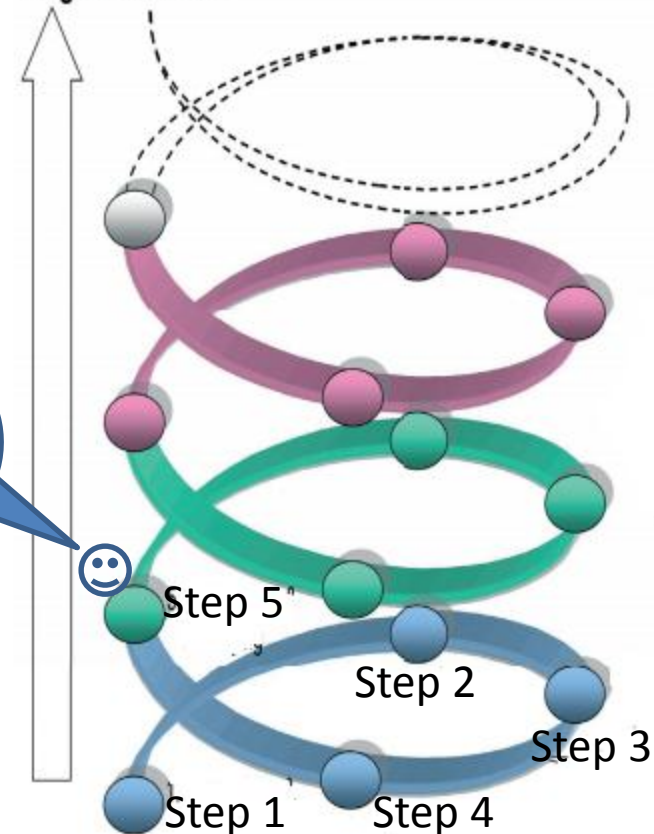
Sai Hong Anh, Water Resources Engineer

Presentation Outline

- Introduction of CRBO (Step 1)
- Identifying (Step 1)
- Conceptualizing (Step 2)
- Solutions (Step 3)
- Implementing (Step 4)
- Identifying again (Step 5)

We are here

Progress of IWRM



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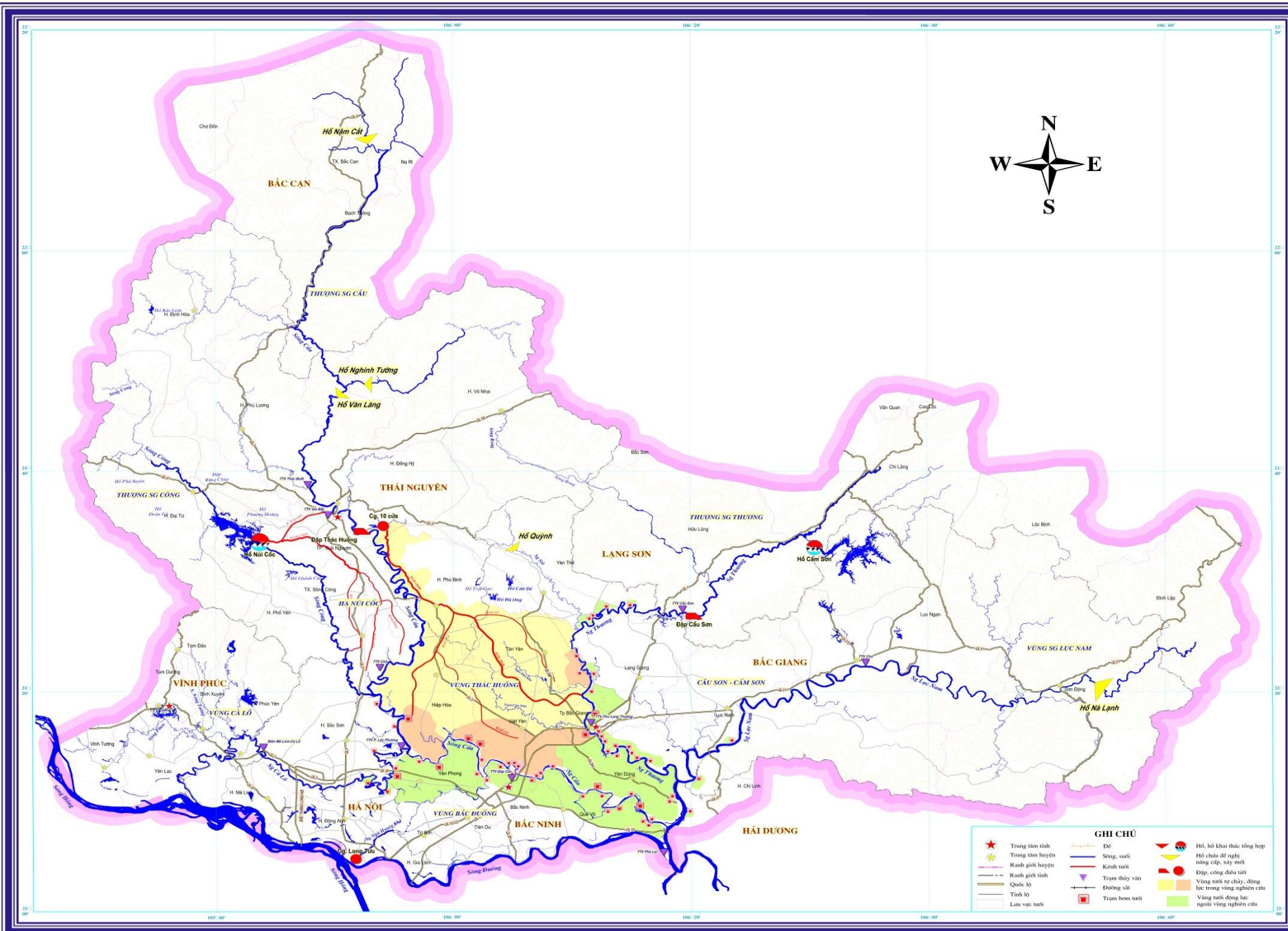
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I. Introduction

- Cau River Sub-Basin is located in the North of Ha Noi. The area extends over six provinces. Total area is 6,030 km². In which:
 - + *Agriculture area: 254,201 ha.*
 - + *Cultivated area: 195,093 ha.*
 - + *Aquaculture area: 8,663 ha.*
 - + *Forest area: 206,850 ha.*
- Topography: Mountain, Midland and Delta.
- Rivers: There are 3 main rivers in this basin: *Cau, Cong and Ca Lo rivers*
- Population: 4 milion (51% female, 81% living in rural).

CURRENT HYDRANLIC STRUCTURE OPERATING ON MAINSTREAM OF CAU, THUONG RIVERS



GHI CHÚ	
	Trung tâm tỉnh
	Trung tâm huyện
	Ranh giới huyện
	Ranh giới tỉnh
	Quốc lộ
	Tỉnh lộ
	Lưu vực nước
	Đê
	Sông, suối
	Kênh tưới
	Trạm thủy văn
	Đường sắt
	Trạm bơm nước
	Hồ, hồ khai thác tổng hợp
	Hồ chứa để nghỉ
	Đập, công điều tiết
	Vùng tưới tự chảy, đồng
	lục trong vùng nghiên cứu
	Vùng tưới đóng học
	ngoài vùng nghiên cứu

II. Identifying

No	Documents	Contents	Methodologies
Step 1	Natural conditions of Cau River Basin	Geographical location	Field, survey, combine with local data.
		Topography Geomorphology	Survey
		Meteorological situation	Collected from meteorological stations of Bac Giang district
		Water resources situation	Field, survey, combine with local data.
Step 2	People's situation - economic	People's situation - economic	Survey, combine with collect reports of local government
Step 3	Current status of water resources	Finding the Current status of water resources	Survey, calculation and combine with data of local government.

II. Identifying

- We used Water Evaluation and Planning System (WEAP) model To calculate water balance.
- **Conclusion**
We have drought, flooding and The lack of water

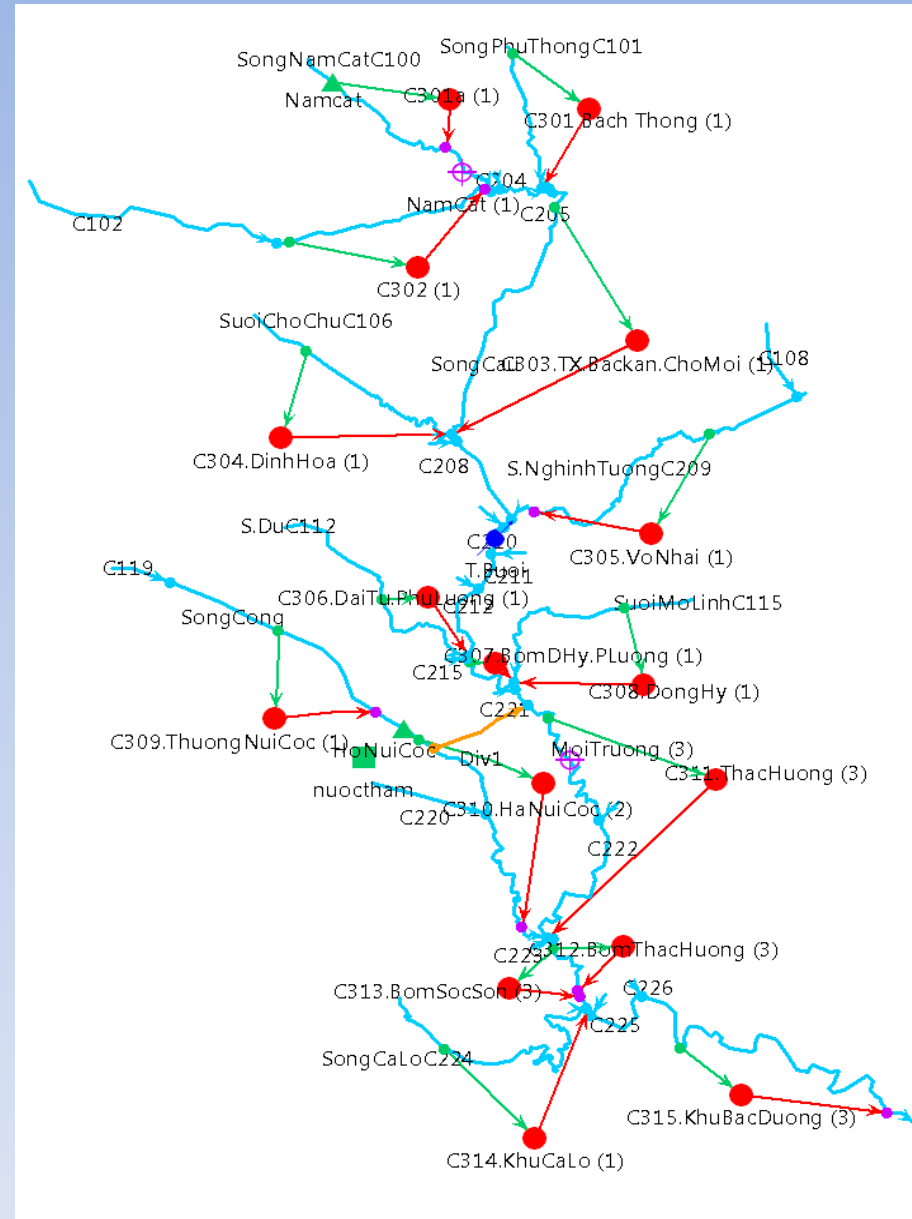


Diagram of WEAP model to calculate water balance

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III. Conceptualizing

- Flooding
- [Drought](#)
- The lack of water in 3 sectors including :
Cultivation, Fisheries, Environment (especially
in dry season)

IV. Solutions

1. Works

- ✓ Building reservoirs ([Van Lang](#) 100 million m³, Nam Cat 50 million m³)
- ✓ solidification canals
- ✓ Applying Water saving methods for paddy such as :System of Rice Intensification – SRI and Alternative dry and wet.
- ✓ Reforestation in upstream
- ✓ Building small reservoirs ([picture](#))

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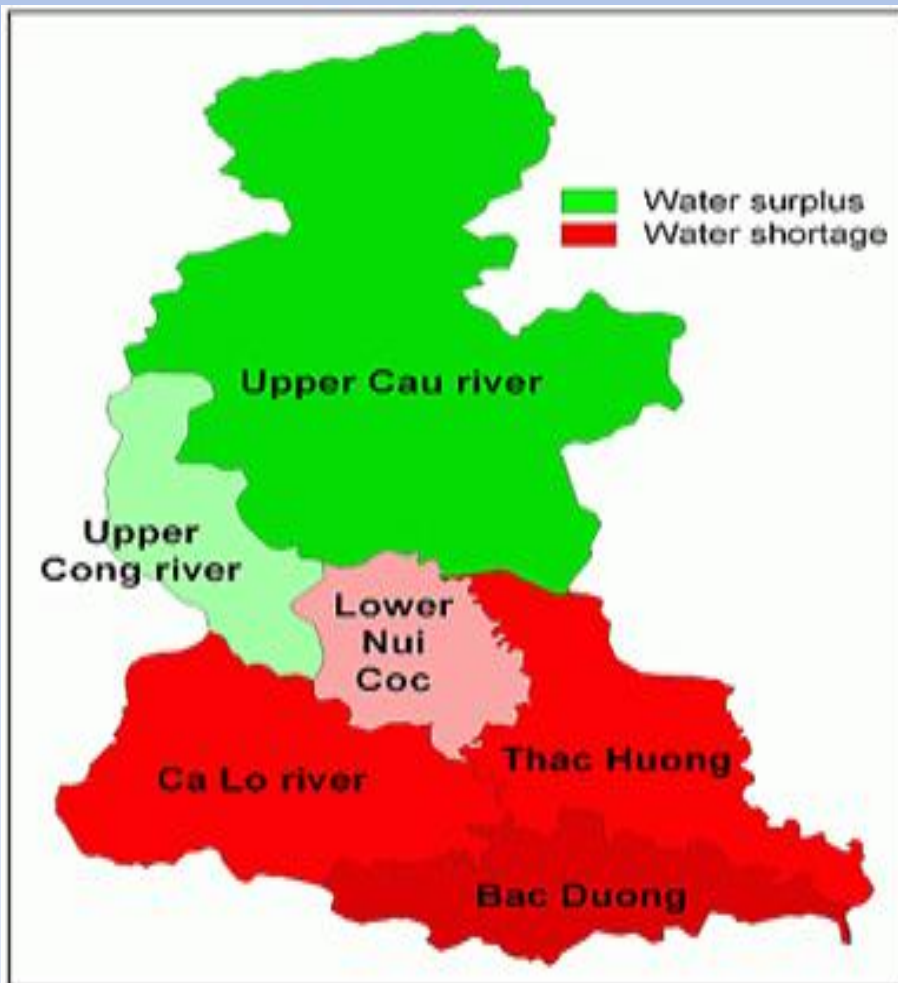
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2. Non- structural works

- ✓ Strengthen the management and provide the knowledge to the people in order to improve efficiency in the exploitation and protection water resources.
- ✓ The development of small resources should be multi-purpose tasks associated with agricultural restructuring: Restructuring crops and livestock to promote the advantages of regional integration with the aim of building national agricultural.
- ✓ Increased participation of the stakeholders
- ✓ Educational organizations to raise awareness sweeping the community, with specific activities

V. Implementation and Identifying again.



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- **Implementation**

- + In 1970, we built Nui Coc reservoir which was used for tourism and regulating water resources.

- + From 1960- to 2010, we built over 400 small reservoirs.

- + We are preparing to build Van Lang and Nam Cat reservoirs in next year (2015-2018)

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A wide, calm river flows through a lush, green landscape. In the foreground, there is a sandy beach with several large, green banana leaves. The background shows a dense line of trees and some buildings on a hillside under a hazy sky.

THANK FOR YOUR ATTENTION!