THE RED RIVER BASIN ORGANIZATION (RRBO)

- Red River system is the second biggest river of Vietnam. Red River is an international river which originates in China and runs through Lao and Vietnam before merges the East sea. Total area of the entire basin is 169,020 km2, in which 86,660km2 (51.35%) is in Vietnam's territory.

- Administratively, the Red River basin covers 26 provinces with a population of 28 million people (in 2002).


Red River Basin
by River Sub Basin
CHINA P. R.
CHINA P. R.
LAO P. D. R.
Ha giang
Lo-Gam rivers sub basin
Lao cai
Da river sub basin
Thao river sub basin
Lai chau
Son la
Yen bai
Tuyen quang
Bac kan
Upper Thai binh
river sub basin
Thai nguyen
Vinh yen
Bac giang
Viet tri
Ha noi
Hadong
Hoa binh
Hai duong
Hai phong
Hung Yen
Red River Delta
Thai binh
Phu ly
Nam dinh
Ninh binh
GULF OF TONKIN

THE RED RIVER BASIN ORGANIZATION (RRBO)

- The Red River Basin Organization is a non-productive body under Ministry of Agriculture and Rural Development of Viet Nam. The RRBO was established on April 9, 2001 according to a Decision by Minister of Agriculture and Rural Development of Vietnam. Dr. Pham Hong Giang, Vice Minister of Agriculture and Rural Development is Chairman of the RRBO.

THE RED RIVER BASIN ORGANIZATION (RRBO)

- **The RRBO comprises the Board and the office:**

- The Board: There are in total 50 members of the RRBO including the Directory Board and meet 2 times per year to change information and take discussions.

- The Office: to do all of technical works of RRBO based at of Water Resources Planning (IWARP), working around the year.

THE RED RIVER BASIN ORGANIZATION (RRBO)

The Directory Board of the RRBO comprises of 4 persons with following details.

Dr. Pham Hong Giang	Vice Minister of Agriculture and Rural Development	Chairman
Dr. Pham Xuan Su	Director of Water Resources Department - Ministry of Agriculture and Rural Development (MARD)	Vice chairman
	Leaders of Departments in Ministry of Natural Resources and Environment – MONRE.	Vice chairman
Dr. To Trung Nghia	Director of Institute of Water Resources Planning (IWARP) - Ministry of Agriculture and Rural Development (MARD)	Chief of the Office

THE RED RIVER BASIN ORGANIZATION (RRBO)

- The other members of the RRBO are directors of relevant Departments under MARD, directors of provincial Departments of Agriculture and Rural Development (DARDs) in the Red-Thai Binh river basin, and directors of relevant departments of ministries of Natural Resources and Environment, Industries, Fishery, Construction, Transport, Health, National Defense, and General Services of Hydro-meteorology.

THE RED RIVER BASIN ORGANIZATION (RRBO)

- **The RRBO has tasks to:**

- Prepare, submit for approval the Red – Thai Binh River Basin Plan and monitor implementation in ensuring consistent management of the river basin plan with the administrative boundary;
- Coordinate with relevant Ministerial, sectoral and local agencies in baseline water resources investigation, inventory and assessment for the Red – Thai Binh and in preparing, submitting for approval and monitor implementation of river basins' plans for tributaries of the Red – Thai Binh system;
- Propose resolution for water resources disputes in the Red – Thai Binh River Basin.

THE RED RIVER BASIN ORGANIZATION (RRBO)

Activities by the Red river basin organization in 2004 and 2005:

- Carry out investigations and field trips, work closely with provinces and to assess the positive aspects as well as problems found in management, exploitation and use of water resources in the river basin. Through this process, the orientations for future investments in water resource management and planning can be now formulated for the coming years.
- Collect and synthesize the database of water resources in the basin, including meteorological and hydrological data, data on livelihood development and hydraulic works data and other information relevant to the study and management of water resources in the river basin.

THE RED RIVER BASIN ORGANIZATION (RRBO)

Activities by the Red river basin organization in 2004 and 2005:

- Participate in the decision making process of the Government regarding the scope of large scale hydropower works of Son La and Tuyen Quang.
- Appraise projects relating to the exploitation of water resources in the Red River basin
- Coordinate with provinces and other members in RBBO in the organization of all RBBO workshops. The organization also summarize a lot of recommendations on how to improve the operation efficiency and capacity of the organization and define the problems in the utilization and protection of water resource in the river basin. The planned activities for years to come are also proposed.

THE RED RIVER BASIN ORGANIZATION (RRBO)

Activities by the Red river basin organization in 2004 and 2005:

- to establish website for the RRBO and issue quarterly newsletter of RRBO
- to launch linkage activities with provinces located in the river basin and to explore the possible formation of sub river basin organizations under the mechanism of the RRBO
- to execute inter – sectoral coordination activities by requesting various ministries and sectors to join in the study and field investigation; reporting process and discussion in order to outline the plans for effective organization, exploitation and management of water resources
- to carry out coordination activities with ADB projects in terms of capacity building for RRBO and its Office.

THE RED RIVER BASIN ORGANIZATION (RRBO)

2006 AGENDA OF RRBO:

- Coordinate with different ministries, sectors and line agencies, especially Department of Agriculture and Rural Development in order to fulfill functions and tasks of RRBO in efficient manner.
- Continue to implement multipurpose water resources planning projects for various river basins in Red– Thai Binh river system. The execution of irrigation projects to facilitate the shift of cropping patterns and livestock raising along northern coast is of no less importance.

THE RED RIVER BASIN ORGANIZATION (RRBO)

2006 AGENDA OF RRBO:

- Organize field trips to help grasp the existing water use of different localities in Red– Thai Binh river basin. This will a basis to work out solutions to potential problems and implementation of future integrated water resource planning and management.
- To coordinate with Department of Water Resources and Department of Dike Management and Flood Control in natural disaster mitigation and storm & flood prevention.

THE RED RIVER BASIN ORGANIZATION (RRBO)

2006 AGENDA OF RRBO:

- Continue to upgrade and update information in website of RRBO which was formed in 2004 and issue quarterly newsletter in order to facilitate the access to this website of different provinces and concerned people for information.
- Gradually go into operation for two sub-river basin organizations for Day and Cau rivers just established in December 2005.
- To maintain regular relationship and participate in activities of NARBO
- To hold study tours overseas to learn from river basin management experiences of other countries.

THE RED RIVER BASIN ORGANIZATION (RRBO)

RRBO Final Workshop - 2004

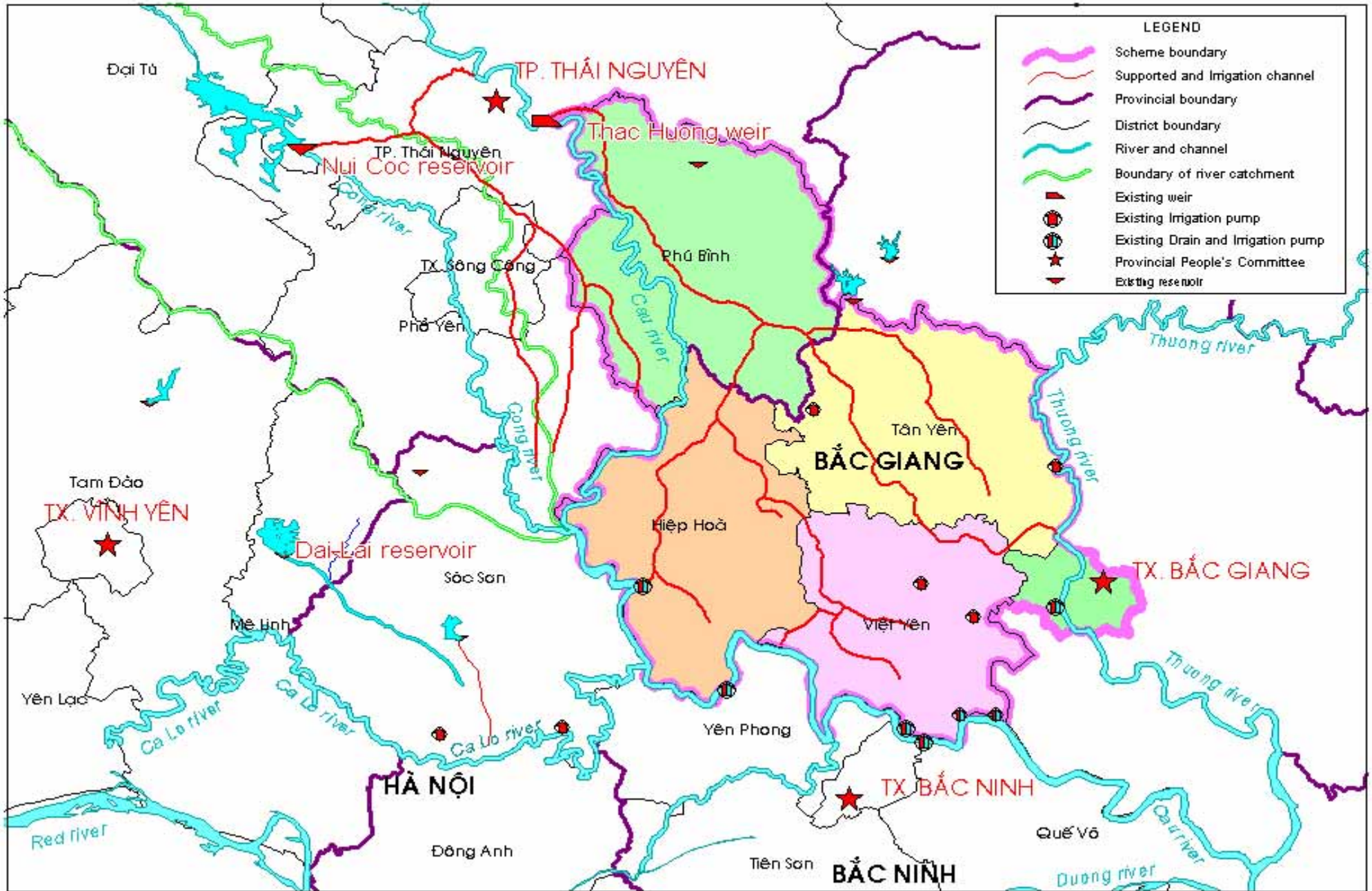
Workshop of Water right and Water allocation

Hydraulic structures to be visited

1. Thac Huong scheme

The Thac Huong scheme was designed and constructed in 1922 and finished in 1936. The initial task was the irrigation for 28,000 ha of the cultivation land in Phu Binh (Thai Nguyen) and Tan Yen, Viet Yen, Hiep Hoa and part of Bac Giang town (Bac Giang province). The work also routed flood for provinces downstream of Cau river and provided navigation.

MAP OF THAC HUONG SCHEME



Hydraulic structures to be visited

The scheme includes the following components:

- *Main canal, floating canal and minor canals of secondary and tertiary having a length of 226.9 km with 906 on-canal structures:*
- *2 large dams (Thac Huong, Da Gan)*
- *40 side spillways.*
- *19 head intakes*
- *49 regulators*
- *27 siphons*
- *2 in-drainage sluices*
- *37 concrete bridges*
- *292 submerge sluices*
- *12 ship locks*
- *416 centipede-foot-shaped culverts*

Hydraulic structures to be visited

- The actual operation and duration show a degraded scheme. The canal system is in bad condition and suffer sedimentation despite repeated repairs. The regulators and headwork are deteriorated too whereas fund for repairing and improvement is not available.
- In 1980 the system was redesigned to receive water from Nui Coc reservoir with design discharge of 11m3/s. in fact, only 5 - 7m3/s has been diverted.

Hydraulic structures to be visited

- During 1992 - 1993: the Van Gia drainage sluice has been upgraded from state budget together with 10 gate head intake of Thac Huong.
- During 1998 - 1999: ADB funded the repair of headwork of Thac Huong and the construction of new car bridge H12 for transport.
- During 1986 – 2001, annually the spring crops need additional water from Nui Coc reservoir for 1-3 times with a discharge of 6m3/s and for 1 – 3 weeks.
- The total command area of Thac Huong is 21,610 ha. The gravity irrigation area is 17,887ha, the remaining area is irrigated by pumping stations of Thac Huong.

Hydraulic structures to be visited

Thac Huong dam

Hydraulic structures to be visited

1. Hoa Binh hydropower plant

a. Location :

- Da river is the main branch of Red river which originate in Nguy Son mountain – China at the elevation of 1500 m. The river is 980 km long and join Red river at Trung Ha with the catchment area of 52,600 km2, equaling to 31% of the Red river basin, yet the water volume is nearly half of the main river (48%).
- The Hoa Binh hydropower plant is constructed in Da river, 1.5 km away from Hoa Binh town and 51 km away from Trung Ha. The catchment area of the reservoir is 51.700 km2.

Hydraulic structures to be visited

b. Tasks of the reservoir

The Hoa Binh multipurpose reservoir is a very precious property which has been optimally exploited for different purposes, specifically:

- Routing floods for Red river delta in the event of big floods in 1945 and 1971, maintaining the water level in Ha Noi not to exceed +13.3 m.
- Exploiting electricity with a power production of 8.4 billion KWh and an installed capacity of 1920 MW in average year and 10 billion KWh in year having excessive water.

Hydraulic structures to be visited

b. Tasks of the reservoir

- Increasing the water flow in the dry season by 500 m3/s for the downstream area to facilitate the agricultural production and domestic supply.
- Providing navigation routes of 200km along the reservoir and improving the channel for waterways in the delta. The reservoir also prevent salinity from intruding into the estuaries of Red river.
- The reservoir crests such a new landscape for tourism development and aquaculture etc…

Hydraulic structures to be visited

c. Main parameters

- Water surface area : 230 km2
- Full water supply level : + 115 m
- Dead water level : + 80 m
- reservoir capacity : 9,45.109m3
- useful water capacity : 5,6.109m3
- Installed capacity: 1920 MW

d. Construction duration : 1979 – 1994

e. Designed by : Mosceove Hydraulic Engineering Institute

g. Contractor : Da River Construction Incorporation

h. Managed by : PMU of Hoa Binh Hydropower Plant

Hoa Binh Hydropower plant

ADMINISTRATIVE MAP OF RED - THAI BINH RIVER BASIN