ORGANIZATIONAL REPORT

RED RIVER BASIN PLANNING MANAGEMENT ORGANIZATION

- Organizational structure and roles of the RRBO
- Challenges and proposed measures on IWRM in RRBO
- Structural and Non-structural countermeasures
- Background, issues, challenges, future vision and concrete action

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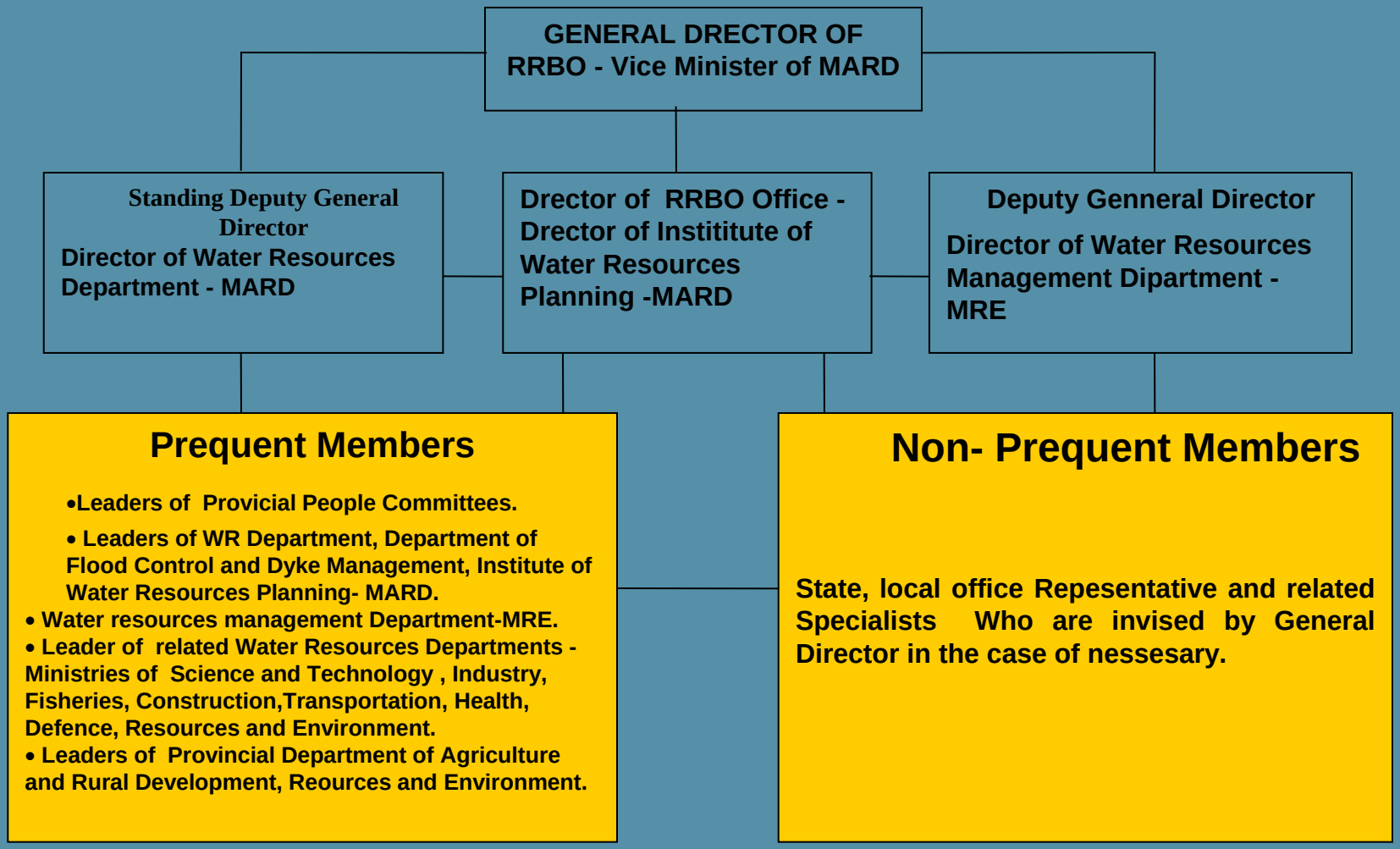
1.Organizational structure and roles of the RRBO

- ***Organizational structure***

- Organization leader: General Director is Vice minister of MARD, Standing Vice General Director is general director of water resources Department, MARD. The other Vice General Director is General Director of Water Resources Department, MRE.
- Members of Standing Team: including General Director and Vice General Directors and other members.
- Members: including leaders of provincial people committies, leader of MARD' departments such as Water Resources Department, Dyke Management & Flood Control Department, Institute of Water Resources Planning, Director or Vice Director of Provincial Agriculture and Rural Development Departments, and the other Department leaders of Ministries concerned.

ORGANIZATION CHART OF THE RED RIVER BASIN ORGANIZATION (RRBO)



Roles of RRBO

1. Assessment of alternatives of water resources planning projects and water resources basic investigation projects and then submit to MARD and the state authorized agencies.

2. Assessment and monitoring implementation of integrated water resources planning projects, including irrigation, drainage, flood control alternatives and water resources conservation.

3. Coordination with related agencies of ministries, sectors, and localities in implementation of water resources planning projects approved by MARD or Government.

4. Coordination with related agencies to establish management regulation of data-base serving management, exploit, use and water resources conservancy.

5. Propose to establish capacity building programs and awareness in management, protection, exploitation, and use of water resources for organizations and individuals.

6. Submit to Minister of MARD and related ministries about the water use and management.

2. Challenges and proposed measures on IWRM in RRBO

2.1 Challenges

Policy and Legislation

- Policy and secondary legislation under the (LWR) is not complete: Water allocation and rights, financial sustainability of hydraulic works, flood management etc.
- Flood management is a critical need:
  - Legislation, policies and institutional arrangements.
  - Major gaps: Structural and non-structural measures, information and skills to implement and maintain measures, international arrangements for flood prone international rivers.
- Require better coordination between ministries, agencies and provinces, training in integrated water resources management.
- Secondary legislation and how these will be implemented is still at a low level. Needed:
  - Clear program of information.
  - Awareness regarding the LWR.
  - Integrated water resources management.

Institution Arrangement

MARD has not yet clearly reflected its mandate for state management of water resources in a new organizational structure. State management of water from:

+ Irrigation and hydraulic works management.

+ Strengthening and coordination of water-related functions across departments.

- The coordination between ministries and agencies is still weak. Some ministry mandates overlap, causing waste of resources and lost opportunities. The solution will involve both:

+ Appropriate coordination mechanisms.

+ Clear requirements from the highest levels of Government.

- RRBO has been established:

+ Their role is still somewhat unclear.

+ The control of RRBO by MARD

+ Representation of multiple ministries/sectors, provinces are matters which should be resolved, based on both international models and local experience.

+ RRBO will need support to raise awareness of members, train staff, provide equipment.

- Institutional strengthening and capacity building is needed for different staff levels on management, planning, and other issues, particularly at the provincial level, where lack of:

+ Technical support.

+ Training, resources.

+ Clear definition of responsibilities.

- The private sector is relatively weak and participation of water users in management, operation and maintenance of water infrastructure is still limited.

- The coordination of international aid and assistance for the water sector has not been done in an optimal manner, focus on allocation rather than deeper partnerships.

Information Management

A large amount of water resources data and information is still scatted in different agencies and ministries. Access to this data and information is difficult, costly and time consuming.

- The water resources monitoring network was established, it does not cover all rivers and groundwater adequately.
- Flood warning and preparedness does not have an adequate action plan.
- Information on the linkage between surface and groundwater needs to be improved.

Integrated Water Resources Planning

There is no single, official water resources development and management strategy at the national level.

+ There are not yet clear mechanisms to make coordinated sectoral development and management decisions across ministry lines.

+ There are no integrated river basin development and management plans.

- Planning has not been carried out in a strategic manner or at a professional level.

+ There is a lack of advanced tools and resources for planning, including software, well trained and experienced staff, guidelines.

+ Technical aspects and consultation and conflict resolution aspects.

Financing

- Investment under the State budget has only reached 60-70 percent of the required level.
- Lack of financial capacity at the local level means that some local investment can not be carried out.
- Compensation rate for site clearance and its mechanism are difficult issues that result in delay of project construction schedule. Tendering problems and unrealistically low bid price creates low quality or delay of projects.

Resources Regulation and Conflict Resolution

Further secondary legislation is required to put the necessary resource regulation activities into effect.

- Considerable work will be required to prepare and test the necessary details, define institutional roles, train staff, build awareness.
- Inspection and enforcement and conflict resolution activities need to be strengthened and coordinated.

Training and Human Resources

- The level of awareness, skills and technology for integrated water resources management and new functions for its implementation is fairly low at both the national and provincial level.
- Technical assistance is integrated river basin planning and management. New techniques, methods and models are needed, negotiation and conflict resolution skills.
- Training and technical assistance should be provided to encourage the application of integrated water resources management to areas such as flood management and mitigation.
- Public administration reform needs to be carried: Salary and benefits, and improved staff management.
- Training should address the need at both the university and post-graduate level and at the technical level.

Education, Awareness, Consultation

- Consultation and coordination between ministries and agencies and between the central and local level needs to be improved.
- Awareness raising on water resources has been limited. People’s participatory activities should be build up as a public movement

2.2 Proposed measures on IWRM of RRBO

The second Red River Basin Sector project is carried out by ADB, MARD and IWRP. The project aims to:

- Establish integrated water resource management.
- Upgrade or repair priority water resources infrastructure.

Capacity Building and training

- Effective Capacity Building constitutes a variety of elements: Training, transfer of technology, transfer of knowledge, study tours, lectures and presentations, workshops.
- By implementation of IWRM the capacity of the RRBO and Institute of Water Resources Planning is built.
- River Basin 'planning' is only the first step in the IWRM cycle, and later in the project the management aspects will receive more attention.
- Consultants have attempted, in cooperation with MARD, IWRP and the RRBO, to assess the specific needs for Capacity Building for the RRBO, the various stakeholders and address such in the plan for phase 2.

3. Structural and Non-structural countermeasures

Strengths

- The Government has placed a high priority on water infrastructure construction for a very long time.
- Multi-purposes projects have been built with multi-sector and stakeholder involvement.
- Irrigation systems have been built throughout the Basin to meet the basic water demand: Strengthened and modernized irrigation system.
- Other sectors such as hydropower and urban and rural domestic and industrial water supply…

Weakness

- Poor operation and maintenance of hydraulic works.
- Operational efficiency is therefore low.
- Irrigation and drainage systems need to be modernized and upgraded.The dyke system is inadequate in some areas.
- Policy is needed on the sharing of capital costs for multipurpose reservoir development.
- Climate change has caused both severe flooding and reduced low flow, resulting in greater need for water storage and regulation.
- Hydraulic works development, management is relatively low. Major investment needs exist in the area of water supply and sanitation. Institutional development and capacity building in these areas are critical needs.

4. Background, issues, challenges, future vision and concrete action

4.1 Background

The Red River is formed by the confluence of the Da, Thao and Lo Rivers at Viet Tri upstream of Ha Noi. The Chay and Gam Rivers are tributaries of the Lo River, all rising in China. The Day River is the first of several distributaries that form the Red River Delta. It branches downstream of Son Tay and flows south of Ha Noi. The Cau, Thuong and Luc Nam Rivers are tributaries of the Thai Binh River. They rise within Vietnam, where rainfall is lower, and discharge to the Gulf of Tonkin. The Duong and Luoc Rivers, distributaries of the Red River,discharge to the Thai Binh River.

Red River Basin General Map

Location of region and sub-region

4.1 Background

- The RRB comprised 26 provinces now. The Red River Delta (RRD) Region consists of 11 provinces and covers 17% of the basin in Vietnam. The upper basin covers about 70% of the Northern Highlands (NH) Region including 8 complete provinces and parts of 7 more. The total population of the RRB was about 25 million in 2000 of which 10 million were poor.

Population and Poverty in the Red River Basin

Area	Population (million)	Poverty Incidence (%)	Poor Population
Ha Noi & Hai Phong Cities	2.0	5	0.1
Rural Delta	15.0	37	5.5
Highlands	8.0	55	4.4
Red River Basin	**25.0**	**40**	**10.0**

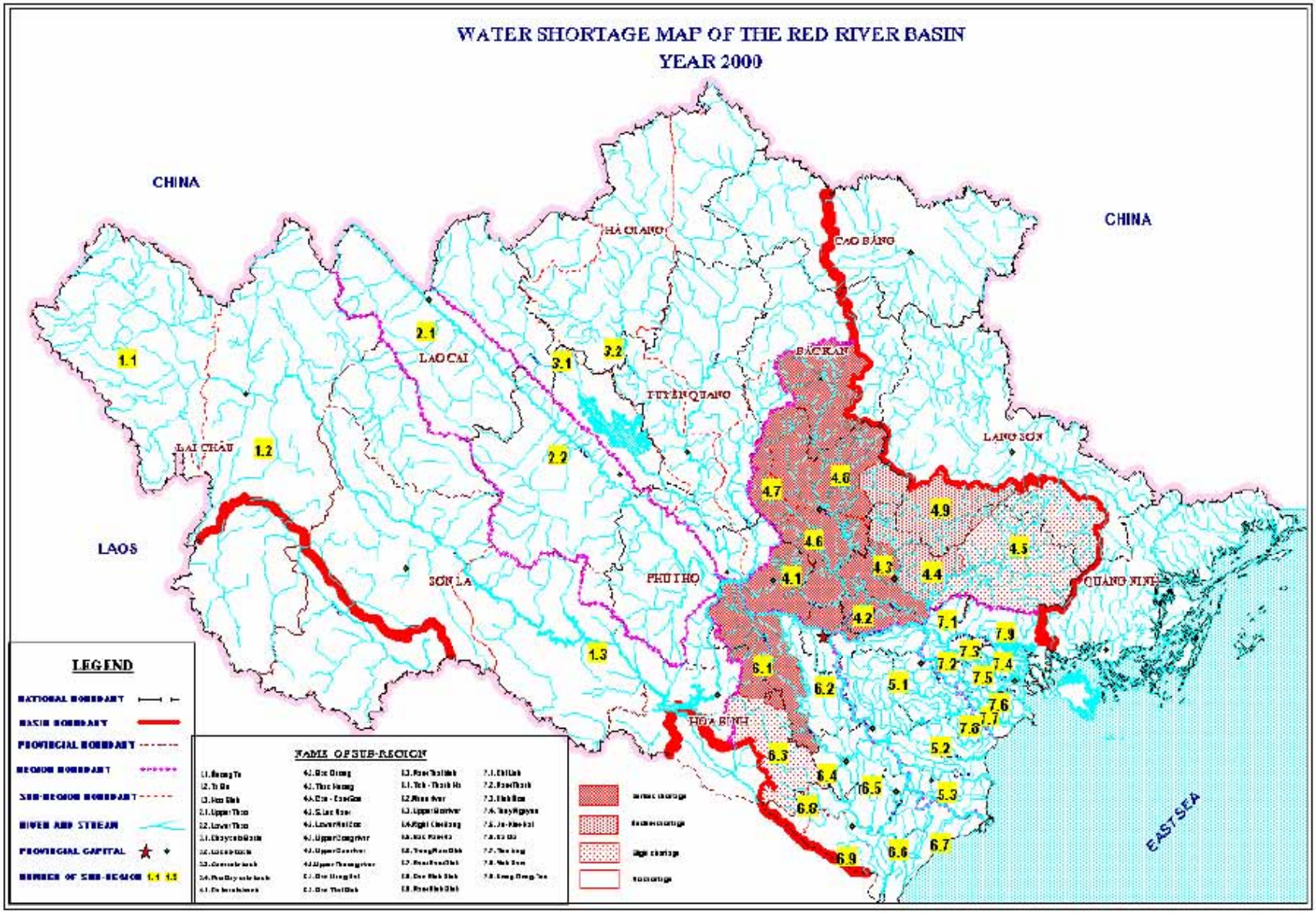
4.1 Background

- The RRB has a monsoon climate with pronounced wet and dry seasons. More than half the delta is less than 2 m above mean sea level. It is protected from flooding and typhoon storm surge by 3,000 km of river dykes and 1,500 km of sea dykes forming about 30 main polders. Rice is the main crop and intensive production relies on a combination of gravity and pumping for both irrigation and drainage.
- Electricity Vietnam has 2 hydropower facilities in the RRB; Hoa Binh Reservoir on the Da River (live storage 5.65 BCM) and Thac Ba Reservoir on the Chay River (2.06 BCM). The GOV is now considering several dams, and has decided already upon construction of the Son La Multi-purpose Reservoir on the Da River upstream of the existing Hoa Binh Reservoir.
- The Thai Binh Sub-basin and its tributaries, including the Cau River, are relatively short of water reflecting smaller basins and lower rainfall.
- Thus the performance of existing irrigation and drainage systems is likely to prove a priority issue. Improved agricultural production performance is likely to require a combination of system management and agricultural improvements.
- Flooding poses the greatest risk to development in the RRD a recent flood study found that Hanoi is currently protected against the 450-year flood. Thus structural dyke failure is considered the main risk rather than overtopping.
- The 6 Cau River Provinces set up a committee to manage water quality reflecting local demand for municipal and industrial pollution control.

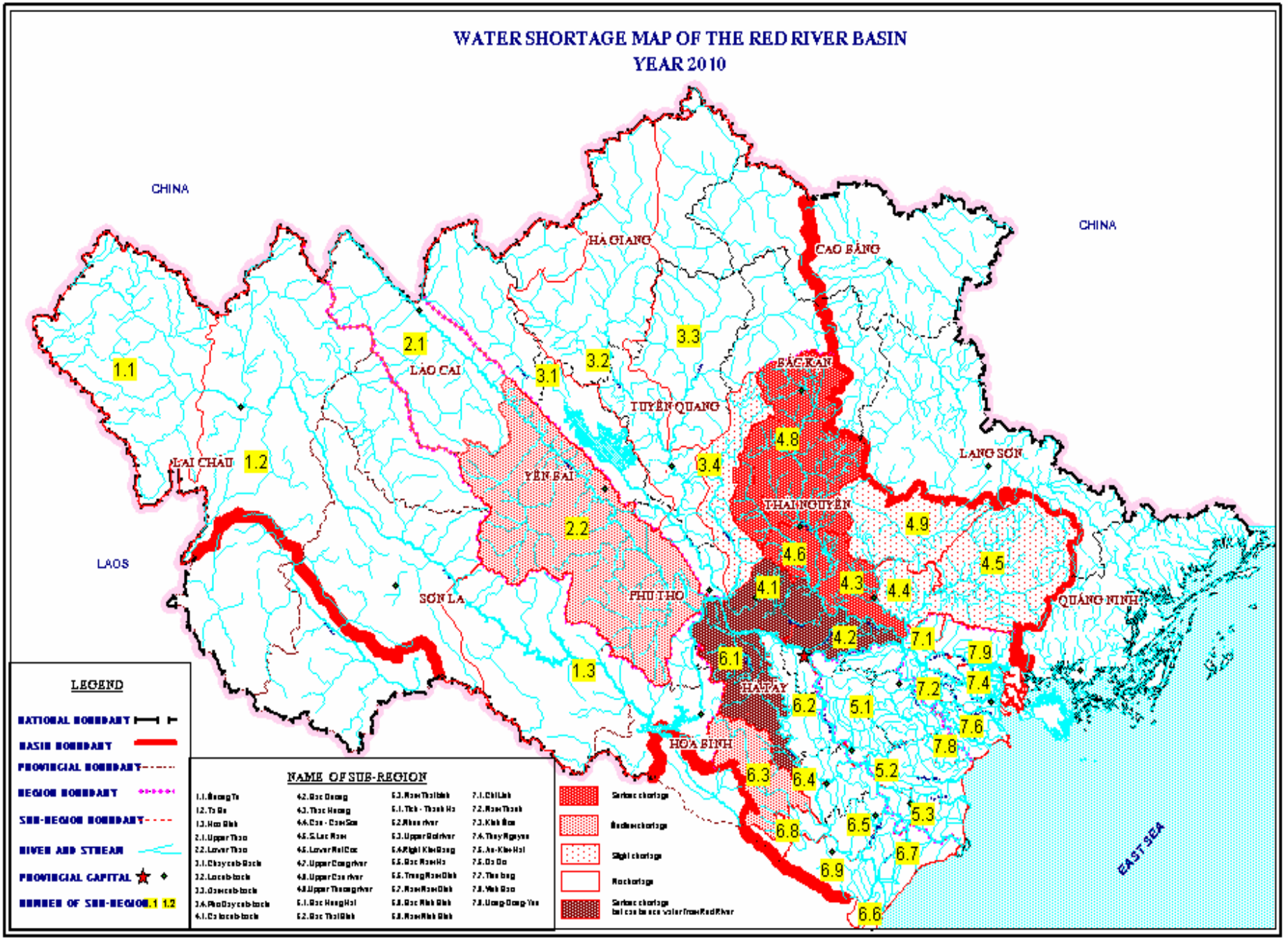
4.2 Issues

- Insufficient maintenance and rehabilitation of the infrastructure. Much of the infrastructure is twenty years old, has been inadequately serviced and maintained, and needs renovation. Pumps, electrical gear, and intake and sluice gates are in many instances in need of improvement. Many of the pumps are reported to have low efficiencies, although no data were available of any site measurements made of this factor.
- Inadequate infrastructure and design constraints. Most of the existing schemes were designed with an intake capacity of 0.8 l/s/ha which, at the time was considered adequate to meet peak water requirements, a higher demand is now considered necessary up to 1.2l/s/ha. Drainage sluices and pumping stations have traditionally been designed with a capacity of 3.0l/s/ha but calculations now show that a higher drainage capacity (up to 6 l/s/ha) is required in many areas.
- System operation and management proplems. In the Red river Delta, many of the systems are operated as combined irrigation and drainage networks, where management of water levels is critical to controlling flooding, minimising pumping requirements and the costs. Many of the operating companies indicated that their staff lack training in water management.

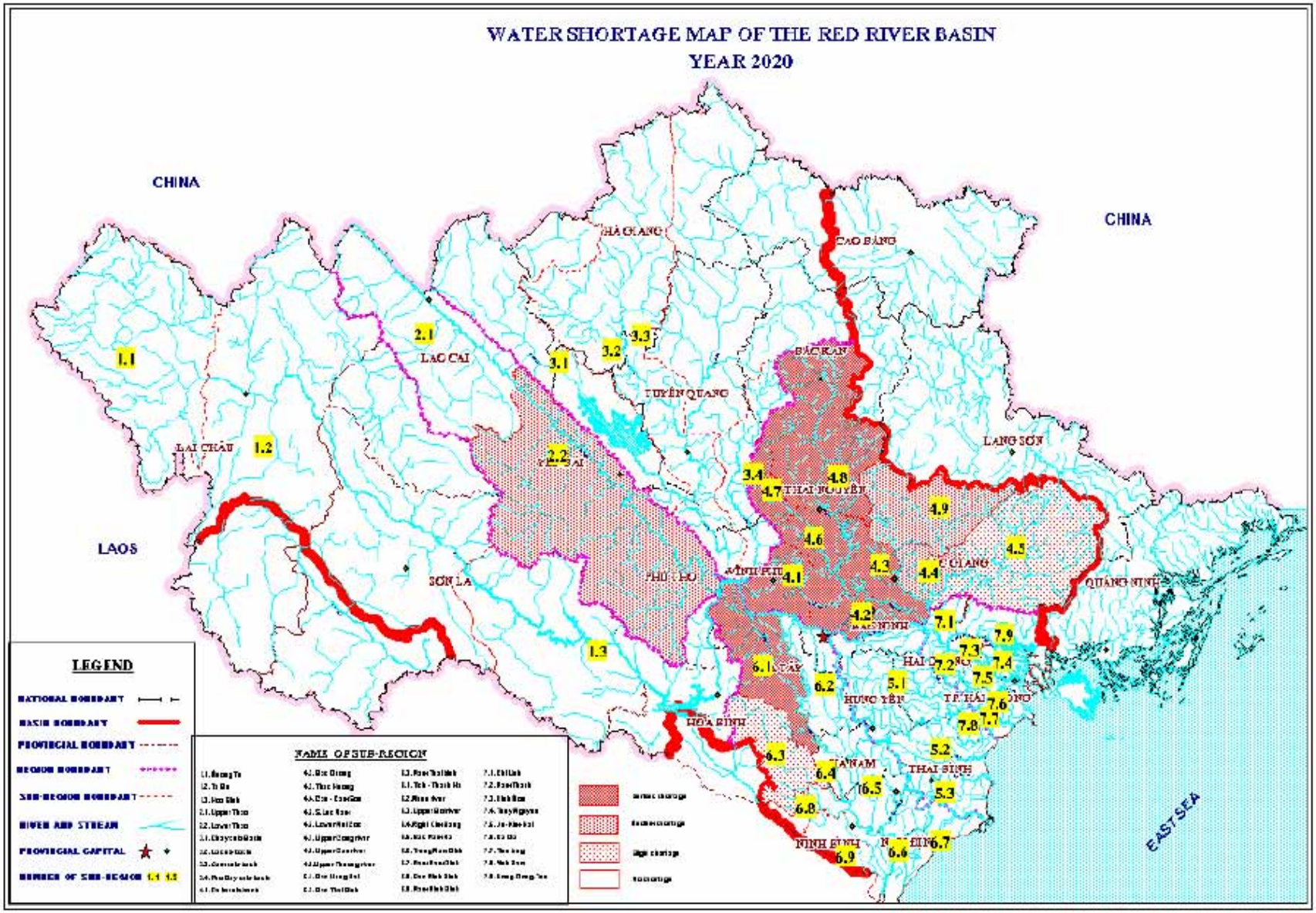
Water shortage map of red river basin - 2000



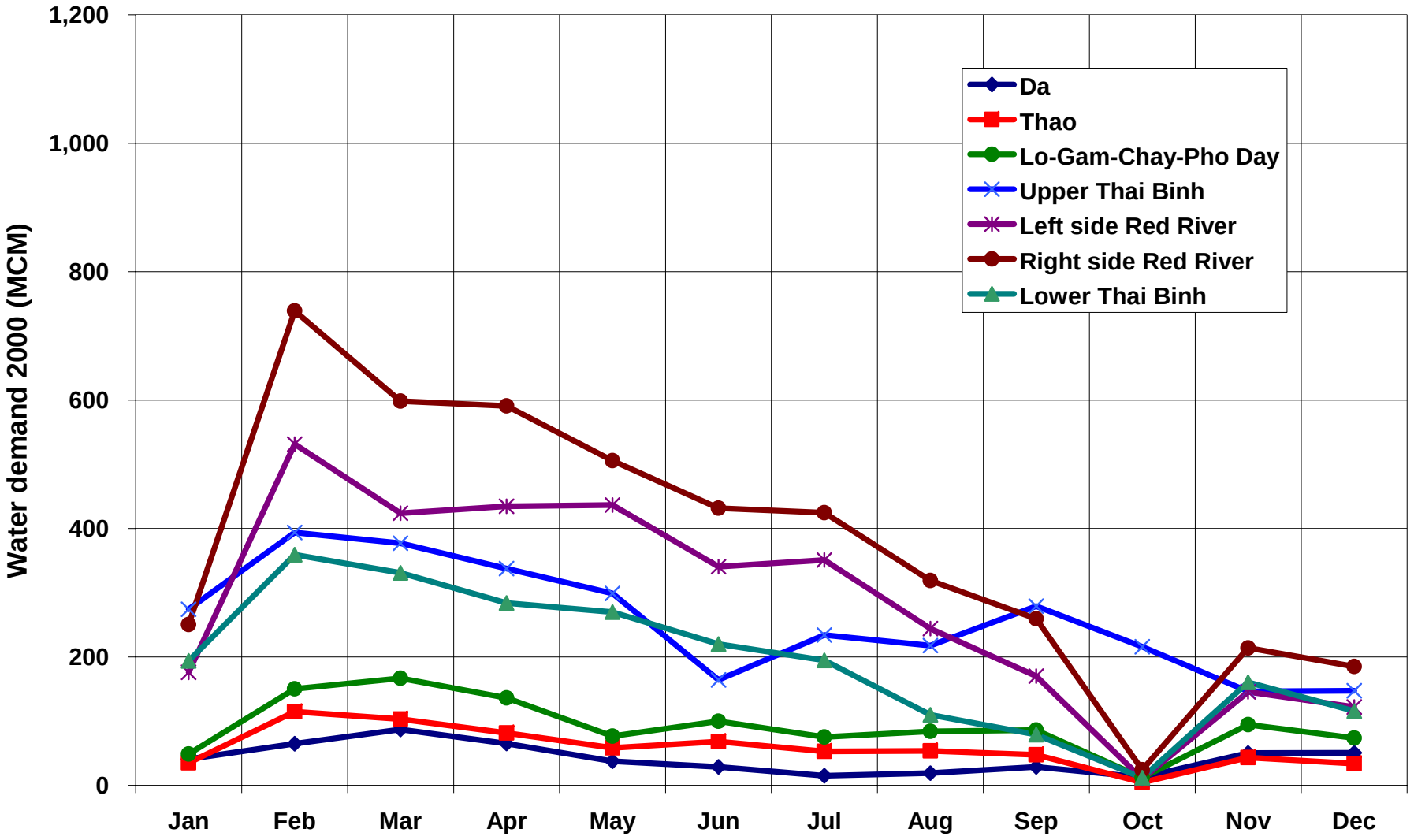
Water shortage map of red river basin - 2010



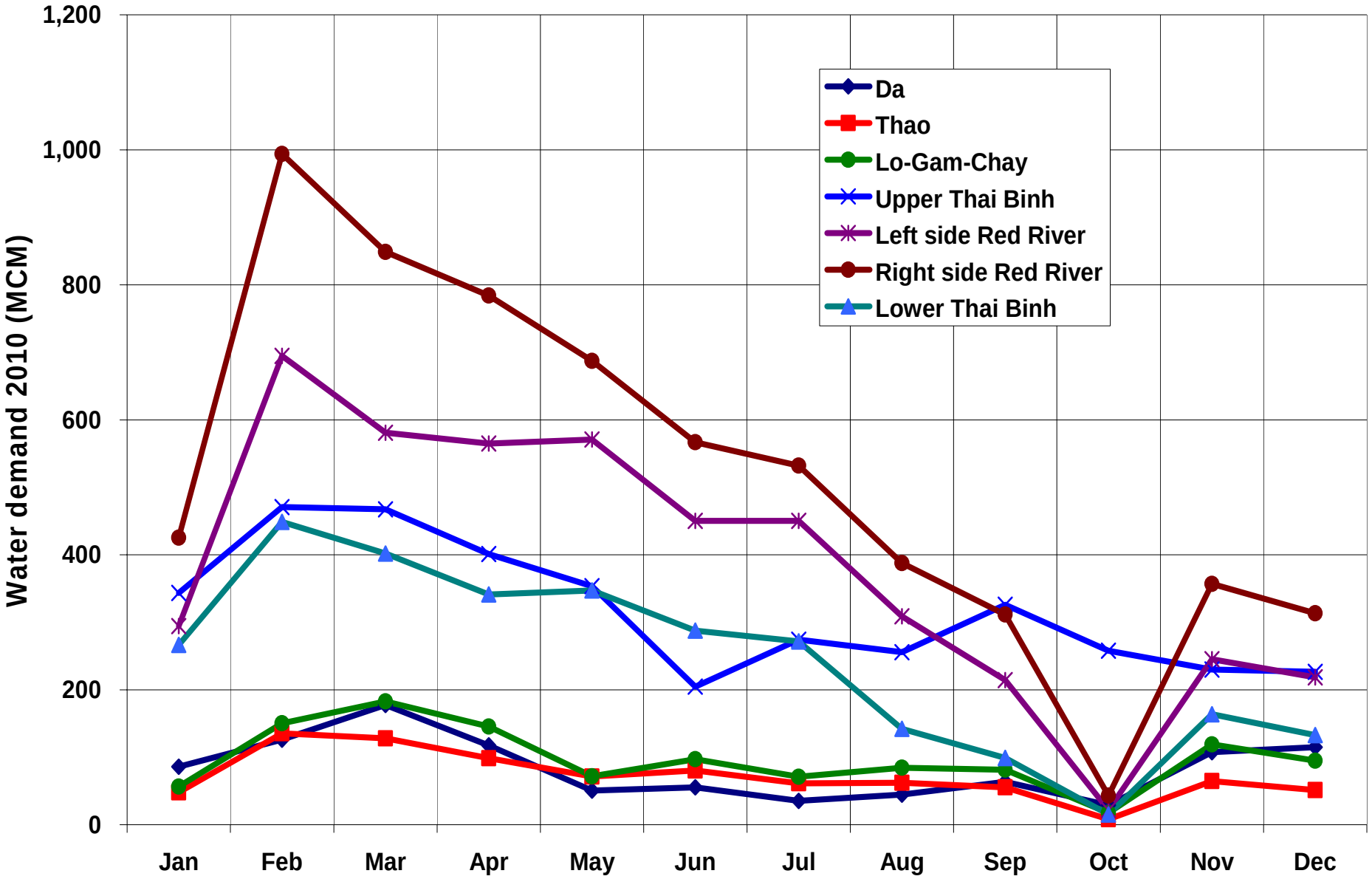
Water shortage map of red river basin - 2020



Water demand year 2000



Water demand year 2010



4.3 Challenges, future vision and concrete action

-Irrigation,drainage and flood control structure

- Invest in upgrading, improving existing hydraulic works.
- Dredging of existing irrigation and drainage canals, lining of canals and construction of new irrigation and drainage canals.
- Invest in equipment, facilities for operation and management of irrigation and schemes.

Plant trees and develop more lakes, dams upstream.

Solve completely essential points of dykes, compartments, sluices.

To build emergency spillway,maintain flood control systems.

To reinforce the existing dyke system (investment in the critical areas).

To dredge the river channel and clear the flood way.

Water supply and sanitation Structure

- Building many different types of water supply works for example commune drill well, tank for containing rainfall, pumping station or common filtered tank for all commune (build a tank, filter water and distribution system).
- Investment and planning in water quality and water storage. Need a master plan, especially in rural and poor area.
- Build new water supply systems and individual water supply structure for residential areas.
- Build, upgrade and complete water supply works.
- Investigate and planning surface water and underground water.

Non-structural countermeasures

Need to have policy and regulations for managing and exploiting water resources.

Have information, education and communication activities to raise public awareness (not only for farmers, people but also staff in organizations, association, people who are in charge of collecting water fee).

Raise the management of exploitation capacity of hydraulic works, economize water in irrigation strengthen organizations, train cadres.

Forest and protect watershed (upstream forest).

To efficiently operate the flood retarding and diversion basins.

Strictly discipline on dikes law's violation.

Mechanism on management and dyke protection.

Management, exploiting and protection water supply works.

To manage the waste water poured into rivers.

To raise public awareness relating the building of sanitary facilities.

Educate and enhance public awareness.

Thank you for listening !