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### **General Introduction**

- There are 2360 rivers, of which 10 river basin have area of over 10.000 km2.
- River network density is about 0,6 km/ km2
- Total annual runoff of rivers in Vietnam is about 853 km<sup>3</sup>, water flow originated in Vietnam is just 317 km<sup>3/</sup> /year, accounted for 37% of total flow, the remaning 536 km<sup>3</sup>/year is originated from neighbour countries.
- The total flow of Mekong, Ma, Ca rivers are 716,9 km<sup>3</sup>/year, of which the flow originated from Vietnam is 189.62 km<sup>3</sup>/year, remaning is originated from neighbour countries.



# Water Resources Development for Agriculture

- The irrigation systems in Vietnam including: 75 large to medium scale systems; 750 large to medium reservoirs; 10,000 small-scale reservoirs; over 10,000 large gates; 2,000 large pumping stations and 10,000 small pumping stations.
- These systems have been irrigating for around 6.8 million ha, draining for around 1.47 million ha, and preventing salt intrusion for around 700,000 ha.
- In average, the irrigation systems supplies 60-65 billion m<sup>3</sup> of water every year for agriculture cultivation.

Institutional framework of water resources in present:

The state management jurisdiction of water resources (Water resources Law):

- The Ministry of Agriculture and Rural Development is responsible to Government for state management of water resources.
- Ministries, Government agencies take responsibilities of state water resources management according to the assignment of Government.
- Provincial People Committees take responsibilities of state water resources management within the provincial area according to the regulation and the decentralization of Goverment.

Functions of State Water Resources Council

- Consulting Government about:
  - State Water resources policy strategy
  - Planning big river basins
  - Projects of water resources protection, exploitation dicided by Government.
  - Management, protection, exploitation and using international water resources.

#### Function of Ministry of Natural Resources and Environment

- Submit to Government the decentralization and allocation of basic investigation, and the jurisdiction of issue and revoke water resources permission; guide and inspect the implementation of works after approved.
- Summarize data, manage results of basic investigation, audit and assess water resources and built water resources database.
- Assign and guide the inspection of work assigned implementation and measures of water resources conservation.
- Standing committee of State Water Resources Council.

### Function of Ministry of Agricultrue and Rural Development :

- Managing the constructing, exploiting, using and protecting the hydraulic works, water supply works in rural area.
- Managing river basin, exploting, using and developing the rivers according to the approved planning.
- Managing the constructing and protecting dams, flood prevention works and natural disaster prevention works.

#### **Provincial level:**

- President of Provincial People Committee make dicision about the organization and activities of water resources management offices in the province.
- Department of Agriculture and Rural Development manage the water resources activities and establish water resources development plan in the province.
- Irrigation Water Management Companies manage and operate hydraulic works as independent enterprise to serve for agriculture water users.

#### Diagram 1

#### Planning and management chart of Hong – Thai Binh river basin



Function of river basin management board

- Establish and monitor the river basin planning, ensure the unity of river basin management with administrative location.

- Co-operate with the concerned offices of Ministry, profession and local in implemeting basic investigation, auditing, assessing water resources of river basin.

## Thank you for your attention

