



**NETWORK OF ASIAN RIVER  
BASIN ORGANIZATIONS**

**The Second General Meeting of  
Network of Asian River Basin Organizations (NARBO)**

Date: 14<sup>th</sup> – 16<sup>th</sup>, February 2006

*Venue: Jatiluhur - Purwakarta, Indonesia*

**ESTABLISHING A WATER MONITORING NETWORK  
IN BAC HUNG HAI HYDRAULIC WORK SCHEME  
IN HONG (RED) RIVER BASIN**

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**1. Status/tendency of Water Quality Problems in the Recent years.**

In the recent years, with the development of the social-economic, the water quality has been deteriorated and exhausted in most of rivers and river basin in Vietnam. So, Vietnam is now trying to conduct a lots of activities to protect water out of contamination and it is also the big challenges on water resources management in general and water in irrigation schemes in particular.

In the past, water resources management has concentrated on only exploitation for production and industry and lack of water quality monitoring and managing. So, it cause many positive problem in balancing environment and development of the country.

Among the dynamic developing area of Red River Basin, BAC HUNG HAI hydraulic works scheme is one of the 9 biggest hydraulic scheme in the North Delta of Vietnam where have high economic growth rate because of significant multi-sectors development in the provinces, especially the rehabilitation of customary hand made production villages. But, since the economic situation in the province has improved, the situation on water quality is getting worst and more serious. The waste water with is flushed directly into the environment and rivers in the province. Water sources in all lakes and rivers are polluted seriously that cause bad impacts to environment surrounding. It also decrease the multi-biology capacity and affect the health of people living in the system. That's why it is needed to establish a monitoring networks for water quality in the BAC HUNG HAI irrigation networks to find out the appropriate measures for an effective management in the system.

Since 2003, with the limited budget from the Ministry of Agriculture and Rural Development (MARD), a framework for establishing a water quality monitoring networks was settled up. The main purpose of the monitoring network is to:

- Assess all contamination element which affect to have better orientation for water quality management ensuring for irrigation production, domestic and environment; predict and forecast the possibilities of water contamination in the future.

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- Establish the water quality monitoring networks in the BAC HUNG HAI scheme in order to protect water in the rivers and in scheme.

Since 2005, MARD continue to finance to test most of water quality elements in the BAC HUNG HAI hydraulic works scheme. It is also the model for improving the management situation in hydraulic works system in the North of Vietnam.

## **2. The role of Department of Water Resources in taking management/improvement of water quality in the BAC HUNG HAI schemes:**

The Department of Water Resources under control of Ministry of Agriculture and Rural Development has responsibility to help MARD to settle up the Ministerial Examination and Approval Committee with members from related sectors concerning to water quality management in the BAC HUNG HAI hydraulic system to assess, check and take over for approval all activities concerning to water quality monitoring in the networks. One agency will be selected to monitor water quality, take sample, test in the laboratory and report to the MARD through Department of Water Resources. The Committee has also to take over the mentioned results and report and then submit to MARD for delivery to all agencies related to water management in the hydraulic work scheme.

## **3. According to the LAW on WATER RESOURCES, there are some rules and infrastructure policies on water quality management in the scheme in river basin as follow:**

*a. “ In Article 5.- Protecting, exploiting and using water resource; preventing, combating and overcoming the harm caused by water*

1. The protection, exploitation and use of water resource, the prevention, combat against and overcoming of the harm caused by water must comply with the zoning of the river basin already ratified by the competent State agency; ensure the systematic character of the river basin and must not lead to severance along the administrative boundary.

2. The protection of water resource, the prevention and fight against deterioration and depletion of the water source must be linked with the protection and development of forests and the reproductive capability of the water source and with the building and protection of water conservancy works, the prevention and combat against pollution of water source and the exploitation and integrated use of the water source in an economical, safe and effective manner.

3. In the prevention, fight against and overcoming of the harm caused by water, there must be a plan and measures to take the initiative in preventing, avoiding, alleviating and limiting the harm caused by water; ensure the harmonious combination of the interests of the whole country with those of different regions, branches, between modern science and technology and the traditional experiences of the people and in conformity with the capacity of the economy.

4. The projects on the protection, exploitation and use of water resource and on the prevention, combat and overcoming of the harm caused by water must contribute to socio- economic development and must take measures to ensure the life of the population, national defense, security, protecting the historical and cultural relics, beautiful landscapes and the environment. “.

*b. In Article 6. Policy of investment in developing water resource:*

“ 1. The State shall invest in the basic survey of water resource, building the system of observation posts and the system of data information, raising the capacity of forecast about rising water, floods, droughts, salinity infiltration, rise and spill-over of sea water and other harms caused by water.”

*c. In Article 11. - Preventing and fighting deterioration and depletion of water source*

“ 1. The State shall have a plan to protect and develop headwater forests and other forests, build water conservancy projects, restore the deteriorated and depleted water source, encourage organizations and individuals to exploit and use water rationally and economically in order to protect the water resource.

2. Organizations and individuals that exploit and use the water source must comply with the regulations on prevention and combat against deterioration and depletion of the water source.”

*d. In Article 14. - Protection of the quality of the source of water for living*

“ 1. All organizations and individuals have the duty to carry out measures of environmental sanitation in order to protect the source of water for living.

2. It is forbidden to discharge waste water or to introduce pollution-generated substance into the sanitary protection zones of the living water providing areas.

... “

*e. In Article 26 - Exploitation and use of water resource for agricultural production*

Quoted from item 2: “2. Organizations and individuals exploiting and using water resource for agricultural production must take measures to save water, prevent and combat acidity and salinity of water, slushiness and erosion without polluting the water source.”

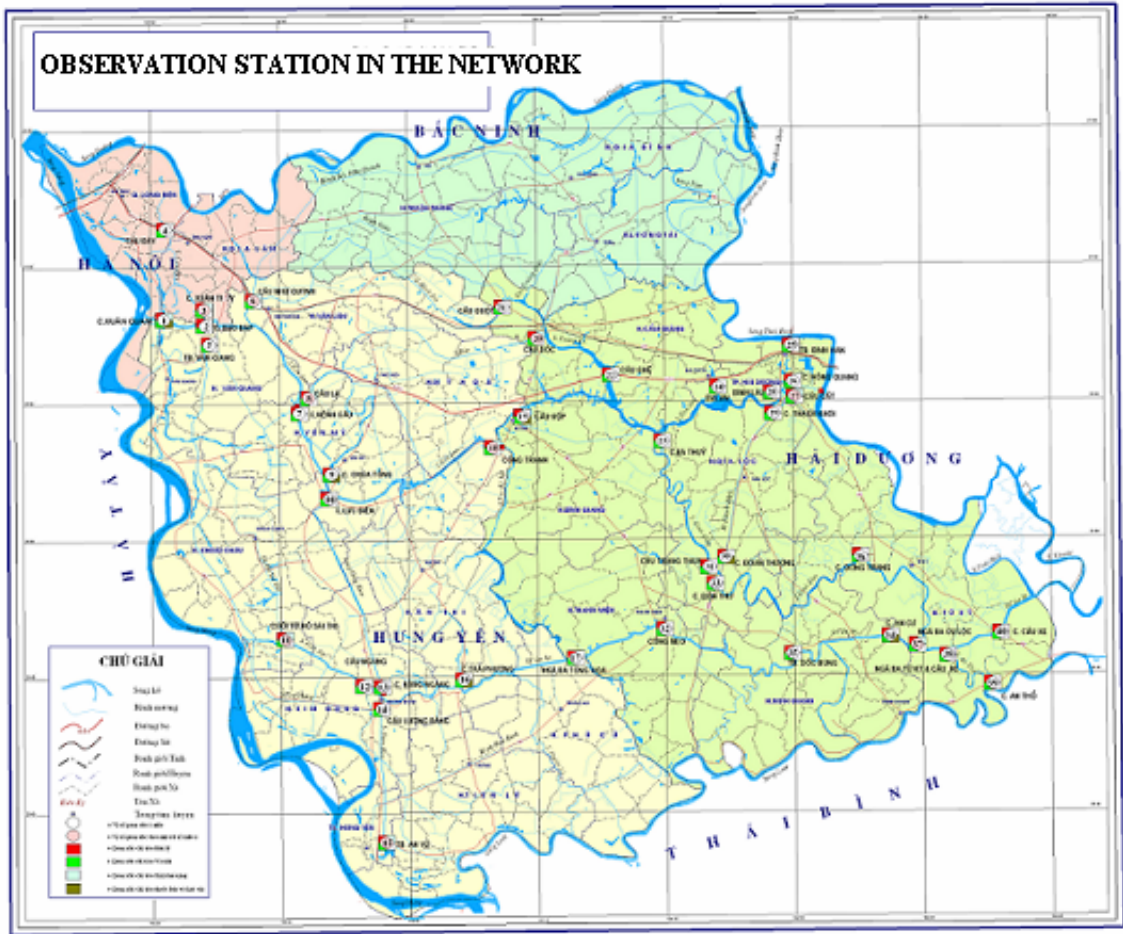
#### **4. Difficulties issues on water quality management in relation to the basinwide IWRM approach.**

- The standard for water quality management for each using purpose is different (eg. the standard on water for domestic or drinking is more strict than water for irrigation,...)

- For the hydraulic scheme larger than one province, it is very difficult to determine which province will be the host agency for handing the water quality monitoring network.

- With the limited of national budget for water resources development sector in general and in multi-purposes hydraulic scheme in particular, it is not easy apply to all schemes in the basin and especially for a scheme, it is lack of fund to install auto measured equipments to all observation points of the network.

**Picture 1: The picture of Bac Hung Hai hydraulic work Scheme.**



**Picture 2: The site of BAC HUNG HAI among Red River Delta.**

