WEPA
Water Environment Partnership in Asia

Progress of Water Environmental Governance/Management and Future Challenges in Vietnam

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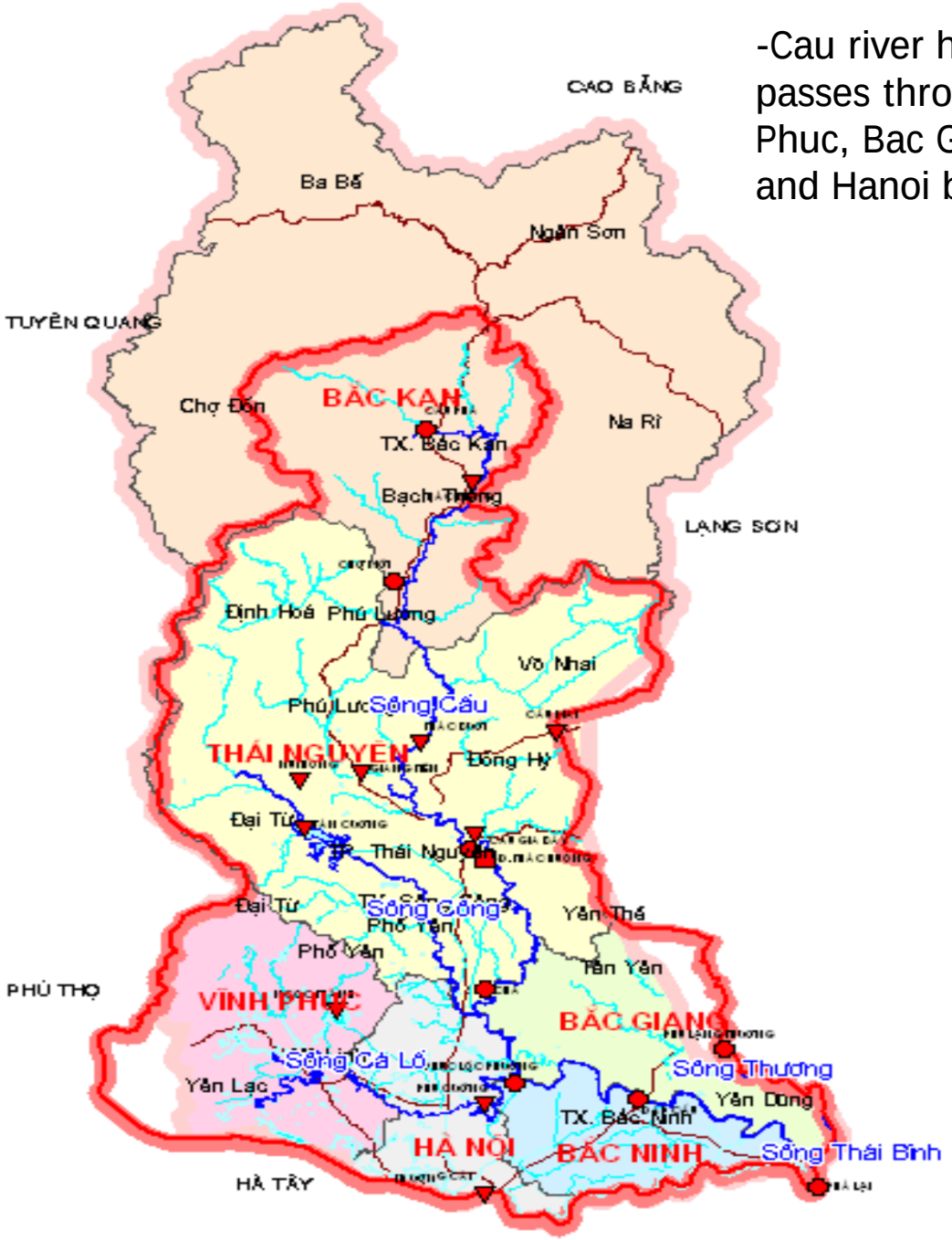
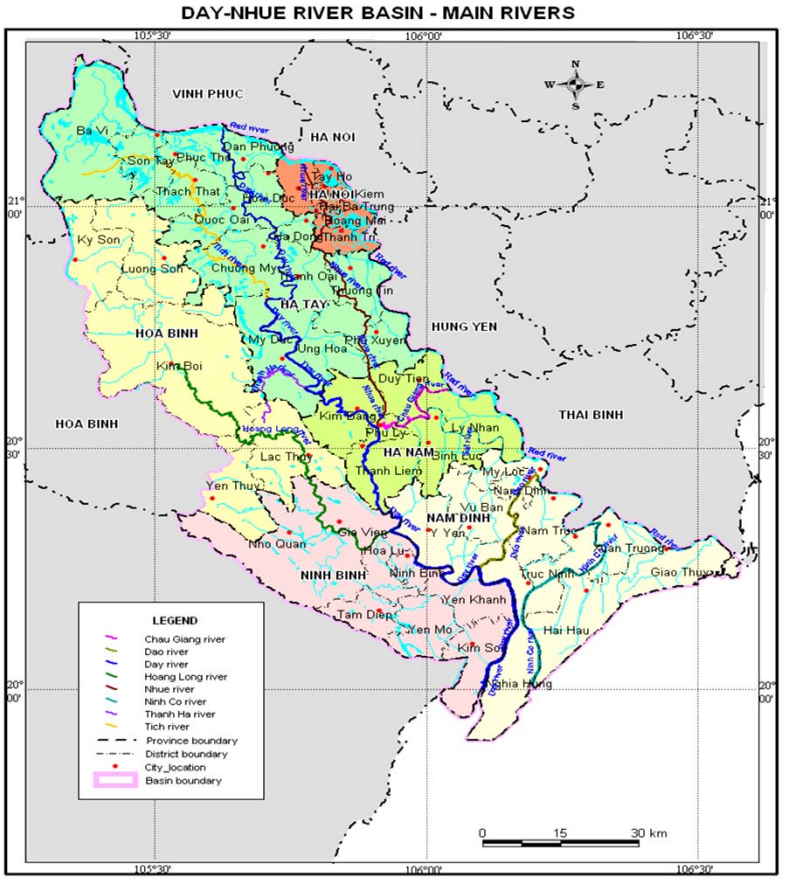
I. State of water qualily

* Vietnam has a dense river network. Rivers with a length of over 10 km total about 2,372 comprising 13 large river systems with a total area of 10,000 km^2. The 13 river basins, 10 of which are trans-boundary systems, cover 80% of the country's territory. Basins of the 9 largest river systems, which include Red, Thai Binh, Bang Giang - Ky Cung, Ma, Ca La, Thu Bon, Ba, Dong Nai and Cuu Long, account for 90% of the total river basins nationwide.

An introduction to Cau, Nhue-Day river



-Cau river has 6.230 km^2, and 288 km long, passes through Bac Kan, Thai Nguyen, Vinh Phuc, Bac Giang, Bac Ninh, Hai Duong provinces and Hanoi before it merges with Thai Binh river.



The Day/Nhue sub-Basin covers some 7,958 km2, 2.4% of the area of Vietnam. It covers Ha Nam, Nam Dinh, Ninh Binh, Hanoi city and Hoa Binh

Cau river basin

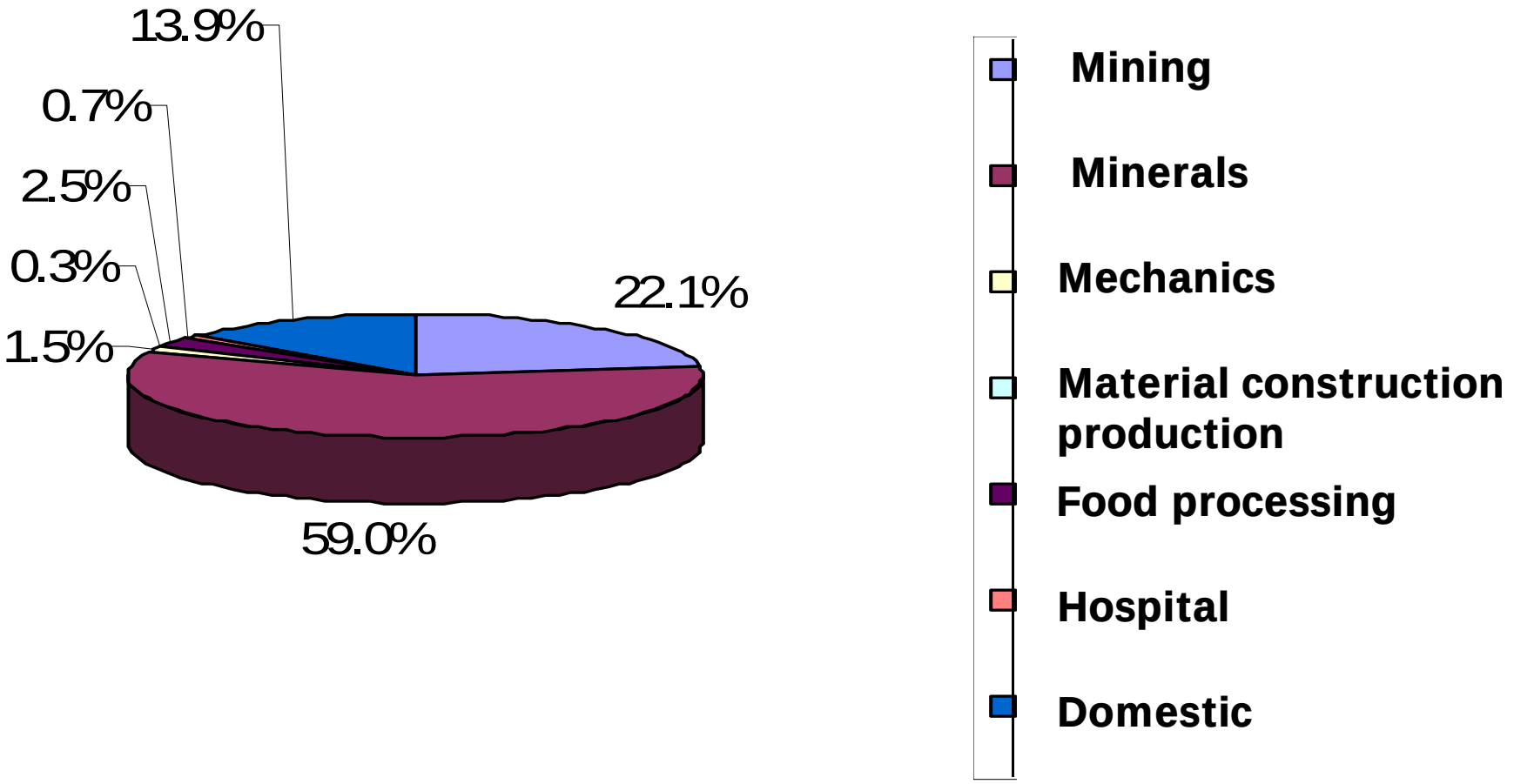
Table 1. Some typical craft villages in Bac Ninh province

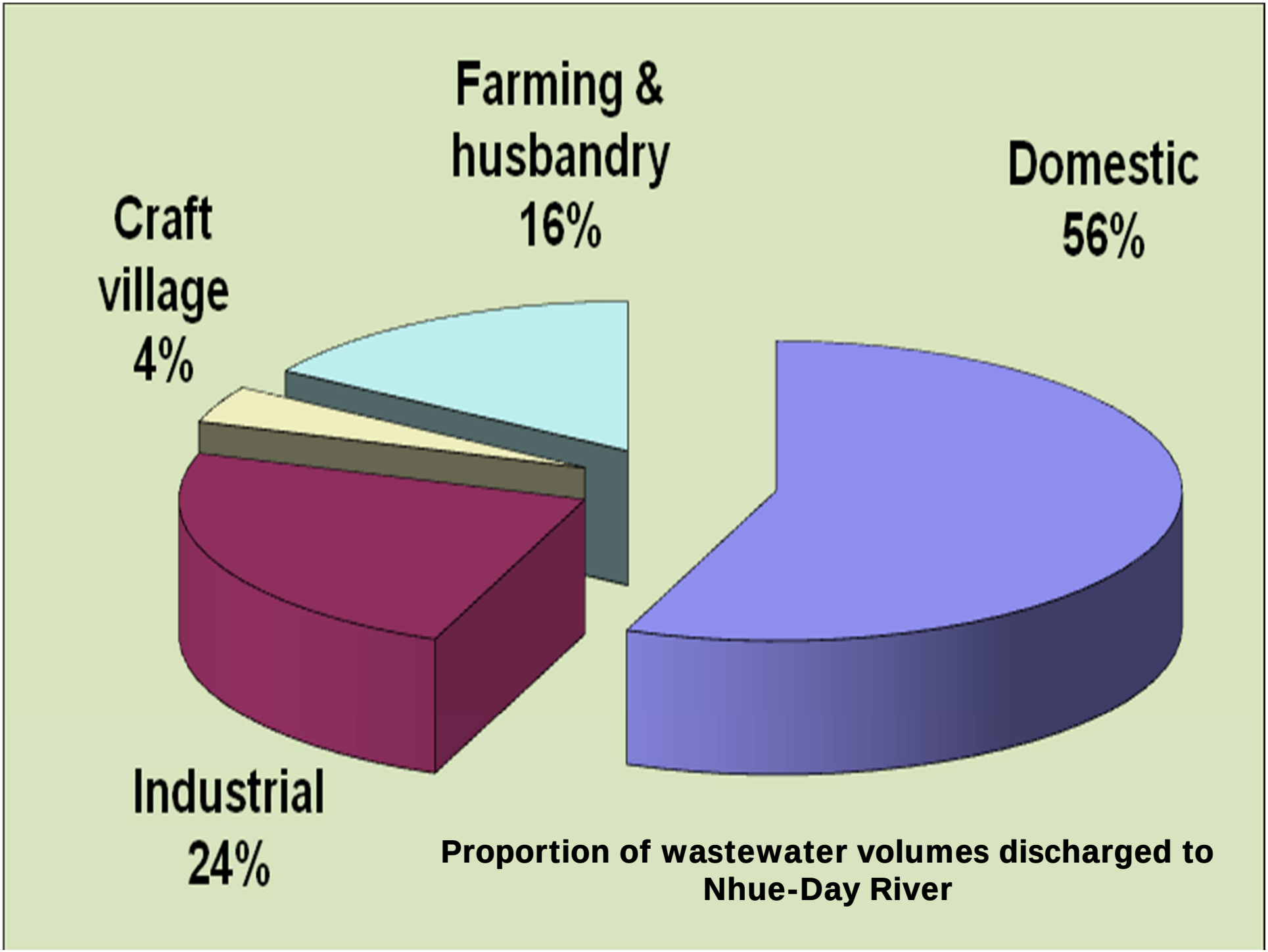
Villages	Number of production est/households	Waste water volume m^3/day	BOD content kg/day
Phong Khe paper production village	*64*	*3.500*	*1.000-1.500*
Phu Lam paper production village		*2.000-2.500*	*260-330*
Da Hoi steel and iron production village	*450*	*15.000*	*600-675*
Van Mon aluminium and lead casting village	*80-120*	*500-1.000*	*5-25*

Source: Bac Ninh DONRE, 2006

Cause of pollution

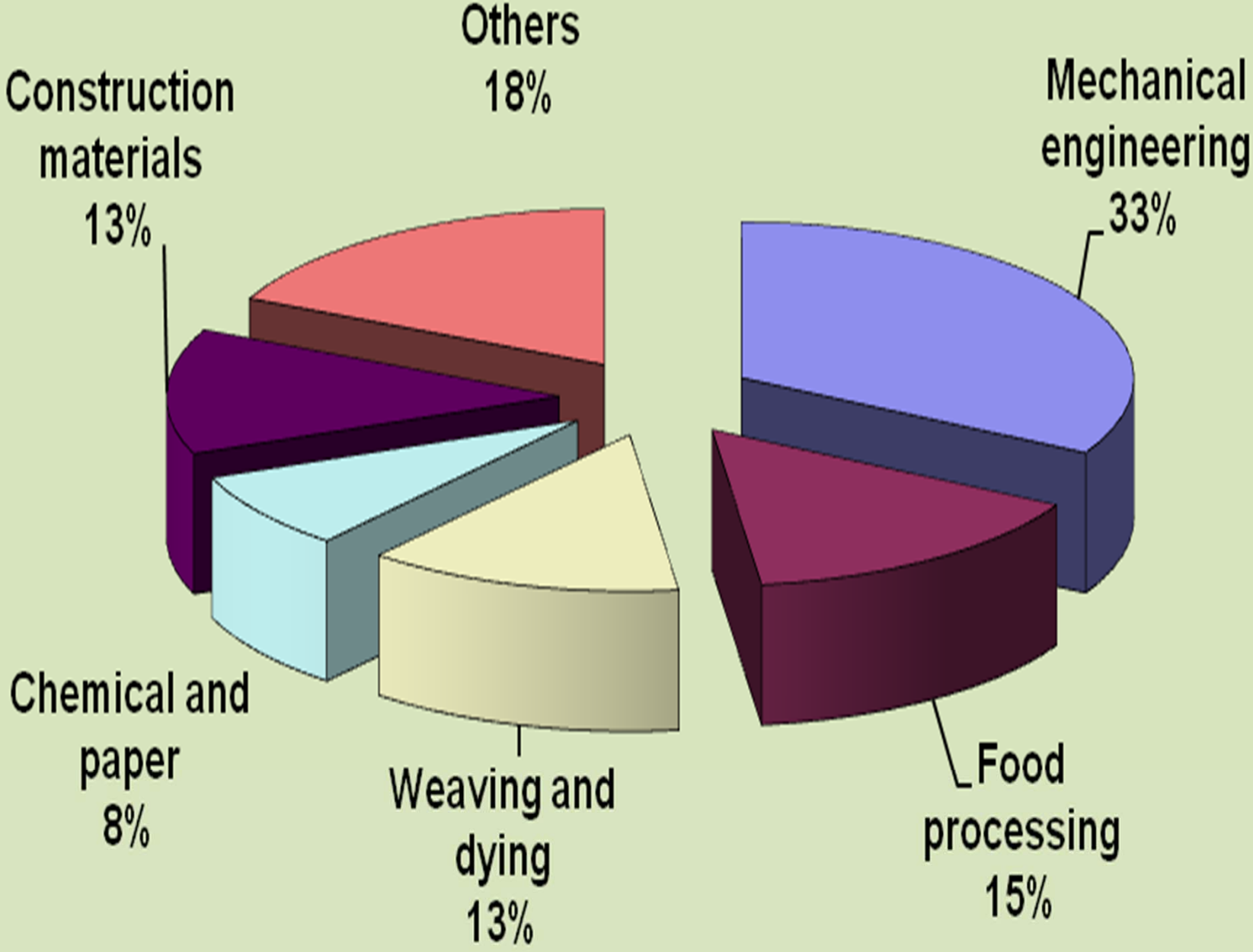
The main wastewater in thai nguyen





Proportion of wastewater volumes discharged to Nhue-Day River

Proportion of industries discharging wastewater to rivers in the Day / Nhue

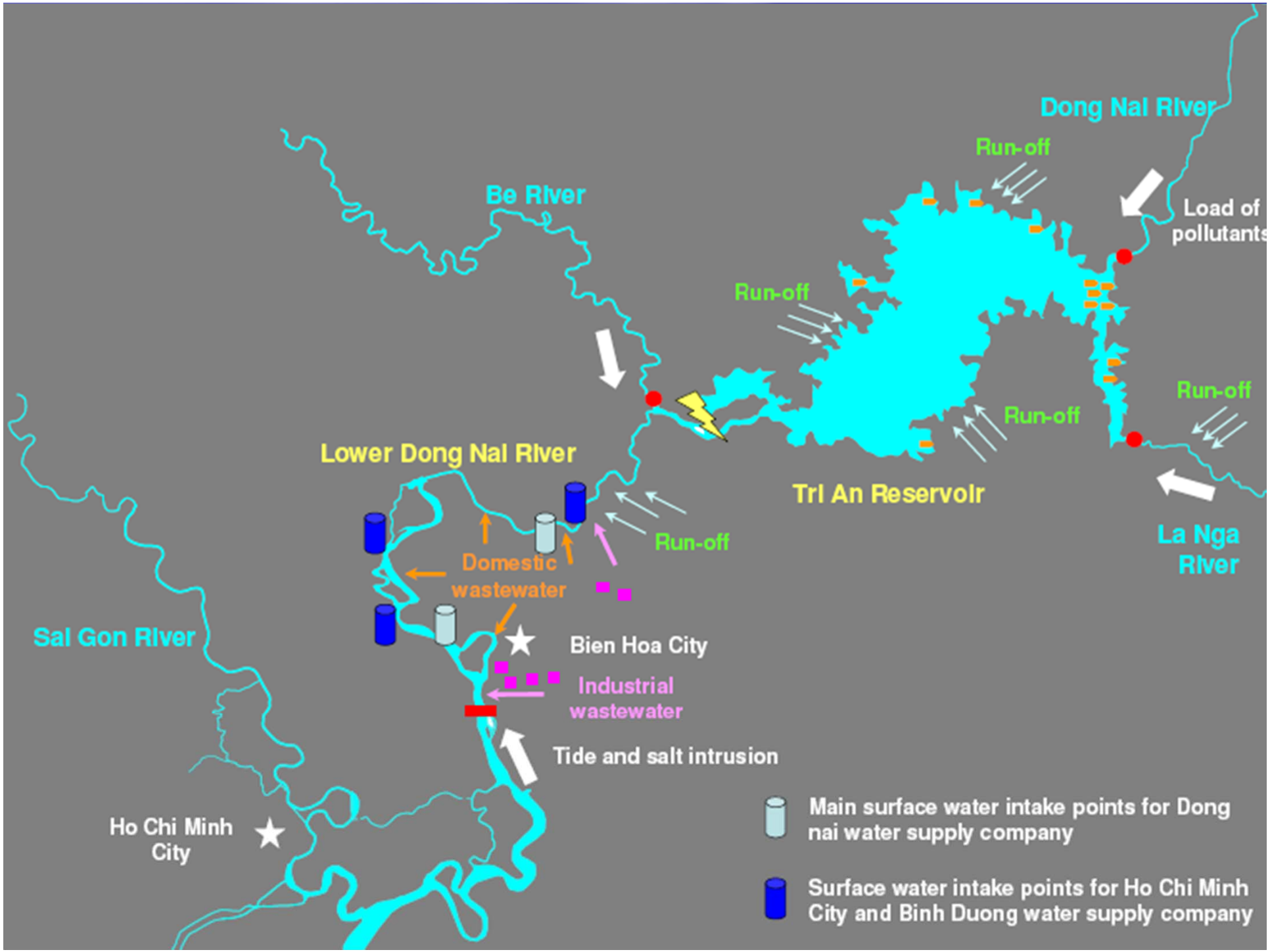


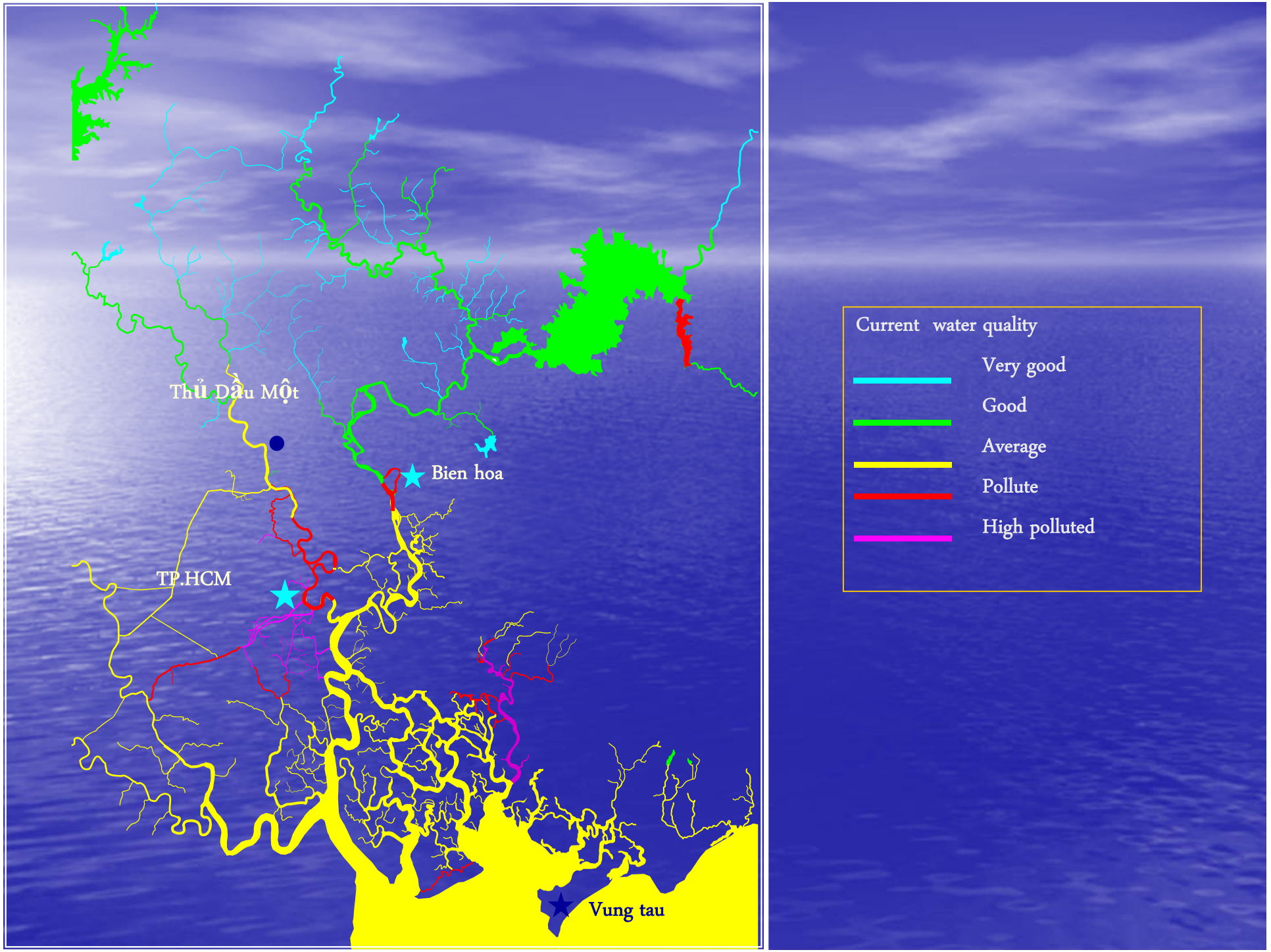
- ***Source***: *Institute of Geography, 2005, SOE Report 2006*

Estimating the discharge of domestic wastewater in Hanoi city

Item		2005	2010	2020
Hanoi population in Nhue River catchment		2,230,300	2,666,240	3,011,163
Water supply standard for urban people (average litre/person/day)		140	180	200
Domestic water volume (calculated at 90% reliability of water supply for domestic) (m^3/day)		365.702	431.930	542.000
BOD	kilo/day	1,281,875	1,620,000	2,218,750
	tonne/year	467,884	591,300	809,844
COD	kilo/day	1,085,000	1.360.000	1.850.000
	tonne/year	396,025	496,400	675,250
SS	kilo/day	888,125	1,100,000	1,481,250
	tonne/year	324,166	401,500	540,656

***Sources**: The water supply decisive planning of Hanoi & Hanoi drainage project period (2003 – 2010)*


Dong Nai River
Run-off
Load of pollutants
Be River
Run-off
Run-off
Run-off
Lower Dong Nai River
Tri An Reservoir
La Nga River
Run-off
Domestic wastewater
Sai Gon River
Bien Hoa City
Industrial wastewater
Tide and salt intrusion
Ho Chi Minh City
Main surface water intake points for Dong nai water supply company
Surface water intake points for Ho Chi Minh City and Binh Duong water supply company


Thủ Dầu Một
Bien hoa
TP.HCM
Vung tau
Current water quality
Very good
Good
Average
Pollute
High polluted

2. Changes of Organisational Arrangement related to Water Quality Management (changes in during January 2004 to March 2011)

Responsibilities relating to the water resources of some ministriess relating to the water resources of some ministries	
Ministry of Natural Resources and Environment	Management of water resources, water quality Make plans on the use, overall management and protection of water resources in the principle river basins
Ministry of Agriculture and Rural Development	Irrigation, flood and storm prevention, rural water supply, management of hydraulic engineering and dykes
Ministry of Planning and Investment	Give guidelines to, and check, ministries and sectors on the preparation and implementation of the Strategy on socio-economic development
Ministry of Industry	Hydropower development via Vietnam Electricity Corporation
Ministry of Science & Technology	Appraise the drafts and publicize the water quality standards prepared by the Ministry of Natural Resources and Environment
Ministry of Construction	Manage the urban public works; design and build up the urban water supply and discharge works.
Ministry of Transportation	Manage and develop the transportation on water; manage aquatic engineering and port system
Ministry of Fishery	Manage the water for aquaculture and aquatic products processing
Ministry of Health	Manage drinking water quality; be responsible for preparing and supervising the water quality standards
Ministry of Finance	Prepare the policy on tax and fees for water resources

3. Water Quality Management Policies

On 13/2/2006, MONRE issued the Decisions approving the preliminary Projects and total estimates for water resource planning in Dong Nai river basin, the southern central region of Vietnam (Trung Bo) and the key economic zones of North Vietnam (Bac Bo).

These planning projects have purposes as follows:

1. Establishing the general framework for water resource protection, exploitation, development and utilisation; prevent, minimize damage caused by water.
2. Develop the principles and activities necessary for the sustainable and overall management and utilisation of water resources in the river basin.

(source "Environment report of Viet Nam 2006")

4. Changes in Laws, Regulations, Standards (in January 2004 - March 2011)

* The National Water Resources Council shall be responsible for advising Government and the Prime Minister on important decisions on water resources; decisions on ensuring the proper coordination of actions and activities of concerned ministries, sectors and localities in the implementation of this National Water Resources Strategy towards the Year 2020, in an effective manner.
* The Ministry of Natural Resources and Environment has the following duties:

- Organising and directing the implementation of the measures and objectives of this Strategy; providing the concerned ministries, sectors and localities with guidance and supervision in development and implementation of programmes.
- Directing reviews, inventories and assessments which are to be carried out and directing and coordinating with the concerned ministries, sectors and localities in the implementation of the projects of high priority (specified below).
- Taking the lead and coordinating with the concerned ministries, sectors, localities and authorities in carrying out monitoring and inspection; carrying out periodic (annual, five-year, etc.) reviews and assessments of the Strategy implementation and drawing experiences and lessons for improvements and/or modifications in next period; submitting for the Prime Minister's approval regarding the amendment and/or modification of objectives and contents as required.

* The Ministry of Planning and Investment and the Ministry of Finance take the lead and coordinate with the Ministry of Natural Resources and Environment and other concerned ministries and sectors in allocating and balancing annual investment budgets for effectively achieving the Strategy objectives. Ministries, sectors and localities, as per their assigned functions and duties, are responsible for the implementation of the high priority projects of this Strategy (listed hereafter)

List of High Priority Projects for Implementation of the National Water Resources Strategy in the Period 2006-2010

* **Inventory, assessment of the national water resources and establishment of national water resources information and data system**

Implementing agency: Ministry of Natural Resources and Environment;

Participating agencies: Ministry of Agriculture and Rural Development, Ministry of Industry, Ministry of Construction; concerned ministries and sectors and people's committees of provinces, cities under Central Government management (hereinafter referred to as provincial people's committees).

* **Water resources sharing with priority given to domestic uses and securing water for power generation of key hydropower plants in cases of drought occurrence**

Implementing agency: Ministry of Natural Resources and Environment;

Participating agencies: Ministry of Industry, Ministry of Agriculture and Rural Development, Ministry of Construction; concerned ministries, sectors and provincial people's committees.

* **Water allocation and regulation for water security for provinces of severe water shortage**

Implementing agency: Ministry of Natural Resources and Environment;

Participating agencies: Ministry of Agriculture and Rural Development, people's committees of the Ninh Thuan, Binh Thuan, Central Highlands provinces.

5. Goals of Water Quality Management Policy in short-/mid-term (2-10 years) to follow after April 2011

* **Master Plan on the Protection and Sustainable Development of the Landscape and Ecological Environment of Cau river basin**

* **Guidance viewpoints:**

+ Protection of the landscape and ecological environment of Cau River Basin is a long-term and recurring task requiring high commitment and focus of investment resources of local governments and communities along the basin with support from the state budget.

+ The protection of the landscape and ecological environment of Cau River Basin should be comprehensively carried out across the entire basin across administrative borders,, integrating water quality preservation together with sufficient water supply.

+ Overcome the practice of unplanned sand and gravel exploitation within the river and protect the stable natural cross section of the river.

+ Protect alluvial deposits and forests to achieve regulated quality in order to overcome water short- age in dry months and preserve, restore and develop a clean natural environment and conserve bio- diversity in the entire basin.

+ Develop and gradually complete the basin environmental organization and management model; develop necessary mechanisms and policies to create favorable conditions for strengthening state management; promote the socialization of environmental protection in the basin.

* **The main tasks are:**

+ Complete assessment of the status and basic prevention of the increased rate of environmental pollution in Cau River Basin.
+ Strengthen state management efficiency and effectiveness in the entire basin.
+ Diversify investment resources to attract and effectively utilise resources with appropriate incentive mechanisms to overcome and treat pollution, in order to protect, restore and develop natural resources and environment in Cau River Basin.
+ Promote international cooperation in terms of multilateral and bilateral cooperation with different nations, international organizations and non-governmental organisations for the cooperation, experience sharing, advanced technology; and encourage and create favorable conditions for Ministries, sectors and provinces to mobilize international bilateral and multi-lateral donor sources and ODA funds to quickly promote the implementation of this Master Plan.

6. Challenges

* **Staff is lacking and Limited capacity**
* **Financial investment**
* **Environmental monitoring and information**
* ***Databases and information system***
* **Conflict Resolution**

THANK YOU VERY MUCH

FOR YOUR KIND ATTENTION