

**VIETNAM MINISTRY OF NATURAL
RESOURCES AND ENVIRONMENT**

**WATER POLLUTION
PREVENT AND CONTROL
IN VIETNAM**

WATER ENVIRONMENT

Surface water environment

- Vietnam has a large river and canal network
 - 108 river basins, with around 3,450 rivers and streams >10km
 - 13 large river systems – 10.000m²
 - 2% total flow of all rivers in the world
 - Total surface water volume averages from 830 billion m³ to 840 billion m³, of which more than 60% of the water is derived from foreign countries
 - Mekong river is 500 m³, 59% of the total flow in the country; Red river (14,9%), Dong Nai river (4,3%), Ma, Ca,...
- Contribute to national social-economic development

WATER ENVIRONMENT

- Exhaustion of surface water
 - Most of central and Central Highlands provinces have been exploited to more than 50% of the total river flow
 - The exploitation of water resources has seriously exhausted the flow and quality of water in 7 to 8 major river basins
 - Over 60% of total river flow depends on the flow in the upper sections which are outside the country's boundaries.
 - Impacted by climate change, the rainy season and rain flow in Vietnam is tending to develop abnormally; drought and partial flooding happens more regularly and on a larger scale.

WATER ENVIRONMENT

- Sources of surface water pollution
 - Waste water discharged from industrial establishments and industrial zones
 - Pollutants from agricultural waste water. Agriculture is the largest user of water, mainly for the irrigation of rice and other water intensive crops.
 - Untreated urban waste water: most cities do not have a treatment system for domestic waste water.

WATER ENVIRONMENT

Groundwater environment

- An important supply source for domestic, industrial and agricultural activities. Currently, between 35 and 50% of the total water supply to all cities in the country comes from groundwater reserves.
- Groundwater in Vietnam is rather plentiful
- Major reasons leading to the decrease of groundwater quality include geological characteristics of the strata, the endosmosis of polluted surface water, change in land-use purposes, illogical exploitation of water, rising sea levels are resulting in salt water intrusion into coastal groundwater layers.

WATER ENVIRONMENT

Sea water environment

- Pressure of population growth and urban development in coastal areas. there are almost no treatment systems for solid waste and waste water in coastal cities.
- Pressure of maritime activities: about 400 units of international shipping passes through Hai Phong - Quang Ninh seaport complex every month and the discharged ballast water
- Pressure of fishing and aquaculture
- Pressure of coastal industrial development: 79% of industrial zones in the whole country
- Pressure of coastal tourism development

WATER ENVIRONMENT

Most of the major rivers in Viet Nam are already contaminated with varying degrees, with major pollution in the middle and lower reaches

The percentage of urban population receiving new drainage services accounts for about 60% and the rate of domestic wastewater treated is only 12%

WATER ENVIRONMENT

Reason

The collection and treatment of domestic wastewater from households is still limited.

Industrial parks and factories, the investment and application of waste water treatment have not met the requirements.

Industrial wastewater from handicraft villages, from small and medium industrial producers, are almost not treated before being discharged into receiving water.

The use of pesticides, chemical fertilizers in agricultural production.

Limited resources on implementation, especially human and financial resources

Trans boundary water pollution (Mekong river).

Awareness of community are not high

RESULT

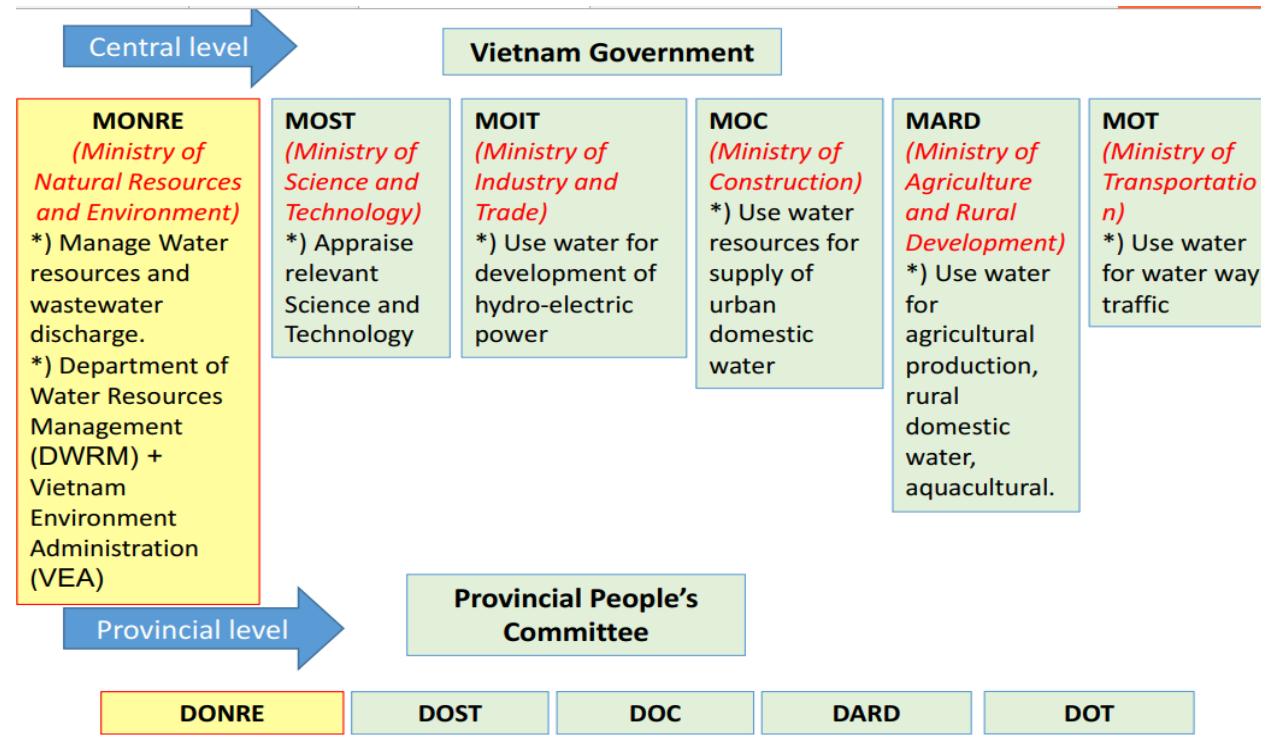
Legislation

- The Law on Environmental Protection has regulations on water pollution prevent and control.
- Law on Water Resources
- Other laws and ordinances of the State relating to environmental protection such as the Law on Chemicals; Law on Natural Disaster Prevention and Fighting; Law on Plant Protection and Quarantine;
- Water technical regulation and standard system ...

RESULT

The participation of many ministries, branches in environmental protection, water pollution control

The capacity of staff of environmental management agencies at the central level Increasingly, both quality and quantity



RESULT

Managed the sources (waste quantity, amount of waste water, composition and content of pollutants in wastewater).

The sources of environmental pollution in general and water pollution in particular (industrial zones, industrial clusters, urban areas, waste burial sites, hospitals, craft villages ...) **have been identified and control.**

- 283 industrial zones, of which 194 industrial zones have been put into operation
- 148 industrial zones (76%) have built and operated the collection and treatment system
- The wastewater is regulated with the designed capacity of over 600,000 m³/day.

Environmental protection projects in the Cau River, Nhue - Day River and the Dong Nai River System to focus resources on addressing environmental pollution.

RESULT

Environmental monitoring is an indispensable stage in pollution control

- Waste water treatment facilities > 1,000m³ must install an automatic wastewater monitoring system
- To socialize the monitoring of the flow and quality of waste water, ie the waste water discharge facilities,
- Improve the capacity of state agencies in managing water quality monitoring data
- At present, there are 4/21 observation stations conducting annual surface water monitoring program with frequency of 4-6 times / year.

Financial instruments

- Environmental protection fee for wastewater
- Grant of water resource rights (for some sectors such as hydropower, industrial production ...)
- preferential policies for water use activities; Incentives for intensive investment for reuse of wastewater, recycled water.

The inspection, examination and handling of violations of environmental protection law has been increasingly strengthened

WEAKNESS

There is no specific legal document on water pollution control

→ A Water Pollution Control Law is needed

The problem of managing wastewater sources from production and business establishments is still inadequate

Assign responsibilities: many ministries and sectors are participating in the water pollution control process, but lack a focal point

WEAKNESS

Implement resources:

- Staff working in environmental protection
- Limited budget for pollution control in general and water pollution control in particular.

Tools for pollution control

- Appraisal / approval of production technology to prevent pollution or to assess waste treatment technology for pollution control.
- In provinces, monitoring activities are weak and lack of management tools, and there is no mechanism to socialize this area.

"Prevention" is not properly concerned and the process of treatment is not thorough

Pollution monitoring and water quality information are not public.

SOLUTION

Legislation:

- Vietnam needs to consider promulgating strict regulations on emission standards for toxic substances.
- The development of the Law on Water Pollution Prevention and Control is very important for Viet Nam today
 - Law on Water Pollution Prevention and Control should focus on 3 issues:
 - Water quality standards;
 - Emission standards and regulations;
 - Total pollution control.

Improve technical regulations on water environment and waste discharge standards suitable to specific groups of industries, suitable to the waste water-receiving capacity of each basin;

Strengthen the system of financial tools in the field of water pollution control, especially environmental protection fees for wastewater.

SOLUTION

Measures to improve water quality

- Reduce pollutant discharge load in polluted areas (source of emission);
- Measures in the area of water pollution (direct filtering measures).
- Industrial wastewater from large scale manufacturing plants, businesses, or farms is regulated by the wastewater regulation to reduce the discharge load.

Raising public awareness on environmental protection, encouraging enterprises and social and political organizations to work to prevent and control water pollution.

Encouraging NGOs working in the field of waste treatment

Move the economy to a "Green Economy"

International cooperation

Thank you very much for your attention!