



DEPARTMENT OF ENVIRONMENT

MINISTRY OF NATURAL RESOURCES & ENVIRONMENT



LEGISLATIVE APPROACH TO WATER QUALITY MANAGEMENT IN MALAYSIA- SUCCESS AND CHALLENGES

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INTRODUCTION

- **Water resources in Malaysia come in the forms of rivers, lakes and groundwater.**
- **Rivers have served as the sole source of water supply for our consumptions in all parts of the country.**
- **Throughout the years, the river water quality has deteriorated making its availability for consumption much more difficult than in the past.**



NATIONAL POLICY ON ENVIRONMENT

The nation shall implement environmentally sound and sustainable development for the continuous economic, social and cultural progress and enhancement of the quality of life of Malaysians.



WATER QUALITY MANAGEMENT

- **River Quality Monitoring**
- **Legislation**
- **Prevention**
- **Pollution Control**



RIVER QUALITY MONITORING

- **DOE has established a river monitoring network since 1978 to establish the status river water quality, to detect changes in the water quality and identify pollution sources of rivers.**
- **There are 1085 water quality monitoring stations sited within 140 river basins.**
- **15 automatic water quality monitoring stations are installed to detect changes in river water quality on a continuous basis at strategic locations on major rivers basins.**

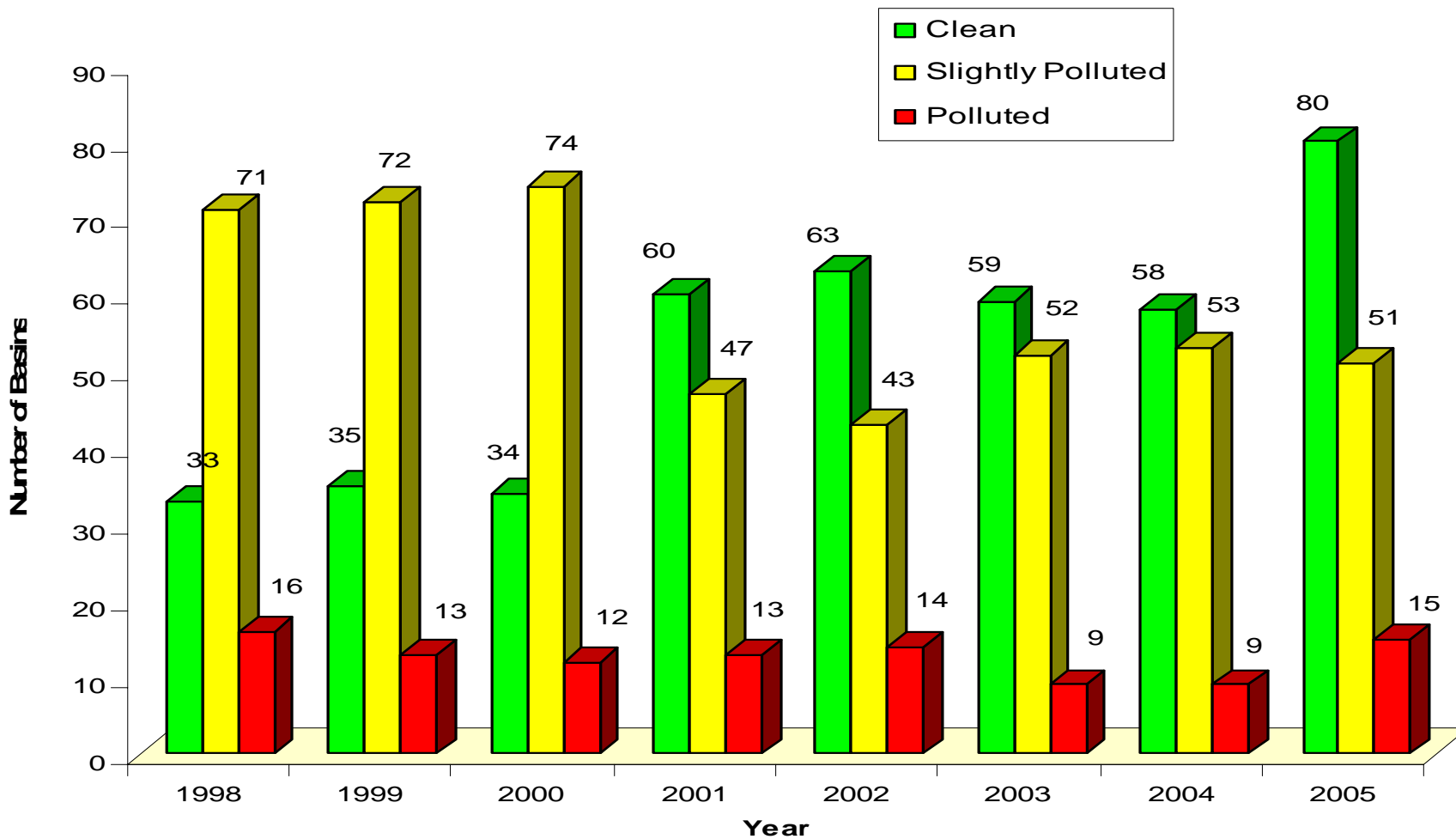


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Figure 1. Malaysia : River Basins Water Quality Index (WQI) Trend, 1998 - 2005





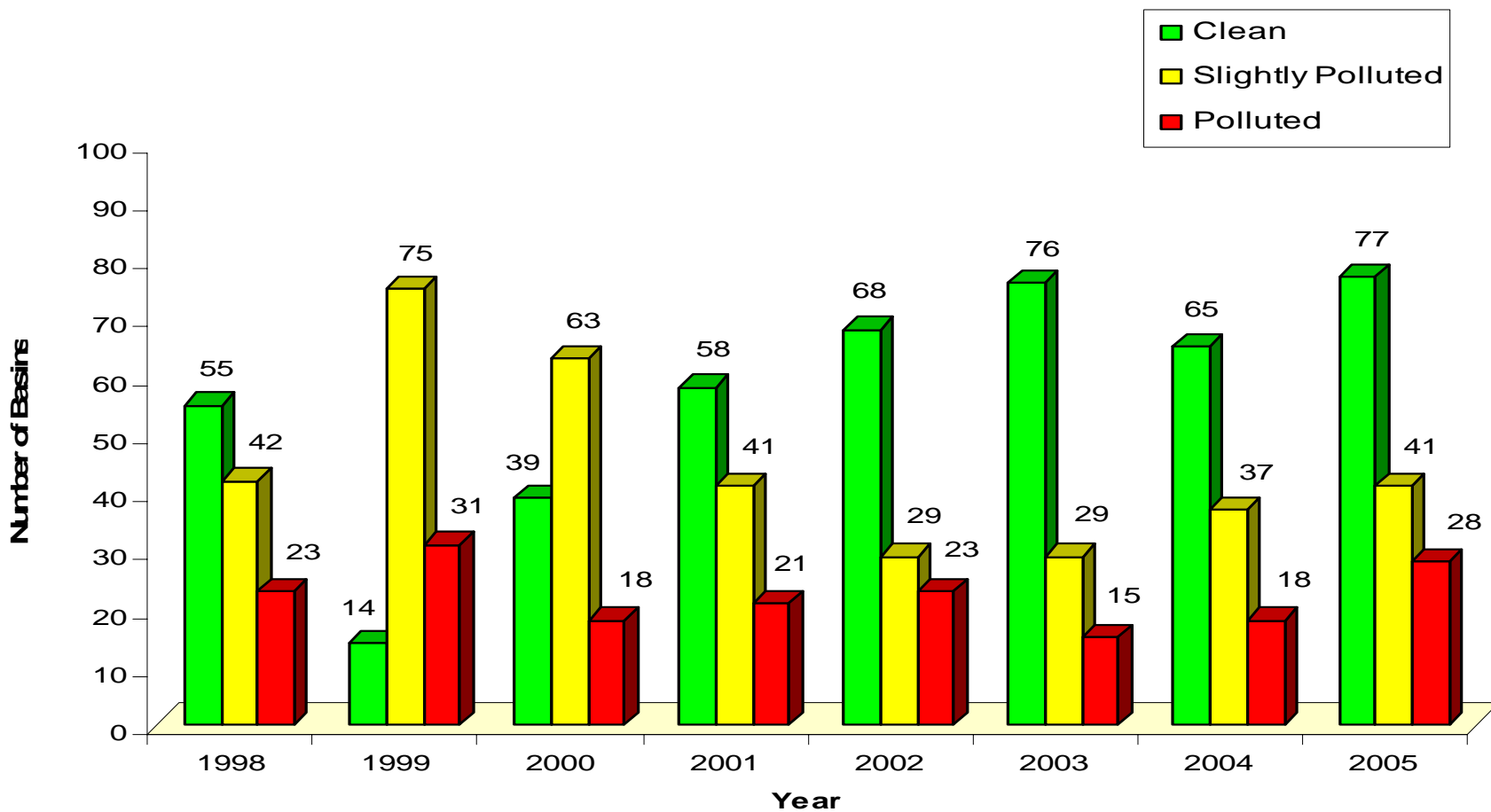
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Figure 2. Malaysia: River Basins Water Quality Trend Based on BOD (Biochemical Oxygen Demand) Sub Index, 1998 - 2005

Source of Pollution (Activity) : Sew age, Agrobased and Manufacturing Industries



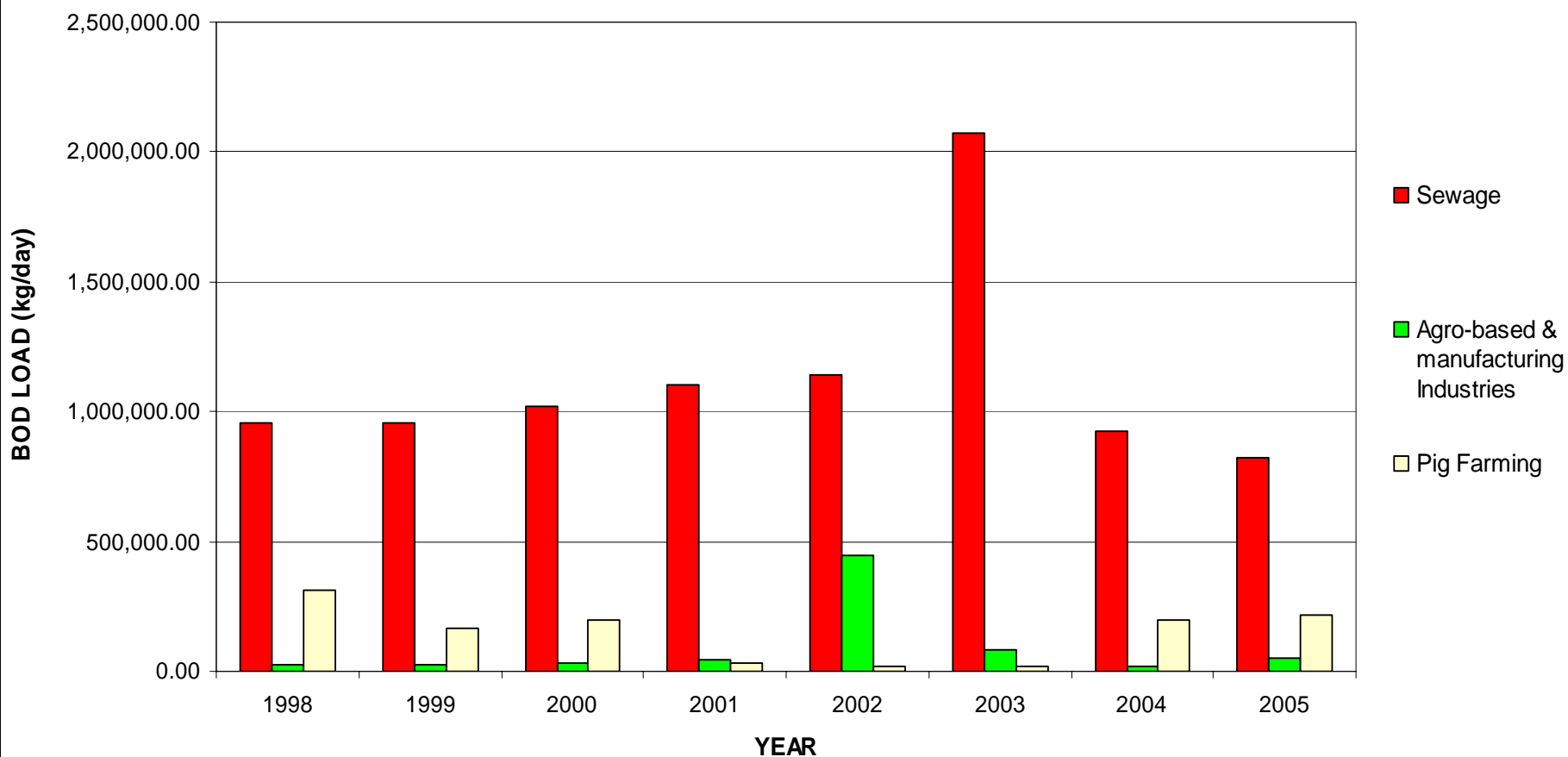


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Figure 3. ESTIMATED BOD LOAD FROM MAJOR SOURCES, 1998-2005





LEGISLATION

- **Environmental Quality Act, 1974**
- **Subsidiary Laws**
 - Environmental Quality (Prescribed Premises)(Crude Palm Oil) Regulations 1977;**
 - Environmental Quality (Prescribed Premises)(Raw Natural Rubber) Regulations 1978; and**
 - Environmental Quality (Sewage and Industrial Effluents) Regulations 1979**



PREVENTION

- **Environmental Impact Assessment (EIA)**
- **Pre-Siting Evaluation**
- **Written Permission**



POLLUTION CONTROL

- **Point Source**
- **Non-point Source**
- **Erosion and Siltation Control**



POINT SOURCE

- **Agro-based Industries**
- **Manufacturing Industries**
- **Sewage Disposal and Sewerage Works**
- **Sullage (Grey-Water)**
- **Pig Farming**



NON-POINT SOURCE

- **Agricultural runoff**
- **Forestry runoff**
- **Urban runoff**



EROSION AND SILTATION CONTROL

- (i) Erosion of Soil and Control Plan (DID)**
- (ii) Guidelines for Prevention and Control of Soil Erosion and Siltation (DOE)**



CHALLENGES

- (i) Uniform discharge standard**
- (ii) River/stream standard**
- (iii) Discharge standard review**
- (iv) Stricter palm oil mill discharge standard**



CONCLUSION

The legislative approach in water quality management using the Environmental Quality Act 1974 has been successful in reducing pollution to a certain extent. It has involved pollution control, prevention and continuous assessment (monitoring) of the river environment. There are still many challenges that need to be addressed to achieve a holistic water quality management.



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THANK YOU