ENVIRONMENTAL ISSUES OF MALAYSIA

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Air Quality
Air quality in Malaysia is continuously monitored in terms of five principal pollutants namely CO, NO, NO\textsubscript{x}, SO\textsubscript{2}, and particulate matter (PM\textsubscript{10}). Except for the dry season and haze formation from transboundary sources, the air quality status of Malaysia, represented by the integration of the six parameters into an Air Pollutant Index (API) is generally between good and moderate, with a few ‘unhealthy’ days in a year. Unhealthy air quality conditions were due to O\textsubscript{3}, PM\textsubscript{10}, NO\textsubscript{x}, and SO\textsubscript{2}. PM\textsubscript{10} is however the prevalent pollutant.

Emission from mobile sources is the largest contributor of pollutants to the atmosphere accounting for about 82% of total emissions in 1999. The CO emission load was the most dominant from this source. The stationary sources namely power plants and industrial premises were next at ~15% while open burning accounted for ~4%. Due to shortage of land for use as sanitary landfill sites, there is a high possibility that incineration of municipal waste will become prominent in the near future. Although stringent air pollution treatment systems are expected of these modern day incinerators, there is likelihood of increase air pollution from this source of emission.

Water Quality
River water
River water quality appraisal in Malaysia is based on Water Quality Index (WQI) involving parameters such as DO, BOD, COD, NH\textsubscript{3}-N, SS and pH. The state of river water quality in 2000 was ~10% of the 120 river basins were polluted, 62% slightly polluted and 28% clean. The main sources of river water pollution were from four sectors namely population sewage (45.5%), manufacturing (43.7%), pig rearing (7.3%) and agro-based industries (3.5%).

Groundwater
Although surface water is the main source of water supply for domestic and industrial uses, Malaysia had experienced in recent years brief periods of drought that has caused the government to view groundwater as the potential alternative source. The status of groundwater quality was benchmarked against the National Guidelines for Drinking Water. Iron, phenol, manganese, arsenic, chloride, nitrate and selenium exceeded the guidelines values.

Marine water
The main contaminants of coastal waters particularly to the west coast of Peninsular Malaysia along the Straits of Malacca were oil and grease, total suspended solids and bacteria \textit{E. coli}. The main contributors to oil and grease contamination were the activities and discharges from the marine vessels such as ballast water and bilges, tanker cleaning and indiscriminate disposals. Bacterial contamination was principally attributed to discharges of domestic sewage and animal wastes that were not well treated.

Renewable Energy and Energy Efficiency (RE and EE)
RE and EE are the two-prong approach taken by the Government of Malaysia to ensure adequacy and security of energy supply. RE sources include biomass, biogas, municipal waste, solar and mini-hydro. The fuel diversification policy is aimed at reducing dependency on crude oil and petroleum products through increased use of natural gas, coal and renewable resources.

Reference: Malaysia Environmental Quality Report 2000; Compendium of Environment Statistics Malaysia 2001; The Eighth Malaysia Plan 2001 - 2005