

EQA 1974 IN THE 21ST CENTURY - A PERSPECTIVE

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The EQA – relevant? effective?

- **OUTCOME BASED**
 - i.e. quality of environment, target year of achievement
- **PROCESS BASED**
 - i.e. implementation and enforcement
- **POLICY BASED**
 - i.e. content of the law

The EQA - relevant? effective?

- **OUTCOME BASED**

- Measured by the environment quality?

- **PROCESS BASED**

- Is it reflected by number of court cases processed?
Number of stations monitored? Types of parameters monitored

- **POLICY BASED**

- Is it reflected by the number of parameters that have prescribed limit values – point source and ambient?
The stringency of the limit values itself? Load based values or concentration determinants?

Outcome

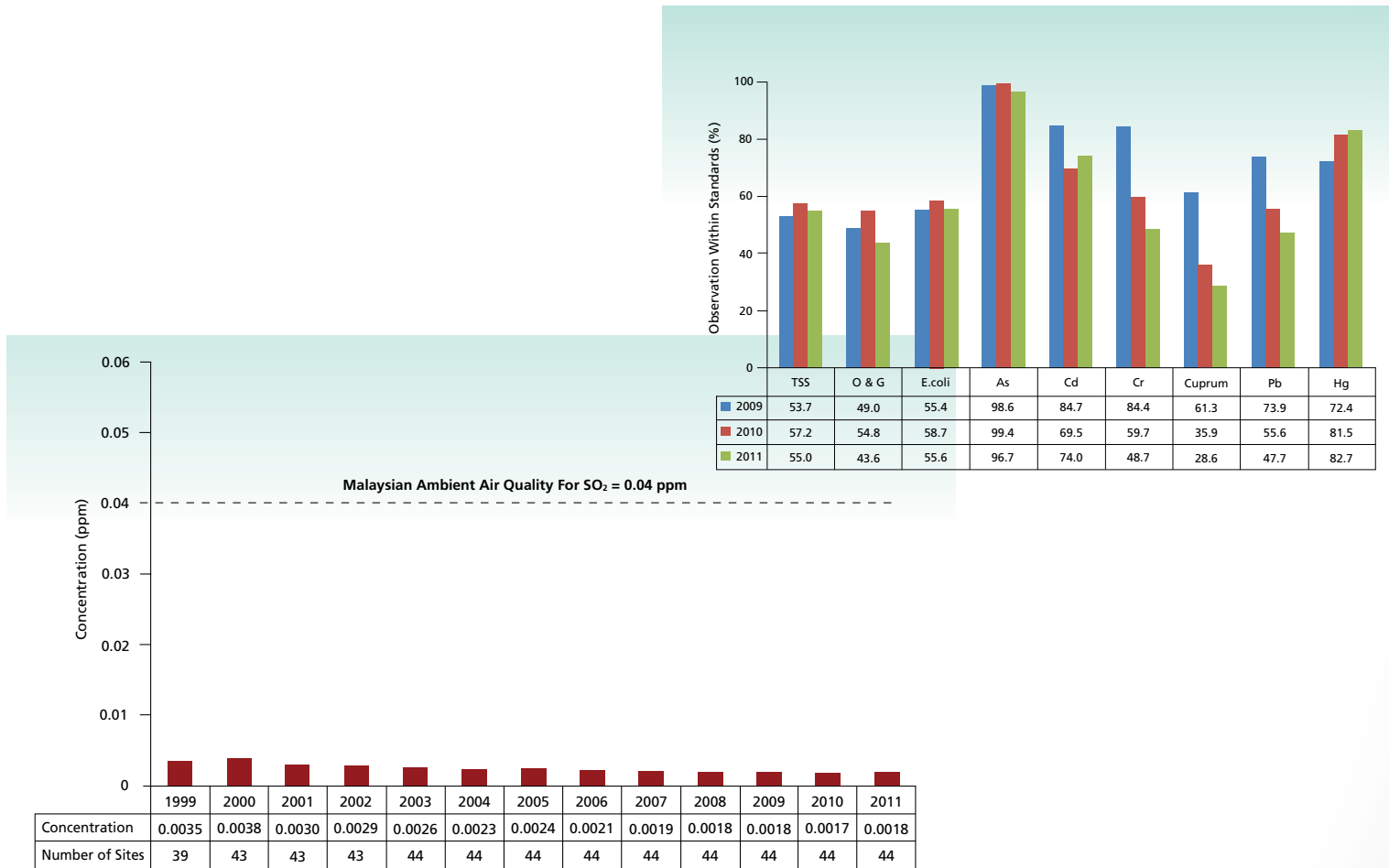


Figure 1.8 Malaysia : Annual Average Concentration of Sulphur Dioxide (SO₂), 1999-2011

Process

Number of court cases

- 2012 – 302
- 2011 – 811
- 2010 -1064
- 2009 – 940
- 2008 - 710

Policy

Table 1.2 Malaysia : Ambient Air Quality Guidelines

Pollutant	Averaging Time	Malaysia Guidelines	
		ppm	($\mu\text{g}/\text{m}^3$)
Ozone	1 Hour	0.10	200
	8 Hours	0.06	120
Carbon Monoxide	1 Hour	30.0	35**
	8 Hours	9.0	10**
Nitrogen Dioxide	1 Hour	0.17	320

Source	Standard A	Standard B	Standard C
Stationary Plant	0.5 gm/Nm ³	0.4 gm/Nm ³	0.3 gm/Nm ³
Mobile Plant	0.7 gm/Nm ³	0.7 gm/Nm ³	0.4 gm/Nm ³

Parameter	Unit	Standard	
		A	B
(i) Temperature	°C	40	40
(ii) pH Value	-	6.0-9.0	5.5-9.0
(iii) BOD ₅ at 20°C	mg/l	20	50
(iv) Suspended Solids	mg/l	50	100
(v) Mercury	mg/l	0.005	0.05
(vi) Cadmium	mg/l	0.01	0.02
(vii) Chromium, Hexavalent	mg/l	0.05	0.05
(viii) Chromium, Trivalent	mg/l	0.20	1.0
(ix) Arsenic	mg/l	0.05	0.10
(x) Cyanide	mg/l	0.05	0.10

Wish List – Air Quality

- More stringent ambient quality limit values nationwide or zone wise
- Add new parameters to nationwide monitoring stations:
 - PM2.5
 - Lead, Cadmium, Arsenic, Nickel
 - Benzene, PAH
 - Acid rain
- Tighter limits on mercury emissions from coal powered plants and oil and gas refineries

Wish List – Air Quality

- AQI basket of parameters to include the new parameters proposed
- GIS based air quality mapping of individual parameters. Why?

Wish List – Fresh Water Quality

- More stringent ambient quality limit values nationwide or zone wise
- Add new parameters to nationwide monitoring stations:
 - PAH
 - POP
 - Pesticides
- WQI basket of parameters to include the new parameters proposed

Wish List – Fresh Water Quality

- GIS based water quality mapping of individual parameters for specific river basins including associated estuaries. Why?

21st Century Wish List

PROACTIVE APPROACH TO MANAGEMENT OF THE ENVIRONMENT

- Go Beyond Enforcement
- Stakeholder engagement and involvement in active management of location specific issues
- Set quantifiable time-bound targets

21st Century Wish List

PROACTIVE APPROACH TO MANAGEMENT OF THE ENVIRONMENT

- Use the EQA limit values as minimum benchmark
- Set quantifiable time-bound targets to achieve minimum benchmark
- Use load-based guidance to set further targets to go beyond minimum benchmark

21st Century Wish List

EXAMPLES OF PROACTIVE MANAGEMENT OF THE ENVIRONMENT

- DOE works with MOA to define and achieve site-specific targets on pesticides in rivers
- DOE works with Local Authorities to define and achieve location-specific targets on oil and grease in rivers
- DOE works with Industrial Facilities to define location-specific targets on various heavy metals and other critical parameters in air, rivers

Communication & Engagement

DATA

DATA

DATA

ACCURATE,

PERTINENT,

ACCESSIBLE

APA DATA

**STAKEHOLDER FRIENDLY INFORMATION?
NARROW TARGET AUDIENCE?
LOCATION AND PARAMETER SPECIFIC?**

