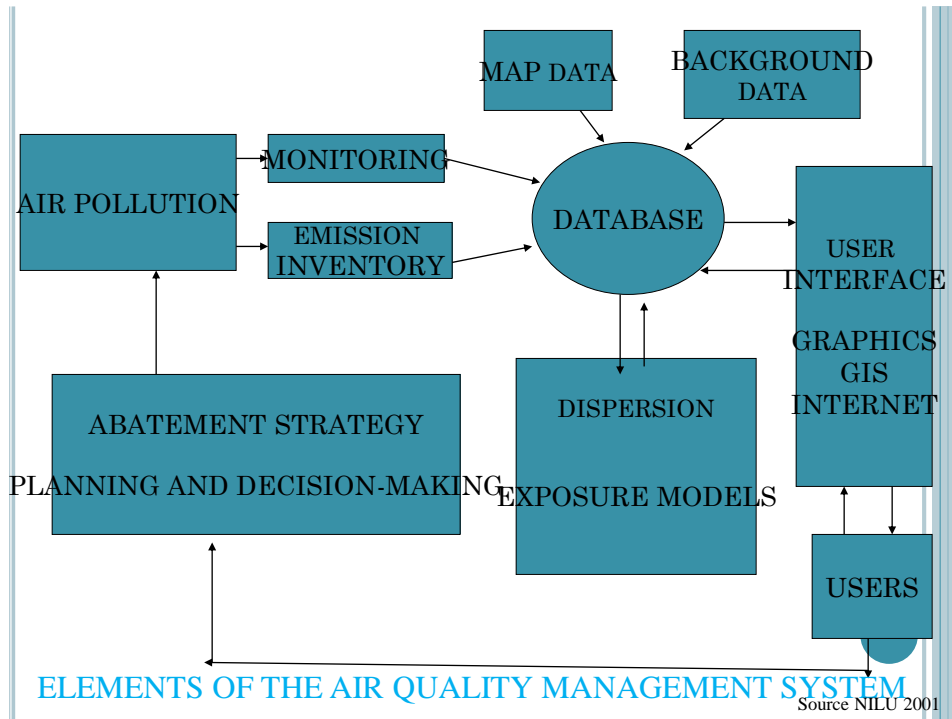


# REPUBLIC ACT 8749 OR THE CLEAN AIR ACT OF 1999

## AIR QUALITY MANAGEMENT IN THE PHILIPPINES

TERESITA PERALTA  
EMB-DENR



## EMISSION INVENTORIES

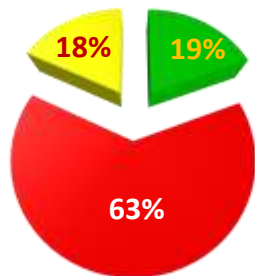
1. Stationary

2. Mobile

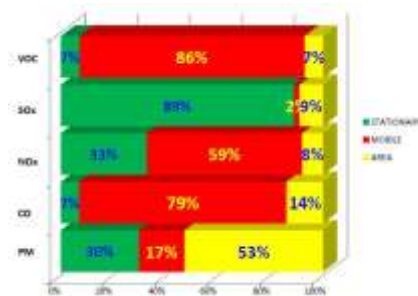
3. Area



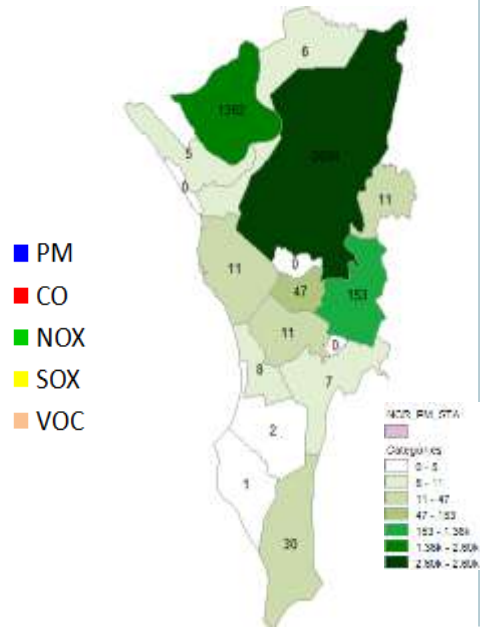
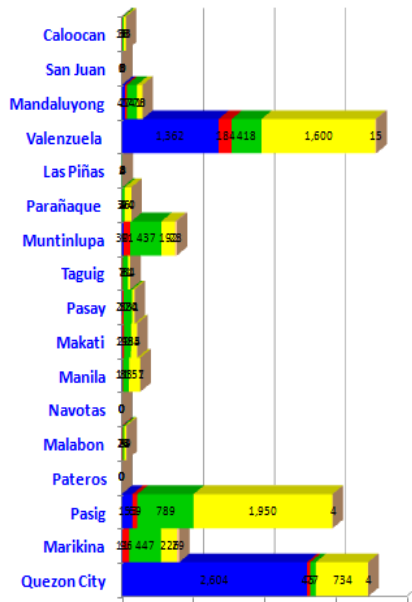
## NATIONAL EMISSION INVENTORY, 2009



■ STATIONARY ■ MOBILE ■ AREA



## 2012 NCR-EMISSION INVENTORY (PM) STATIONARY SOURCE



## AIR QUALITY MONITORING

### Methods in Air Quality Monitoring

- USEPA 40 CFR, Part 50, Part 53 and Part 58
- FRM and FEM



## AIR QUALITY MONITORING



**Suspended particulate matter is a major concern in Metro Manila and other urban areas in the Philippines.**

<p><b>TSP</b> TOTAL SUSPENDED PARTICULATE</p>	<p><b>PM10</b> PARTICULATE MATTER 10 MICRON AND SMALLER</p>	<p><b>PM2.5</b> PARTICULATE MATTER 2.5 MICRON AND SMALLER</p>
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### TSP

#### TOTAL SUSPENDED PARTICULATE

TSP – small airborne particles such as dust, fume and smoke with diameters less than 100 micrometers

HIGH-VOLUME SAMPLER



# PM10

**PARTICULATE MATTER  
10 MICRON AND SMALLER**

High-Volume Sampler

Partisol Sampler

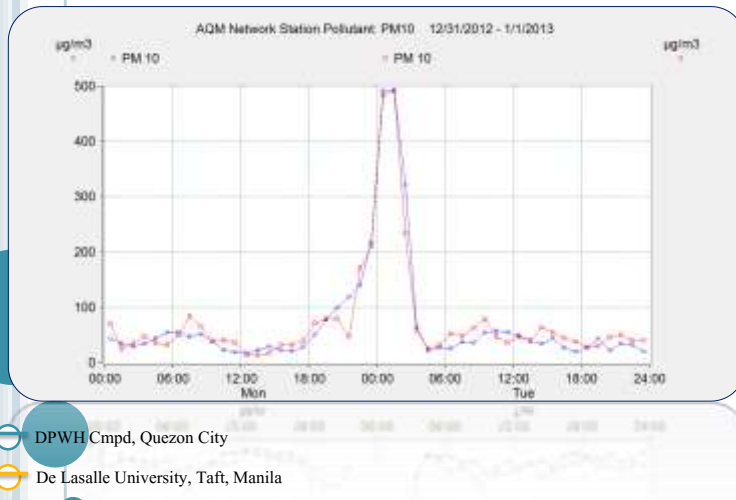
Continuous Automatic  
Monitoring Station



## PM 10 Concentration

NEW YEAR CELEBRATION

Monitoring result Dec 31, 2012 – Jan 1, 2012



## **PM<sub>2.5</sub>**

**PARTICULATE MATTER 2.5  
MICRON AND SMALLER**



## **CONTINUOUS AUTOMATIC MONITORING STATIONS**

### **CRITERIA POLLUTANTS**

**PM 10/2.5**

**SULFUR DIOXIDE**

**NITROGEN DIOXIDE**

**CARBON MONOXIDE**

**OZONE**

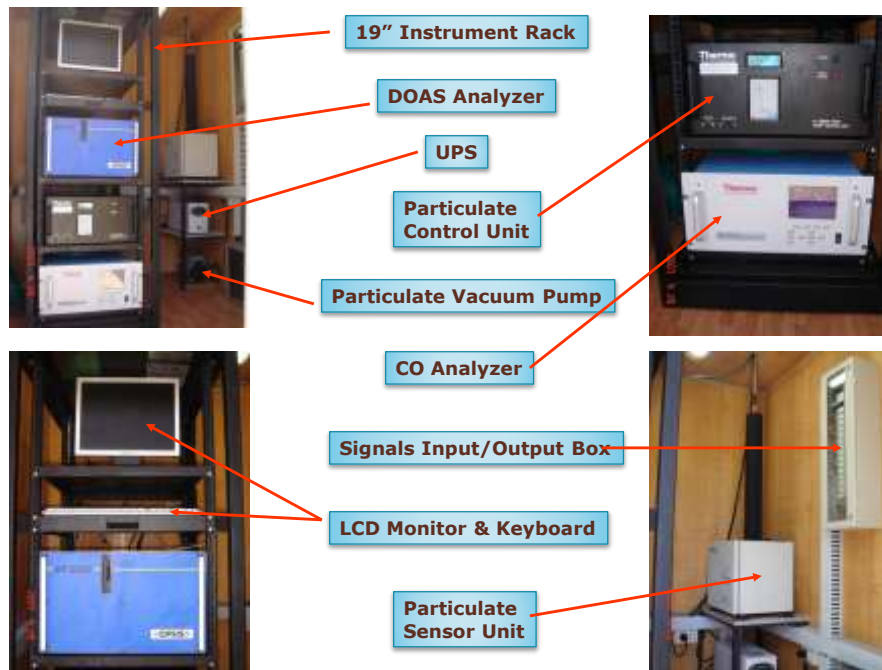
### **Other Gases**

**BENZENE, XYLENE,**

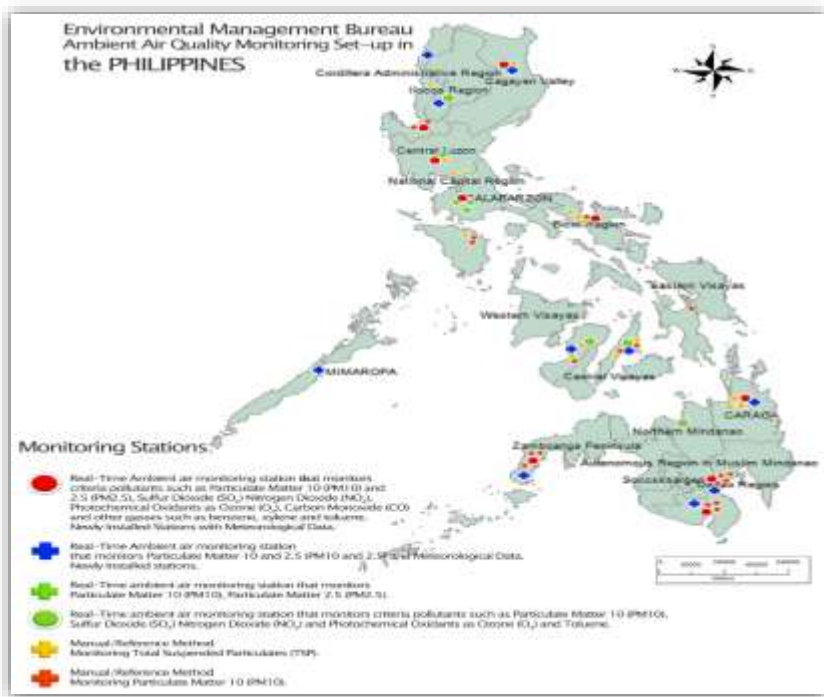
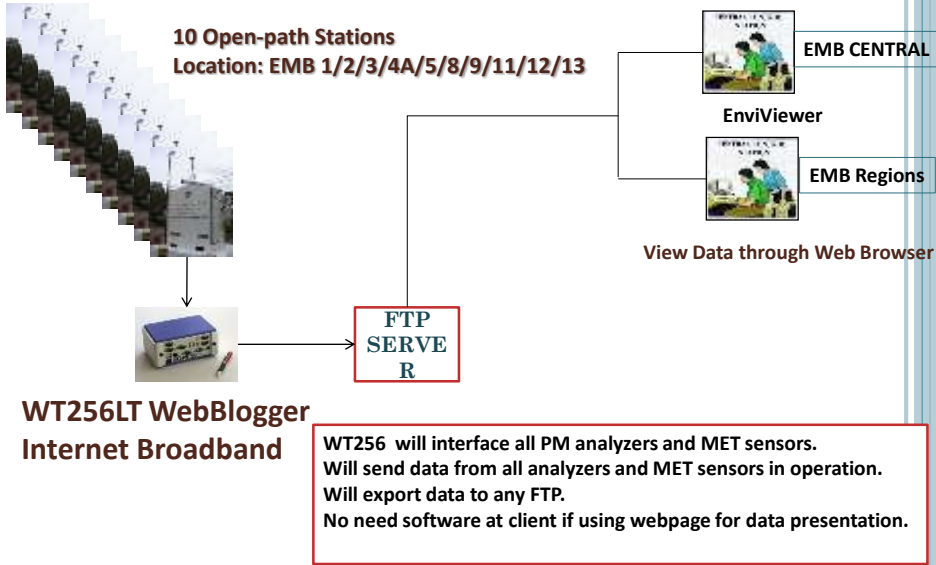
**TOLUENE**



## COMPONENTS OF AQMS SYSTEM

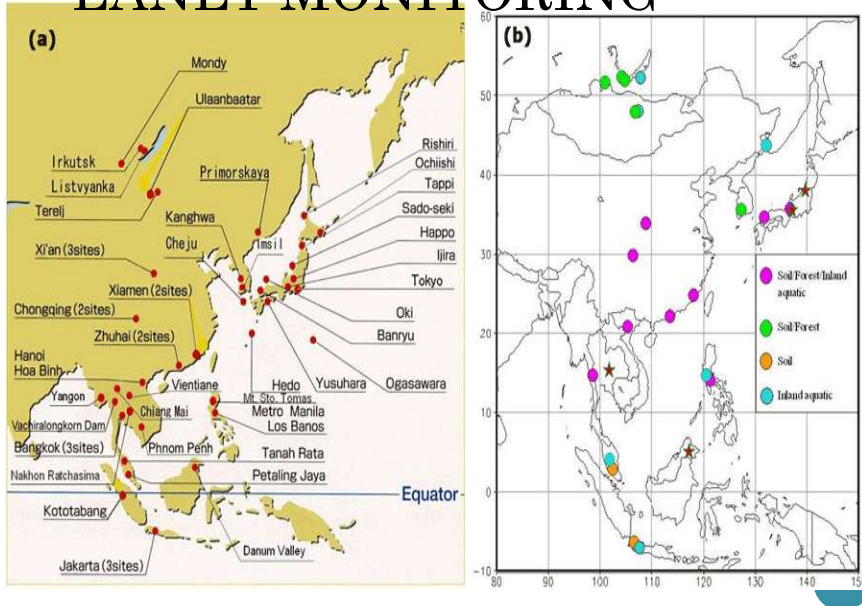


# COMMUNICATION SOLUTION





# EANET MONITORING



**WET, DRY , INLAND  
SOIL AND VEGETATION MONITORING**

## STACK EMISSION MONITORING



40 CFR PART 60  
USEPA

## COMPLIANCE INSPECTION

- Permit to Operate  
Temporary Permit to Operate (P/O)  
5-year (P/O)
- Self-Monitoring Reports  
Stack testing  
Ambient Monitoring
- Complaints



## PERMIT TO OPERATE

Air Pollution Source  
Installations  
(boiler, generator set, furnace  
etc.)

Air Pollution Control Facility

(smoke stack, electrostatic  
precipitator, scrubber etc.

- National Source  
Emission Standards

NO<sub>x</sub>, SO<sub>x</sub>, Particulate  
Matter, CO, heavy  
metals- Hg, etc.



## AMBIENT AIR MONITORING

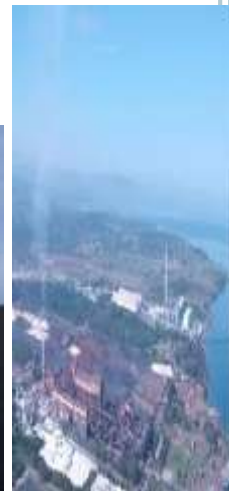
- National Ambient Air  
Quality Standards for Source  
Specific Air Pollutants from  
Industrial Sources

( SO<sub>2</sub>, NO<sub>2</sub>, Lead, PM, Hg  
etc. )

Manual and/or Automatic

Inspection ( validate reports  
submitted )

- Accredited firms for stack
- Manual testing for ambient  
air monitoring
- Calibration reports and audit  
for automatic stations



## THE STOCKHOLM CONVENTION

- Legal instrument which addresses the international community's call for urgent actions to reduce or eliminate releases of Persistent Organic Pollutants (POPs).
- An agreement to end the production and use of the world's most poisonous chemicals... the "Dirty Dozen" and "New POPs including Endosulfan"
- Inventory of Dioxin and furans ( monitoring in ambient and stack )



## FUTURE PLANS

- Mercury monitoring in ambient using real time or manual?
- Procurement of mercury sampling equipment ( check whether automatic sampler or manual )
- Use of screening method to check mercury in-situ?

