Atmospheric Monitoring of the Malaysian Meteorological Department

Environmental Studies Division, Malaysian Meteorological Department

14-15 May 2008

Environmental Studies Division Stations Network

- Head Office – Petaling Jaya
- Global Atmosphere Watch Stations
  - Tanah Rata
  - Danum Valley
- Atmospheric Monitoring Stations (20)
  - Aerosol load + rain chemistry
  - co-located with met station

Network of Atmospheric Monitoring Stations

Environmental Studies Division Stations Network
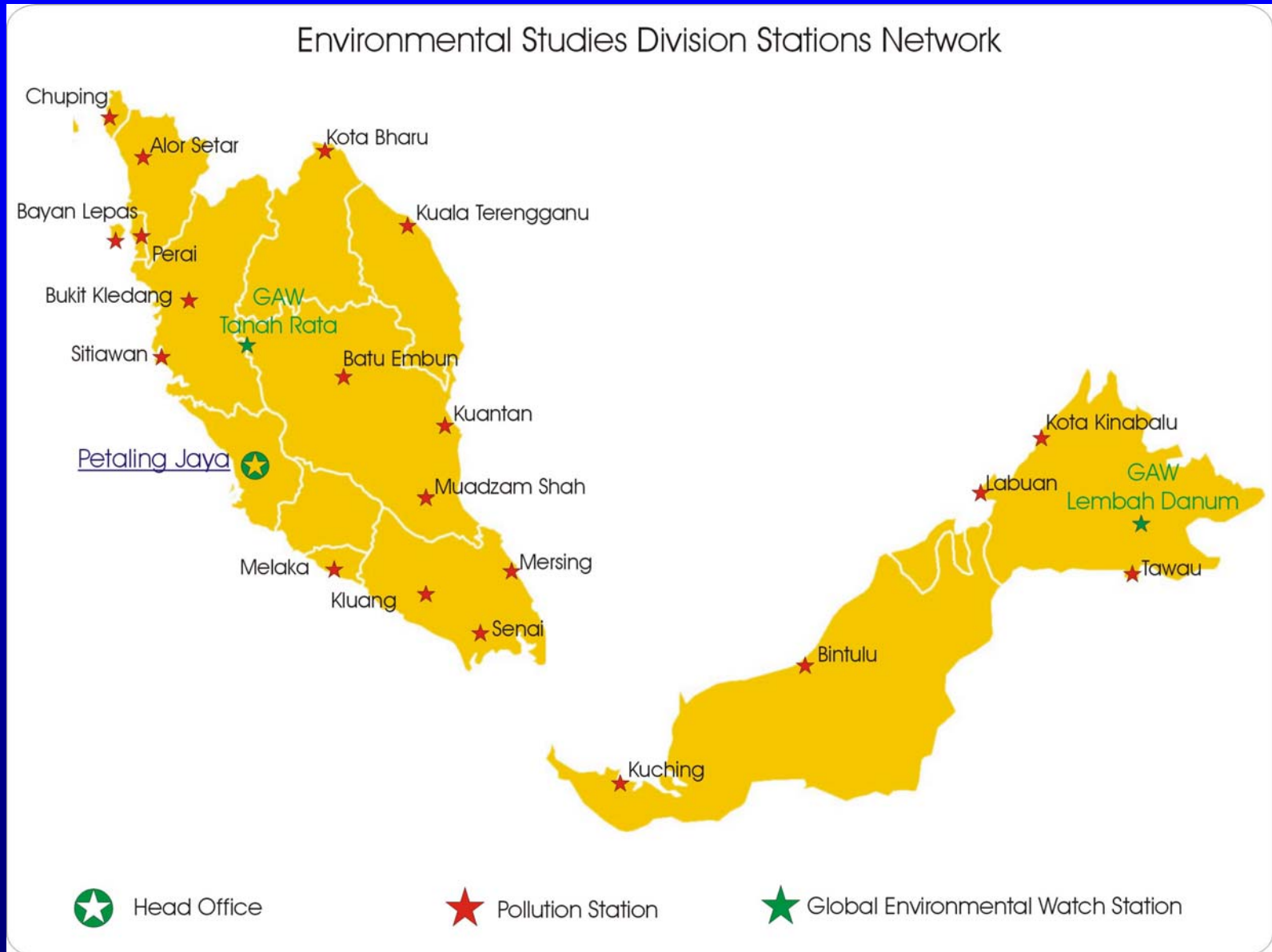
Parameters Monitored

- Petaling Jaya
  - Total column ozone and UV radiation measurements using Mark II Brewer Spectrophotometer No. 90

- Kuala Lumpur Intl Airport Met Station
  - Ozone profile soundings using Vaisala Digicola system (twice a month)

- UV-B and ozone data obtained from the measurements made since 1992 are submitted to the world data center

Danum Valley GAW Station, Sabah

- Baseline GAW station established in 2004
- Lat: 4.98 deg. N
- Lon: 117.84 deg. E
- Elevation: 426 meters above MSL (Atur Hill)
- In a conservation area surrounded by tropical lowland forest
- Goals: to obtain long-term, reliable, comprehensive, observations of the chemical composition & selected physical characteristics of the atmosphere on a global scale
- Part of East Asia Acid Deposition Monitoring Network (EANET)
- Supports research activities at the Danum Valley Field Center which is managed by British Royal Society

WORLD METEOROLOGICAL ORGANIZATION

Global Atmosphere Watch global network of surface-based *in situ* and remote sensing stations
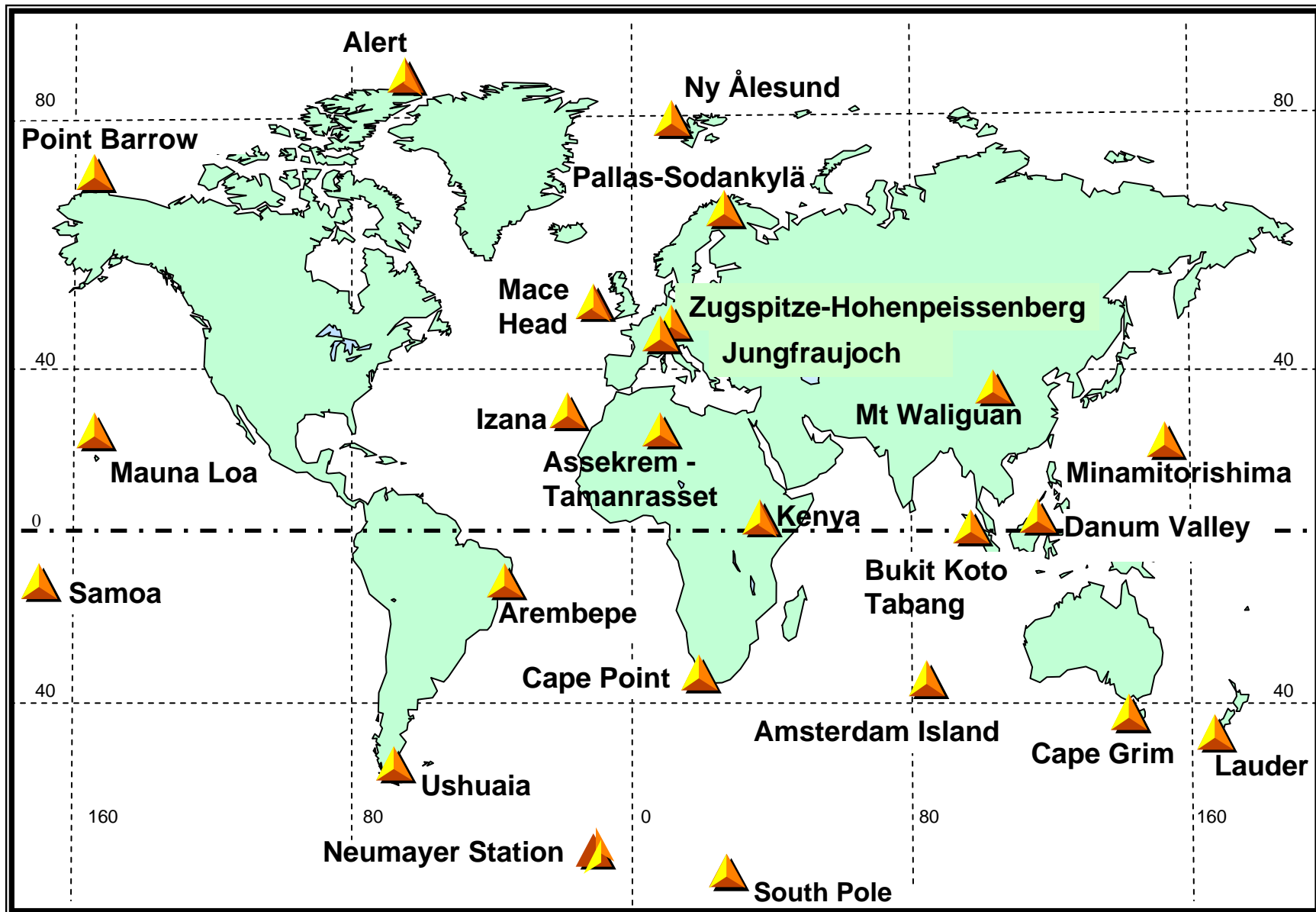
Danum Valley GAW Station

Danum Valley GAW Station
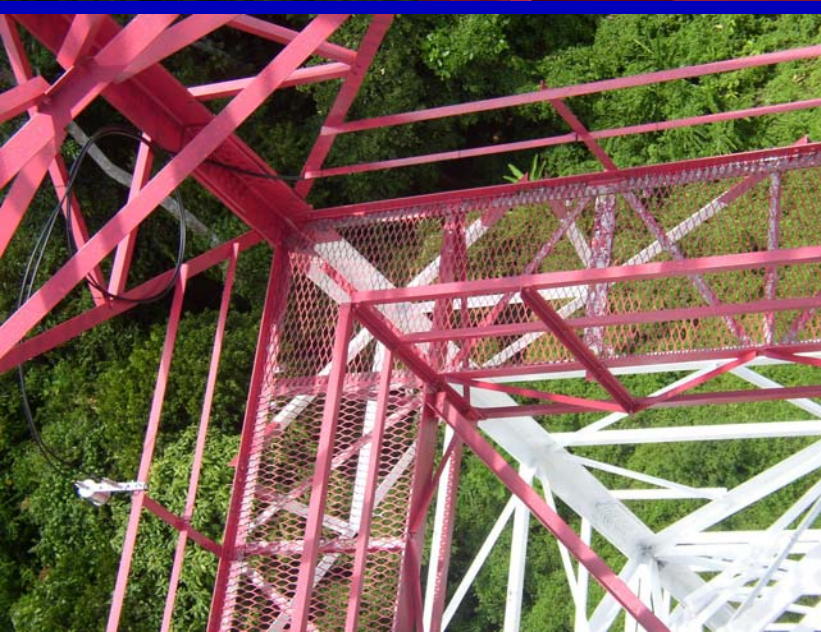
Intake at 30m, 50m and 100m using Australian LoFlo system

LoFlo Analyser/Gas Cylinders/Regulator Rack/Nafion Drying Tubes

Vaisala AWS and Ecotech wet-only collector (precipitation chemistry)

Aerosol measurements

Aerosol load, back scattering, black carbon, optical depth

Reactive gases - filter pack system

Persistent organic compounds passive samplers

Surface Ozone

Parameters Monitored at GAW Danum Valley

- Carbon dioxide (Australian LoFlo System)
- CFCs, Methane, Nitrous oxide (flask sampling)
- Precipitation chemistry (Ecotech wet-only collector)
- Aerosol (pm-10 load, back scattering, black carbon, optical depth)
- Reactive gases (filter-pack method)
- Persistent organic pollutants (passive sampling)
- Surface ozone
- Meteorological parameters (Viasala AWS)

Future plans

- Collaboration work
- QA/QC

Thank you