



THE POLLUTION CONTROL DEPARTMENT (PCD)
NORTHERN CENTER FOR ENVIRONMENTAL MONITORING (NCEM)

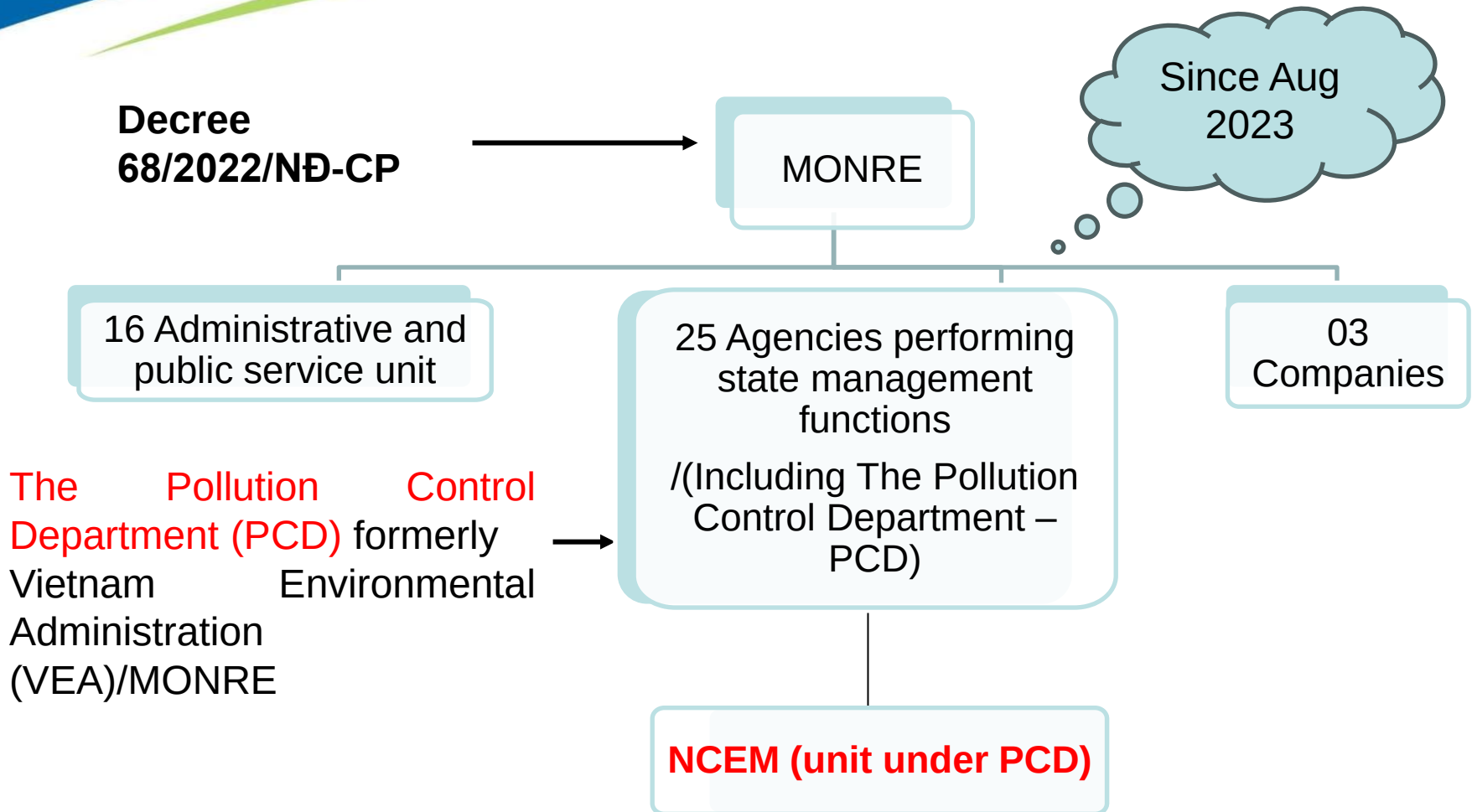


UPDATED MERCURY MONITORING ACTIVITIES IN VIETNAM

**THE 13th ANNUAL ASIA-PACIFIC MERCURY MONITORING
NETWORK PARTNERS MEETING**

September 2024, Taipei - Taiwan

New Organizational structure



Update on organizational structure

- **Decision 3026/QĐ-BTNMT:** The Pollution Control Department (PCD): is an organization under the Ministry of Natural Resources and Environment (MONRE)
 - ✓ Advising and assisting in performing state management of pollution source control; waste and scrap management; environmental quality management; ecological treatment, improvement and restoration;
 - ✓ Prevention, response and remediation of environmental incidents; ecological monitoring;
 - ✓ Management of persistent pollutants; certification or recognition of environmentally friendly products and services; organizing the implementation of public services within the scope of state management of the Department by the provisions of law.
 - ✓

NCEM – Key of monitoring network

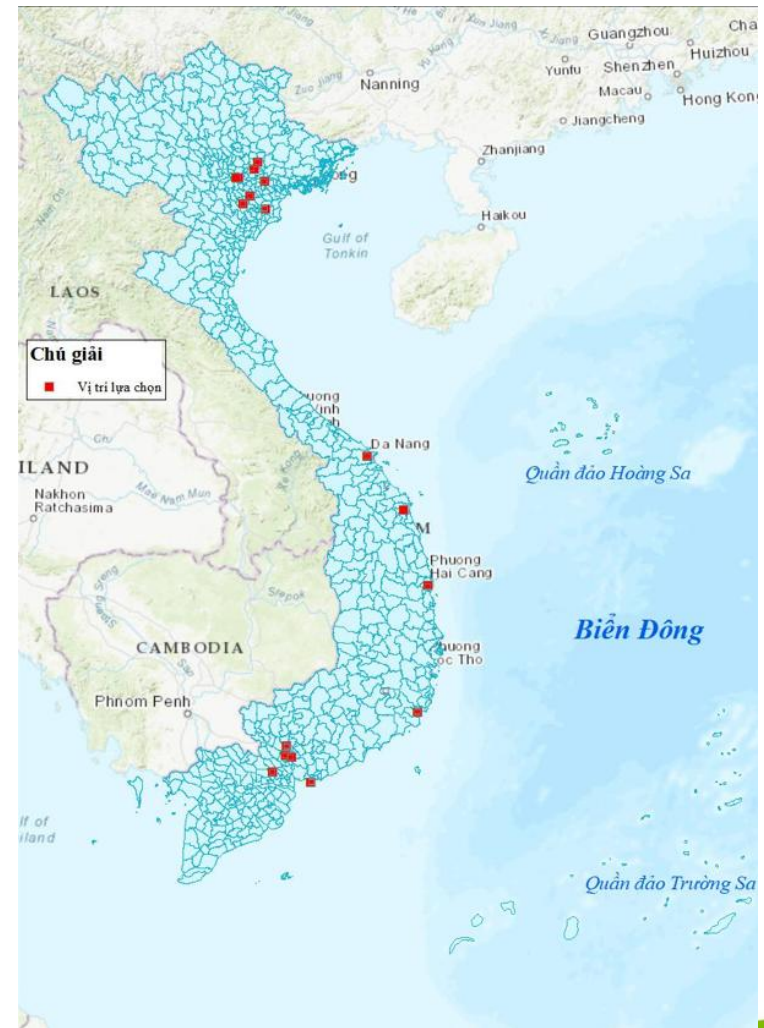
- Continue the focal point (shall lead, guide, check) of environmental monitoring systems nationwide.
- Continue the focal point to implement the master plan for the national monitoring system.
- Continue the focal point to implement inter-laboratory comparison and proficiency testing programs nationwide.
- Integrated data Centre: building, managing national database of environmental monitoring; disseminating information and reporting.

New Master plan for National environmental monitoring

- In 2023, we (MONRE) have installed 18 Rainwater sampling devices at Automatic ambient air monitoring station at 16 provinces.
- In 2024, The Prime Minister has signed and issued Decision 224/QĐ-TTg- Master plan for the National environmental monitoring in 2021-2030, vision to 2050. Including Acid deposition monitoring network.
- Plan to operate 18 rainwater monitoring stations in October 2024.

Map of new AMS in Vietnam

- Location of 18 AMS at 16 Provinces: Ba Ria-Vung Tau, Bac Giang, Binh Dinh, Binh Duong, Da Nang, Ha Nam, Ha Noi, Hai Duong, Ho Chi Minh, Hung Yen, Lam Dong, Long An, Ninh Thuan, Quang Nam, Quang Ngai, Thai Binh
- 03 AMS in Ha Noi, Da Nang and Ho Chi Minh has Hg automatic monitoring





New AMS
monitoring
stations
(including
Rain
sampling
on the top
of AMS)
and O₃ Hg
automatic
monitoring



New National Technical Regulation on 2023 (Hg)

Environmental	Old national technical regulation	New national technical regulation (2023)
Ambient air quality (Hazardous substances)	0,3 μ g/m ³ (24hours)	0,3 μ g/Nm ³ (24hours)
Surface water and Underground water (impact on human health)	0,001 mg/L	0,001 mg/L
Coastal water	0,001 mg/L	0,0005 mg/L
Soil	-	Type 1: 12 mg/kg (agricultural land...) Type 2: 30 mg/kg (non-agricultural land..) Type 3: 60 mg/kg (land for other purposes..)

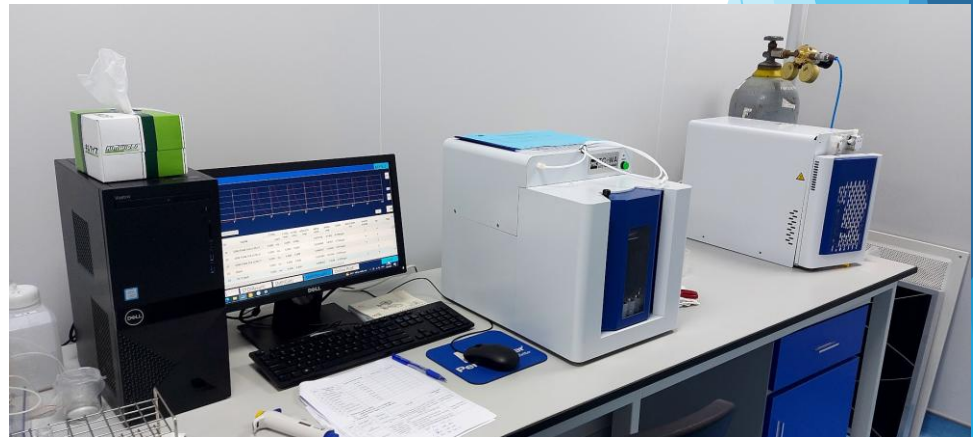
New NCEM building

- 2022-2023: Completion of the new office (large area and modern design for Laboratory).
- Separate Hg analysis room.
- Clean room for wet deposition sampling preparation.
- Relocated wet deposition system; mercury vapor and passive sampling system to new NCEM headquarters. Set up more passive sampling sites with support from APMMN network.
- Increase participation in international cooperation activities and other related projects for the implementation of the Minamata Convention



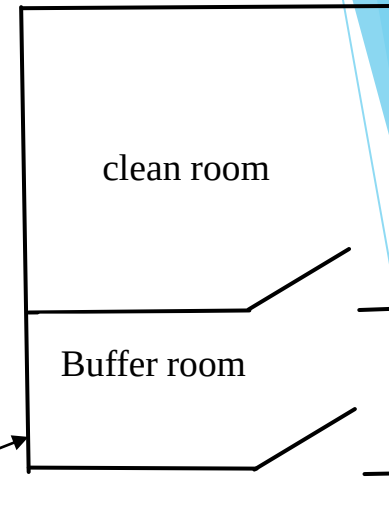
New location for Hg equipment analysis

- Separate Hg analysis room at new headquarters
- There is a buffer room



Update on the New Headquarter

- For wet deposition sample preparation room
- There is a buffer room
- Plan the installation of equipment



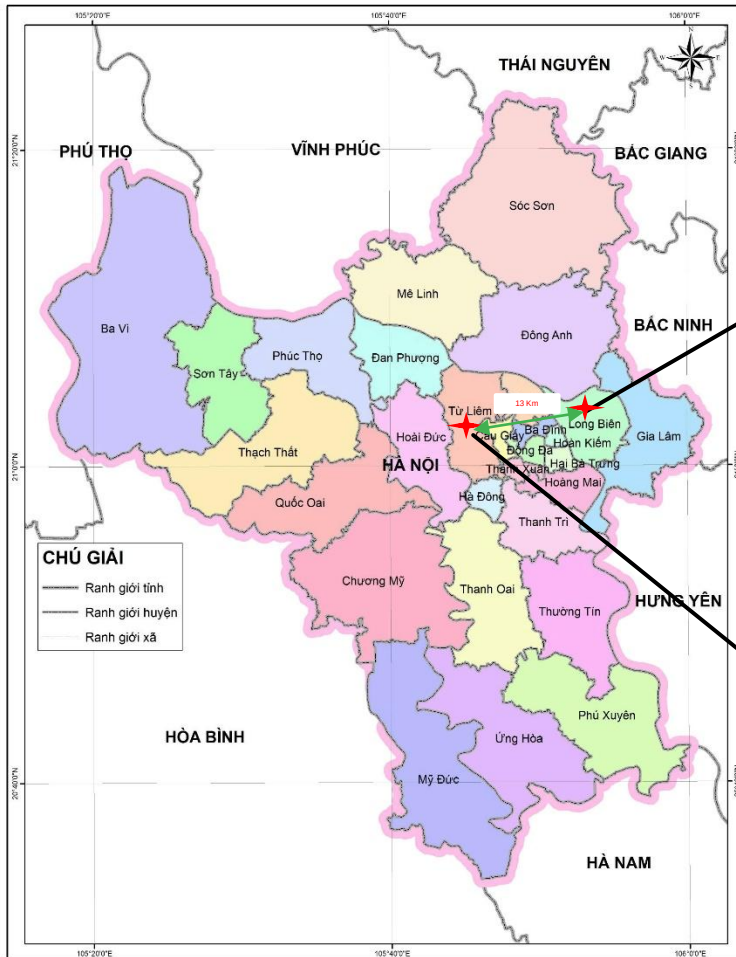
Update on Mercury Monitoring Activities

- **From 2014 – 2024:** Participate in APMMN's activities

(02 sampling sites for wet deposition; 01 sampling site for vapor Hg using both gold trap and passive sampling device)

- For Hg rainwater sampling equipment in Hanoi:
 - ✓ From January 2014 to April 2024, the rainwater sampling equipment was installed at 556 Nguyen Van Cu, Long Bien, Hanoi.
 - ✓ From June 2024, the equipment monitoring was moved and installed to the new headquarters at 79 Van Tien Dung (We notified the network before installation).

Update site Mercury monitoring in rain water



Operating the wet deposition sampler in Hanoi, Vietnam from 2014 - June 2024 (APVN01)



Operating the wet deposition sampler in Hanoi, Vietnam from June 2024 – Sep 2024 (APVN01)

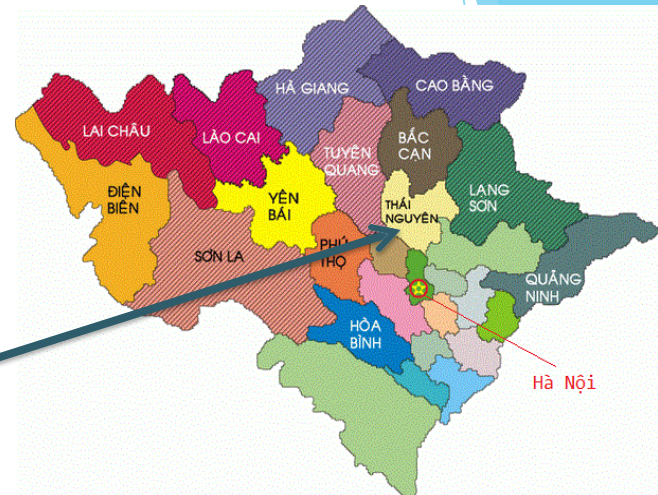
The new location is far from the old location about 13km west

Update site Mercury monitoring in rain water



The new location is far from the old location about 13km, It is the main road and is open on all sides, ensuring quality for rainwater sampling. However, the new location is not as crowded as the old location.

Mercury monitoring in rain water



- Operating the wet deposition sampler in Thai Nguyen province Vietnam from 2019 (APVN02)



Hg levels in rain water

ng/L

APVN 01 -2023

350

300

250

200

150

100

50

0

Jan

Feb

Mar

Apr

May

May

Jun

Jul

Jul

Aug

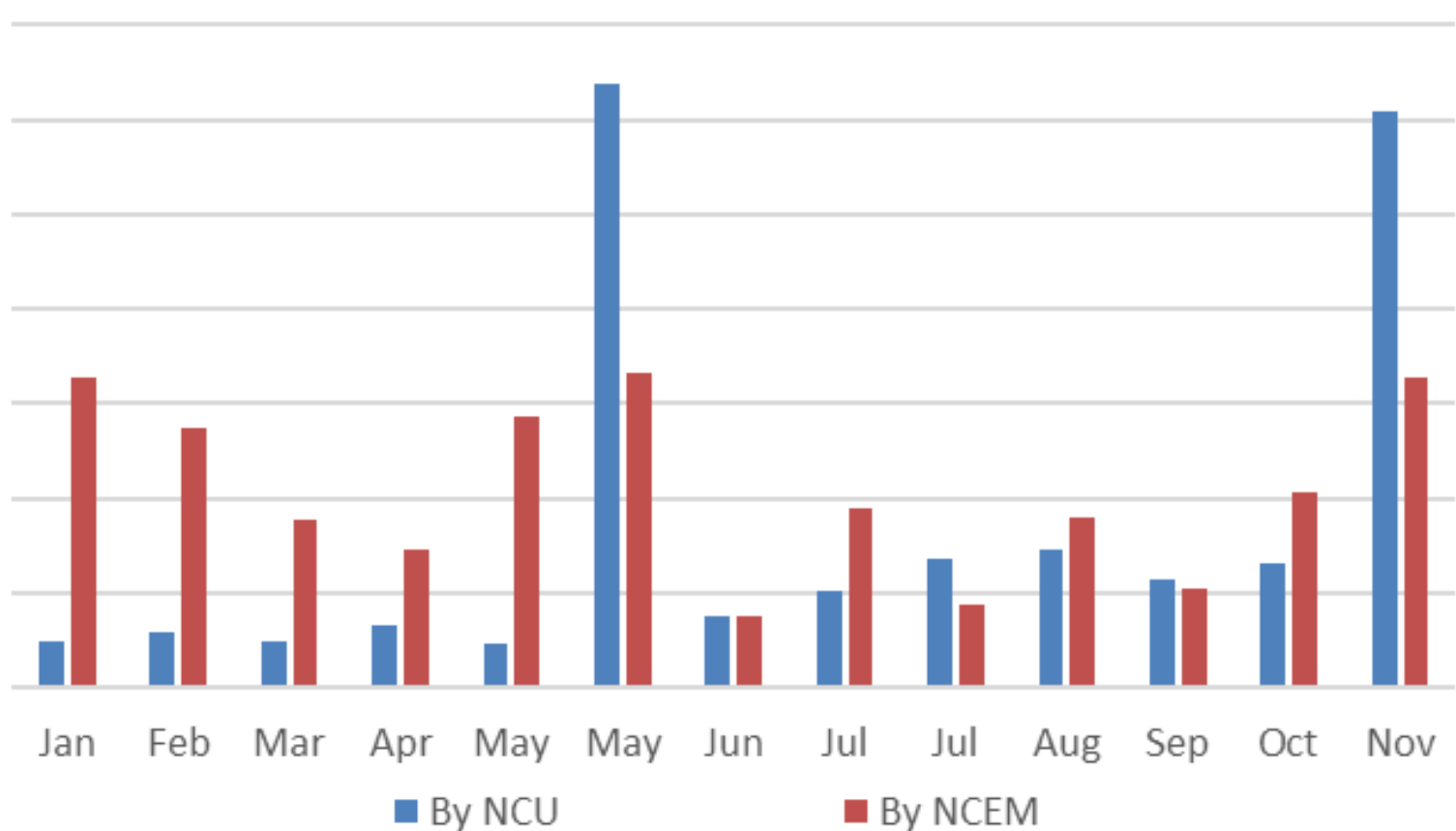
Sep

Oct

Nov

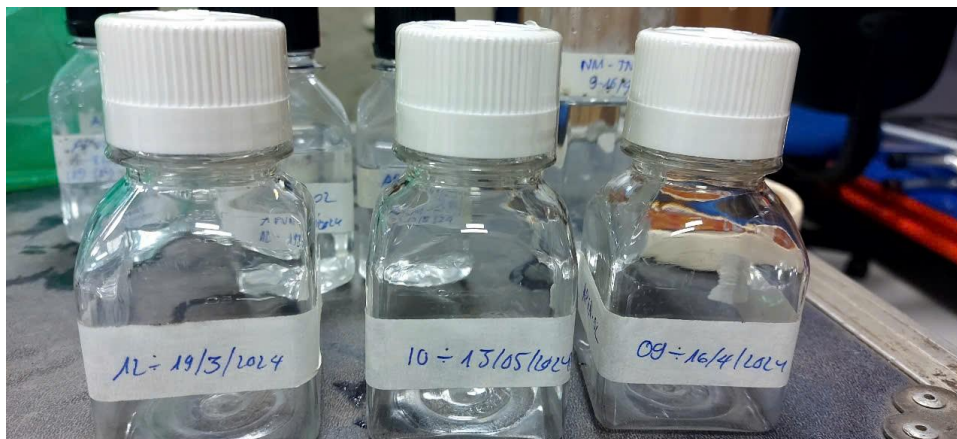
■ By NCU

■ By NCEM



Discussion

- QA/QC for sampling, reservation and deliver to NCU Taiwan
- Sometimes there are samples with very high concentrations, but it is difficult to determine the influencing factors
- The NCON sampling device in HaNoi, including sampler, bottles, funnels are old, have been installed and used many years
- New sampling locations need time to stabilize



Future Plan

- The rainwater monitoring network in Vietnam is being extend
- Strengthen cooperation with The Asia-Pacific Mercury monitoring network and actively participate in networking activities
- Build equipment investment plant for cleanroom installation and get supported from The Asia-Pacific Mercury monitoring network
- Strengthening the capacity of monitoring staff and expanding the Rainwater monitoring and Air network
- Welcome expert from The Asia-Pacific Mercury monitoring network to Vietnam and visit our new headquarters and provide support and advice on new locations.

Thank you

