



VIETNAM ENVIRONMENT ADMINISTRATION (VEA)
CENTRE FOR ENVIRONMENTAL MONITORING (CEM)
Website: <http://www.quantracmoitruong.gov.vn/>

UPDATED MERCURY MONITORING ACTIVITIES IN VIETNAM

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1. Findings of mercury sources in the air in Vietnam

In Vietnam mercury has been widely used in industrial production. According to a research project carried out in factories/industries in Vietnam, some mercury sources are found as below:

- *Coal power plants*
- *Cement factories/plants*
- *Steel plants*
- *Other manufacturers:* Oil refinery, thermometer, compact fluorescent lamp, dentistry, electric components, metallurgy, waste incinerator, e-waste, landfill, chemistry...
- In Vietnam, currently, Hg has not been managed well and strictly. Vietnam does not have an overview of impact and emission level of mercury emission sources.



1. Findings of mercury sources in the air in Vietnam

- ***Cement factories:*** Hg was detected in smoke released from cement stacks. Emission gas before and after the dust collector system was measured. The concentrations of Hg before the dust collector system were relatively high.
- Hg in materials for producing cement causes Hg delivery from furnace in cement plants in Vietnam
- ***Coal power plants:*** Monitoring results from smoke stack and ambient air show low Hg concentration
- ***Steel plants:*** Hg was not detected from stack smoke in Steel plants. The reason is maybe emission gas collector system is not close tight, so emission gas was released to ambient air



1. Findings of mercury sources in the air in Vietnam

- Hg sources come mainly from materials: coal, limestone.
- Hg emission is mainly from fuel burning
- Hg emission from cement plants is highest
- Hg concentration in ambient air is quite low, below the National Standard.



2. Updated atmospheric mercury monitoring activities



The number of air quality monitoring stations

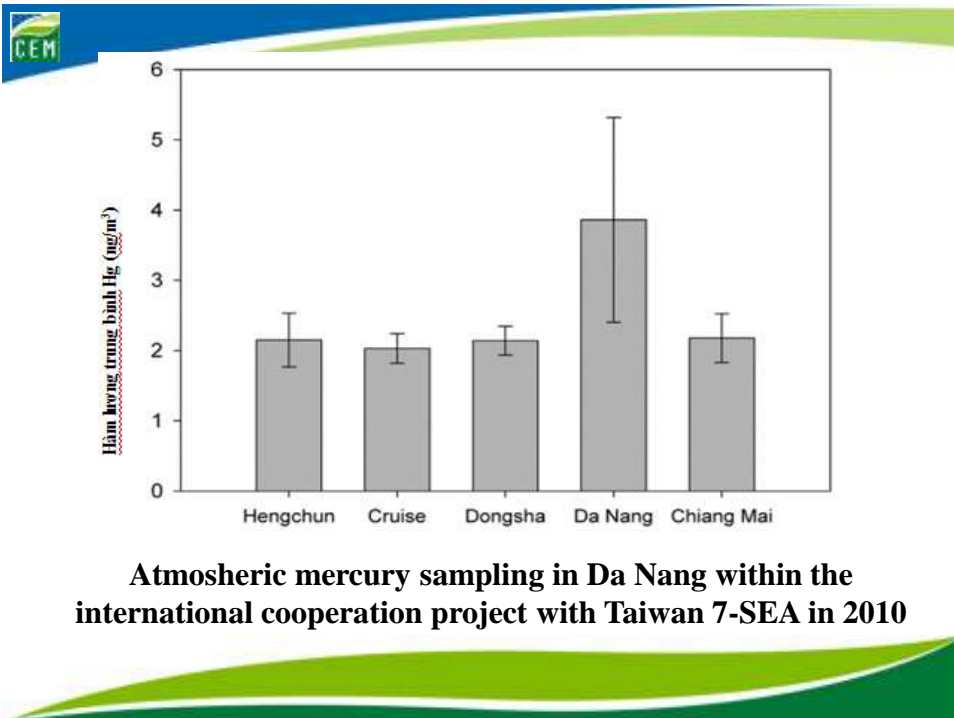
Location	VEA	Donres	National Hydro-meteorological Service (NHMF)
Vĩnh Phúc		1	
Hà Nội	2	2	2
Hải Phòng			1
Ninh Bình (Cúc Phương)			1
Nghệ An (Tp.Vinh)			1
Đà Nẵng	1		1
TP Hồ Chí Minh		9	1
Pleiku			1
Cần Thơ			1
Sơn La			1
Đồng Nai		1	
Nha Trang	1		
Phủ Thọ	1		
Thừa Thiên Huế	1		
Quảng Ninh	1		
Total	7	13	10



2. Updated atmospheric mercury monitoring activities

- Mercury was currently measured in one automatic monitoring station at the Ho Chi Minh Mausoleum area, using optical technology.





- ## 2. Updated atmospheric mercury monitoring activities
- Under Decision No. 1811/QĐ-TTg dated 04/10/2013, Prime Minister Nguyen Tan Dung approved for Vietnam to join in the **Minamata Convention on Mercury**.
 - One of the main contents of Minamata Mercury Convention is on the regulation on monitoring and controlling mercury production; Under the Convention, a road-map implemented by member-countries has been set out for period 2020 – 2025
 - Vietnam is assessing the effects of Minamata Convention for the countries in managing and controlling Hg and proposing the roadmap and measures to satisfy Provisions of the Convention.



2. Updated atmospheric mercury monitoring activities

- **Research Project conducted by CEM:**
 - Designing mercury monitoring network in Vietnam
 - 2015: The network of Hg monitoring sites and monitoring frequency will be proposed
 - 2016: Technical Hg monitoring manual will be developed



2. Updated atmospheric mercury monitoring activities

- **Participating in EANET** (Acid deposition monitoring network in East Asia) since 1998
 - Focal point:
Institute of Meteorology, Hydrology and Environment (IMHEN)
 - 6 stations: wet /dry deposition in Ha Noi, Hoa Binh, Cuc Phuong, Da Nang, Can Tho, Tp. Ho Chi Minh



3. Future Plan



Future Plan

- Raising awareness on the risk of Hg pollution
- Designing Mercury monitoring network
- Participating in the Asia-Pacific mercury monitoring network activities;
- Comprehensive assessment of mercury pollution in the air in Vietnam
- Perfecting national legislation on mercury management



Future Plan

- Develop technical guidelines on Hg safety management
- Equip the monitoring equipments and facilities for mercury sampling and analysis;
- Strengthen capacity thru training activities on mercury monitoring.
- Strengthen international cooperation in Hg monitoring and controlling
- Sharing data and information among the member countries in the network



**THANK YOU
FOR YOUR ATTENTION!**