



# AIR QUALITY MANAGEMENT HANOI CITY CHALLENGES AND OPPOTUNITIES

Mr Nguyen Minh Muoi
Deputy Director
Hanoi Department of Natural Resources and Environment

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#### **Vision of Hanoi City**





- The city's plans for 2030 and vision 2050: to develop Hanoi to be a dynamic, modern capital, a prouded symbol of Vietnam, a center of politics, culture, science, education and economics;
- Hanoi will be the hub of international transactions and tourism in the Asia-Pacific region.
- Ensuring that Hanoi residents and visitors have a high and comfort quality of life, maintaining a promising investment place.







#### THE STATE OF AIR QUALITY IN HANOI



#### **SOURCES OF AIR POLLUTION**



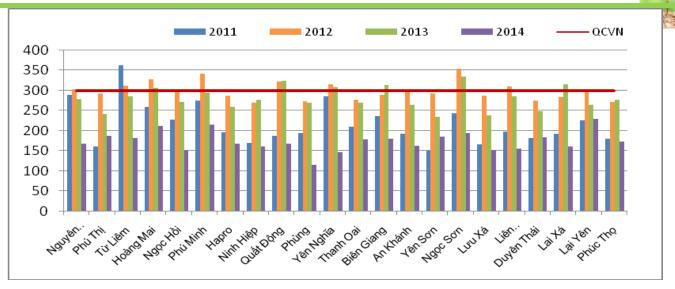


- Traffic is the main source of air pollution
- Industrial production: mainly from the operation of industrial zones and clusters, industries locating in the city;
- Construction activities: typical emissions such as: smoke, dust, SO2, CO.
- Agricultural production and craft villages:
- solid waste disposal landfills

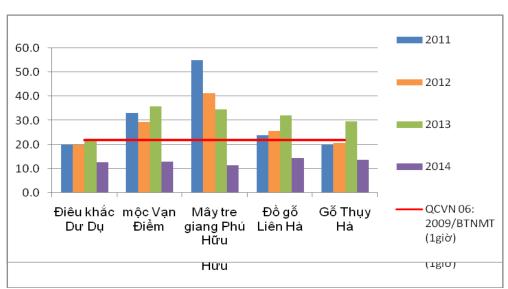


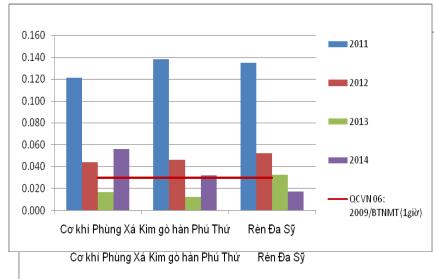
Chart of pollution concentration— Source: Report on the status of the environment in Hangi

2011-2015



Total suspended particle (TSP) in industrial clusters



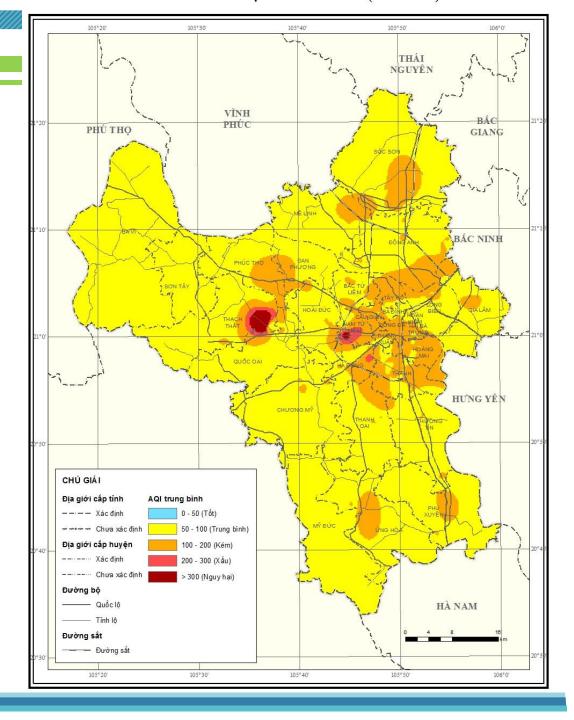


Concentration of As dust in mechanical trade villages



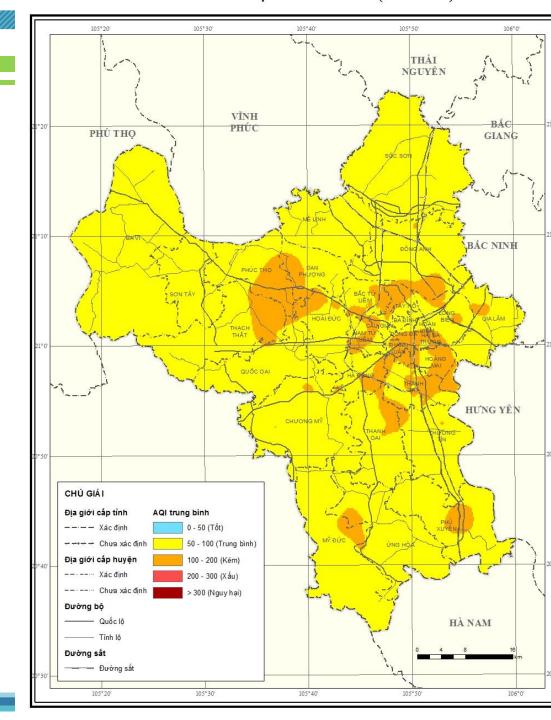
Map of air quality of Hanoi city in the period of 2011 - 2014 (dry season)

Source: Report on the status of the environment in Hanoi City for 5 years in the period of 2011 - 2014





Map of air quality of Hanoi city in the period of 2011 - 2014 (rainy season)





- Air quality in residential areas, roads, craft villages and industries tends to be improved.
- Roads and construction areas are heavily contaminated with dust and benzene, noise
- In the craft villages: mechanical trade villages are contaminated with dust, bamboo, rattan and wood processing trade villages, are contaminated with benzene
- In Industrial Zones: Some indicators exceed slightly in some periods. Although the Benzene indicator still within the limit of QCVN 06: 2009 / BTNMT, it tends to increase over the years due to the increase in using of fossil fuel (petrol), especially due to the increase in means of transport.





#### **CHALLENGES**





- Environmental issues in the planning and development of the city have not been considered and integrated.
- Rapid urbanization, lack of synchronous infrastructure, poor management of construction order lead to local environmental pollution in many places, especially dust pollution.
- The quantity of vehicles is too large compared to the response of technical infrastructure, some means of transportation are too old and expired.





- •Regulations on environmental protection in the construction periods are not complied with: vehicles carrying raw materials, uncovered waste, no bridge car wash or not meet requirements.
- Some roads are degraded
- •Pollution control of industrial waste sources is limited, with no emphasis on controlling the source of waste from agricultural activities.
- Lack of emission inventories





- •The legal system is lacking, overlapping and inadequate; The efficiency of implementing policies and legal documents on the environment is not high; The coordination, the participation of all levels and branches is not tight, drastic.
- •Human resources at all levels are lacking and weak, even holding concurrently, failing to meet the requirements of the management decentralization process.
- Supervision system is not comprehensive





- The implementation of investment projects in the field of air quality improvement is still slow compared with the schedule.
- The mobilization of resources for investment in improving air quality is limited, and socialization is at the pilot level; Not diversified, attracted and encouraged many economic sectors to participate. Foreign-funded ODA is low.







#### **OPPORTUNITIES**







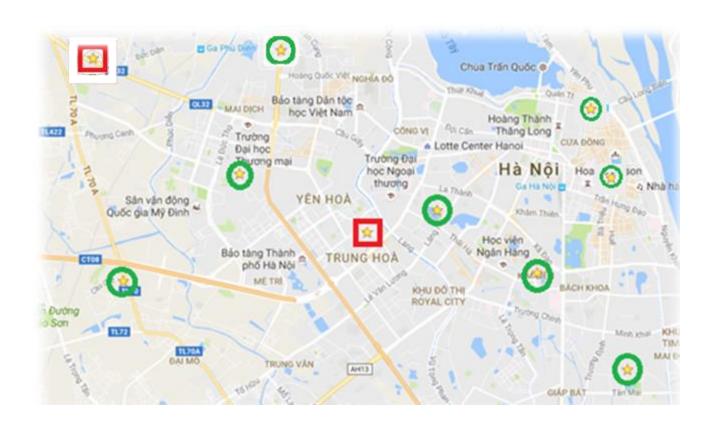
- •Developing master environmental planning including air quality for Hanoi city.
- Reviewing and completing legal procedures on air quality management: Monitoring and controlling emission generating industries, automatic monitoring data reporting to the Environment and Natural Resources Department (DONRE).
- •New and periodical register for transport vehicles. Establishing a roadmap for applying emission level 4, level 5 (Euro 4, Euro 5) in Hanoi.



- •Investment in automatic air mornitoring network for forecasting, early warning about the air quality. 10 automatic mornitoring stations (02 fixed and 08 sensor stations) have been installed and put into operation. Air mornitoring data is updated 24/24.
- Operation of the center for transmitting and processing data from automatic monitoring stations to DONRE.



### Position of 10 automatic air monitoring stations





### Sensor air mornitoring station



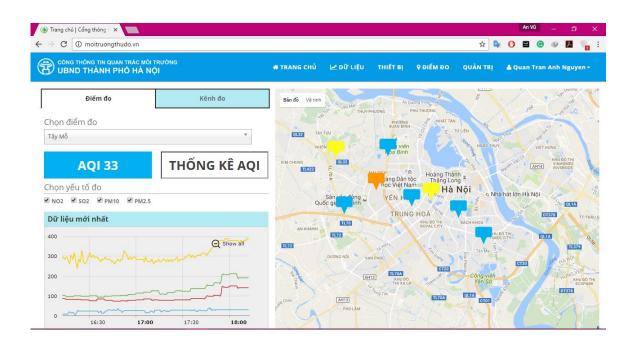




#### **Fixed air observation station**



## Website interactive interface of air quality in Hanoi City





- •Building a synchronous transport infrastructure, encouraging people to use public transport; Building a roadmap for motorcycles restriction accessing inner city area.
- •Propagating and campaigning people to limit and tend to not use beehive stoves in the residential activities, not burning straw to reduce emissions that pollute the environment.
- •Widely public of information on air quality and raising community awareness to generate political support for AQM.
- Continuing one million trees plantation program for Hanoi

