



Action Plan to Reduce Vehicle Emissions in Viet Nam

10th Nov. 2008, Bangkok



Contents

1. Action plan 2002
2. Implementation & Progress
 - 2.1 Vietnam Register actions
 - 2.2 Fuel standards: STAMEQ
 - 2.3 SVCAP Program
 - 2.4 World Bank supports
3. Summary



1. Action plan 2002

- The action Plan address various aspects of Vehicle Emission Reduction with various stakeholder and donors
 - Vehicle Standards
 - Fuels Standards
 - I & M
 - Air Quality Management, etc.



2. Implementation & Progress

- The whole AP has not been implemented, some parts of this has been carried out with political will from the Government and support from donors.
- This presentation briefs the VR actions, Fuels regulations, SVCAP program and the World Bank supports.

A decorative graphic on the left side of the slide featuring three balloons in green, blue, and purple, each with yellow streamers and small yellow triangles representing sunbeams or confetti.

2.1 VR actions

1. Regulations for new vehicles
2. Regulations for in use vehicles
3. Motorcycle emissions inspection program: 2009
4. Vehicle emissions testing facility: 2009-
Euro 4 for Vehicles gasoline and diesel
and Euro 3 for motorcycles.
5. IT system upgrade for Inspection
Centers: 2008-2009
6. Mobile testing facilities: 2008-2009

A decorative graphic on the left side of the slide featuring three balloons in green, blue, and purple, each with yellow streamers and small yellow triangles representing sunbeams or confetti.

2.1.1. Regulations for new vehicles

- Since 1/7/2007: Euro 2 for new type of vehicle. Types approved before 1/7/2007 will be produced until 1/7/2008.
- Proposal Euro 3 for motorcycle and Euro 4 for automobiles in 2012.

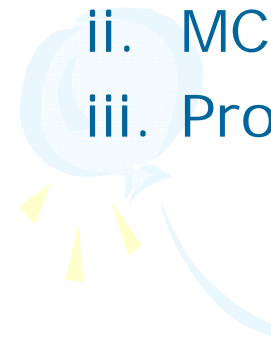
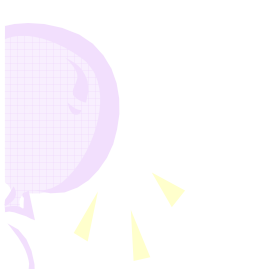


2.1.2. Regulations for in use vehicles

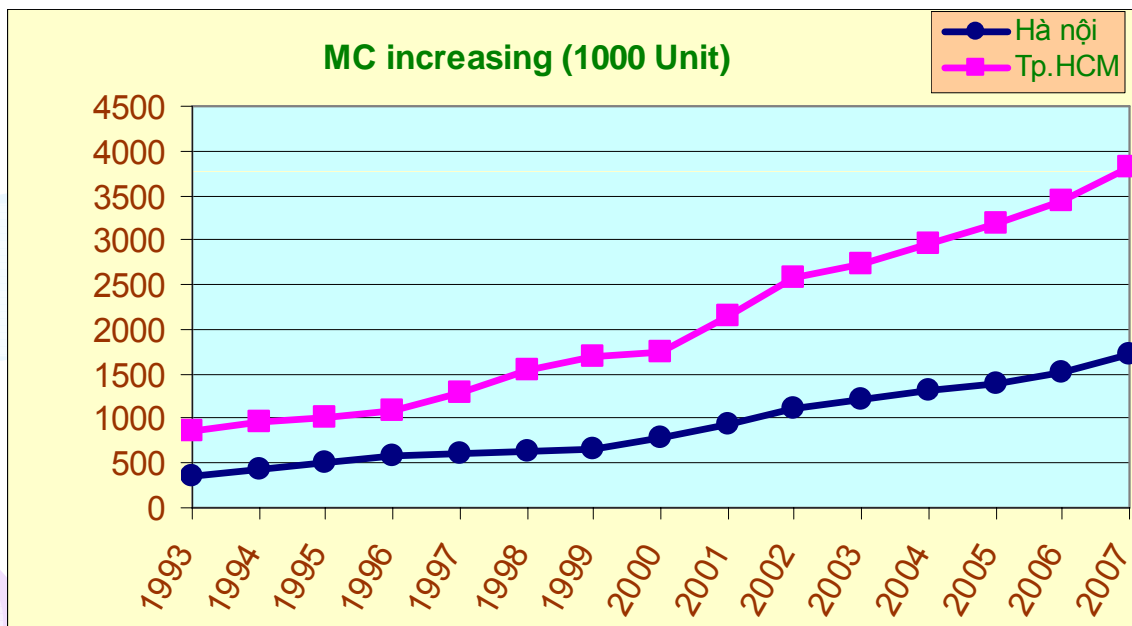
	CO (%)	HC (ppm)	%HSU
Before 08/99	6,5	-	85
08/99-07/06	4,5	1200	72
From 07/06 for 5 big cities	4,5	1200/7800	72
From 01/08 for country	4,5	1200/7800	72
From 07/06 for import MC	4,5	1200/7800	60
From 07/06 for import Autos	3,5	800/7800	60



2.1.3. Motorcycle emissions inspection program – under development

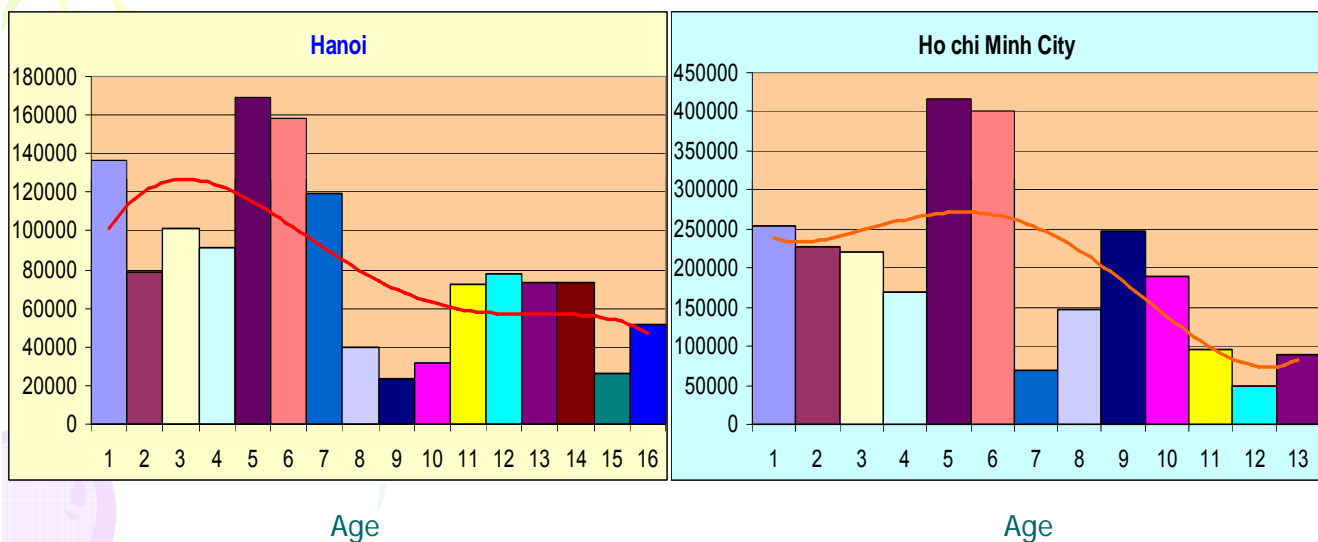
- 
- 
- i. MC situation
 - ii. MC Clinic
 - iii. Proposal

MC situation - Number of MC



MC situation – Age & Number

- MC fleet is young, most of them under 7 years



Source: Registration Dept.

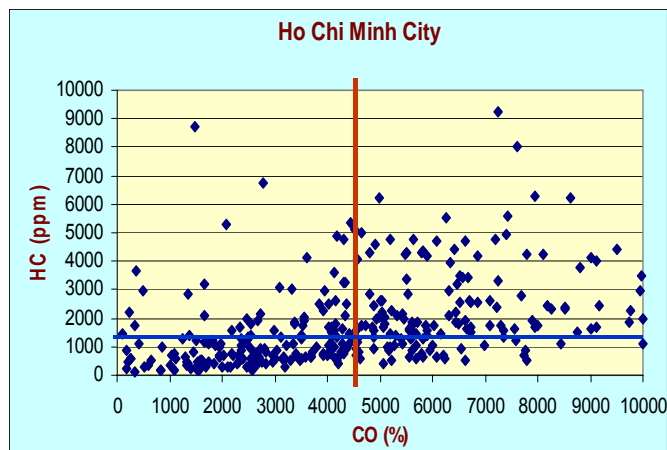
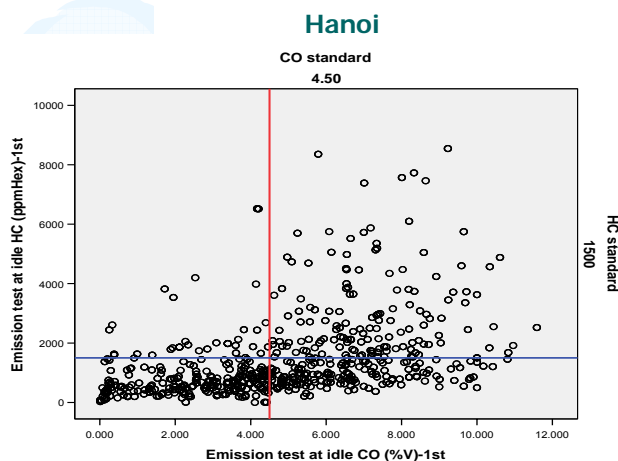
ii. MC clinic

- 400 MC have been checked



MC clinic- results

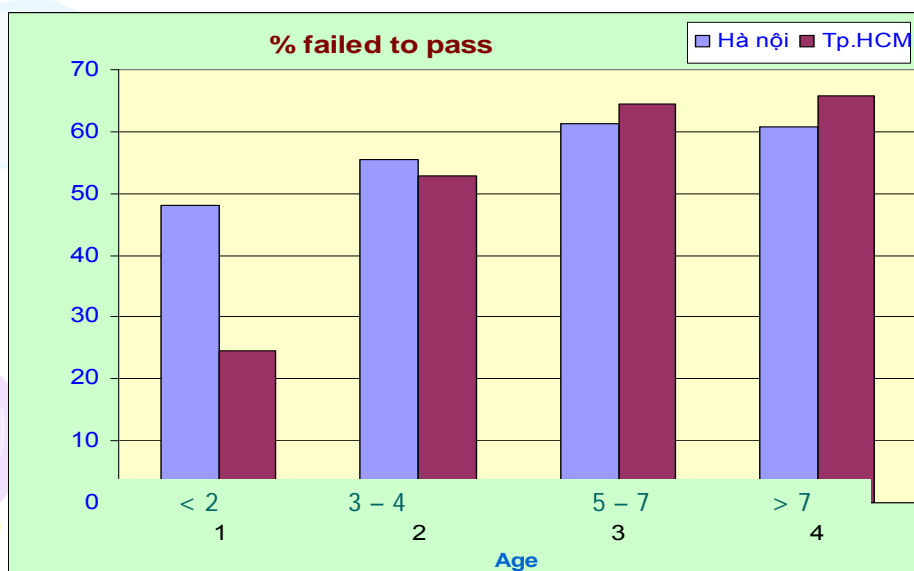
Several MC do not pass 4,5 % CO & 1200 ppm HC



Source: Motorcycle clinic

MC clinic- results

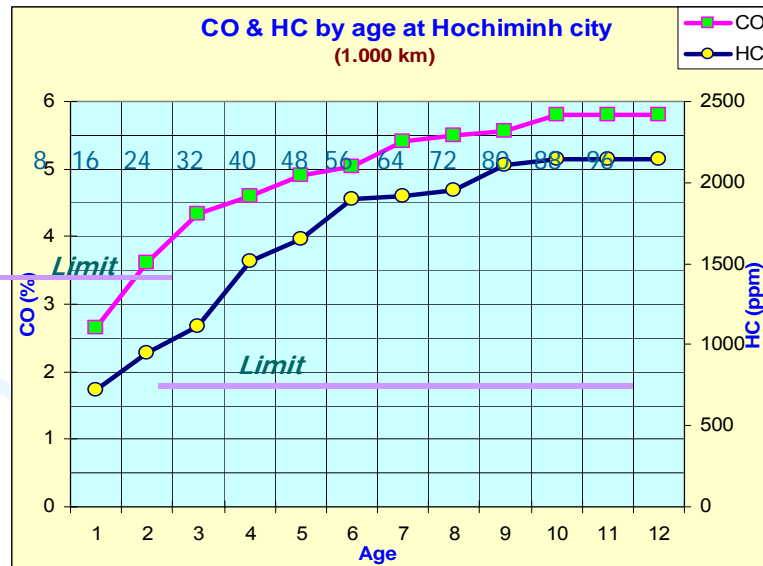
Average: 59,33 % MC not pass in Hanoi and 57,84 % Ho Chi Minh City



Source: MC Clinic

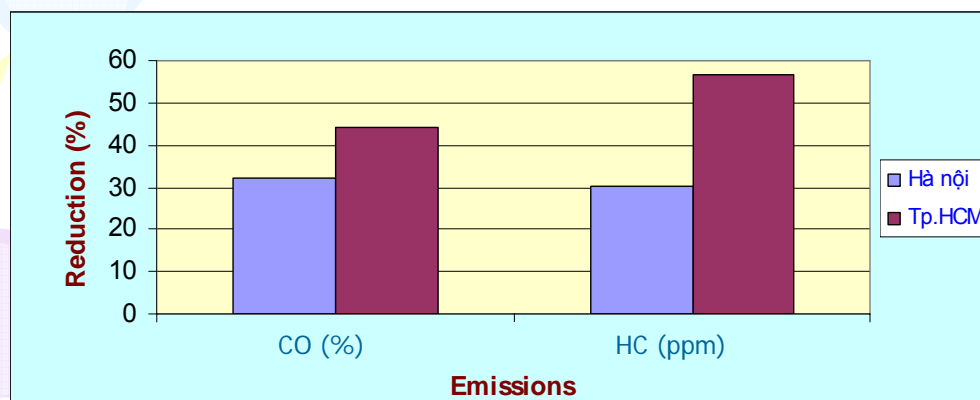
MC clinic- results

Most of MC over 3 years failed to pass



MC clinic- results

- Maintenance helps to reduce 38 % CO and 43 % HC
- Most of failed MC will pass after having maintenance.
- Some MC too old need to replace parts of engine.





iii. Proposals

Phase 1, 2009 – 2012: Implementation in 5 big cities: HCM, Hanoi, Haiphong, Da Nang, Can Tho. Encourage in other cities:

- o From 1/7/2009, for MC above 10 years (registration before 1999)
- o From 1/7/2010: for MC above 7 years (registration before 2003)
- o From 1/7/2011: for MC above 5 years (registration before 2006)
- o From 1/7/2012: for MC above 3 years (registration before 2009)

Phase 2,

From 2013: for MC in other cities and provinces



Tentative Number of Inspection stations

Time	Age	MC in 05 big Cities	Inspection station needed
2009	> 10	1.865.505	155
2010	> 7	3.728.450	155
2011	>5	4.924.551	100
2012	>3	6.373.322	121
2015	>3	7.479.566	92
2020	>3	8.419.114	82
Total			705

Hanoi



2.2. Vietnam Fuel Specifications Progress - Diesel

Time	Pb (g/l)	S (ppm)
1992	-	10000-30000
1998	-	5000-10000
2002	-	500-5000
2005	-	500 (for vehicles)
2008	-	500 (cont.)




Vietnam Fuel Specifications Progress - Gasoline

Time	Pb (g/l)	S (ppm)
1992	0,4	4000
1998	0,15	1500
2000	0,013	500
2005	0,013	500
2008	0,013	500 (cont.)




2.3 SVCAP program

1. Motorcycle Emission Control for Big Cities Program (MECCP);
 2. Clean Air legislation on Air Pollution Charges on national level;
 3. Air Quality Management (AQM) Plan for Hanoi;
 4. Awareness Rising;
 5. Clean Truck Pilot Project;
 6. Clean Motorbike Pilot Project;
 7. Emission Inventory
- 



2.3.1. Motorcycle Emission Control for Big Cities Program (MECCP)

- Background study on international experience and Vietnam situation on motorcycle emission control, covering (i) air pollution caused by transport sector, (ii) cost-effectiveness (in regard to health impacts), (iii) institutional and organizational responsibilities
 - A study tour to an Asian country (Taiwan) to learn experiences on motorbike emission control
 - At least 3 consultation workshops with stakeholders organized to collect feedbacks for MECCP
 - Final Draft of MECCP available
- 



2.3.2. Clean Air legislation on Air Pollution Charges on national level

- Background study on international experience and Vietnam situation on economic tools for air pollution control
 - A study tour to developed countries England & Switzerland to learn experiences concerning environment and air pollution issues
 - At least 5 consultation workshops and thematic seminars with stakeholders organized to collect feedbacks for air pollution fees system in Vietnam
 - Final Draft of Gov. decree on air pollution charge and Circular guiding implementation of Decree available
- 



2.3.3. Air Quality Management (AQM) Plan for Hanoi

- A short training course on AQM for Hanoi DONRE
- A study visit to HCMC DONRE to learn experience on AQM in urban
- A study tour to an Asian country to learn on urban AQM planning and implementation
- Analysis on status of AQM in Hanoi and international best practice on AQM
- Stakeholder workshops for draft AQM Plan
- Final draft of the AQM plan for Hanoi available.



2.3.4. Awareness Raising

- Baseline survey on awareness level carried out.
- Awareness raising concept elaborated and general implementation plan (GIP) developed
- Awareness raising activities implemented according to GIP. Umbrella Campaign & Specific Campaigns
- Two impact monitoring surveys carried out.



2.3.5.Clean Truck Pilot Project

- Program concept developed and approved by partners on improved maintenance and eco-driving.
- Implementation plan developed and agreed by partners.
- At least 10 trainings conducted on workshop management, engine maintenance, eco-driving and emission testing.
- 1 set of emission test equipment (opacity meter) and 2 sets of fuel consumption meters procured.
- Standard maintenance procedures adapted to Vietnamese context.
- Eco-driving training manual adapted to Vietnamese context.
- Further air pollution reduction potential identified (extension to public buses and/or other companies).



2.3.6.Clean Motorbike Pilot Project

- Concept developed and approved by partners on alternative technologies for motorbikes incl. ToR for survey and evaluation of availability of alternative technologies.
- Survey carried out on motorbike utilization in Hanoi.
- Evaluation of availability of alternative technologies carried out.
- Program for pilot testing developed and approved.
- Pilot testing implemented

2.3.7. Emission Inventory

- Concepts and implementation/management plans developed and approved by partners on emission inventory for Hanoi, incl. ToR for collection of necessary data, as relevant;
- Emission inventory for most densely populated areas of Hanoi elaborated as per implementation plan, incl. baseline predictions up to 2020.
- At least one update of the emission inventory depending on development of input factors.
- Necessary hard and software procured

Hanoi





2.4 WB support Hanoi Urban Transport Development Project

1. Improvement of Air Quality Monitoring Network
2. Pilot Operation and Demonstration of I/M for Motorcycles
3. Technical Assistance for Mobile Sources Emission Inventory Development and Exposure and Health Impact Assessment

2.4.1. Improvement of Upgrading of existing monitoring stations.

- air quality monitoring replacement of outdated devices instruments for each of the 5 monitoring stations
- Establishment of additional monitoring stations. 3 new monitoring stations equipped with measurement instruments such as O₃, CO, SO₂, NO, and PM₁₀/PM_{2.5}
- Portable monitoring instruments. Portable instruments for the use of ad-hoc or emergency event measurement



2.4.2. Pilot operation and Demonstrative operation of several pilot inspection stations

- The activities will include pilot inspection and equipment of motorcycle inspection instruments to several maintenance for existing automobile inspection stations, voluntary inspection motorcycles, public awareness raising campaign, data analysis, and development of policy options to be reported to HPC .



2.4.3. Technical Mobile sources emission inventory development

- Assistance of existing available information such as traffic model and emission inspection data, additional emission measurements, and establishment of a mobile emission inventory by type of vehicle.
- Exposure and health impact assessment. Study on the conditions of exposure to polluted air among high exposure groups such as motorcyclists and street vendors, as well as their health impact.



3. Summary

- There are some projects to address the issue of vehicle emissions, despite not keep timely as scheduled but make sense.
- Vietnam on the way forward to tackle air pollution from mobile source.
- Coordination among stakeholders
- Awareness raising takes time
- Several donors and overlap
- Not a comprehensive approach
- Number of MC increase and immigration into urban area.



THANK YOU!

email: anhnh@vr.org.vn