



Asia Clean Fuels and Vehicles Program

The Asia Clean Fuels and Vehicles Program is a 4-year project completed in 2011 with support from the United Nations Environment Program Partnerships for Clean Fuels and Vehicles (UNEP PCFV) with these objectives:

- reduce sulfur in vehicle fuels in Pakistan, Philippines and Vietnam
- investigate cleaner and more efficient two and three-wheelers in Asia
- improve clean fleet management in Asia
- disseminate policy briefs on clean fuels and vehicles

Improvement of Fuel Quality and Vehicle Emission Standards

National stakeholders' workshops were organized by CAI-Asia in Pakistan, Philippines and Vietnam to discuss national roadmaps for clean fuels and vehicles.

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| <p>Pakistan's national consultation resulted in increased awareness of stakeholders of the status of preparations for the implementation of Euro 2 fuel specifications by 2012 and also started discussions for a roadmap to Euro 4. The Ministry of Petroleum and & Natural Resources, in a letter dated May 2010, emphasized the need for more follow up meetings to come up with a timetable for Euro 4 standards.</p> | <p>The Philippines' Clean Air Act mandates the review of fuel quality and vehicle emission standards every two years. Prior to 2009, the move to Euro 4 had been discussed many times by stakeholders but no clear roadmap was agreed and pursued. The consultation meeting and national workshop organized under the project led to the signing of the regulation mandating Euro 4 vehicle emission standards for new vehicles starting January 2016.</p> | <p>Since Vietnam applied the Euro 2 vehicle emission standards and fuel quality specifications in 2007, there was no active discussion among stakeholders on the move to Euro 4. The national workshop resulted in a roadmap discussed by stakeholders for Euro 4 by 2018. In 2011, the Vietnam Standards and Quality Institute received support from the Clinton Climate Initiative of the Clinton Foundation for the drafting of Euro 3 and 4 fuel specifications.</p> |
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Current and Proposed Sulfur levels in Diesel

| | YEAR | | | | | | | | | | | | | | | | | | | | | |
|-------------|-------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Pakistan | 10000 | | | | | | 7000* | | | | | | 500 | | | | | | | | | |
| Philippines | 5000 | | | | | 2000 | | | | | 500 | | | | | 50 | | | | | | |
| Vietnam | 10000 | | | | | | | | | | | 500 | | | | | | | | | | 50 |

*marketed

Emission Standards for New Light-Duty Vehicles

| | YEAR | | | | | | | | | | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|--------|------|------|------|--------|--------|------|------|------|--------|--------|------|------|--------|--------|------|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Pakistan | | | | | | | | | | | | | | | | | EURO 2 | | | | | | |
| Philippines | | | | | | | | EURO 1 | | | | | EURO 2 | | | | | EURO 3 | | | EURO 4 | | |
| Vietnam | | | | | | | | | | | | EURO 2 | | | | | | | | | | EURO 4 | |



Managing Two and Three-Wheelers in Asia

CAI-Asia developed a publication promoting cleaner and efficient two and three-wheelers. It provides an updated and comprehensive overview of policies and technologies addressing the issue of emissions from two and three-wheelers in Asia.

Roll-out of Clean Fleet Management Toolkit in Asia

In 2008, PCFV and CAI-Asia launched the UNEP Clean Fleet Management Toolkit at the Better Air Quality conference held in Bangkok, Thailand. Since then, CAI-Asia was able to carry out training of the Toolkit in Chile (September 2009), Slovenia (November 2009); Dubai (September 2010) and St. Lucia (March 2011). CAI-Asia implemented the Toolkit in the Philippines at the Manila Electric Company (Meralco).

BEST Cluster Members



The pilot project demonstrated the usefulness of the Toolkit in measuring emissions from company fleets, guiding companies in setting fuel savings and emission reduction objectives. The Philippine Climate Imperative, a private sector-led initiative, created the Business for Environmentally Sustainable Transport (BEST) Cluster which recommends to and trains companies on the use of the Toolkit. The core group of companies (see left figure) is envisioned to form the foundation for a future fleet managers' association of the Philippines.

The project facilitated CAI-Asia's cooperation with the private sector to promote the Toolkit and eco-driving:

- Isuzu, which produces and sells diesel engines and vehicles, has agreed to partner with CAI-Asia in delivering eco-driving training. It provided eco-driving training to Meralco.
- Honda, which organizes trainings for fleet managers of key Philippine government agencies
- Shell, which organizes trainings for fleet managers of bus fleets
- Philippine Business for Environment which serves as Secretariat in rolling out the Toolkit and eco-driving training in the Philippines
- Bosch, which promotes preventive maintenance to bus operators

With funding from the Sustainable Urban Mobility in Asia (SUMA) program of CAI-Asia supported by ADB and Sida, training for Indonesian fleet managers was held in 2010.

Policy Briefs on Clean Fuels and Vehicles

CAI-Asia has identified a number of basic questions on fuels and vehicles that regularly arise in discussions with policy makers. There is a pressing need for a document that provides answers to these questions, so that policy makers are guided by clear and accurate information. Drawing from its experience in promoting cleaner fuels and vehicles, CAI-Asia Center will prepare policy briefs for policy makers to support their effort towards cleaner fuels and vehicles.

CAI-Asia also collected fuels, vehicles and automotive fuel efficiency data in 29 countries to provide information to policymakers and researchers on fuel quality specifications.

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CAI-Asia, 2011. "Project Summary No. 10 – Asia Clean Fuels and Vehicles". Pasig City, Philippines.

<http://cleanairinitiative.org/portal/whatwedo/projects/AsiaCleanFuelsandVehicles>

<http://cleanairinitiative.org/portal/CleanFleetManagement>

<http://cleanairinitiative.org/portal/Managing2and3Wheeleders>



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