

## NATIONALLY APPROPRIATE MITIGATION ACTIONS IN THE TRANSPORT SECTOR

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### 1. Introduction

Nationally Appropriate Mitigation Actions (NAMAs), formed in the Bali Climate summit in 2007, are voluntary emission reduction measures by developing countries that are reported by developing countries governments to the United Nations Framework Convention on Climate Change (UNFCCC). The NAMAs is a very new concept and is opportunity for developing countries to define potential design options and shape concrete policy measures at national, regional, or local levels.

Realizing sustainable transport system is a crucial issue for developing countries in order to gain economic and social development with minimal environmental impacts and the NAMAs is then thought to provide a new opportunity for developing countries to take action in the sector with large and rapidly increasing emissions, while still managing their need for growth and economic development.

This paper is an attempt to review the NAMAs with providing some illustrative examples of the types of transport policies and measures that might fall under the NAMAs and comparison of NAMAs with Action Plan on Environment Improvement in the Transport Sector under ASEAN-Japan Transportation Partnership (APEI) and Clean Development Mechanism (CDM).

### 2. NAMAs Framework

In the Bali Action Plan, developing countries agreed to undertake NAMAs that are measurable, reportable and verifiable (MRV) in return for financial, technological and capacity building assistance that is also subject to MRV.

The NAMAs can be divided into following three categories:<sup>1)</sup>

- a) Unilateral NAMAs – autonomous actions taken by developing countries to achieve emission reduction without outside support or financing.
- b) Supported NAMAs – actions eligible for up-front (up to the incremental cost of the action) financing or other forms of assistance (technology transfer or capacity building) from developed countries.

- c) Credit-Generating NAMAs – actions that reduce emissions below a predetermined and negotiated sector- wide or policy-wide crediting baseline. Therefore, the benefits, developing countries can get from the NAMAs, can be said as follows:<sup>2)</sup>
- a) Access to new sources of funding – Funds will be developed to match actions and funding needs for the support of mitigation, adaptation, technology and capacity building; there is a short term commitment to provide resources approaching USD 30 billion for the period 2010-2012.
- b) National and international visibility – Countries can move directly to the front of climate mitigation action by: (a) sharing the responsibility to reduce Green House Gas (GHG) emissions and (b) making the transport sector a key element in achieving this goal.
- c) Reaping the co-benefits – Sustainable and modern low-carbon transportation systems increase the competitiveness of countries and cities by attracting top companies and highly qualified workers. Further benefits are: better air quality and health, increased energy security, reduced congestion, improved safety, social inclusion of poor people, enhanced tourism etc.

### 3. Transport Sector NAMAs Formulation

Generally, policies and measures supporting mitigation actions in the transport sector focus on:

- a) Avoiding or reducing trips, e.g. through the integration of land use and transportation planning,
- b) Shifting to and maintaining the use of “green” modes, such as public transport and non-motorized transport, and
- c) Improving vehicle and fuel technology of all modes of transport to improve the environmental efficiency from each kilometer travelled.

And these attempts can be reached through implementing regulations imposing economical measures and promoting technologies, land planning and transport management.

There are 151 developing country Parties to the UNFCCC, and 36 of these Parties complete a NAMAs

Keywords: NAMAs, Co-benefits, APEI, CDM

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submission by 8 April 2010. Among them 21 submissions have included transport related mitigation actions.<sup>3)</sup>

#### 4. Transport Sector NAMAs

There are a wide range of transport sector related NAMAs which are formulated through the policies and measures explained in the previous section. The following tables provide an overview of possible opportunities for the land transport NAMAs.

Table 1 Land Transport Related Possible NAMAs

Categories	NAMAs	Supports Need	Co-benefits
Regulations	Vehicle Standards	Capacity building	Air quality
	Low-carbon Fuel Standard	Technology transfer Financial support	Air quality
	Car Free Day	Unilateral	Air quality
	Plate Number Policy	Unilateral	Air quality Less congestion
	Eco-driving Promotion (Idling restriction)	Unilateral	Air quality
	Vehicle Inspection and Maintenance	Technology transfer	Air quality
	Car Sharing	Unilateral	Air quality
	High Occupancy Vehicle Incentive	Unilateral	Air quality
Economic Measures	Increase Fuel Tax	Capacity building	Air quality Less congestion Financial revenue
	Road or Cordon Pricing	Capacity building	Air quality Less congestion Financial revenue
	Vehicle Registration Tax	Capacity building	Air quality Less congestion Financial revenue
	Incentive for Rail Freight	Financial support	Economic success
Technology	Glean Vehicle Promotion	Technology transfer Financial support	Air quality Economic growth
	Idling Stop (Equipment installation)	Technology transfer Financial support	Air quality Cost savings
	Electronic Congestion Charge	Technology transfer Financial support	Air quality Financial revenue
	Bus Prior Signal System	Technology transfer Financial support	Social equity
	Alternative fuel	Technology transfer Financial support	Air quality Economic growth
	Fuel Efficiency	Technology transfer Financial support	Cost saving
Land Use Planning and Management	Smart Growth	Capacity building	Reduces land demand Economic success Social equity
	Mass Rapid Transit (BRT,LRT,Metro)	Financial support Capacity building	Less congestion Air quality Reliable, timely transport
	City Logistic	Capacity building Financial support	Air quality Less congestion
	Park and Ride	Capacity building Financial support	Air quality Less congestion
	TDM	Capacity building	Air quality Less congestion
	Mobility Management	Capacity building Financial support	Air quality Less congestion Cost saving
	High Occupancy Lane	Capacity building Financial support	Less congestion Air quality
	Bicycle Lane Promotion	Capacity building Financial support	Air quality Less congestion Cost saving

The most NAMAs in the table 1 are considered as supported NAMAs from a perspective of Least Developed Countries (LCD) who may not be in position to propose unilateral NAMAs due to limited capacities. Bearing in mind is that unilateral NAMAs could be supported NAMAs depending on specific needs of a developing country and its capacity. The table 2 in the below shows the comparison of NAMAs with APEI and CDM.

Table 2 Comparison of NAMAs with APEI and CDM

Categories	NAMAs	APEI	CDM
Regulations	Vehicle Standards	○	△
	Low-carbon Fuel Standard	○	△
	Car Free Day		
	Plate Number Policy		
	Eco-driving Promotion (Idling restriction)	○	
	Vehicle Inspection and Maintenance		
	Car Sharing		△
	High Occupancy Vehicle Incentive		
Economic Measures	Increase Fuel Tax		
	Road or Cordon Pricing		△
	Vehicle Registration Tax	△	
	Incentive for Rail Freight		
Technology	Glean Vehicle Promotion	○	○
	Idling Stop (Equipment installation)	○	○
	Electronic Congestion Charge	○	△
	Bus Prior Signal System	○	
	Alternative fuel	○	○
	Fuel Efficiency		△
Land Use Planning and Management	Smart Growth		
	Mass Rapid Transit (BRT,LRT,Metro)	○	○
	City Logistic	○	△
	Park and Ride		△
	TDM	○	
	Mobility Management		
	High Occupancy Lane		
	Bicycle Lane Promotion		

Note: ○ is certain; △ is not certain.

#### 5. Conclusions

As a new concept, the NAMAs is still in its embryonic stage; However, the NAMAs will play important role on reducing GHG emission from transport sector in developing countries. The supported NAMAs has a big potential for encouraging developing countries to fulfill “thinking globally and acting locally”.

On the other hand, credit-generating NAMAs does not seem to promise for transport sector as sharing many of the limitations of the existing transport. CDM Mutual complement of NAMAS with other mechanism would provide substantial financial recourses for developing countries to realize sustainable low carbon transport system.

#### References

- 1) Center for Clean Air Policy. (2010). *Transportation NAMAs: A Proposed Framework*. Washington DC.
- 2) Holger D., Daniel B., Ko S., Isabella N. and Kate A. (2010). *Formulating NAMAs in the Transport Sector: Kick-starting action*. Sustainable Low Carbon Partnership.
- 3) <http://unfccc.int/home/items/5265.php>