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New ways to involve transport

Clean Development Mechanism (CDM) financing has not been particularly successful in the transport sector, note CORNIE HUIZENGA and STEFAN BAKKER, and current climate discussions are considering a new mitigation instrument more appropriate for transport, called Nationally Appropriate Mitigation Actions (NAMAs).

The post-2012 Climate Agreement is expected to open a new window for more ambitious greenhouse gas emissions reduction actions. It is increasingly important for the transport sector in developing countries to contribute to such mitigation efforts.

Transport provides access to jobs and markets, schools and healthcare, and is an integral part of the development process. A large part of the population of developing countries still lives in poverty, and an expansion of transport activities to drive economic and social development is called for.

Thus, the challenge for this sector will be to provide economically affordable, attractive transport options that can help slow down the trend of moving toward transport systems based on environmentally unsustainable motorised private vehicles.

The transport sector is the fastest growing sector in terms of GHG (Green House Gas) emissions, both in developed and in developing countries. Globally the transport sector is notorious for its difficulty in realising GHG emission reductions. This makes it tempting to concentrate on sectors where it is easier to realise emission reductions, such as the energy

sector. However, if the world community is to be successful in realising ambitious medium and long-term emissions reduction targets and objectives in support of a maximum 2 degree Celsius temperature rise by 2050, all sectors, including the transport sector, will have to take action.

A decisive decade

The period 2012-2018 will be a decisive time for mitigating emissions from the transport sector in developing countries. If no effective measures are taken in that period to influence emissions from the transport sector, a point of no return might be reached.

'Businesses-as-usual scenarios' indicate a growth of over 100% in vehicles for the period 2012-2018. Such an unchecked growth of vehicles is likely to be associated with corresponding increases in transport infrastructure, such as roads and flyovers, which almost certainly will lock-in further increases in the number of vehicles. The key to long-term success in reducing emissions in the transport sector is action now.

An uncontrolled increase in CO₂ emissions from the transport sector in developing countries would most likely be accompanied by more congestion, air pollution and a further decrease in road safety.

The period 2012-2018 does, however, also offer an opportunity for the transport sector to become more engaged in climate change mitigation. New instruments and associated funding mechanisms will

almost certainly help developing countries to adopt less carbon intensive development strategies.

Catalysts for change

In order to achieve an economy wide transformation it is important that post 2012 will be applicable to the transport sector. 'Applicable' in this context means that such instruments will be able to help catalyse a transformation of the transport sector in developing countries to a growth path that will result in a substantial deviation in GHG emissions from business as usual. To be able to contribute in a meaningful manner, the instruments need to set the right direction and be deployed at a scale that is sufficient to give rise to the transformational changes needed.

Globally, governments and experts are discussing instruments that support mitigation efforts by developing countries. The proposals fall under two general categories:

- Generate Emission Reductions that count against mitigation targets for developed countries. This includes continuing the Clean Development Mechanism (CDM) beyond 2012, but with certain modifications to enhance the scale of emission reductions, lower barriers and reduce transaction costs.
- Generate Emission Reductions that can be reported directly by developing countries to UNFCCC (United National Framework Convention on Climate Change). The instrument



It has not been easy for the transport sector to monitor emissions from individual sources, such as private vehicles, hence transport's under-representation in Clean Development Mechanism projects (which require strict monitoring and evaluation).

being discussed for this purpose is Nationally Appropriate Mitigation Actions (NAMAs).

There is a considerable CO₂ emission abatement potential from the transport sector in developing countries, especially if non-vehicle technology related options are considered as well.

The Avoid-Shift-Improve approach represents an integrated approach that, if implemented in a comprehensive manner, can help in achieving a structural transformation of the transport sector. This can be summarised as:

- Avoiding the need to travel,
- Shifting travel to more sustainable modes, or
- Improving the sustainability of modes.

A technology-focused approach alone will not result in large enough emission reductions. This is largely because the rapid growth of the vehicle fleet in developing countries will negate reductions achieved through efficiency improvements.

Why transport hasn't done well

Transport has not fared well under the existing climate instruments, especially CDM. This is related to both the transport sector and the character and detailed guidelines of CDM under the first commitment period of the Kyoto Protocol.

The CDM is an arrangement under the Kyoto Protocol allowing industrialised countries with a greenhouse gas reduction commitment (called Annex 1 countries) to invest in ventures that reduce emissions in developing countries as an

alternative to more expensive emission reductions in their own countries.

However, the transport sector has played a very limited role in the CDM. As of December 2009, 24 projects out of 4 782 projects in the pipeline were related to transport (including biofuels). This is expected to reduce 2.9 MtCO₂-eq/yr up to 2012, or 0.4% of the total reductions of the current pipeline.

The adoption of the NAMA concept would introduce a new form of developing countries participation in global climate governance.

The current under-representation of the transport sector can be explained by a number of barriers, such as:

- The difficulty in establishing the baseline scenario, due to the fact that transport projects contribute to a multitude of goals,
- The fact that emissions from individual sources are relatively small and dispersed, making monitoring difficult,
- Extensive linkages to other economic activities (makes it more difficult to give boundaries to a project), and
- Transport's strong relationship with human behaviour, which can make evaluation difficult.

What are NAMAs?

Broadly defined, NAMAs are actions voluntarily proposed by developing countries that significantly reduce emissions below business-as-usual levels. NAMAs can be categorised into three groups:

Unilateral NAMAs are autonomous actions taken by developing countries to achieve emissions reductions without outside support or financing. These are typically low-cost mitigation measures and are an important piece of a climate policy package for transportation, representing developing countries' own contributions to mitigation efforts. These include fuel taxation reform, fuel economy standards, and smart growth land-use planning.

Supported NAMAs are developing-country actions undertaken with financial or other support from developed-country Parties [THIS IS CORRECT]. They also represent developing countries' contribution to climate mitigation. For the transportation sector, these could include capacity-building measures, particularly the design and implementation of Low Carbon Transportation Plans; policy and regulatory measures, such as

congestion pricing; and physical infrastructure, such as Bus Rapid Transit. Support could come in the form of direct financing, loans, technology transfer, or capacity-building assistance.

Credit-generating NAMAs are actions that could be partially or fully credited for sale in the global carbon market after an agreed-upon crediting baseline has been reached. These are not as promising for the transportation sector, as credit-generation programs for policies and bundles of projects are likely to face two of the same challenges – quantifying emission reductions with certainty and demonstrating additionality – that have virtually excluded transportation from the existing Clean Development Mechanism.

Overall, supported NAMAs provide the greatest opportunity to truly transform the transportation sector in developing countries.

Source: Transportation NAMAs: A Proposed Framework, report by The Center for Clean Air Policy



'Business-as-usual' is seeing developing countries spend a high percentage of mobility funds on roads infrastructure, perpetuating the dependence on private vehicles.

It is therefore encouraging that the current discussions on post-2012 climate instruments (post-2012 CDM and NAMAs) do provide more perspective for the transport sector, and have the potential to address several of the barriers which prevented a wide-ranging engagement of the transport sector until now.

Paragraph 1 (b) ii of the Bali Action Plan calls for 'nationally appropriate mitigation actions by developing country parties in the context of sustainable development, supported and enabled by technology, financing and capacity building, in a measurable, reportable and verifiable manner'.

While the main role of developing countries in the Kyoto Protocol is as host countries in the CDM, the adoption of the NAMA concept would introduce a new form of developing countries participation in global climate governance. It is important to note that NAMAs are however different from Annex I country targets, as they will be proposed voluntarily by the developing country and are conditional to financing by developed countries.

In terms of definition, the general understanding so far is that NAMAs are not restricted to actions that directly reduce GHG emissions but that they can also include actions that will facilitate or enable the reduction of GHG emissions. There is also no restriction to projects in the NAMA discussion so far and it is accepted so far that a NAMA can be a policy, a program or a project. While the various documents have a bias towards describing and discussing NAMAs at the

national level there is no clear reason to assume that NAMAs could not be implemented at the provincial or city level.

It has been proposed that NAMAs would be registered in a NAMA registry. The registration process would include the amount of emission reductions accomplished through the NAMA. For supported NAMAs the NAMA registry.

NAMAs intend to stimulate domestic mitigation activities in developing countries. By allowing funding for enabling activities through supported NAMAs that contribute to removing barriers to the implementation of Avoid-Shift-Improve-related approaches in the transport sector, it appears that they would offer perhaps even better possibilities for the transport sector than in the case of revised CDM.

If the MRV (Monitoring, Reporting and Verification) procedures agreed upon will be less restrictive than in the case of CDM and if adequate funding is available for NAMAs, it might be that especially supported NAMAs can contribute in a significant manner to the funding of implementation measures under the Avoid-Shift-Improve approach.

Transport NAMAs and transport CDM will in the best-case scenario provide only a minor part of overall funding for both enabling and implementation activities, compared to other sources of funding. The challenge is not to replace existing funding from development assistance but rather in tandem with development assistance funding facilitate, catalyse

and lever a re-orientation in the funding of transport in developing countries towards a more sustainable, low-carbon future.

The relevance of CDM and NAMAs as a meaningful instrument for the transport sector will be greatly influenced by the manner in which these instruments will incorporate non climate-related benefits in their conceptualisation. Experience has shown that the non-climate benefits from transport measures are often much larger than the climate impacts (especially so in the case of non technology-related measures). The incorporation of these benefits in the total costs fundamentally changes the 'incremental costs' of these measures. There is a need for further discussion how to integrate the co-benefits approach in post 2012 climate instruments without creating another barrier for funding because of growing complexity in MRV procedures.

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Reflecting the importance of the transport sector as a source of emissions it can be argued that it is important to reserve a percentage of NAMA funds for the transport sector, combined with a possible geographical allocation. The role of NAMAs is to catalyse and enhance mitigation action. This can be best achieved by stimulating a paradigm shift that will result in a structural transformation of the transport sector. Paradigm shifts happen less easily if funding is allocated to a limited number of countries (even if those countries are responsible for a majority of the emissions).

The availability of 'fast-starting finance' for the period 2010-2012, as proposed amongst others by the EU, is especially relevant to the transport sector in developing countries, which in many cases has not received the same attention as for example the energy sector in developing low carbon transformation strategies and can be used to:

- Improve transport data and baselines,
- Develop institutional co-ordination and capacity to implement Avoid-Shift-Improve interventions,
- Develop integrated co-benefit assessment methodologies,
- Develop financing models for various types of transport NAMAs, and
- Pilot transport NAMAs.

Ultimately, what is needed are instruments that can demonstrate a direct or indirect impact on CO₂ and GHG reduction, which acknowledge co-benefits, which are relatively simple, and which can be applied in a transparent and predictable manner. 

The CITS (Climate Instruments in the Transport Sector) project is part of the work program of the Partnership on Sustainable, Low Carbon Transport (www.slocat.net). The final results of the CITS Project will be presented at the second ADB Transport Forum, 24-28 May 2010 in Manila, Philippines.

This is a shortened version, edited by Gail Jennings, of the draft report written by Cornie Huizenga (Partnership for Sustainable Low Carbon Transport) and Stefan Bakker (the Energy Research Center Netherlands) with support from the authors of case studies. The authors invite comments on this draft interim consultants report: cornie.huizenga@slocatpartnership.org and [Stefan Bakker \(bakker@ecm.nl\)](mailto:bakker@ecm.nl).

What is additionality?

Additionality is defined as follows: 'A CDM project activity is additional if anthropogenic (caused by humans) emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.'

In other words, additionality is the requirement that the greenhouse gas emissions after implementation of a CDM project activity are lower than those that would have occurred in the most plausible alternative scenario to the implementation of the CDM project activity.

This alternative scenario may be the business-as-usual case (that is, the continuation of current emission levels in the absence of the CDM project activity), or it may be some other scenario that involves a gradual lowering of emissions intensity.

Additionality is a principal condition for the eligibility of a project under the CDM.

Source: CDM Rulebook