



### NAMA submissions to the UNFCCC: An overview from a transport perspective

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#### Introduction

In the lead-up to the Post-2015 climate regime, Nationally Appropriate Mitigation Actions (NAMAs) are increasingly being seen as one of the most promising tools for Non-Annex 1 countries to implement low-carbon development pathways, mitigate their greenhouse gas emissions and, under certain circumstances, to receive international support for their efforts. The concept was first introduced in the Bali Action Plan (2007) and Parties agreed on '*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*'. NAMAs are not entirely new concepts and the formulation of the text around NAMAs and that of the Convention itself are actually strikingly similar: "*Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change.*" (UNFCCC, Art. 3.4, 1992).

A NAMA must be nationally appropriate, deliver emission reductions (mitigation) and be action orientated. Both new and existing programmes and measures to mitigate emissions can be recognised as a NAMA<sup>1</sup> or part of one. The concept itself as well as how they can be implemented (financed), measured and verified is still evolving. They can be stand-alone actions or integrated into, for example, Low Carbon Development Strategies (LCDS). LCDS, introduced in Cancun (2012) as part of the common but differentiated responsibility (CBDR) to meet overall emissions reduction objectives: "*All countries shall prepare Low Emission Development Strategies...nationally-driven and representing the aims and objectives of individual Parties in accordance with national circumstances and capacities*", provide an overarching framework. NAMAs can be considered to be one of the vehicles to implement LCD strategies as well as other national and local climate change action plans.

The Bridging the Gap Initiative is a multi-stakeholder initiative formed in 2009 to encourage international recognition that land transport should play a more prominent role in addressing climate change in the Post-2012 agreement. The Initiative has provided an on-going review of NAMA submissions from a transport perspective (t-NAMAs). The partners work together at '*bridging the gap*' between the transport sector and the climate change negotiations process and the initiative conducts a series of workshops and side events linked to the negotiation process to increase the mitigation potential of land transport and promote sustainable solutions for developing countries.

[www.transport2020.org](http://www.transport2020.org)

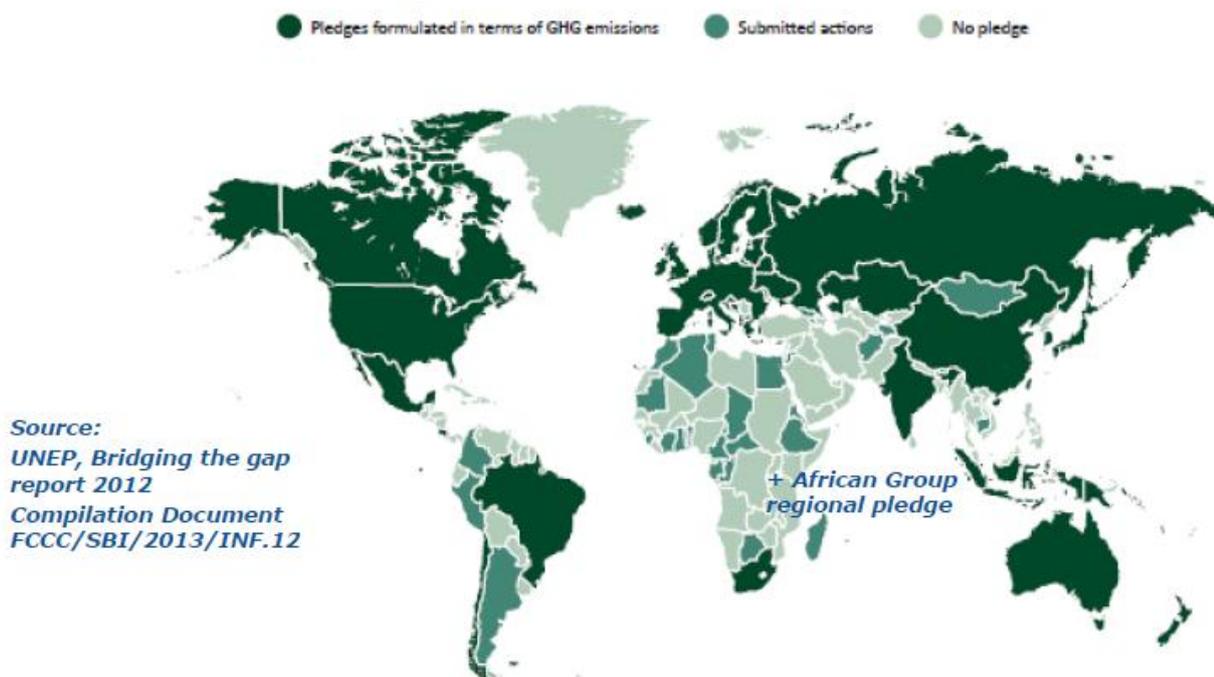
<sup>1</sup> NAMAs can be put forward for any sector and can vary in terms of scale, approach and the extent to which they are used to mitigate emissions.

NAMAs can be developed in any sector and currently there is no restriction on the nature of climate change mitigation activities that can be submitted to the UNFCCC as a NAMA. They can include local, regional and national policies, actions and measures as long as they will reduce greenhouse gas (GHG) emissions from a business as usual (BAU) scenario. The proposals received so far range from policies and strategies to more specific projects, and the level of detail provided varies considerably.

Preparing a NAMA needs to include aspects such as implementation of the initiative or project, allocate the responsibilities and timescales as well as how it contributes to delivering higher development and climate goals (the MRV- Measurable, Reportable, Verifiable- aspect which refers to the quantitative assessment of the NAMA). Robust methodologies and approaches to MRV will not only help to track progress towards achieving national objectives and goals but will probably also be a prerequisite for international support). However Parties have also expressed concern the learning from CDM<sup>2</sup> on this aspect needs to be taken on board for NAMAs but not in such a way as to increase the burden of reporting.

## History and overview of NAMAs

The term NAMAs is becoming commonly used for a large variety of different types of 'Nationally Appropriate Mitigation Actions'. These include economy wide GHG reduction goals, sectorial strategies, mitigation policies and individual or 'bundled' projects. A large number of pledges have been received by the UNFCCC and Figure 2 shows the regional distribution of NAMAs in May 2013.

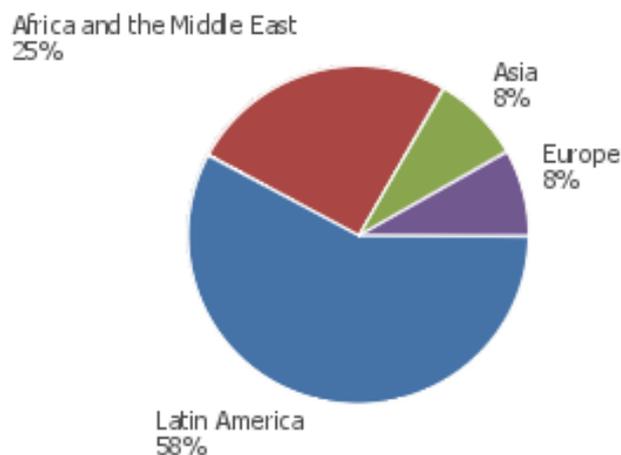


**Figure 1:** Map showing the distribution of NAMAs pledges put forward to the UNFCCC (UNEP, Bridging the Gap, 2012 compilation document FCCC/SBI/2013/INF.12).

NAMAs are voluntary and Non-Annex I Parties to the UNFCCC were first invited to submit NAMA proposals to the UNFCCC after the Copenhagen Accord of December 2009<sup>3</sup>. Twenty-five Parties have responded initially and since then the number of NAMA proposals has steadily continued to increase. Transport has featured largely and was the leading sector of interest in our first and second reviews (2010).

<sup>2</sup> CDM – Clean Development Mechanism

<sup>3</sup> Conference of the Parties (2010) Decision 2/CP.15. Available from <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4>



**Figure 2:** Regional distribution of NAMAs<sup>4</sup>

In May 2013, the UNFCCC published a revised version of its report on NAMA proposals citing that 57 Parties and a group of Parties (the African Group) communicated information on NAMAs that they intend to implement.<sup>5</sup> Transport is mentioned by 25 of them and it is likely that it will be included as actions by other Parties that have chosen to suggest economy wide strategies such as low carbon green growth, energy efficiency or biofuel use strategies. Latin America is leading in terms of overall NAMA submissions and some are getting close to implementation stage.

## Tracking NAMA developments and proposals

As NAMAs are voluntary in nature they do not need to be approved by the UNFCCC. This paper contains information on those transport NAMAs that are submitted to the UNFCCC process or have been published. Bridging the Gap is aware of several transport related NAMAs that are not covered in this paper as they have not been formally included yet in the Parties communications. Examples include in low carbon transport policies and capacity building in Peru, transit orientated development (TOD) around transit stations in Colombia, electric vehicles in Chili, and various other transport related projects (e.g. South Africa, Thailand).

A number of NAMAs were proposed as part of mitigation actions post Copenhagen and transport was well represented. Since then some Parties have made significant efforts to progress these from an idea to a project and explore how to measure the expected positive reduction in emissions as well as what will be required to implement them, including in some cases institutional reform. Three broad categories are emerging: “strategy”, “policy” and “project”-based NAMAs and three main classifications – domestic, supported and credited. Most NAMAs are either policy or strategy based (70%<sup>6</sup>). Support may be financial and/or in the form of technical assistance. The MRV requirements are not yet set out for crediting NAMAs and at this point this is seen as a challenge for t-NAMAs<sup>7</sup>.

Recent developments outside the negotiations include the launch of the NAMA Facility (a € 70 million fund set up by the UK and Germany to support transformational, country led NAMAs) and the NAMA Partnership, a multi-stakeholder group focussing on knowledge sharing to support developing countries. GIZ is the Bridging the Gap contact on this.

### NAMA Registry

The UNFCCC agreed to establish a NAMA Registry to record NAMAs and to “...*facilitate matching of finance, technology and capacity building support for their implementation.*” At COP 17 (2011) it was

<sup>4</sup> [http://www.nama-database.org/index.php/By\\_region](http://www.nama-database.org/index.php/By_region)

<sup>5</sup> UNFCCC (2013). Revised Note by the Secretariat of: Compilation of information on nationally appropriate mitigation actions to be implemented by developing country Parties. Available at: <http://unfccc.int/resource/docs/2013/sbi/eng/inf12r02.pdf>

<sup>6</sup> Ecofys NAMA database

<sup>7</sup> t-NAMA – an abbreviation for transport NAMAs

decided to develop the registry as a dynamic, web-based platform and the Secretariat was requested to develop a prototype for trial. Bridging the Gap members were able to attend the workshop held to trial and test the functionalities in 2012. The Secretariat currently has a prototype of the Registry available to Parties, with the fully functional (publicly available) web base expected to become operational by October 2013<sup>8</sup>. The platform faces certain challenges as it must not only be able to match donors and projects but also flexible enough to manage the wide variety of NAMA submissions<sup>9</sup>. Ideally it could also help provide a useful link between future climate finance architecture and multilateral funds.

In the meantime, in order to enable Parties and entities to submit NAMAs and information on support, the UNFCCC secretariat has put in place a support webpage at:

[https://unfccc.int/cooperation\\_support/nama/items/6945.php](https://unfccc.int/cooperation_support/nama/items/6945.php).

NAMAs may be entered under the following headings:

- NAMA seeking support for preparation
- NAMA seeking support for implementation,
- Other NAMAs for recognition
- Information on support for NAMAs.

#### **Box 1: Three New Transport NAMA Submissions to the UNFCCC**

As of May 2013, three countries have officially submitted transport NAMAs seeking support for preparation/ implementation (since September 2012):

- **The Commonwealth of Dominica:** Dominica's submission encompasses the impacts of GHG mitigation from transport within its low carbon resilient strategy.
- **The Federal Democratic Republic of Ethiopia:** Ethiopia's submission includes help in the preparation of an Interurban electric rail system to replace 50% of road cargo via eight routes to the economic centres of the country. The electricity used would be generated from renewable sources. A grant of US\$ 400,000 for technical assistance and a further 100,000 US\$ for capacity building is being requested. This is a component of Ethiopia's 2011 Climate Resilient Green Economy Strategy
- **The Republic of Indonesia:** See box 2.

#### **NAMA Pipeline**

UNEP RISOE centre have developed a NAMA pipeline<sup>10</sup> ([www.namapipeline.org/](http://www.namapipeline.org/)) which is similar to the well-used CDM pipeline. It is not a registry as such but acts more as an informal overview of activities submitted to the UNFCCC as NAMAs<sup>11</sup>. The NAMA pipeline contains all submissions to the UNFCCC from developing countries for Nationally Appropriate Mitigation Actions; even if the submissions have not yet been finally formalised.

#### **NAMA Database**

Ecofys has developed a NAMA database with the aim of sharing information on NAMA activities, enabling countries to learn from these experiences and gain insights into how mitigation activities can be undertaken within the NAMA framework. The webpage (<http://www.nama-database.org/>) is

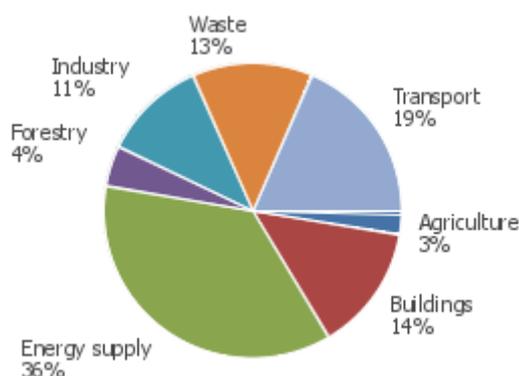
<sup>8</sup> UNFCCC NAMA Registry website: [http://unfccc.int/cooperation\\_support/nama/items/7476.php](http://unfccc.int/cooperation_support/nama/items/7476.php)

<sup>9</sup> Ecofys website: <http://www.ecofys.com/en/project/nama-registry-support/>

<sup>10</sup> A copy of the 'NAMA Pipeline overview' is available as a download from [www.namapipeline.org](http://www.namapipeline.org).

<sup>11</sup> The NAMA Pipeline was consulted on 20 May 2013 to update this paper.

regularly updated and collects publicly available data across all sectors. As of May 2013, the database has information on 66 NAMAs, an increase of 31 since November 2012, and 35 feasibility studies in 35 countries. In terms of transport, there are 10 transport or transport related NAMAs and 12 feasibility studies<sup>12</sup>. As shown in Figure 3, transport is the second most represented sector (19%) having recently been overtaken by energy (36%)<sup>13</sup>.



**Figure 3:** Current sectorial distribution of NAMAs (Ecofys NAMA Database; Accessed 04/06/13)<sup>14</sup>

The fact that 19% of Non-Annex I Party NAMA submissions have a transport component highlights the appropriateness of interventions to reduce emissions from this sector. As NAMAs are seen as a mechanism to develop readiness, and help build capacity and transfer technology, they are particularly well suited to transport. The aspiration of Parties to develop sustainable transport under NAMAs could also be seen to reflect a growing recognition within Non-Annex I Parties of the wider social, economic and environmental benefits (often called co-benefits) that can result from the development of a sustainable, low carbon transport system. This is the case for several t-NAMAs in development such as those looking at land use and planning (TOD).

## An Overview of t-NAMAs (May 2013)

### UNFCCC Submissions

As previously mentioned, the UNFCCC Secretariat updated their paper: 'Compilation of information of nationally appropriate mitigation actions to be implemented by developing country Parties'<sup>15</sup> in 2013. Table 1 shows the list of proposed transport or transport related NAMAs. New additions since 2011 are in red text and those indicated in blue are known to be in development. The transport NAMA activities proposed by the Parties are not exhaustive and in general little detail is provided. It should be noted that not all of the NAMAs cited below are being actively followed up and turned into NAMAs. Several Parties state that actions submitted are still in preparation and the 'initial list' will require more detailed analysis.

A few countries appear to be taking leadership in developing t-NAMAs such as Mexico and Colombia. Colombia has a number of transport NAMAs in progress. One of which is the renovation of the cargo vehicle fleet, initially catalysed by the GIZ TRANSfer project in consultation with the Ministries of Transport, Environment and Sustainable Development and now receiving technical support from TRANSfer<sup>16</sup>. The Government of Colombia (GoC) intends to accelerate the renovation of the cargo vehicle fleet, a third of which is more than 30 years old (and responsible for the largest share in sectoral emissions of CO<sub>2</sub> and air pollutants) with the aim of improving economic competitiveness and environmental performance of the freight transport sector.

<sup>12</sup> <http://www.nama-database.org/index.php/Transport>

<sup>13</sup> In the previous analysis Transport represented 29% and Energy 23%

<sup>14</sup> [http://www.nama-database.org/index.php/By\\_sector](http://www.nama-database.org/index.php/By_sector)

<sup>15</sup> <http://unfccc.int/resource/docs/2013/sbi/eng/inf12r02.pdf>

<sup>16</sup> <http://www.transferproject.org/index.php/countries/colombia>

Mexico is working on several NAMA projects, has made great efforts in capacity building and have also made significant changes in their legislation including passing a Climate Change Law to ensure that there is continued momentum in this policy area. They are also leading one of the few policy wide programmes of reform badged as a NAMA.

**Table 1:** Details of transport NAMAs communicated to the UNFCCC

(May 2013 - those in red text are new since Jan 2011 and those indicated in blue are known to be in development)

<b>Non-Annex 1 Party</b>	<b>Action</b>
Republic of Armenia	<ul style="list-style-type: none"> <li>Improvement of energy efficiency in all sectors of the economy</li> <li>Expansion of electrical transport and increase of the natural gas share in motor transport's fuel</li> </ul>
Benin	<ul style="list-style-type: none"> <li>Develop public transport in the city of Cotonou and its suburbs</li> </ul>
Botswana	<ul style="list-style-type: none"> <li>Policies in the transport sector (only mass transport systems are specified) Note: there is active expansion of mass transport in the main capital city, Gaborone, but it is not clear of the connection with their NAMA development.</li> </ul>
Central African Republic	<ul style="list-style-type: none"> <li>Programme design of new urban areas, integration of principles of optimization of energy consumption and limiting urban sprawl</li> <li>Controlling emissions from vehicles in large urban areas</li> </ul>
Chad	<ul style="list-style-type: none"> <li>Develop less polluting modes of transport</li> <li>Promoting the use of biofuels in the transport sector</li> </ul>
Colombia	<ul style="list-style-type: none"> <li>Colombia is currently anticipating studies of mitigation and abatement cost curves for the transport sector, which will be incorporated in the national strategy for low-carbon development.</li> <li>Implementation of CDM in the transport sector (it cites the 'successful mass public transport system')</li> </ul>
Republic of the Congo	<ul style="list-style-type: none"> <li>Control emissions from vehicles in large agglomerations</li> <li>Rehabilitation of transport infrastructure.</li> </ul>
Costa Rica	<ul style="list-style-type: none"> <li>The country is in the process of identifying concrete policies, sectors and measures that will be specific NAMAs. On a preliminary basis efforts will focus on sectors and specifically includes transport.</li> </ul>
Cote d'Ivoire	<ul style="list-style-type: none"> <li>Conduct awareness campaigns in the transport sector to support sustainable production and consumption.</li> </ul>
Dominica	<ul style="list-style-type: none"> <li><b>Low Carbon Climate Resilient Development Strategy (encompassing the transport sector within it)</b></li> </ul>
Egypt	<ul style="list-style-type: none"> <li><b>Scrapping and replacement programme for two-stroke motorcycles</b></li> <li><b>Greater Cairo metro network phase 1 and 2 project.</b></li> </ul>
Eritrea	<ul style="list-style-type: none"> <li>Research, develop, demonstrate, apply, diffuse and transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol (MOP) in sectors including the transport (the Montreal Protocol covers emissions CFCs, which are also greenhouse gases as well as damaging ozone layer).</li> </ul>
Ethiopia	<ul style="list-style-type: none"> <li>Biofuel development for road transport</li> <li>9 railway projects (trains to run from renewable electricity sources)</li> <li>1 light railway project with trains to run from renewable electricity sources)</li> </ul>

Gabon	<ul style="list-style-type: none"> <li>• Develop a quality public transport with buses running on more energy efficient fuel</li> <li>• Import and sell used vehicles that are less than 5 years old (promote scrapping, green label cars, and import new vehicles operating with liquefied natural gas).</li> </ul>
Ghana	<ul style="list-style-type: none"> <li>• Improve road conditions by increasing the percentage of paved road</li> <li>• Expand road and develop infrastructure and promote rail, maritime, air and inland water transportation systems</li> <li>• Expand infrastructure for non-motorised transport</li> <li>• Develop and improve facilities for public transport</li> <li>• Incentivise the use of public transport and promote car pooling</li> <li>• Enforce road worthiness certification requirements</li> <li>• Retrofit existing refinery infrastructure and ensure that new refinery produce non-metallic based gasoline</li> <li>• Substitute the use of gasoline with CNG, LPG and electricity for public transport</li> <li>• Promote the production and use of bio-fuels as transport fuel</li> <li>• Promote the use of Euro III and above as well as use flexi vehicles</li> <li>• Institute measures to promote and switch from the use of gasoline and diesel fuels to use of CNG, LPG and electricity for public transport.</li> </ul>
Indonesia	<ul style="list-style-type: none"> <li>• Shifting to low-emission transportation modes</li> </ul>
Israel	<ul style="list-style-type: none"> <li>• A National Action Plan will be prepared to reduce emissions with a focus on energy efficiency, renewable energy, green buildings and transportation</li> </ul>
Jordan	<ul style="list-style-type: none"> <li>• National Railway project (start design and feasibility study)</li> <li>• Amman to Zarqa light rail project to improve urban transport standards in greater Amman to Zarqa metropolitan area, reduce pollution and cut back vehicle emissions by introducing an environmentally friendly transport system</li> <li>• Modernise the Freight Transport Fleet operating in Jordan, stop importing old trucks and transform gradually into a modern efficient fleet.</li> <li>• Build and Develop the Amman dry port south of the city on an 80 m new ring road to create a new corridor which aims to reduce congestion of trucks and pollution.</li> <li>• Aqaba Port Project. By moving the port south to the Saudi border, thus cutting back significantly the distance for the ships to travel in Jordan water and congestion in the city of Aqaba.</li> </ul>
Madagascar	<ul style="list-style-type: none"> <li>• Promote the exploitation of biofuels in the transport sector</li> <li>• Introduce and develop the least polluting mode of transport (means of transport intermediaries, urban rail, reduce transport vectors).</li> </ul>
Mauritania	<ul style="list-style-type: none"> <li>• Promote public transport (as a component of their strategy to enhance energy efficiency and reduce energy consumption in urban and rural areas).</li> </ul>
Mexico	<ul style="list-style-type: none"> <li>• Mexico adopted its Special Climate Change Program in 2009 including a set of nationally appropriate mitigation and adaptation actions to be undertaken in all relevant sectors</li> </ul>
Mongolia	<ul style="list-style-type: none"> <li>• To promote the import of fuel efficient vehicles, it can be used economic measures such as implementation of used vehicle import standards and vehicle registration tax.</li> </ul>

Morocco	<ul style="list-style-type: none"> <li>• Enhance the role of technical inspection centres in controlling the vehicles in circulation to reduce emissions.</li> <li>• Renewal of vehicle fleets for road freight, taxis, and premium renewal vehicles.</li> <li>• Promote and develop railway transport by enhancing the Tangier to Casablanca route and by electrifying the Fes to Oujda route.</li> <li>• Develop a regional suburban express train service in Casablanca.</li> <li>• Commission a tram service in Rabat</li> <li>• Implement urban travel plans as well as long-distance/inter-urban plans to ensure consistency and to support land-use planning.</li> </ul>
Papua New Guinea	<ul style="list-style-type: none"> <li>• No NAMAs specified but an intention outlined to conduct NAMAs in the transport sector.</li> </ul>
San Marino	<ul style="list-style-type: none"> <li>• Reduction of energy consumption in the transport sector through energy saving and rational use and information campaigns to favour implementation thereof.</li> </ul>
Sierra Leone	<ul style="list-style-type: none"> <li>• Development and enforcement of regulations on regular maintenance of vehicles. Improvement of the use of mass transport for passengers and freight.</li> </ul>
Singapore	<ul style="list-style-type: none"> <li>• It contains no specific NAMAs but refers instead to mitigation and energy efficiency measures announced under the Sustainable Singapore Blueprint in 2009.</li> </ul>
The former Yugoslav Republic of Macedonia	<ul style="list-style-type: none"> <li>• Improvement of the overall efficiency in the transport sector and energy efficiency of vehicles (revitalisation, extension and better maintenance of road and railway infrastructure; extension spreading of the electrification of the railway network; modernisation of the vehicle fleet; motivation for wider use of alternative fuels and other power systems (i.e. LPG, CNG, biodiesel, hybrid vehicles)</li> <li>• Improvement of the public urban and inter-city transport (improvement in the planning, organisation and control of traffic; measures for regulation of the traffic in central urban areas; modernisation of the transport equipment for the public traffic; synchronisation of the road signalisation in towns; introduction of electronic pay toll charging; introduction of electrically driven types of transport (i.e. tramways); electrification of the railway network. Harmonisation of the national transport legislation with EU Directives (energy and climate package - biofuels; regulation on fuels quality in accordance with EU norms).</li> </ul>
Togo	<ul style="list-style-type: none"> <li>• Reduce energy consumption of public transport</li> </ul>
Tunisia	<ul style="list-style-type: none"> <li>• Develop public transport in cities (metro, bus and train)</li> <li>• Use land-use planning and logistics to ensure that economic hubs are well served by transport</li> <li>• Develop multimodal transport and transport of freight via rail transport.</li> <li>• Land-use planning to reduce the demand for transport Develop an energy efficiency programme for the transport sector.</li> <li>• Promoting the use of clean energies especially compressed natural gas in the transport sector.</li> </ul>

## NAMA Database

The Ecofys NAMA database has included more and different NAMAs which are summarised in Table 2. A full list of those that refer to transport NAMAs can be found in the Annex 1.

**Table 2:** Transport NAMAs featured in the Ecofys NAMA Database as of May 2013 (those registered with the UNFCCC Registry are in red text)

Country	Number of transport NAMAs in the NAMA database	NAMAs
Argentina	1	Modernisation of freight train infrastructure
Brazil	1	Comprehensive mobility plan for Belo Horizonte
Chile	4	E-mobility readiness plan
		Programme to support a sustainable modal shift in transport
		Integrated improvement of transit management
		Programme for energy efficiency in the transport sector in Chile
Colombia	3	Transit-oriented development
		National plan for freight transport: NAMA pilot study
		Electric vehicles NAMA
Dominica	1	Low carbon climate resilient development strategy in Dominica
Ethiopia	1	Shifting freight to electric rail
Indonesia	2	Sustainable Urban Transport Initiative
		Transport demand management in Jakarta
Jordan	1	City wide mitigation programme of Greater Amman Municipality
Laos	1	Feasibility study for transportation NAMA in Vientiane
Lebanon	1	Public transport development in Lebanon
Mexico	4	Freight transport NAMA
		Optimization of the conventional bus system in Mexico City
		Enhancing vehicle renovation in Mexico
		NAMA based on the Federal Mass Transit Programme
South Africa	1	Rollout of electric private passenger vehicles <sup>17</sup>

Since September 2012, there have been four additions to this list:

- A proposal of 'Transit-oriented development' by the Republic of Colombia;
- The submission to the UNFCCC NAMA Registry of 'Low carbon climate resilient development strategy in Dominica' by the Commonwealth of Dominica;
- The submission to the UNFCCC NAMA Registry of 'Sustainable Urban Transport Initiative' by the Republic of Indonesia; and
- The 'Freight transport NAMA' of Mexico (stage is currently unknown).

<sup>17</sup> TRANSfer is working with the Department of Transport on NAMAs that are not in the database. For instance on "Passenger Modal Shift from Road to Rail – The Gautrain Case": an existing rapid rail network connecting Johannesburg and Tshwane/Pretoria. Its GHG impact and co-benefits are being assessed in a study which is being conducted during summer 2013. Lessons from this exercise may be used for a possible extension of the Gautrain and further rail projects in South Africa. This NAMA for recognition places itself in the broader context of a modal shift from road to rail.

## Box 2: Examples of transport NAMAs in the process of being developed

### Republic of Indonesia<sup>18</sup>

This NAMA promotes sustainable urban transport in Indonesian Cities by implementing and monitoring measures in order to halt the increasing motorisation and reduce externalities of transportation. This NAMA is being supported by the GIZ TRANSfer project.<sup>19</sup>

#### Activities: (2013 - 2021)

The pilot phase will start with the implementation of low-carbon mobility plans in three cities (Medan, Manado, Batam) as well as supporting activities on national level that aim at up-scaling the policies of the pilot phase to more Indonesian cities. The NAMA covers the following activities:

#### 1. At national level

- Development of a policy framework for sustainable, low-carbon urban transport
- Comprising a regulatory framework
- Co-financing of local measures
- Capacity building, practical guidelines for local planning
- Overall MRV of the actions

#### 2. At the local or provincial level

- Development, implementation and MRV of Comprehensive Urban Low- carbon Mobility Plans
- The sustainable transport policies covered include a tailor- made mix of 'push' and 'pull' measures for each city, including high quality public transport, non- motorised transport, parking management, traffic management, spatial planning, alternative fuels and vehicle efficiency

#### 3. Types of support requested:

- Financial support
- Technology transfer
- Capacity building

**Total funds requested:** US\$ 300 million

**Type of funds:** Grant

**Local agency:** Ministry of Transport (Republic on Indonesia)

**International funders:** International Climate Initiative (ICI) of the German Federal Government

### Mexico<sup>20</sup>

The NAMA has two objectives. In the short term, the objective is to provide complementary support to the federal mass transit programme to undertake capacity building and to improve internal processes to speed up project development. In the long term, the NAMA will provide funding to continue activities under the program beyond 2016 when a large part of existing funding will finish.

#### Activities: (2012 - 2030)

The NAMA has three components which will finance various types of activities listed below:

#### 1. Capacity building (Requested USD \$20 million)

- On-the-ground capacity building
- Support activities to identify projects at the local level

<sup>18</sup> Source: [http://www.nama-database.org/index.php/Sustainable Urban Transport Initiative](http://www.nama-database.org/index.php/Sustainable_Urban_Transport_Initiative)

<sup>19</sup> <http://www.transferproject.org/index.php/countries/indonesia>

<sup>20</sup> Source: [www.nama-database.org/index.php/NAMA based on the Federal Mass Transit Programme](http://www.nama-database.org/index.php/NAMA_based_on_the_Federal_Mass_Transit_Programme)

- Capacity building to enable municipalities to develop integrated sustainable mobility master plans
- Internal capacity building
- Creation of mechanisms/processes to improve the execution of projects
- Internal capacity development to accelerate the evaluation and implementation of projects
- Development of guidelines for the processing of funds

**2. Methodology development** (Requested USD\$ 10 million)

- Development of general methodologies (project evaluation, processing of funds)
- Development of specific methodologies that focus on externalities (cost-benefit analysis, health and environmental impact assessment)

**3. Integrated transport systems** (Requested USD\$ 350 million)

- Development of an integrated mass transit corridors (BRT+)
- Multimodal integration
- Low-carbon technologies
- Vehicle scrapping

**4. Types of support requested:**

- Financial support
- Capacity building

**Total funds requested:** US\$ 380 million

**Type of funds:** Bilateral

**Local agency:** Mexican Secretariat of the Environment and Natural Resources (SEMARNAT)

**International funders:** Dutch Ministry of Infrastructure and the Environment

Technical support provided by: Ecofys, Centro de Transporte Sustentable (CTS) Mexico

## Other ongoing t-NAMA project development

There has been significant international dialogue on NAMAs since Bali (2007) and there are now strong indications that it is gathering momentum. This has been driven in part by the wide support of Parties to the NAMA concept and by the engagement of experts. Bridging the Gap, as part of the Partnership on Sustainable Low Carbon Transport (SLoCaT), has been actively supporting this with side events, reports and workshops ([www.transport2020.org](http://www.transport2020.org)).

There have been several regional workshops on NAMAs examples include:

- The Institute for Global Environmental Strategies (IGES) and the Clean Air Initiative for Asian Cities (CAI-Asia) Workshop: 'Transport Sector and NAMAs: Assessing Data Readiness for MRV of Greenhouse Gas (GHG) Emissions from Transport' (<http://cleanairinitiative.org/portal/node/8120>)
- UNFCCC Workshop for further understanding the diversity of NAMAs by developing countries Parties ([http://unfccc.int/meetings/bonn\\_may\\_2012/workshop/6660.php](http://unfccc.int/meetings/bonn_may_2012/workshop/6660.php))
- IGES & USAID-RDMA Workshop on Low Carbon Development and Resilient Society in Asia (<http://www.iges.or.jp/en/archive/cp/activity20120904.html>)

Countries are developing transport NAMAs that have not been submitted to the Secretariat (or added to the NAMA Pipeline). Colombia for example has recently announced (in May 2013) that it has received high-level support from the Centre for Clean Air Policy (CCAP) to develop a transport NAMA: transit-oriented development<sup>21</sup>. This NAMA will work to focus urban development around transit

<sup>21</sup> <http://ccap.org/colombia-transit-oriented-development-nama-gains-high-level-support/>

stations, contributing to the development of sustainable and fully integrated neighbourhoods. It will combine policies on transport; housing and land use to yield both economic and social benefits<sup>22</sup>. CCAP has worked closely with Findeter<sup>23</sup>, the National Ministries of Transport, Environment, Housing, and Planning, as well as local governments and real estate developers to develop the NAMA proposal to implement and finance 'catalytic transit neighborhoods'. The key component of the NAMA is an independent Centre for the Promotion of Transit-Oriented Development, which would provide technical and financial assistance on Transit-Oriented Development (TOD) implementation, based on locally-specific needs. The Centre would also act in a policy advisory role to integrate national policies to promote TOD and advance national policy goals on urban transportation, housing, environment, economic development and social equity<sup>24</sup>.

GIZ (and founder member of the Bridging the Gap Initiative) is leading the project TRANSfer to provide technical assistance to developing countries to prepare transport NAMAs. Presently it is providing support for three countries, Colombia, South Africa and Indonesia, to prepare transport NAMAs. In addition TRANSfer launched a handbook at the Bridging the Gap side event at the SB36 (2012) entitled 'Navigating Transport NAMAs' which is a useful tool for Parties<sup>25</sup>.

Egypt is in the process of developing a broad NAMA of which individual projects include developing the Metro network and scrapping and replacing two-stroke motorcycles<sup>26</sup>. Bangladesh has two transport NAMA projects within its 2010-2021 development plan, including i) conducting travel demand management, encouraging use of public transport and car-pooling; and ii) improving fleet efficiency, and replacing inefficient vehicles and engines. This follows on from an initial submission made to the UNFCCC in 2002<sup>27</sup>. In Latin American, Chile have developed an 'E-mobility Readiness' NAMA involving the development and implementation of a plan to facilitate the introduction on grid-enabled vehicles in the greater Santiago. The goal is to introduce 70,000 vehicles by 2020. The proposal had technical support from Ecofys and financial support from the International Climate Initiative (ICI) of the German Federal Government. Work was forecast to commence around mid-2012. Peru have also produced a draft transport NAMA with the aim of submitting a proposal in the near future. A number of potential transport NAMA activities have been identified in order to improve mobility in metropolitan cities such as Lima and Callao: development of an integrated mobility system; measures to improve energy efficiency of vehicles; and the development of demonstrator Green zones to show how low carbon living might work in reality.<sup>28</sup> It is the aim that these measures will not only benefit the transport system but also have social and economic benefits such as reduction of health problems and impact on lifestyle.

In Africa, South Africa is working on the submission of a 'NAMA for recognition'. The chosen project is the modal shift of passenger transport from road to rail, specifically focused on the Gautrain, a rapid rail network carrying around 42 000 passengers per day. The TRANSfer project is once again involved in supporting this NAMA, in particular the approach to measure, report and verify emissions reductions and co-benefits.<sup>29</sup> GIZ are also assisting with the implementation of a BMU (Federal Ministry for the Environment, Germany) funded NAMA project in China, to develop a comprehensive Transport Demand Management (TDM) system in Beijing. It is hoped that from the results of this project, other Chinese cities will start to implement TDM measures.<sup>30</sup>

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<sup>22</sup> <http://ccap.org/programs/transit-oriented-development-nama-in-colombia/>

<sup>23</sup> <http://www.findeter.gov.co/>

<sup>24</sup> <http://ccap.org/programs/transit-oriented-development-nama-in-colombia/>  
[www.transferproject.org](http://www.transferproject.org)

<sup>26</sup> [http://unfccc.int/files/cooperation\\_support/nama/application/pdf/egypts\\_nama\\_mrv\\_plans.pdf](http://unfccc.int/files/cooperation_support/nama/application/pdf/egypts_nama_mrv_plans.pdf)

<sup>27</sup> [http://www.iisd.org/pdf/2012/nama\\_concepts\\_bangladesh.pdf](http://www.iisd.org/pdf/2012/nama_concepts_bangladesh.pdf)

<sup>28</sup> Tyler, N. & Ramirez, C. (2012). Developing low-carbon transport policies in Peru with capacity building for their implementation: Draft Transport NAMA. UCL.

<sup>29</sup> <http://www.transferproject.org/index.php/countries/south-africa>

<sup>30</sup> <http://mitigationpartnership.net/transport-demand-management-beijing>

## Progress of MRV (Monitoring, Reporting and Verification) of NAMAs

The UNFCCC have organised a series of regional workshops to facilitate preparation, submission and implementation of NAMAs. MRV is of particular importance and the workshops gave the participants the opportunity to share experience and discuss challenges. GIZ participated in the one held in Lesotho in April 2013<sup>31</sup>.

GIZ (TRANSfer) have also produced a 'NAMA tool', which provides a guide to developing a NAMA including information on MRV<sup>32</sup>. A primer on MRV is also available from the NAMA Partnership<sup>33</sup>. The CCAP on the other hand propose a broad approach to MRV of NAMAs focussing more on the impact of the NAMA as part of national efforts to evaluate policy performance and track priority social and economic benefits<sup>34</sup>. This may also comply with UNFCCC requirements and involves selecting indicators that reflect how NAMAs support sustainable development and can gain domestic political support and international funding for their implementation<sup>35</sup>. To minimise the burden on human and financial resources used for MRV, it is suggested that policy makers should select a short, core list of indicators that are specific, measurable and cost effective to collect or assess, but also relevant and straightforward to understand. This makes them not only useful for MRV of a specific NAMA but also enables cross comparisons either on a subnational, project specific or sector wide scale. This work is being developed as part of the Mitigation Action Implementation Network (MAIN) initiative, a regional and global dialogue forum supporting development and finance of NAMAs<sup>36</sup> and a NAMA design template and proposed criteria for supported NAMAs<sup>37</sup> have been put forward. In their 2012 report<sup>38</sup>, they specifically consider sustainable indicators that could be used as part of the MRV of the transport NAMA: transit oriented development, shown in Table 3.

Using a range of economic, social and environmental factors enable the wider effects of transport NAMAs to be measured as well as the direct changes. These indicators can be easily applied to other transport NAMAs.

**Table 3:** Sustainable development indicators that can be used in the MRV of transport NAMAs such as transit-oriented development<sup>39</sup>

<b>Economic Indicators</b>	Public expenditure - Tax revenue - Job creation - Leveraging of private financing - Energy security - Fuel intensity - Fuel savings per capita
<b>Social Indicators</b>	Travel distance and time - Access to public transit - Cost of transportation – Health - Safety
<b>Environmental Indicators</b>	Air pollution

Other organisations are also in the process of working with developing countries to develop suitable MRV metrics, building up their MRV capacity. The International Energy Agency, United Nations (UN) Department of Economic and Social Affairs, UN Industrial Development Organization, International Atomic Energy Agency, the World Bank, the International Monetary Fund, and the World Health Organization, are all working to develop metrics and methodologies to assess non-GHG outcomes.

<sup>31</sup> [http://unfccc.int/files/cooperation\\_support/nama/application/pdf/mrv\\_of\\_namas\\_-\\_giz.pdf](http://unfccc.int/files/cooperation_support/nama/application/pdf/mrv_of_namas_-_giz.pdf)

<sup>32</sup> [http://www.namapartnership.org/upload/nama%20partnership/other%20publications%20\(pdf\)s/nama\\_tool\\_8\\_6.pdf](http://www.namapartnership.org/upload/nama%20partnership/other%20publications%20(pdf)s/nama_tool_8_6.pdf)

<sup>33</sup> <http://www.namapartnership.org/upload/firm%20project/publications/unep%20ris%C3%B8%20mrv%20nama%20primer.pdf>

<sup>34</sup> MRV for NAMAs: Tracking Progress while Promoting Sustainable Development, MRV of NAMAs: Guidance for Selecting Sustainable Development Indicators

<sup>35</sup> [http://mitigationpartnership.net/sites/default/files/2012\\_ccap\\_cerqueira\\_mrv\\_of\\_namas\\_guidance\\_for\\_selecting\\_sustainable\\_development\\_indicators.pdf](http://mitigationpartnership.net/sites/default/files/2012_ccap_cerqueira_mrv_of_namas_guidance_for_selecting_sustainable_development_indicators.pdf)

<sup>36</sup> <http://ccap.org/programs/mitigation-action-implementation-network-main/>

<sup>37</sup> [http://ccap.org/assets/Criteria-for-Evaluating-Supported-NAMAs\\_CCAP-Oct-2012.pdf](http://ccap.org/assets/Criteria-for-Evaluating-Supported-NAMAs_CCAP-Oct-2012.pdf)

<sup>38</sup> [http://mitigationpartnership.net/sites/default/files/2012\\_ccap\\_cerqueira\\_mrv\\_of\\_namas\\_guidance\\_for\\_selecting\\_sustainable\\_development\\_indicators.pdf](http://mitigationpartnership.net/sites/default/files/2012_ccap_cerqueira_mrv_of_namas_guidance_for_selecting_sustainable_development_indicators.pdf)

<sup>39</sup> CCAP (2012). MRV of NAMAs: Guidance for Selecting Sustainable Development Indicators. Available at: [http://mitigationpartnership.net/sites/default/files/2012\\_ccap\\_cerqueira\\_mrv\\_of\\_namas\\_guidance\\_for\\_selecting\\_sustainable\\_development\\_indicators.pdf](http://mitigationpartnership.net/sites/default/files/2012_ccap_cerqueira_mrv_of_namas_guidance_for_selecting_sustainable_development_indicators.pdf)

The World Resource Institute is currently working on building national capacities associated with measuring GHG emissions<sup>40</sup>.

### **Box 3: MRV Framework for Mexico's transport NAMA: Federal Mass Transit Programme**

Mexico has developed a set of assumptions regarding MRV for the NAMA based on the Federal Mass Transit Programme.

The main assumptions are:

- 320 km of BRT lines built, 2280 buses in operation on it by the end of 2030 with some 15,500 million of passengers transported in the 15 year period
- Diesel bus technology with emissions of 1.901 kgCO<sub>2</sub>eq/km
- Annual distance travelled per bus of 70,200 km
- 9.5 passenger boardings per Bus-km and average occupation per bus of 100 passengers. 15% passengers would shift from private cars and 85% from traditional public transportation (if the BRT system wasn't available).
- Kilometres travelled per BRT bus 192 km/day: based on data from the "Instituto Mexicano del Petroleo" (IMP)
- Emissions per BRT bus per km 1.90079276 kgCO<sub>2</sub>eq/km: Calculated by CTS and based on (Sanchez Catano et al., 2009).
- Passengers per km-bus 9.5. This is the average for Optibus, Macrobus y Metrobus (in 2009) according to (Hidalgo & Carrigan, 2010).
- Passengers/day per kilometre of line 13,012: This is the average of 12 cities according to (Hidalgo & Carrigan, 2010).

Source:

[http://www.nama-database.org/index.php/NAMA\\_based\\_on\\_the\\_Federal\\_Mass\\_Transit\\_Programme](http://www.nama-database.org/index.php/NAMA_based_on_the_Federal_Mass_Transit_Programme)

Egypt is has publicised their approach to MRV of NAMAs, with their focus being on measuring GHG reductions. Transport is one of the sectors covered and they intend to make use of a national team of experts from relevant sectors to best assess the potential for GHG mitigation<sup>41</sup>.

## **NAMA Finance**

Many countries state an increased level of ambition in their reduction targets if international finance is made available. There have been several developments in financial assistance for NAMA development and implementation but transport NAMAs are typically high-cost investments (examples include: 1.4 b USD in Colombia, 8 b USD in South Africa of which a very small part can be funded through existing NAMA financing options). Several events and workshops have been held to discuss how to provide increased assistance and the modalities of this. In October 2012, the Nordic Environment Finance Corporation (NEFCO) hosted an international expert event on the subject of financing issues related to NAMAs. The workshop was organised in association with the Nordic Council of Ministers and the Bilateral Financial Institutions Climate Change Working Group (consisting of AFD, KfW, JICA, NEFCO and UNEP). Discussions included capacity and institution building, preparing and operationalizing NAMAs and how to build confidence regarding the integrity of the NAMA process. More recently there was a Global NAMA Financing Summit co-hosted by the Danish Ministry of Climate Energy and Building and CCAP where 14 NAMAs were presented for discussion.

<sup>40</sup> [http://pdf.wri.org/working\\_papers/national\\_communications\\_mrv.pdf](http://pdf.wri.org/working_papers/national_communications_mrv.pdf)

<sup>41</sup> [http://unfccc.int/files/cooperation\\_support/nama/application/pdf/egypts\\_nama\\_mrv\\_plans.pdf](http://unfccc.int/files/cooperation_support/nama/application/pdf/egypts_nama_mrv_plans.pdf)

Following COP18, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and UK Department of Energy and Climate Change (DECC) announced the launch of the 'NAMA Facility', a fund dedicated to the development of NAMAs. DECC has committed £25m (€30 million) and BMU committing an additional €40m. The Facility is intended to support developing countries that want to implement 'transformational country-led NAMAs'<sup>42</sup>. A competitive process will be used to select transformational NAMA activities with a focus on short-term delivery. Finance will take the form of grant-based instruments or concessional loans. The potential of this for t-NAMAs was explored at the Bridging the Gap side event by KfW. Mexico and Ethiopia<sup>43</sup> presented case studies and experiences for financing NAMAs in their transport sectors and experts from KfW, Wuppertal Institute and Centre for Clean Air Policy (CCAP) commented on new trends on the subject at the Bridging the Gap/ EMBARQ Mexico side event 'Financing Transport NAMAs held at the SB38 session in Bonn (2013)<sup>44</sup>.

A number of questions recur in these events that will require addressing within the next few years; namely that there is still no clear definition of the concept of NAMAs and there are different views as to whether standardisation is necessary or not. Bottlenecks of climate finance and sustainable transport, the importance of capacity building are frequently discussed. It has also been suggested that NAMAs should increasingly have co-benefits to make them more commercially viable and perhaps they should be included in a new market based mechanism related to this<sup>45</sup>. Using NAMA finance and developing mechanisms to provide leverage to access funds from the private sector and international support is also seen as a way forward.

## Conclusions and Recommendations

It is still proving difficult for some Parties to move from a 'wish list' to prioritising the most promising areas and projects to develop into NAMAs. Ambition does not seem to be lacking. Countries, such as Thailand and Indonesia, have put forward reduction targets that would be funded domestically and state an increase in this commitment if international support is made available. However, the modalities for supported or credited NAMAs are still being worked on but presently it looks unlikely that they will follow the same rigid procedures as CDM. For **internationally supported NAMAs**, developing countries invited to submit further details on:

- Description of the mitigation action and national implementing entity
- Timeframe for implementation
- Estimated full cost of preparation, full and incremental cost of implementation
- Amount and type of support required
- Estimated emission reductions
- Other indicators of implementation
- Other relevant information including co-benefits

How far the present levels of flexibility and lack of clear guidelines hamper or encourage transport NAMAs is still unclear and the MRV component continues to be a challenge.

After an analysis of the present submissions, discussions with Parties themselves at various events and meetings and the conclusions from a variety of workshops related to this topic, Bridging the Gap partners would like to put forward the following recommendations:

- **NAMAs appear well suited to a variety of transport interventions** that would deliver emission reductions.

<sup>42</sup> For more information about the NAMA facility, see: <https://www.gov.uk/government/publications/information-about-the-nationally-appropriate-mitigation-actions-nama-facility>

<sup>43</sup> [https://seors.unfccc.int/seors/reports/events\\_list.html?session\\_id=SB38](https://seors.unfccc.int/seors/reports/events_list.html?session_id=SB38)

<sup>44</sup> <http://www.transport2020.org/newsitem/37/official-bridging-the-gap-side-event-on-financing-transport-namas-at-unfccc-sb38-how-it-went>

<sup>45</sup> <http://www.nefco.org/sites/nefco.viestinta.org/files/NAMA%20Finance%20workshop%20proceedings.pdf>

- **NAMAs can be made into bundles of projects and policies.** By leveraging “bundles” of projects and policies in line with Low Carbon Transportation Plans, an effective combination of domestic and internationally support actions can be put together.
- **NAMAs can be used to build capacity.** A lack of local capacity and knowledge is a significant barrier to making low carbon transport a reality. Bilateral supported NAMAs can help increase the level of technical knowledge, catalyse action through learning and the exchange of best practise and help institutional integration, a key building block of low carbon development and effective mitigation actions. NAMAs can also help promote South/ South exchange not only North/South and here there are many promising possibilities in the transport sector as demonstrated by the take up of BRT worldwide. There is a strong community of sustainable transport experts that can be tapped.
- **Low Carbon Development Strategies should include a Low Carbon Transportation Master Plans for countries and metropolitan regions.** These chart a course for short, medium and long-term GHG reductions through a comprehensive set of policy, infrastructure and fiscal measures and transport NAMAs can be part of the policy and project packages to achieve this.
- **Parties should work to create funding windows for sustainable transport. Transport NAMAs may be challenged to comply with strong MRV at this point in time when compared to other sectors, and this could put them at a disadvantage.** There is some opportunities now to do this. Appropriate evaluation criteria for supported transport NAMAs could include consistency with the Low Carbon Transportation Plan; long-term GHG reduction potential; co-benefits; local implementation capacity; and cost-sharing. ([www.transport2020.org](http://www.transport2020.org) will be producing an updated climate finance fact sheet to be launched in COP 18).
- **Learning by doing.** There is and will remain to be a higher level of uncertainty in mitigation actions in the transport sector. It is better to still commit to projects that will deliver wider sustainable development goals and that are directionally correct, and in line with a low carbon transport pathways for land transport despite difficulties and uncertainties in measuring the exact volume of reductions.

# Bridging the gap

## Pathways for transport in the post 2012 process

### Annex 1

Summary of transport NAMAs by Party (highlighted cells show UNFCCC registered transport NAMAs) from the NAMA database<sup>46</sup>

<u>NAMA</u>	<u>Country</u>	<u>Sub-sector</u>	<u>Objective</u>
Modernisation of freight train infrastructure	Argentina	Rail cargo	Modernise the infrastructure of the Belgrano Cargas freight rail system and promote a modal shift from trucks to rail for agricultural products
Comprehensive mobility plan for Belo Horizonte	Brazil	Public transport Non-motorised transport	Increase the share of non-motorised and public transport to generate reductions in GHG emissions from urban transport and improve conditions of transport and the local environment.
E-mobility readiness plan	Chile		Designed to promote the introduction of grid-enabled electric vehicles in Chile on a large scale, leading to a target of 70,000 electric vehicles by the year 2020. The plan foresees the implementation of a set of activities to target barriers and provide incentives to achieve the overall target.
Programme to support a sustainable modal shift in transport	Chile	Non-motorised transport	Support of a modal shift in transport to switch from private to public and from motorised to non-motorized transport
Integrated improvement of transit management	Chile	Urban planning and Transit management	Implementation of transit management measures in cities to improve the overall flow of traffic and to reduce GHG emissions
Programme for energy efficiency in the transport sector in Chile	Chile	Road cargo	Promotion of energy efficiency in the transport sector to reduce GHG emissions and to secure sustainable cargo and passenger transport
Transit-oriented development	Colombia	Urban planning and Transit management	Focusing urban development around transit stations, combining policies on transport, housing and land use to yield both economic and social benefits.
National plan for freight transport: NAMA pilot study	Colombia	Road cargo	Build the planning and implementation capacity of the Ministry of Transport and the National Planning Department in Colombia, to structure NAMAs in the transportation sector and more specifically in the field of freight transportation.

<sup>46</sup> Retrieved from "[www.namadatabase.org/index.php/Transport](http://www.namadatabase.org/index.php/Transport)", May 2013

# Bridging the gap

## Pathways for transport in the post 2012 process

Electric vehicles NAMA	Colombia	Public transport Passenger vehicles	Substitute conventional vehicles with electric vehicles. The penetration of electric vehicles should reach 20% for the passenger sector, 30% for taxi fleets and 30% for urban freight.
Low carbon climate resilient development strategy in Dominica	Dominica	Renewable energy (geothermal), Green technology (including fuels)	Implementing appropriate low carbon and climate resilient technologies to support Dominica's continued transformation to the Greenest Economy in the Caribbean region. To include measures to mitigate CO <sub>2</sub> emissions from the transport sector.
Shifting freight to electric rail	Ethiopia	Rail cargo	Increase in tonne-km of freight transported by electric rail as opposed to road transport. Rail transport will be powered by renewable electricity.
Sustainable Urban Transport Initiative	Indonesia	Urban planning and Transit management	Promote sustainable urban transport in Indonesian Cities by implementing and monitoring measures in order to halt the increasing motorisation and reduce externalities of transportation.
Transport demand management in Jakarta	Indonesia	Public transport; Urban planning and Transit management	Transport demand management
City wide mitigation programme of Greater Amman Municipality	Jordan	Renewable energy (unspecified); Public transport Solid waste management; Urban forests	The NAMA seeks emission reduction opportunities in municipal waste, urban transport, sustainable energy, and urban forestry estimated to average around 560 ktCO <sub>2</sub> e per year.
Feasibility study for transportation NAMA in Vientiane	Laos	Urban planning and Transit management	The Lao Transport NAMA will implement the Sustainable Transport Strategy as well as the Master Plan on Comprehensive Urban Transport of Vientiane.
Public transport development in Lebanon	Lebanon	Public transport	This NAMA aims to modernize the transport system which today depends on a large share of old passenger vehicles.
Freight transport NAMA	Mexico	Freight transport	Renovate freight transport fleets and adopt strategies, technologies and best practice in this transport mode, building on existing projects.
Optimization of the conventional	Mexico	Public transport	Optimization of the conventional bus system in the valley of Mexico



# Bridging the gap

## Pathways for transport in the post 2012 process

bus system in Mexico City			
Enhancing vehicle renovation in Mexico	Mexico	Road cargo	Support of the national vehicle renovation program
NAMA based on the Federal Mass Transit Programme	Mexico	Public transport; Urban planning and Transit management	The NAMA has two objectives. In the short term, the objective is to provide complementary support to the federal mass transit programme to undertake capacity building and to improve internal processes to speed up project development. In the long term, the NAMA will provide funding to continue activities under the program beyond 2016 when a large part of existing funding will finish.
Rollout of electric private passenger vehicles <sup>47</sup>	South Africa	Passenger vehicles	GHG emission reductions through production and use of private passenger electric vehicles

<sup>47</sup> TRANSfer is working with the Department of Transport on NAMAs that are not in the database. For instance on “Passenger Modal Shift from Road to Rail – The Gautrain Case”: an existing rapid rail network connecting Johannesburg and Tshwane/Pretoria. Its GHG impact and co-benefits are being assessed in a study which is being conducted during summer 2013. Lessons from this exercise may be used for a possible extension of the Gautrain and further rail projects in South Africa. This NAMA for recognition places itself in the broader context of a modal shift from road to rail.