

## Transport NAMA Monitor 2015

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Building and Nuclear Safety

of the Federal Republic of Germany



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## Background Information on the TRANSfer Project

The TRANSfer project is run by GIZ and funded by the International Climate Initiative of the German Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB). Its objective is to support developing countries to develop and implement climate change mitigation strategies in the transport sector as „Nationally Appropriate Mitigation Actions“ (NAMAs).

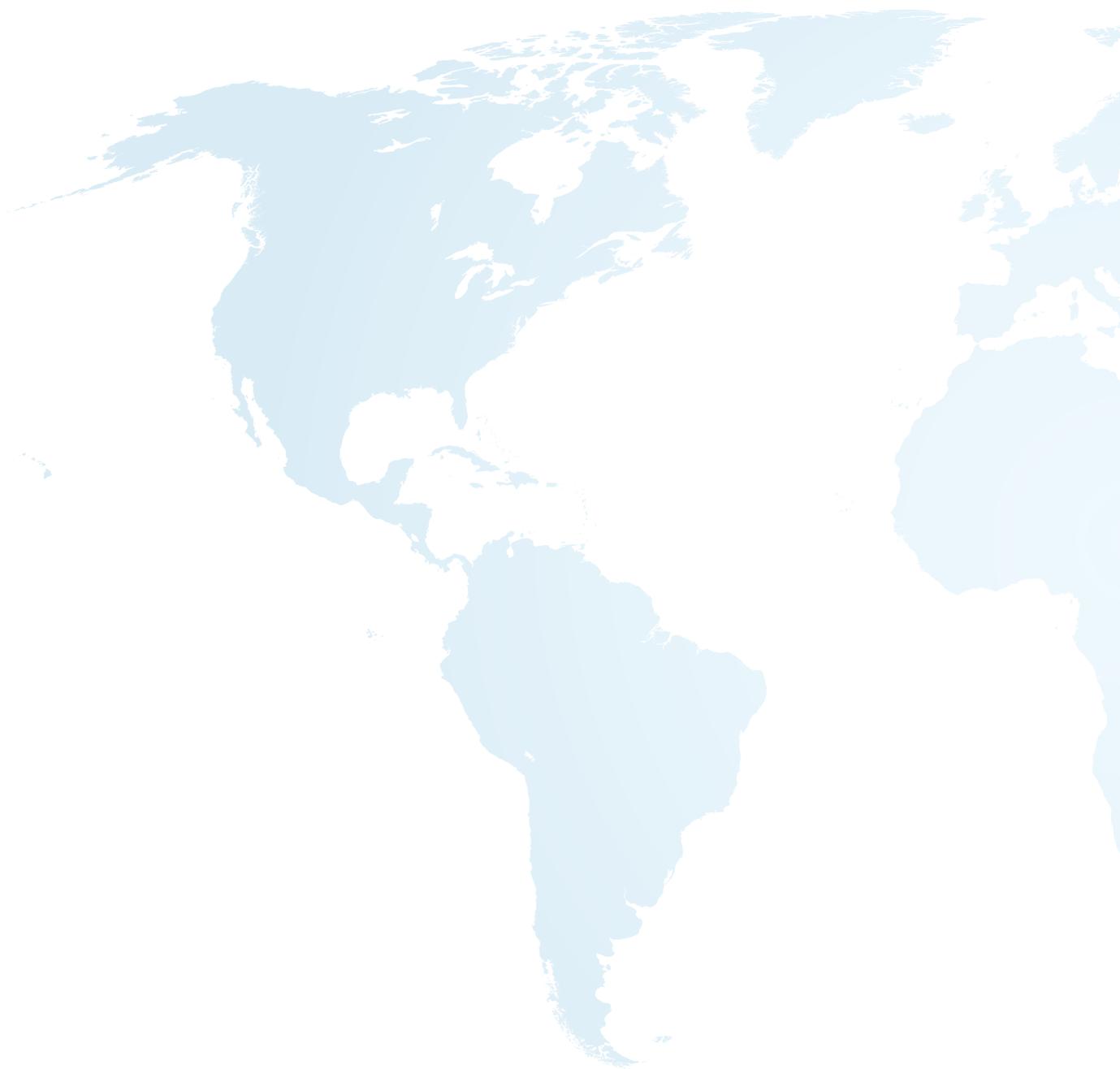
The project follows a multi-level approach:

- At country level, TRANSfer supports selected partner countries in developing and implementing NAMAs in the transport sector. The NAMAs supported by the project cover a broad variety of approaches in the partner countries Indonesia, Philippines, South Africa, Peru, Colombia and associated countries.
- At international level and closely linked to the UNFCCC process, the project helps accelerate the learning process on Transport NAMAs with a comprehensive set of measures (events, trainings, facilitation of expert groups, documents with guidance and lessons learned such as the Transport NAMA Handbook and a database, which provides access to Transport NAMAs).

Activities at country and international level are closely linked and designed in a mutually beneficial way. While specific country experience is brought to the international stage (bottom-up) to facilitate appropriate consideration of transport sector specifics in the climate change regime, recent developments in the climate change discussions are fed into the work in the partner countries (top-down).



For more information see:  
<http://www.transport-namas.org>



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Where do we stand?



## 1. Where do we stand? Transport NAMAs in 2015

Environmental and climate protection in the transport sector has an immense value; it reduces emissions, creates new jobs, minimises health risks and noise, decreases energy costs and makes transport safer.

Nationally Appropriate Mitigation Actions (NAMAs) provide a framework for governments in developing countries to support the reduction of greenhouse gas emissions. The flexibility and numerous benefits of transport NAMAs create incentives for domestic policy-



Pereira, Brazil; Photocredit: Carlos Pardo/2006

makers to support sector-related climate change mitigation actions and encourage bilateral and multilateral cooperation.

**The 2015 Transport NAMA Monitor presents the latest trends and developments of transport NAMAs around the world.**

While 8 new NAMAs could be added to the publicly available Transport NAMA Database since last year, the total number of NAMAs has been relatively stable and currently comprises

43 NAMAs, most of which are in an early development stage. Against the high expectations held on NAMAs from the very beginning, the relatively modest and slowly growing number of transport NAMAs suggests that the concept has not yet attracted the desired attention of domestic policymakers. However, it is expected that NAMAs will gain additional significance once a new global climate change agreement is concluded. It is likely that the main focus will shift from the preparation to the implementation of the Intended Nationally Determined Contributions (INDC) which determine the mitigation paths of the UNFCCC parties.

**INDCs** represent a promising opportunity to increase bold mitigation and adaptation measures in transport and other sectors, as for the first time, Parties to the UNFCCC countries are communicating their commitment to reduce emissions and increase resilience on sectoral scales in the context of the UNFCCC system. Among 120 INDCs submitted as of October 6, 2015, 76% explicitly identify the transport sector as a mitigation source, and more than 60% of INDCs propose transport sector specific mitigation measures.



A **Nationally Appropriate Mitigation Action (NAMA)** is considered to be any mitigation action tailored to the national context, characteristics and capabilities, and embedded in national sustainable development priorities. Nevertheless, based on international experience, the ingredients for a NAMA are quite uniform.

The following four elements form the main building blocks of any NAMA in the transport sector:

1. Design of Mitigation actions
2. Measurement, Reporting and Verification (MRV)
3. Financing
4. Registration



**READING TIP:**

Intended Nationally-Determined Contributions (INDCs) offer Opportunities for Ambitious Action on Transport and Climate Change. Preliminary Analysis by SLoCaT. Available at <http://ppmc-cop21.org/wp-content/uploads/2015/06/INDC-Report-Preliminary-Assessment-October-18.pdf>

For a list of INDCs submitted to date, please see [UNFCCC Website](#).

## 1.1 Why Transport Namas?

Sustainable transport policies often face barriers such as lack of capacity, finance, data and political momentum. Internationally supported transport NAMAs:



**FACILITATE MORE EFFECTIVE TRANSPORT SOLUTIONS.**

NAMAs provide the opportunity to foster a broad range of possible mitigation actions. This can include the promotion of large-scale investments in transport infrastructure and vehicle technologies as well as (low-cost) policies related to vehicle efficiency or Transport Demand Management (TDM) which have often been neglected in conventional transport-led climate change mitigation strategies.



**TRIGGER TRANSFORMATIONAL CHANGE.**

NAMAs can act as a catalyst for low-carbon development in the transport sector. Unlike a project based approach, transport NAMAs can contribute to enabling a significant evolution in terms of scope (e.g. scaling-up or replication). Success factors to increase the sustainability of impacts include a strong political will, involvement of the private sector, use of innovative technologies and approaches.



**GENERATE MORE RESOURCES FOR SUSTAINABLE TRANSPORT SOLUTIONS.**

Transport NAMAs have the opportunity to receive international climate finance for NAMA development and implementation (e.g. from the NAMA facility, the Green Climate Fund or the World Bank's Clean Technology Fund) which complement domestic sources of climate finance. Successful pilot projects create an incentive to scale up existing international financial sources and shift domestic budgets towards sustainable transport initiatives.



**LEAD TO BETTER UNDERSTANDING OF IMPACTS AND SUPPORT POLICY MAKING.**

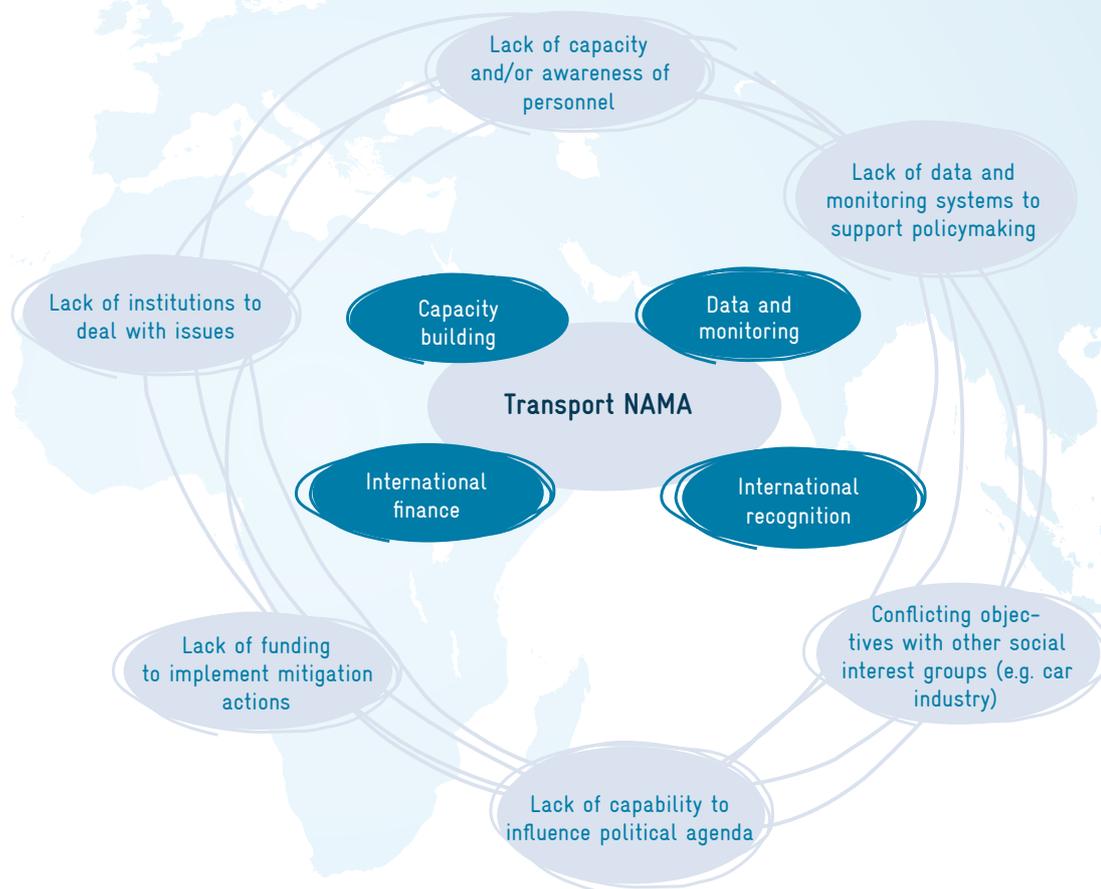
Data collection and monitoring / evaluation (MRV) are key elements to receive international support. The availability of baseline data and MRV concepts can lead to better policy designs and feedback on the implementation process to policymakers and the public, ensuring more successful NAMAs and related policies.



**BENEFIT FROM A FRAMEWORK FOR ENHANCED AND CONSISTENT ACTIONS.**

This allows the various policymakers and other stakeholders to discuss and implement continued sustainable transport policy actions and creates the required political momentum for the implementation of such policies. The national and international recognition of the framework helps to stimulate such a political impulse.

Figure 1: Barriers for sustainable transport and the role of Transport NAMAs



## 1.2. Methodology of the Transport NAMA Database

The GIZ Transport NAMA Database, available at [www.transport-namadatabase.org](http://www.transport-namadatabase.org), aims to provide an up-to-date picture of NAMA development in the transport sector for governments, practitioners and researchers. It includes all NAMAs to which public information<sup>1</sup> is available as well as a limited number of NAMAS to which non-public information was gathered and approved by national counterparts.

### THE DATABASE COMPRISES:

- **the name of the NAMAs,**
- **the country of implementation,**
- **the development stage (development of initial concept; full concept under development; implementation),**
- **the type of NAMA (supported; unilateral),**
- **the type of action (strategy; plan; project; policy; programme),**
- **the scope of action (national; sub-national) and**
- **the type of approach (Avoid; Shift; Improve).**

Further information such as mitigation potential, financing, MRV and co-benefits may be found in the detailed sheet of the NAMAs in the Transport NAMA Database.

GIZ has information on additional transport NAMAs that are not included in the database due to confidentiality or a lack of (reliable) sources. As soon as more information becomes available, these NAMAs will be added to the database.

<sup>1</sup> Public information covers information from the NAMA registry, INDC submissions, public presentations, publicly available information and interviews.



San José, Costa Rica; Photocredit: Florian Kopp/2012

The database contains NAMAs in various stages of development. These stages have been characterised in multiple ways (e.g. by UNFCCC et al. (2013)<sup>2</sup> and Ecofys). GIZ uses the following categorisation of development stages:<sup>3</sup>

- **Development of initial concept:** This can include: e.g. that a feasibility study is available, that a NAMA identification process has resulted in the intention to develop priority NAMA(s), etc.

- **Full concept under development:** This stage ranges from identification of broad NAMA scope by the government and supporting organisations, to full proposal submitted to funding organisations and anything in between, including submitted but not awarded funding.

- **Implementation:** Either funding from international donor approved or components of programme / project are being implemented or policies being developed / adopted.

The development stages have been deliberately defined as very broad and in some cases overlapping categories. This facilitates the allocation of NAMAs where only limited information is available. The categorisation is therefore to be understood as a mere indication of the development stage rather than a precise contention.

<sup>2</sup> UNFCCC, UNEP, UNDP (2013) Guidance for NAMA design. Building on country experience. Available at [http://namapipeline.org/publications/guidance\\_for\\_nama\\_design\\_2013\\_.pdf](http://namapipeline.org/publications/guidance_for_nama_design_2013_.pdf)

<sup>3</sup> The other criteria, including “type of action” and “type of approach” are described in the Transport NAMA Report 2014. Available at [http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report\\_2014.pdf](http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report_2014.pdf)

## 1.3 The state of Transport NAMAs in 2015

**43 transport NAMAs in 30 different countries are currently listed in the Transport NAMA Database.**

8 new Transport NAMAs could be identified through this year's update. The slight decrease in the total number of NAMAs is due to a reassessment of the database entries, including the elimination of NAMAs with insufficient and / or unreliable sources.

**Good regional coverage: NAMAs are developed and/or implemented in Latin America, Asia and Africa.**

Together, these regions cover over 90% of all transport NAMA activities. Only three NAMA activities take place in Eastern Europe and the Middle East.

Figure 2: Number of Transport NAMAs

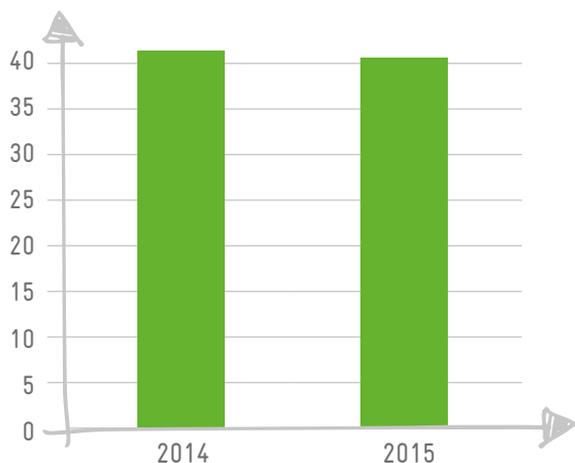
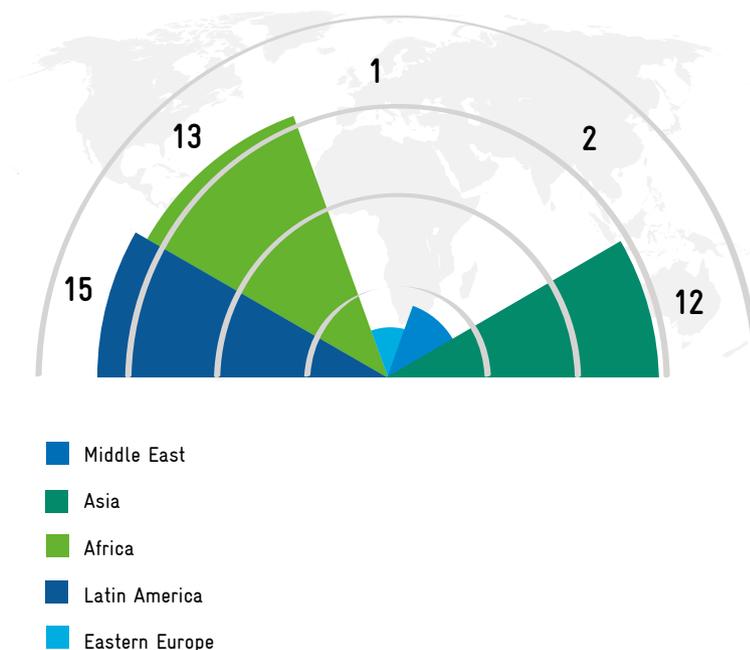


Figure 3: NAMAs per world region



**Interventions in public transport dominate the current NAMA landscape**, followed by improvements in the freight transport sector and improved approaches in individual motorised transport.

Within the public **transport sector**, bus and rail are the most commonly supported transport modes; these NAMAs typically aim to introduce new systems and / or improve existing ones.

The registered NAMAs in the **freight sector** support the optimisation of operational designs, renewal of vehicle fleets and investment in infrastructure enhancements.

NAMAs that **target passenger** vehicles seek to introduce fuel efficiency policies, car fleet renovation strategies and promote new vehicle technologies.

Figure 4: NAMAs per transport sector

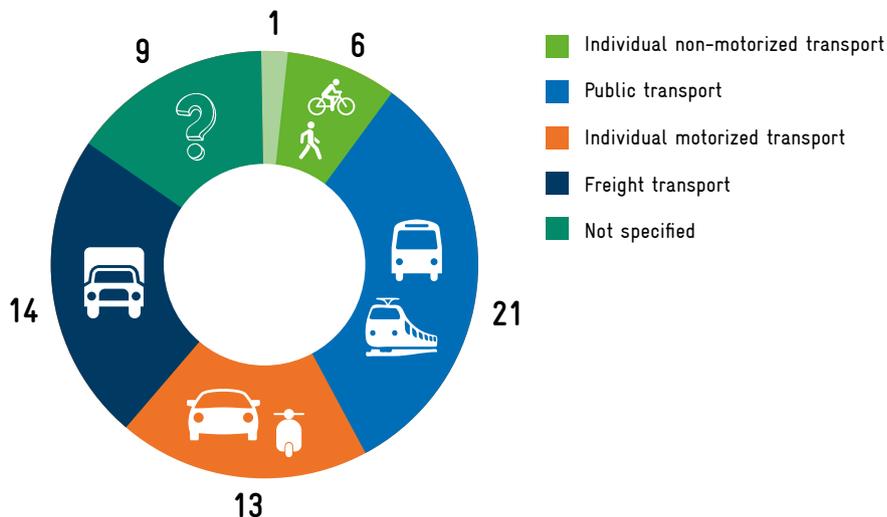
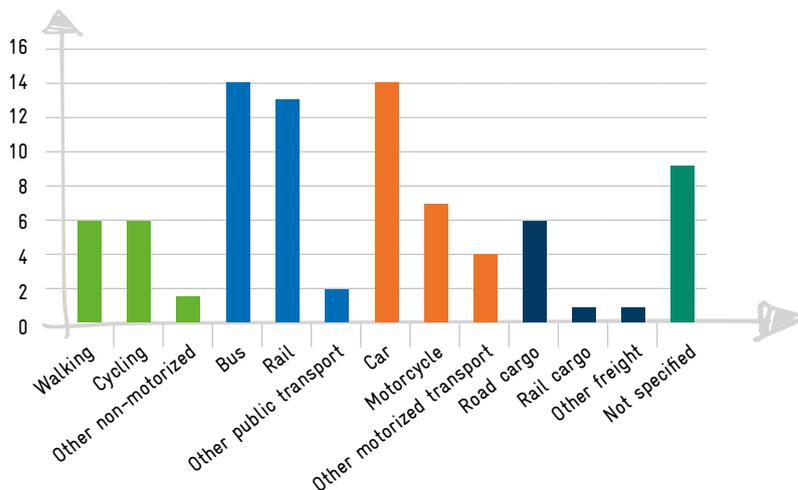


Figure 5: NAMAs per transport mode



Please note that several NAMAs cover various modes simultaneously.

**The majority of NAMAs in the Transport NAMA Database are currently under development and not yet being implemented.**

**17 NAMAs are at an early stage of development**, where a feasibility study has been performed, but no sign of activity or progress has been identified.

**15 NAMAs are at an advanced development stage.** This stage ranges from the identification of the broad scope of a NAMA to the acceptance of a full proposal by funding organisations.

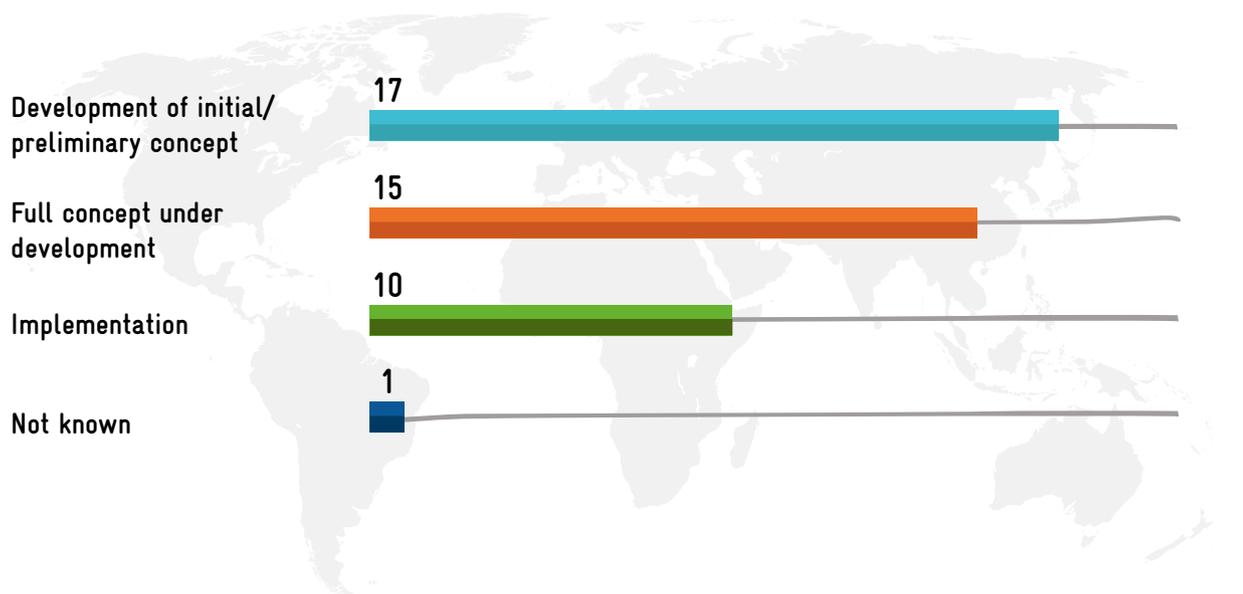
**10 NAMAs are currently being implemented.** In these cases, international funding for the planned interventions has already been approved. In some cases, only pilot phases or single components are currently being implemented.

Please note that due to adjustment of the development stage categories, a comparison to last year's figures is not possible.

Most NAMAs are being set up with international support and unilateral elements. This means that support from both international partners and domestic investment contributes to the development of the NAMA.

The type of support requested is mostly financial. However, in most cases the NAMA is also receiving technical support. Development banks and international cooperation agencies are among the most common partners to support Transport NAMAs.

Figure 6: NAMAs per development stage





## TIPS FOR FURTHER READING

### Guidance on transport NAMAs:

- GIZ (2015) *Navigating Transport NAMAs*. A practical handbook on Nationally Appropriate Mitigation Actions (NAMAs) in the transport sector. 2nd revised edition. Available at <http://transport-namas.org/resources/handbook/>
- *Transport NAMA Toolbox* - Factsheets on different sustainable transport measures for potential NAMAs. Available at [www.transport-namas.org/resources/toolbox/](http://www.transport-namas.org/resources/toolbox/)

### NAMA databases and reports:

- Transport NAMA Database. Available at <http://www.transport-namadatabase.org/>
- Ecofys NAMA database. Available at [http://www.nama-database.org/index.php/Main\\_Page](http://www.nama-database.org/index.php/Main_Page)
- GIZ (2014) *Transport NAMA Report 2014*. Available at [http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report\\_2014.pdf](http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report_2014.pdf)

### Climate mitigation in the transport sector:

- Bongardt, D et al., (2013) *Low-Carbon Land Transport - Policy handbook*. Routledge. Chapter 2.
- Cambridge Systematics (2015). *Shaping the role of climate finance for sustainable transport – What are the levers and how to make them work?*, Background study undertaken on behalf of the GIZ TRANSfer project.
- GIZ (2012) *Sourcebook Module 5b. Urban Transport and Energy Efficiency*. Available at [http://www.sutp.org/files/contents/documents/resources/A\\_Sourcebook/SB5\\_Environment%20and%20Health/GIZ\\_SUTP\\_SB5h\\_Urban-Transport-and-Energy-Efficiency\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/A_Sourcebook/SB5_Environment%20and%20Health/GIZ_SUTP_SB5h_Urban-Transport-and-Energy-Efficiency_EN.pdf)
- GIZ (2014) *Sourcebook Module 5e. Transport and Climate Change*. Available at [http://www.sutp.org/files/contents/documents/resources/A\\_Sourcebook/SB5\\_Environment%20and%20Health/GIZ\\_SUTP\\_SB5e\\_Transport-and-Climate-Change\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/A_Sourcebook/SB5_Environment%20and%20Health/GIZ_SUTP_SB5e_Transport-and-Climate-Change_EN.pdf)

## Where do we stand?

Table 1: Transport NAMA Database (2015 update)

Number	Country	Name of NAMA	Development stage
1	Argentina	Modernization of freight train infrastructure	Development of initial/preliminary concept
2	Azerbaijan	Nationally Appropriate Mitigation Actions (NAMAs) for low-carbon end-use sectors in Azerbaijan <sup>4</sup>	Implementation
3	Bangladesh	NAMA Proposal for the Railway Sector in Bangladesh	Development of initial/preliminary concept
4	Bhutan	Sustainable Urban Transport System for Thimphu and Phuentsholing cities (Bhutan)	Not known
5	Brazil	Comprehensive mobility plan for Belo Horizonte (Brazil)	Development of initial/preliminary concept
6	Chile	Santiago Transportation Green Zone (STGZ) (Chile)	Implementation
7	Colombia	Non-Motorized Transport and Transport Demand Management (TDM) (Colombia)	Development of initial/preliminary concept
8	Colombia	Transit-Oriented Development (TOD) in Colombia	Implementation
9	Colombia	Unilateral NAMA: Sustainable road-based freight transport Colombia	Implementation
10	Costa Rica	Fostering technological change and fleet modernization in the public transport sector (Greater Metropolitan Area of San Jose) (Costa Rica)	Development of initial/preliminary concept
11	Costa Rica	Urban NAMA (Costa Rica) <sup>5</sup>	Development of initial/preliminary concept
12	Dominican Republic	Low Carbon Climate Resilient Development Strategy in Dominica <sup>6</sup>	Full concept under development
13	Egypt	Urban transport infrastructure in Cairo, Egypt	Development of initial/preliminary concept
14	Ecuador	Urban Mobility (Metro) NAMA in Quito (Ecuador)	Development of initial/preliminary concept
15	Ethiopia	Addis Ababa Light Rail Transit Transit Oriented Development NAMA (Ethiopia)	Implementation
16	Ethiopia	Ethiopia Railways Establishment of Climate Vulnerability Infrastructure Investment Framework NAMA	Full concept under development
17	Ethiopia	Ethiopia's National Railway Network and Addis Ababa Light Rail Transit (LRT) NAMA	Full concept under development
18	Ethiopia	Ethiopian Railways –Railway Academy NAMA	Full concept under development
19	Georgia	Vertically Integrated NAMA (V-NAMA) for the Urban Transport Sector (Georgia)	Development of initial/preliminary concept
20	Ghana	BRT for Accra (Ghana)	Full concept under development
21	India	Inter-urban Rail NAMA (India)	Full concept under development

<sup>4</sup> This includes improvements of the energy performance of the transport sector (passenger cars, trucks, buses, special purpose vehicles).

<sup>5</sup> Includes the modernisation of the transport sector.

<sup>6</sup> This NAMA recognises the need to reduce energy use and associated GHG emissions from the road transport sector.

	Country	Name of NAMA	Development stage
22	Indonesia	Sustainable Urban Transport Initiative (SUTRI) NAMA (Indonesia)	Implementation
23	Jordan	City wide mitigation programme of Greater Amman Municipality (Jordan) <sup>7</sup>	Development of initial/preliminary concept
24	Kazakhstan	Nationally Appropriate Mitigation Action for Low-carbon Urban Development in Kazakhstan <sup>8</sup>	Implementation
25	Kenya	Mass Rapid Transport System for Nairobi (Kenya)	Implementation
26	Laos	Master Plan on Comprehensive Urban Transport of Vientiane (Laos)	Development of initial/preliminary concept
27	Lebanon	Hybrid electric vehicles (Lebanon)	Development of initial/preliminary concept
28	Malaysia	Towards Energy Efficient Two-Wheelers NAMA (EE2W) in Malaysia	Full concept under development
29	Mexico	Car Fleet Renewal in Mexico	Full concept under development
30	Mexico	Enhancing Vehicle Renovation and operating efficiency in Mexico's federal freight sector (Mexico)	Implementation
31	Mexico	NAMA based on the Federal Mass Transit Programme (PROTRAM) (Mexico)	Full concept under development
32	Mexico	Optimization of the conventional bus system in the valley of Mexico City (Mexico)	Development of initial/preliminary concept
33	Peru	TRANSPeru, Sustainable Urban Transport NAMA (Peru)	Full concept under development
34	Serbia	Rehabilitation of Arterial Roads (Serbia)	Full concept under development
35	South Africa	Passenger Modal Shift from Road to Rail - The Gautrain Case (South Africa)	Implementation
36	South Africa	Rollout of electric private passenger vehicles (South Africa)	Development of initial concept
37	Thailand	Urban Public Transport Connectivity (NMT) and Public Transport Management (Bus) (Thailand)	Full concept under development
38	Tunisia	Capacity development for GHG Inventories and MRV (Tunisia) <sup>9</sup>	Development of initial/preliminary concept
39	Uganda	Bus Rapid Transit (BRT) for Kampala (Uganda)	Full concept under development
40	Uganda	Vehicle Fuel Efficiency (Uganda)	Full concept under development
41	Uganda	Periodic Vehicle Inspection for Emissions and Roadworthiness (Uganda)	Full concept under development
42	Vietnam	Fuel Efficiency Policies (Vietnam)	Development of initial/preliminary concept
43	Vietnam	Green Freight (Vietnam)	Development of initial/preliminary concept

<sup>7</sup> The NAMA aims to reduce greenhouse gas emissions in a variety of sectors, including urban transportation.

<sup>8</sup> This includes the modernisation of urban infrastructure (including transport).

<sup>9</sup> This covers all energy-related sectors, including transport.



Buenos Aires, Argentina; Photocredit: Carlos Pardo/2008

## 2. Sustainable funding for Climate Change Mitigation – Financing transport NAMAs

## 2.1. Why is transport NAMA financing so important?<sup>10</sup>



Choices made today on transport infrastructure and technology in emerging and developing economies can lock a country into either a fossil fuel dependent or a low-carbon pathway for the next 30 to 50 years. Low-carbon choices are also economically justified: The IEA shows that a 2 degrees scenario requires \$ 70 trillion less cumulative investments up to 2050 in transport infrastructure, up-grades, vehicles, fuels and maintenance costs compared to an unsustainable 4 degrees scenario.<sup>11</sup> Climate finance can support shifting investments towards sustainable transport; however until now, the transport sector does not attract a proportional amount of climate finance, and the financing available is not stimulating a change in transport policies and investments at the scale required.

At the Rio+20 United Nations Conference on Sustainable Development (2012), eight of the large Multilateral Development Banks formed a joint MDB Working Group on Sustainable Transport, making a commitment to provide more than \$175 billion in loans and grants for transportation in developing countries between 2012 and 2022. In 2013, the eight

MDBs reported spending US\$ 25 billion overall on the transportation sector. The data demonstrates two points: First, the MDBs are on the way to shifting more of their transportation related funding to sustainable and climate friendly activities. Second, significant investments still go to traditional transport infrastructure investments such as interregional highways or similar projects.

Overall, there is a growing international recognition for sustainable transport solutions selected using the 'Avoid-Shift-Improve'<sup>12</sup> approach to reduce GHG emissions and promote more sustainable development. International climate finance (ICF) can play a pivotal role in scaling up sustainable transport globally.

<sup>10</sup> Based on on-going work of the Expert Group on Climate Finance for Transport (<http://transport-namas.org/expertgroup/expert-group-on-climate-finance-for-sustainable-transport/>) initiated by the GIZ TRANSfer Project and SLoCaT

<sup>11</sup> International Energy Agency (IEA) (2013), "Global Land Transport Infrastructure Requirements: Estimating road and railway infrastructure and costs to 2050."

<sup>12</sup> As described by GTZ (2007), "Transport and Climate Change", GTZ Sourcebook Module 5e written by Holger Dalkmann and Charlotte Branninga.

## 2.2. How can decision-makers improve financial framework conditions?

Developing a financial framework for a NAMA is a challenging but important step in NAMA development.

In creating a funding and financing framework that is favourable to sustainable transport, national and international decision-makers may:

### GET DOMESTIC FRAMEWORK CONDITIONS RIGHT

- Develop a coherent policy framework, including institutions and framework conditions;
- Use the transport-finances-transport principle, e.g. through a partial subsidisation of public transportation by fuel and private vehicle tax revenues and the use of land value capture;
- Price transport to moderate excessive demand;
- Set clear investment priorities in order to shift investments from conventional, unsustainable to low-carbon, sustainable transport, e.g. through national urban transport policy framework;
- Increase the overall availability of public funding to develop and maintain sustainable transport infrastructure and services.

### SHAPE THE CLIMATE FINANCE ARCHITECTURE

- Promote that climate finance supports sustainable transport in a manner that corresponds roughly to transport's share of overall GHG emissions taking into account carbon benefits and co-benefits not just the marginal abatement cost of GHGs;
- Consider the creation of a Transport Window under climate finance mechanisms to ensure that transport is not neglected due to its complex structure, which often puts it to the end of the line of sectors benefitting from climate finance;
- Develop a White List (Positive List) of transport measures that can access climate finance, thereby relaxing the need to quantify GHG mitigation and co-benefits at an early stage;
- Adopt eligibility criteria that match the transport sector. Do not evaluate projects merely based on GHG mitigation costs. Include co-benefits as important criterion when deciding on eligibility of transport projects;
- Establish credible, appropriate MRV requirements that take into account the data intensity (and associated costs and required time) of estimating emission reduction in the transport sector.

### FOCUS ON EFFECTIVE MITIGATION APPROACHES

- Prioritise and reward the use of programmatic approaches over a project-by-project approach;
- Raise awareness and capacity for neglected transport sub-sectors like freight transport;
- Demonstrate how to engage the private sector in sustainable transport, including the development of private sector oriented mechanisms like Climate Bonds (see Box 1);
- Support institutional “readiness” with the aim to build up a viable, well-prepared investment pipeline



#### READING TIP:

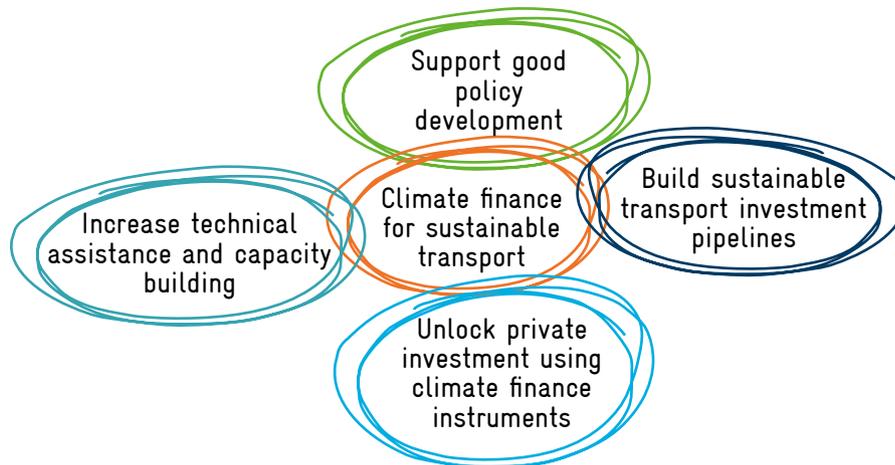
Discussion Paper: A Systematic Approach for the Use of Climate Finance for Sustainable Transport, available at <http://transport-namas.org/expert-group/expert-group-on-climate-finance-for-sustainable-transport/>

## 2.3. How can scarce climate finance help sustainable transport?

In order to get a clearer picture how scarce international climate finance can be systematically used to significantly scale-up sustainable transport, an international Expert Group was initiated by GIZ and SLoCaT and prepared a recently published Discussion Paper<sup>13</sup>. From the research and consultations undertaken **four areas** were identified where climate finance should be applied **to systematically scale-up sustainable transport (see figure 7)**:

- **Support good policy development;** Investing in climate friendly sustainable transport is a long term commitment which requires building trust and long term relationships between various actors.
- **Build investment pipelines to improve the flow and quality of sustainable transport investments;** international climate finance can be used to expand project pipelines, and the quality of investments including their climate relevance, but also to facilitate the development of a broader range of sustainable transport opportunities.

Figure 7: Climate finance for sustainable transport



- **Unlock private investment using climate finance instruments (e.g. address risks, fill financing gaps);** ICF can be used to overcome some key barriers for private investment in sustainable transport projects in developing countries through a variety of instruments (e.g providing low-cost (concessional) debt financing, risk coverage through guarantees/partial risk guarantees, equity financing and structures); and
- **Increase technical assistance and capacity building.** Designing and providing robust technical assistance programmes associated with the climate finance aspects can help build capacity and also improve the transfer of knowledge.

International climate finance can play a pivotal role in scaling up sustainable transport through systematic support to these four areas.

<sup>13</sup> Discussion Paper - A Systematic Approach for the Use of Climate Finance for Sustainable Transport, available at <http://transport-namas.org/expertgroup/expert-group-on-climate-finance-for-sustainable-transport/>

In order to highlight thinking on how specific climate finance instruments could help at different stages of the project and policy / programme cycles, please find below three examples, each of a different nature.

- **Project: Bus Rapid Transit or Light Rail Transit.** Financing is required for all phases in the project cycle. Potential revenue sources are from ticket revenues, advertising and land value capture. However, these sources are often not sufficient to cover O&M costs and investments, i.e. such projects are often economically feasible but not financially profitable. Official Development Assistance (ODA), PPP and public finance can cover this gap. Climate finance could be used to support the preparation of a nation's first urban rapid transit system. It can provide additional opportunities to address barriers including improving formulation of concepts, project preparation, raise awareness on value capture mechanisms, co-finance procurement support, lower interest on loans, support supervision of implementation, reduce operating risks, and cover costs for MRV. In addition, climate finance can play a role in developing additional measures such as multi-modal accessibility and moves toward a more programmatic approach (see next example).



Buenos Aires, Argentina; Photocredit: Claudio Varano/2005

- **Sustainable Transport Programme**, i.e. a national programme that includes a mechanism to incentivise municipalities to implement measures (such as BRT, parking management, non-motorised transport, etc.) by providing finance and capacity building support, based on approved Sustainable Urban Mobility Plans. This is a relatively new and complex approach, and climate finance can assist in the design of the programme, capacity building and inter-country learning, “top-up” available finance through loans, provide procurement assistance, develop project pipeline, address non-financial barriers, support financial, regulatory and institutional reforms, and help in data gathering and MRV.
- **Policy: Fuel Economy Standard, e.g. for new Light Duty Vehicles.** Such a policy may have very large emission reduction potential with low or negative costs to society, as the benefits to users and the national economy are substantial, in addition to co-benefits for air quality. Climate finance can help address barriers by financing campaigns for public awareness and communication, dialogues with industry, technical advisory service to develop appropriate standards, capacity building for implementation, data gathering and MRV, as well as expanding the policy package to car labelling, CO<sub>2</sub>-based vehicle taxation, tyre policies, and include other vehicles such as two/three-wheelers and heavy duty vehicles.



## POTENTIAL SOURCES OF CLIMATE FINANCE AND OTHER RELEVANT SOURCES OF ASSISTANCE:

- Asian Development Bank (ADB) Climate Change Fund (CCF) <http://www.adb.org/site/funds/funds/climate-change-fund>
- Clean Technology Fund (CTF) <http://www.cif.climateinvestmentfunds.org/fund/clean-technology-fund>
- Global Environmental Facility (GEF) <https://www.thegef.org/gef/>
- Green Climate Fund (GCF) <http://www.greenclimate.fund/home>
- Inter-American Bank Sustainable Energy and Climate Change Initiative (SECCI) <http://www.iadb.org/en/topics/climate-change/secci,1449.html>
- IDB Infrastructure Fund (InfraFund) <http://www.isdb.org/irj/portal/anonymous?NavigationTarget=navurl://88145b5fdaf722f11d9b39ed380b40f1>
- International Climate Initiative (ICI) <http://www.international-climate-initiative.com/en/>
- NAMA Facility <http://www.nama-facility.org/start.html>
- Nordic Development Fund (NDF) <http://www.ndf.fi/>
- Partnership for Market Readiness (PMR) <https://www.thepmr.org/>
- Carbon markets – Clean Development Mechanism (CDM) <http://cdm.unfccc.int/>, Joint Implementation (JI) <http://ji.unfccc.int/index.html>
- Joint Crediting Mechanism (JCM) <https://www.jcm.go.jp/>
- Multilateral Investment Guarantee Agency (MIGA) for mitigation/ clean energy projects <https://www.miga.org/Pages/Home.aspx>



## CLIMATE BONDS

- Project bonds are a borrowing instrument where the government or a private corporation issues bonds that are purchased by investors. The issuer receives an immediate influx of cash that can be used to pay for a project. The investors are repaid over time through principal plus interest payments from the revenue source(s) pledged to support debt service. Bonds are an especially attractive investment vehicle for institutional investors, such as pension funds and insurance companies. About 2% of transport infrastructure investments in Europe are financed through the bond market. In developing countries, however, it can be challenging to attain a good enough bond rating, especially at the municipal level, making their use rare in such places. Most transport bond investments in the developing world are realised in the rail market in China.
- In the context of international climate finance, the concept of climate bonds (which may be corporate bonds, project bonds or public bonds) has received a high level of interest recently. Climate bonds have the potential to raise significant amounts of financing for low-carbon investments. The Climate Bonds Initiative (see <http://www.climatebonds.net/standard/transport2>) is currently developing eligibility criteria for climate bonds in the land transport sector as a basis for certifying such bonds as climate-friendly.

## 2.4. How to finance a NAMA?

A look at the different stages of the development of a sustainable transport intervention is helpful in answering this question. International financing and development institutions use cycle frameworks, and financing needs (including the role of climate finance) vary according to the stage of development. Climate finance is likely to be best utilised where other sources are unavailable, or unaffordable, and where the amount of financing is low compared to the potential impact.

Climate finance may be delivered through a range of instruments, including grants, concessional debt or equity, guarantees and risk sharing facilities, risk reduction, advisory services, complementary activities (e.g. studies, capacity building), and demonstration projects.

The financial structure of a transport NAMA should be targeted towards addressing the main barriers preventing a transformation in the sector. Experience shows that in many NAMA development processes, in-depth analyses of the status quo in terms of technology use, regulatory environments and political interests have been undertaken, but the financial dimension of these analyses, including current investment flows, nature of investments, and financial barriers, tend to be insufficiently elaborated.

The following **key steps** should be undertaken to develop a financial structure for a transport NAMA:

- Perform a **context analysis** of the current nature of investments in the sector, financial flows, main (financial) actors in the sector and barriers preventing the mitigation action from happening
- Realise a **cost analysis** of the actions in the NAMA by breaking down the NAMA into individual activities and assign costs;
- Determine potential **revenue sources**:
  - a. User and private sector revenues, such as user charges, through land value capture and through ancillary revenues, e.g. advertising and rentals;
  - b. National and local public funding;
  - c. International public funding, e.g. ODA and climate finance
- Develop the **financial structure**, based on the previous steps and thorough economic and financial analysis



### READING TIP:

**Navigating Transport NAMAs - A practical handbook on Nationally Appropriate Mitigation Actions (NAMAs) in the transport sector.** The recently revised handbook now also gives practical guidance on how to develop a financial structure for a NAMA in the transport sector. It describes and gives examples of financial mechanisms in the transport sector both public and private, e.g. project bonds and public-private-partnerships. Available at <http://transport-namas.org/resources/handbook/>

**Discussion Paper: A Systematic Approach for the Use of Climate Finance for Sustainable Transport** aims at identifying how scarce International Climate Finance (ICF)<sup>14</sup> can be systematically used to significantly scale-up sustainable, low-carbon transport (ST) infrastructure and services. Available at <http://transport-namas.org/expertgroup/expert-group-on-climate-finance-for-sustainable-transport/>

<sup>14</sup> For the purpose of this Discussion Paper, International climate finance, is a key subject of interest, i.e. developed to developing country, public climate finance including climate relevant ODA and specific bilateral and multilateral climate funds. Such funds include: the Green Climate Fund, the Climate Investment Funds, the Global Environment Facility, and bi-lateral climate funds.



Bangkok, Thailand; Photo credit: Manfred Breithaupt/2013



#### READING TIP:

A useful guide for carrying out financial appraisals in an MDB context is the ADB's Guidelines to Financial Management and Analysis of Projects, available at <http://www.adb.org/sites/default/files/pub/2005/financial-governance-management.pdf>



Bogotá, Colombia; Photocredit: Carlos Pardo/2010

## 2.5. How climate finance works in practice – examples from Colombia and China



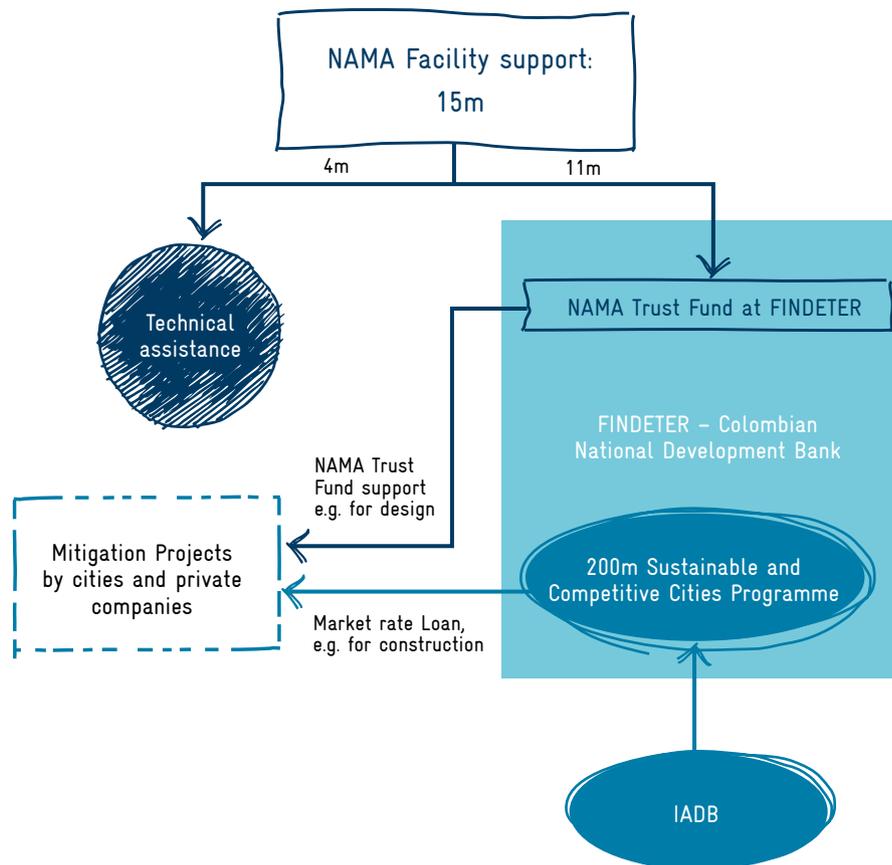
### TRANSIT-ORIENTED DEVELOPMENT (TOD) NAMA (PROGRAMME-BASED NAMA), COLOMBIA

The Transit-Oriented Development NAMA in Colombia aims to reduce private vehicle GHG emissions through the creation of urban environments that provide alternatives to automobile travel. These improvements include integrated development around public transport stations, and blending low-income and market-rate housing with commercial uses to

create neighbourhoods attractive for walking, living, working, shopping and playing. The Government of Colombia will have invested nearly USD 10 billion from the public budget in public housing and mobility within the next few years. A NAMA Support Project funded by the NAMA Facility provides an additional EUR 15 million of international climate fi-

nance in the form of grants, EUR 4 million of which will be used for technical assistance and EUR 11 million for the establishment of a trust fund at the Colombian National Development Bank FINDETER. FINDETER in turn will use the trust fund to provide grants, concessional loans and other financial instruments to projects by cities or private companies. For example, a local Special Purpose Entity (SPE) has been created to manage public and private development in a neighbourhood area, and could receive a grant from the NAMA Trust Fund for the design and engineering of a bus rapid transit station integrated into a shopping centre. In addition, FINDETER could give a market rate loan to the transit agency, linked to the design grant, for construction of the actual station. The funds of the NAMA Support Project may potentially be used alongside FINDETER's existing 200 million Sustainable and Competitive Cities Programme, which is supported by IADB. Generally speaking, the NAMA Facility funds support the design and management of the approach for sector transformation, and provide targeted co-funding for the implementation of concrete sustainable transport measures.

Figure 8: Financial architecture of TOD NAMA Colombia





## THE GUANGDONG GREEN FREIGHT DEMONSTRATION PROJECT<sup>15</sup>

The Guangdong Green Freight Demonstration Project seeks to demonstrate that energy efficient truck technologies can yield global and local environmental benefits in reduced GHG emissions and improved air quality, and help “green” the road freight sector. The project has four components:

- **Green Truck Technology Demonstration:** Incentive payments (government rebates) for installing energy efficient technologies on trucks, as well as a green freight trade fair, vehicle monitoring systems and evaluation reporting;
- **Green Freight Logistics Demonstration:** Conducting market studies for “drop and hook” logistics methods and a proposed provincial logistics brokerage platform;
- **Capacity Building:** Providing technical advisory services for policy research and training of officials and private stakeholders and dissemination support via Guangdong green freight websites; and
- **Project Implementation Support:** Providing technical advisory services for project implementation, stakeholder consultations, project results evaluation and dissemination, and project management.

### Financing mechanism

A majority of the funding (67 per cent) is allocated to incentive payments, which are paid in the form of rebates and performance payments to the participating trucking companies. The private companies provide the largest share of the project cost as enterprise co-financing. The participating companies have a clear incentive investing in new technologies that have the potential to reduce their fuel consumption and lower their operating costs. The performance of these new technologies, however, was unproven. Thus, some incentives were needed to get these companies to take the final step and invest in these new technologies. These incentives are provided by the GEF grant in two ways:

- **Green Freight technology rebates** – a transfer in the form of a rebate for investing in a technology that improves fuel efficiency. These rebates lower the cost of the technology for the purchaser. The point of giving these rebates is to make the cost of the new technology the same (or nearly so) as the older technology so that the decision to purchase the new technology is no longer based on difference in price between the new and old technology; and
- **Performance-based payments** that provide incentives to participating companies to properly operate these fuel saving technologies and monitor the results.



## CO-BENEFITS - TACKLING CONGESTION, AIR QUALITY, ACCESS AND SAFETY THROUGH KEY CLIMATE CHANGE MITIGATION MEASURES

Low-carbon transport has the potential to contribute to a number of economic, social and environmental policy objectives. This is often a much more powerful trigger for action than climate change, in particular at the local level, where air quality, congestion and road safety are key concerns. By providing choice of transport mode and cost, low-carbon mobility also improves access to transport services, for businesses and low-income groups in particular.

Download our new publication Sustainable Development Synergies and Co-benefits of Low-carbon Transport Measures at <http://transport-namas.org/resources/publications/>.

<sup>15</sup> Cambridge Systematics (2015). “Shaping the role of climate finance for sustainable transport – What are the levers and how to make them work?”, background study undertaken on behalf of the GIZ TRANSfer project



## TIPS FOR FURTHER READING

- Agence Française de Développement (AFD) (2015) *Who pays what for urban transport? – Handbook of good practices*. Available at [http://www.codatu.org/wp-content/uploads/handbook\\_good\\_practices.pdf](http://www.codatu.org/wp-content/uploads/handbook_good_practices.pdf)
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- Expert Group on Climate Finance for Sustainable Transport <http://transport-namas.org/expertgroup/expert-group-on-climate-finance-for-sustainable-transport/>
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- GIZ / BtG (2013) *Accessing Climate Finance for Sustainable Transport: A Practical Overview*. Available at [http://www.sutp.org/files/contents/documents/resources/B\\_Technical-Documents/GIZ\\_SUTP\\_TD5-Accessing-Climate-Finance-for-Sustainable-Transport\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/B_Technical-Documents/GIZ_SUTP_TD5-Accessing-Climate-Finance-for-Sustainable-Transport_EN.pdf)
- GIZ/SLoCaT (2015) *A Systematic Approach for the Use of Climate Finance for Sustainable Transport*, available at <http://transport-namas.org/resources/publications/>
- GTZ (2010) *Sourcebook for Decision Makers in Developing Cities – Module 1f: Financing Sustainable Urban Transport*. Available at [http://www.sutp.org/files/contents/documents/resources/A\\_Sourcebook/SB1\\_Institutional-and-Policy-Orientations/GIZ\\_SUTP\\_SB1f\\_Financing-Sustainable-Urban-Transport\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/A_Sourcebook/SB1_Institutional-and-Policy-Orientations/GIZ_SUTP_SB1f_Financing-Sustainable-Urban-Transport_EN.pdf)
- Heinrich Böll Stiftung & ODI (2014) *Climate Finance Fundamentals Series*. Available at <http://www.odi.org/publications/5157-climate-finance-fundamentals>
- Lefevre, B et al., (2014) *The Trillion Dollar Question: Tracking Public and Private Investment in Transport*. WRI. Available at [http://www.wri.org/sites/default/files/trillion\\_dollar\\_question\\_working\\_paper.pdf](http://www.wri.org/sites/default/files/trillion_dollar_question_working_paper.pdf)
- Lütken, S. E. (2014) *Financial Engineering of Climate Investment in Developing Countries – Nationally Appropriate Mitigation Action and How to Finance It*. Anthem Press.



Lima, Peru; Photocredit: Gerhard Menckhoff/2009

### 3. Learning from good practice – Insights into successful transport NAMAs

Showcasing similar projects that might serve as **learning models can facilitate the development of new transport NAMAs**. The selected examples show a variety of “good practice” examples – each being “nationally appropriate.”



Learning from successful  
NAMAs can be a first step to  
bridge the gap from concept  
to implementation.

### 3.1. Good practice 1: Sustainable Urban Transport (SUTRI) NAMA, Indonesia

With growing numbers of private motor vehicles and a lack of alternative transport modes, Indonesia's transport sector is becoming increasingly unsustainable, contributing to rising levels of GHG emissions. This trend is partly due to the design of national and local transport policies that are characterised by unclear legal frameworks and insufficient institutional capacities, particularly at the local level. Rather than providing incentives for municipalities to support energy efficient and environmentally sustainable standards, current policies favour increasing levels of motorisation.

In order to create a more efficient and sustainable transport policy framework and thereby reduce the level of GHG emissions in the longer term, the objective of the Sustainable Urban Transport Indonesia (SUTRI) NAMA is to **transform the disbursement of national budgets for urban transport development to cities and municipalities from a request-based budget allocation towards a performance-based distribution scheme**. The more effectively local governments manage to implement infrastructure projects that target GHG emission reduction in the urban transport sector, the more national funding they are eligible for. Through the financial component of the SUTRI NAMA, the **Ministry of Transport allocates additional resources for the new co-financing programme**, thereby creating an incentive for cities to support the transformation.



To ensure that the SUTRI NAMA will lead to successful results, a number of challenges need to be addressed. These include legal and administrative hurdles with respect to the reformation of the disbursement scheme, the setting up of a financial monitoring scheme of fund utilisation and the coordination, evaluation and monitoring of co-financing and project implementation activities. Furthermore, standards for the estimation and measurement of GHG emissions at project level need to be established. Eventually, local governments need support and advice regarding the use of allocated budgets and project development, why it is critical to embed the financial component of the SUTRI NAMA within a solid framework of technical cooperation and to complement international expertise with communication, knowledge transfer and adaptation to Indonesian-specific conditions.

Therefore, the SUTRI NAMA includes:

- the **establishment of a Technical Support Unit at the national level** that will provide technical guidance and capacity development for local governments,

- the **development of an effective funding mechanism** to co-finance the implementation of public transport and transport demand management projects,
- the **development of a project pipeline** for eligible demonstration projects and co-financing in seven pilot cities,
- the **implementation of demonstration projects** in up to five cities (e.g. bus fleet investment, improvement of public transport corridors, parking management and pedestrian programmes),
- the **establishment of an MRV system** that initiates systematic monitoring of urban transport development in order to increase and monitor the transparency of the achieved impacts.

Full NAMA Concept Documents: <http://transport-namas.org/resources/full-nama-concept-docs/>

## 3.2. Good practice 2: TRANSPerú

Peru faces a wide range of challenges in its transport system, including sharply increasing motorisation, an old and inefficient vehicle fleet, low average traffic speeds, and rising emissions and air pollution. In order to tackle the variety of problems and address the sector's challenges in a comprehensive manner, the TRANSPerú NAMA chose a sector-wide approach, which focuses on the realisation of key structural changes (adequate regulation, strengthening of institutions and key infrastructure) that lead the sector towards a sustainable development path.

As a planning tool for sector transformation, the TRANSPerú NAMA uses an **innovative policy matrix approach**. The matrix outlines objectives and targets (outcomes), the actions required in order to achieve these objectives (outputs), and responsibilities for their implementation in a comprehensive manner, allowing for coordinated and structured planning and implementation in the medium-term (2016 -2019).

The matrix was developed jointly in an intensive consultation process. All national and international stakeholders were directly involved in shaping the sector's policies (an inter-institutional Steering Committee was established for this purpose). As a result, the objectives of planned measures are coherent, planned actions are feasible, and the policy reform agenda counts with high backing and ownership of all relevant stakeholders. The clear definition

of specific and measurable outputs (and outcomes) enables a sound monitoring and verification of the efficiency in implementing the NAMA.

TRANSPerú's policy matrix foresees 77 outputs overall, which are clustered into six mitigation areas:

### 1. Integrated public mass transport system

**in Lima/Callao:** Construction of parts of Metro Line 2 (13.5 km) and 4 (8km), extension of the BRT line by 10.5 km, 12 intermodal integration spots, timetable and ticketing integration for BRT and Metro systems.

**2. Non-motorised transport in Lima:** Drafting of a Master Plan for Non-Motorised Transport, revision and dissemination (with districts) of the out-dated technical guidelines for NMT-infrastructure, and public awareness campaigns.

**3. Institutional development to improve urban transport management in Lima/Callao:** coordination agreement between Lima and Callao, process towards the establishment of a Single Transport Authority for Lima and Callao.

**4. Vehicle certification and fuel efficiency for light vehicles:** implementation of a national vehicle homologation system including technical vehicle inspections, review



of emission standards, and introduction of a labelling scheme for energy efficiency and CO<sub>2</sub> emissions, implementation of 30 NGV stations in 5 secondary cities.

**5. Modernisation of the public transport vehicle fleet:** implementation of a scrapping scheme for Lima and Callao for routes competing with organised mass transport lines (replacement of 6000 old units with 1800 modern high capacity buses), development of scrapping schemes in secondary cities.

**6. Support to local governments to strengthen sustainable urban transport:** Implementation of a Sustainable Urban Transport Policy and Programme that supports secondary cities in the planning, financing and implementation of sustainable urban transport measures.

Full NAMA Concept Documents: <http://transport-namas.org/resources/full-nama-concept-docs/>

### 3.3. Good practice 3: Transit Oriented Development (TOD) NAMA, Colombia

Colombia's Transit Oriented Development (TOD) NAMA promotes planning and investment in public infrastructure in proximity to transit stations. The aim of the NAMA is to attract additional private real estate development in order to create new TOD neighbourhoods.

What characterises the TOD NAMA is its **extraordinary financing and implementation approach**: The NAMA is going to be implemented by the Center of Urban Interventions for the Advanced Development towards Transport (CIUDAT), a newly created domain within the Colombian development bank (FINDETER). FINDETER runs a number of programmes and lines of credit aimed at sustainable urban development, but has not previously had a focus on TOD. As a new section within FINDETER, CIUDAT will develop policy templates for TOD and select locally appropriate TOD implementation projects for financial and technical assistance in a competitive setting. Moreover, the agency will recruit staff composed of technical experts (in urban economics, urbanism, and urban mobility) and financial experts (in finance, value capture and project management) for the development of the TOD NAMA. A national-level steering committee consisting of Vice Ministers of Transport, Environment, Housing and the heads of National Planning, FINDETER and the Center for Clean Air Policy (CCAP) will control the actions taken by CIUDAT.

CIUDAT's technical assistance staff works with Colombian cities and transit agencies to create a pipeline of bankable TOD plans and projects. The city-level projects will attract international and private capital. They demonstrate the economic opportunities TOD provides, reflecting Colombia's continuing robust economic growth. Projects that promise high catalytic potential, private sector mobilisation, GHG reduction, sustainable development benefits and financial viability are eligible for financial assistance from the NAMA support funds. This assistance may take the form of grants for design and engineering studies or subsidised financial means such as concessional loans or guarantees to be provided by FINDETER to local intermediary banks. The technical and financial staff will present the selected projects to the steering committee for final approval of the use of NAMA support funds.



The TOD NAMA is carried out by CCAP as the Delivery Organisation (D.O.) for Technical Cooperation and German Kreditanstalt für Wiederaufbau (KfW) as the D.O. for Financial Cooperation while FINDETER serves as the implementing entity. The remarkable division of financing and implementing responsibilities between FINDETER / CIUDAT and the KfW is meant to overcome internal barriers within FINDETER to financing TOD projects, thus providing an example for other public and private lending institutions.

Executive Summary: [http://ccap.org/assets/Colombia\\_Transport\\_Transit\\_Oriented\\_Development\\_May\\_2013\\_NAMA\\_Executive\\_Summary.pdf](http://ccap.org/assets/Colombia_Transport_Transit_Oriented_Development_May_2013_NAMA_Executive_Summary.pdf)



## TIPS FOR FURTHER READING

- SUTRI NAMA: [http://transport-namas.org/wp-content/uploads/2014/11/Overview\\_IND\\_SUTRI-NAMA.pdf](http://transport-namas.org/wp-content/uploads/2014/11/Overview_IND_SUTRI-NAMA.pdf)
- TRANSPerú: [http://transport-namas.org/wp-content/uploads/2014/04/Overview\\_PERU\\_TRANSPeru.pdf](http://transport-namas.org/wp-content/uploads/2014/04/Overview_PERU_TRANSPeru.pdf)
- TOD Colombia: [http://ccap.org/assets/Colombia\\_Transport\\_Transit\\_Oriented\\_Development\\_May\\_2013\\_NAMA\\_Executive\\_Summary.pdf](http://ccap.org/assets/Colombia_Transport_Transit_Oriented_Development_May_2013_NAMA_Executive_Summary.pdf)



## 4. Further reading

### General literature on climate mitigation:

- Bongardt, D et al., (2013) *Low-Carbon Land Transport - Policy handbook*. Routledge. Chapter 2.
- Cambridge Systematics (2015). *Shaping the role of climate finance for sustainable transport – What are the levers and how to make them work?*, Background study undertaken on behalf of the GIZ TRANSfer project.
- GIZ (2012) *Sourcebook Module 5b. Urban Transport and Energy Efficiency*. Available at [http://www.sutp.org/files/contents/documents/resources/A\\_Sourcebook/SB5\\_Environment%20and%20Health/GIZ\\_SUTP\\_SB5h\\_Urban-Transport-and-Energy-Efficiency\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/A_Sourcebook/SB5_Environment%20and%20Health/GIZ_SUTP_SB5h_Urban-Transport-and-Energy-Efficiency_EN.pdf)
- GIZ (2014) *Sourcebook Module 5e. Transport and Climate Change*. Available at [http://www.sutp.org/files/contents/documents/resources/A\\_Sourcebook/SB5\\_Environment%20and%20Health/GIZ\\_SUTP\\_SB5e\\_Transport-and-Climate-Change\\_EN.pdf](http://www.sutp.org/files/contents/documents/resources/A_Sourcebook/SB5_Environment%20and%20Health/GIZ_SUTP_SB5e_Transport-and-Climate-Change_EN.pdf)

### NAMA databases and reports:

- Transport NAMA database. Available at <http://www.transport-namadatabase.org/>
- Ecofys NAMA database. Available at [http://www.nama-database.org/index.php/Main\\_Page](http://www.nama-database.org/index.php/Main_Page)
- GIZ (2014) *Transport NAMA Report 2014*. Available at [http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report\\_2014.pdf](http://transport-namas.org/wp-content/uploads/2014/11/T-NAMA-Report_2014.pdf)

### Guidance on transport NAMAs:

- GIZ (2015) *Navigating Transport NAMAs. A practical handbook on Nationally Appropriate Mitigation Actions (NAMAs) in the transport sector*. Available at <http://transport-namas.org/resources/handbook/>
- *Transport NAMA Toolbox - Factsheets on different sustainable transport measures for potential NAMAs*. Available at [transport-namas.org/resources/toolbox/](http://transport-namas.org/resources/toolbox/)

### Examples of transport NAMAs:

- Sustainable Urban Transport (SUTRI) NAMA, Indonesia: [http://transport-namas.org/wp-content/uploads/2014/11/Overview\\_IND\\_SUTRI-NAMA.pdf](http://transport-namas.org/wp-content/uploads/2014/11/Overview_IND_SUTRI-NAMA.pdf)
- Transit Oriented Development (TOD) NAMA, Colombia: [http://ccap.org/assets/Colombia\\_Transport\\_Transit\\_Oriented\\_Development\\_May\\_2013\\_NAMA\\_Executive\\_Summary.pdf](http://ccap.org/assets/Colombia_Transport_Transit_Oriented_Development_May_2013_NAMA_Executive_Summary.pdf)
- TRANSPerú: [http://transport-namas.org/wp-content/uploads/2014/04/Overview\\_PERU\\_TRANSPeru.pdf](http://transport-namas.org/wp-content/uploads/2014/04/Overview_PERU_TRANSPeru.pdf)

**Climate finance:**

- Agence Française de Développement (AFD) (2015) *Who pays what for urban transport? – Handbook of good practices*. Available at [http://www.codatu.org/wp-content/uploads/handbook\\_good\\_practices.pdf](http://www.codatu.org/wp-content/uploads/handbook_good_practices.pdf)
- Buchner, B.; Stadelmann, M.; Wilkinson, J.; Mazza, F. Rosenberg, A.; Abramskieh, D. (2014) *Global Landscape of Climate Finance 2014*. Climate Policy Initiative (CPI). Available at <http://climatepolicyinitiative.org/wp-content/uploads/2014/11/The-Global-Landscape-of-Climate-Finance-2014.pdf>
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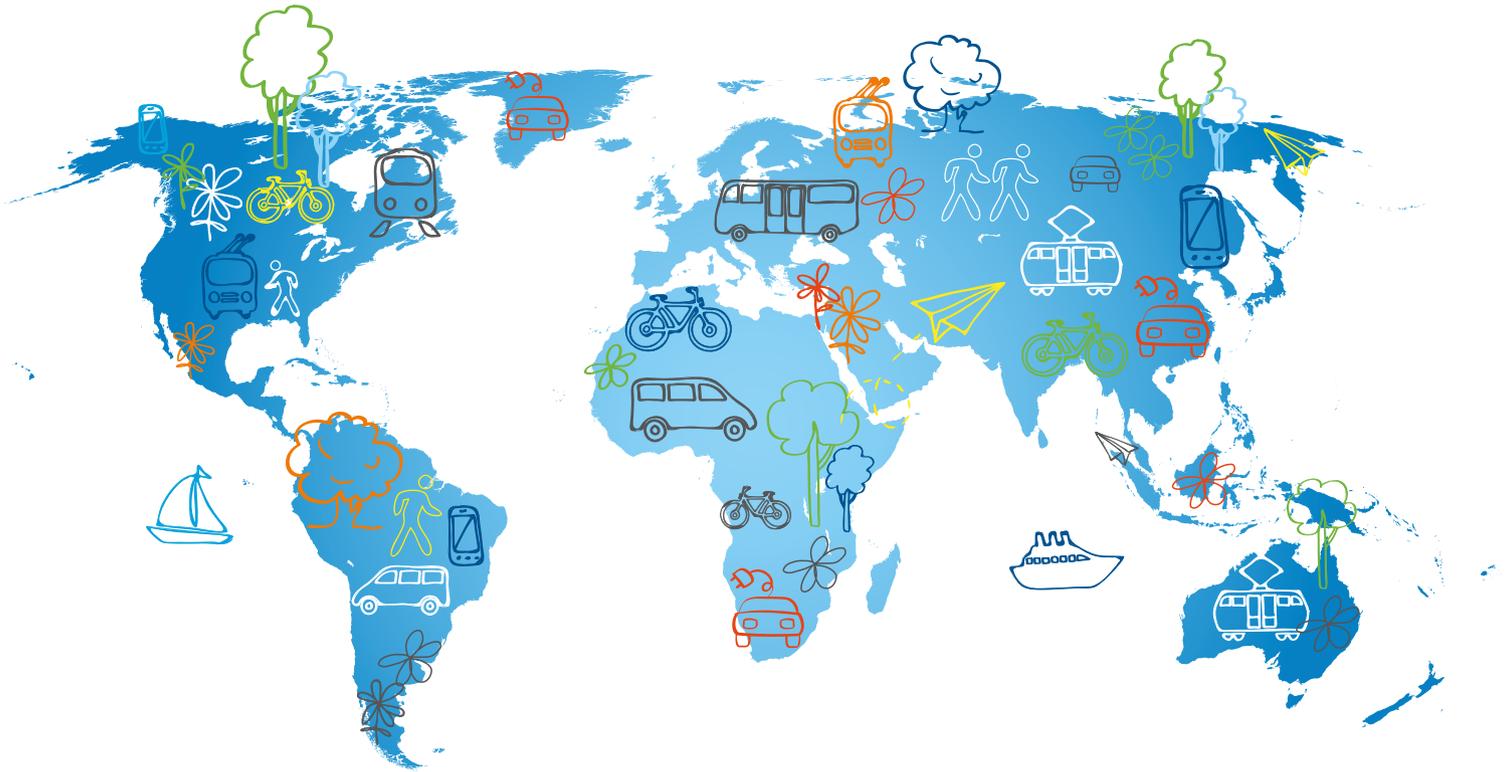
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