

Summary

With its White Paper 'National Climate Change Response' (2011) and the corresponding Transport Flagship Programme the Republic of South Africa aims at contributing to international climate change mitigation. The NAMA elaboration takes place in this framework.

Within the NAMA identification process the 'Passenger Modal Shift from Road to Rail – The Gautrain Case' has been chosen to be developed as NAMA for recognition. The Gautrain is an existing rapid rail network of around 80 km extension carrying around 42 000 passengers per day with expected increasing numbers of passengers in the coming years. It serves the important corridor from Johannesburg to Tshwane. TRANSfer supports especially the approach to measure, report and verify emissions reductions and co-benefits.

Policy identification

Policy framework In October 2011 South Africa released the White Paper 'National Climate Change Response' which includes the Transport Flagship Programme. It identifies key priority areas like enhanced public transport, shift from road to rail (both for passenger and freight transport) and improved vehicle efficiency. The Department of Transport is ready to contribute its fair share to the national climate change mitigation effort as espoused in the White Paper. Through the NAMA elaboration it envisages to consciously plan its interventions with regard to climate change and to enrich the Transport Flagship Programme. The Department of Environmental Affairs is the key coordinator of the overall climate change mitigation process and of the national MRV system.

The National Transport Master Plan and regional Public Transport Strategies (e.g. Gauteng) form further policy frameworks in which the NAMA elaboration takes place.

Stakeholders The National Department of Transport (DOT) of South Africa is in charge of designing the Transport Flagship Programme of the White Paper and responsible for transport NAMA elaboration. DOT is TRANSfer's main project partner. In addition, the National Department of Environmental Affairs (DEA) is involved in all project activities, as it is in charge of the framework for NAMAs and MRV. In the NAMA identification process different stakeholders (private sector, development banks, civil society, research institutions, ...) have been involved.

For the identified NAMA 'Passenger Modal Shift from Road to Rail – The Gautrain Case' the most important actors include the Gauteng Department of Roads and Transport, the South African National Roads Association (SANRAL), the Gautrain Management Agency and the Passenger rail Agency of South Africa (PRASA).

The above shall form part of a Transport NAMA Task Team chaired by DOT and supported by DEA within the framework of the National Transport Committee on Environment.

Process (I) **Step i) Analyse emissions and mitigation potential**
A general study on NAMA development in the transport sector in South Africa has been conducted. It includes an overview of transport emissions in the transport sector, summarises existing climate change policies and identifies relevant stakeholders and their roles. »»»



Gautrain approaching Malboro Station
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<p>»» Process (II)</p>	<p>Step ii) Identify Possible NAMAs Several meetings with relevant stakeholders (ministries, private sector, development banks, civil society and research institutions) were held to get a common understanding of South Africa's transport priorities with regard to the Transport Flagship Programme and an overview of possibilities in the context of NAMAs. In the follow-up of these meetings the Workshop 'Establishing Transport NAMAs in South Africa' has been organised and took place in August 2012. The output was a long list of NAMA ideas, categorised into 3 types (Ready-to-go-NAMA, mid-term NAMA, long-term NAMA).</p> <p>Step iii) Select and Refine With the intention of concretising the workshop results follow-up meetings between DOT, DEA and GIZ took place (<i>inter alia</i> at COP18 in Doha). It was agreed that an assessment of the four identified 'Ready-to-go-NAMAs' would be done following <i>five main criteria</i>:</p> <ol style="list-style-type: none"> 1. Success chance/ease of implementation (technical and operational feasibility, status of development, etc.) 2. Mitigation Potential (direct and indirect impacts) 3. Co-benefits (social, economic, environmental) 4. Costs/finance options (abatement costs, access to financial resources, etc.) 5. MRV (need for data, complexity of methodology, etc.) <p>The analysis came to the result that the 'Passenger Modal Shift from Road to Rail – The Gautrain Case' would suit best for a first transport NAMA elaboration as NAMA for recognition.</p> <p>Step iv) Elaborate Data After the selection of the 'Passenger Modal Shift from Road to Rail – The Gautrain Case' to be developed as NAMA a study needs to be undertaken. This study shall collect data and identify data gaps, define a baseline and propose an approach for measuring, reporting and verifying emissions reductions and co-benefits resulting from the Gautrain. It is being conducted in 2013.</p>
<p>Type and status of the mitigation action</p>	<p>The Gautrain is an existing rapid rail network in Gauteng. The Gautrain project was initiated in 2006 and service started in August 2011.</p> <p>In combination with the Gautrain buses and the electronic toll on the freeway the Gautrain is part of encouraging a shift from individual motorised transport to public transport.</p> <p>Emissions reduction and congestion impact of Gautrain on the individual motorised transport between Johannesburg and Tshwane has not yet been assessed systematically.</p> <p>The Gautrain could be registered as NAMA for recognition.</p>
<p>Barriers for implementation</p>	<p>The Gautrain is already implemented. For a possible extension of the Gautrain or other passenger rail projects in South Africa the following barriers would have to be overcome:</p> <ul style="list-style-type: none"> ■ Investment costs for rail are significant; ■ Developed urban landscape poses a challenge for additional rail investment; ■ Rail is a national responsibility and is sometimes neglected in planning at local and provincial planning levels; ■ Restricted capacity to undertake massive passenger rail projects.
<p>Lessons learned</p>	<p>The process of identifying the most appropriate action/policy to be developed as NAMA takes time even when general transport priorities are set. This is mainly due to few international and national experiences and guidance. After this learning process it is expected that future NAMA elaborations could be done more quickly.</p> <p>Institutional structures should be set up to have clear responsibilities of the NAMA elaboration and implementation process.</p>

MRV

<p>Key parameters</p>	<p>The preparation of an MRV approach is topic of a study which is to be conducted during the summer of 2013.</p> <p>The MRV approach and its parameters will be developed with the guidance of the general MRV framework provided by the Department of Environmental Affairs.</p> <p>The key parameters of the approach would include ridership numbers on Gautrain, number of vehicles on the Freeway between Johannesburg and Tshwane, cost of travel including toll fees, cost of rail travel, emission factors for private cars, electricity use and emission factor for Gautrain, etc.</p>
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Available data & data needs	Analysis of data availability, assessment of its quality and analysis of data needs will be part of the mentioned study. Data for the freeway and the Gautrain will be available at the South African National Roads Association (SANRAL), the Gautrain Management Agency and the Passenger rail Agency of South Africa (PRASA).
Ex-ante and ex-post estimations	Will be subject of the mentioned study.
MRV process	Will be subject of the mentioned study.
Lessons learned	The MRV approach for specific mitigation actions/policies shall be placed in the broader context of a national MRV system. It should be clarified how individual NAMA data can be used for the national MRV system. Additional data needs should be in line with existing processes and research efforts.

Funding and support needs

Technical support	Technical support focuses on the mitigation related aspects of the Gautrain and on linking the transport sector to the global climate architecture. Capacity development in MRVing emissions and co-benefits is needed on different levels and for different involved actors.
Finance	No finance needs at this point, possibly at a later stage for extension of the Gautrain or further passenger rail projects in South Africa. Financial needs will be identified using the results of the mentioned study.
Domestic finance	The Gautrain has mainly been financed domestically, its investment reaching around 23 billion Rand (around 1.9 billion Euro). For the investment in further projects towards a shift from road to rail the Republic of South Africa already allocated several billions of Rand.
Lessons learned	A lack of experiences in measuring, reporting and verifying emissions and co-benefits requires a systematic capacity development for MRV.



Possibilities of mixed-mode commuting
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Contribution to sustainable development

Co-Benefits	The co-benefits will be analysed as part of the mentioned study. Amongst others reduction in congestion, improved safety of road users, economic development around Gautrain stations (and in its catchment area), job creation, less air pollution and improved health are important co-benefits.
Monitoring of Co-Benefits	Monitoring of co-benefits will be part of the MRV approach which will be developed in the framework of the mentioned study.
Lessons learned	Co-benefits should be taken into account at each stage of the NAMA development and be part of the MRV. This does not only serve to communicate the diverse advantages of sustainable transport solutions but also helps to choose the most appropriate mitigation action.

Implementation

Status and next steps	The Gautrain itself is implemented. Its elaboration as a NAMA for recognition requires an MRV approach which is being developed in the framework of a study during summer 2013. Depending on the results of the study a registration in the UNFCCC registry is envisaged in autumn 2013.
Lessons learned	NAMAs can be elaborated from different stages of project implementation (new/greenfield initiatives, labeling of running projects/programs, up-scaling of existing initiatives, or a combination). It may be recommendable to start setting up a NAMA for recognition (already implemented measures) and to upscale these activities as a NAMA seeking support or to use the newly gained knowledge for the elaboration of new activities. The knowledge from an existing project helps to develop a financeable project and to set up a solid framework for MRV.



Gautrain Buses at Park Station
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Applied tools	<ul style="list-style-type: none"> ■ Inception Report ■ Long list ■ Screening Tool (adapted) ■ Terms of Reference MRV study
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