



# Unlocking Africa's Carbon Market

An overview of German initiatives

# Imprint

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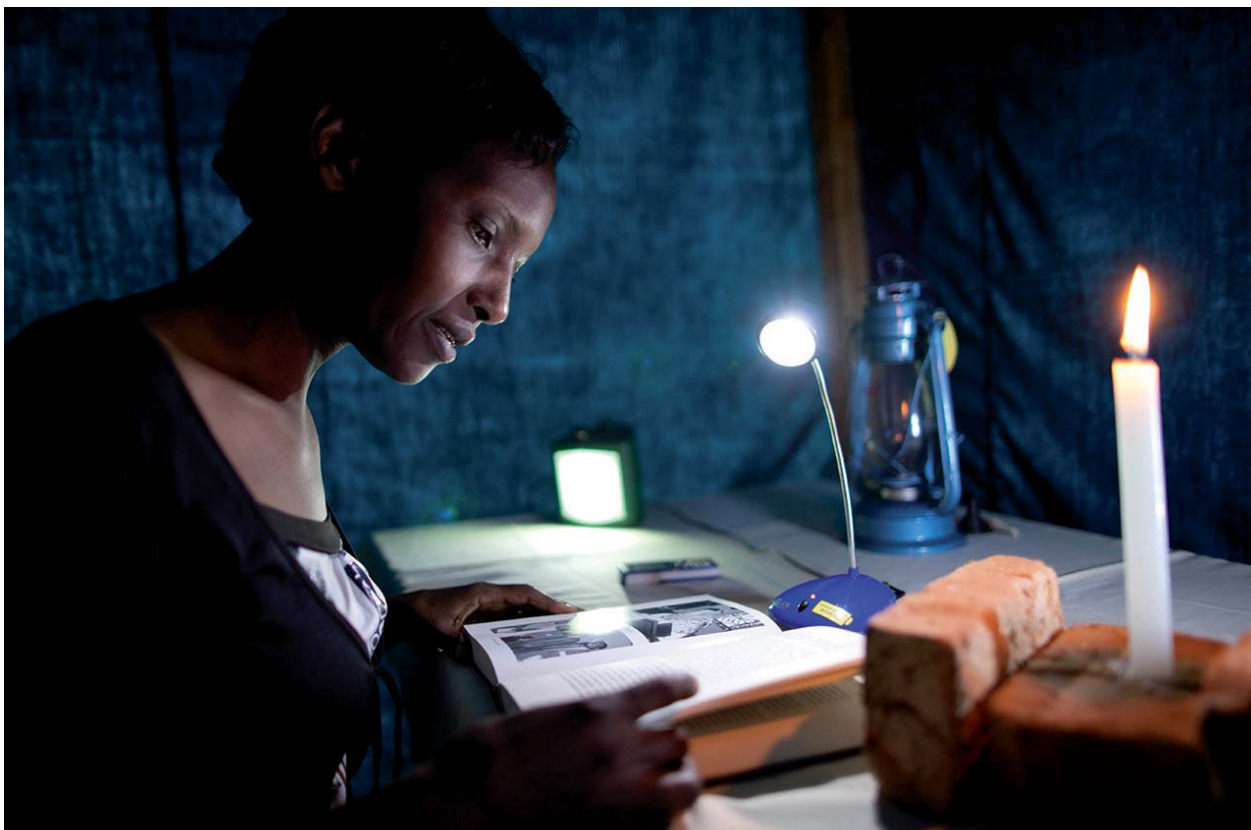
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# Setting the Scene

Climate change has been identified as one of the key threats to human society. It exposes individuals, societies, economic sectors and ecosystems to wide-ranging risks. The rise in average temperature of the earth's climate system leads to changing weather patterns, provoking droughts in some regions and flooding in others, temperature increases and heat waves, sea level rises and ocean acidification. Africa is among the regions most vulnerable to climate change and its countries with particularly low capacities to respond will be disproportionately impacted by the changes it

brings. This makes climate change mitigation a global imperative, with Africa as part of the solution. In order to stay within the temperature limits set out in the Paris Agreement, developed countries in particular will have to significantly raise their ambition in terms of climate change mitigation. International market-based cooperation and carbon markets can play a crucial role in this regard, enabling collective action that goes beyond current ambition levels. But the related benefits are not limited to climate protection: Climate action can also provide key sustainable development





benefits, such as increased access to clean energy services, poverty reduction and reduced negative health impacts, thus holding significant potential for all countries involved. Cooperative climate action can further strengthen the capacities needed to introduce domestic climate policies and in doing so, put countries in a better position to address climate change.

In the field of carbon markets and market-based cooperation, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) launched the first of its initiatives on the African continent more than a decade ago. By supporting the development of Clean Development Mechanism (CDM) activities as well as new conceptual approaches, BMU sought to strengthen Africa's role in the global carbon market and foster capacities in market-based climate change mitigation.

This engagement must be seen in the light of the fact that the African carbon market had experienced difficulties, including during the peak phase of the CDM. In large parts of Africa, building the necessary administrative and technical capacities proved particularly difficult. This together with the market's focus on large-scale emission sources resulted in an uneven distribution of projects, especially in the early stages of the CDM. This regional imbalance has been recognized by the United Nations Framework Convention on Climate Change (UNFCCC) bodies and several measures have been undertaken to support project development in the region. The situation improved with the development of the required domestic capacities and the broader application of new concepts, such as Programmes of Activities, which allowed smaller and more dispersed emission sources to be tapped. Despite these achievements, Africa was not able to fully benefit from the global carbon market – the market experienced a global turndown at the very moment when Africa would have been able to assume a more prominent role as a market player. This CDM market crisis was mainly due to a lack of ambitious emission reduction targets in developed countries – traditionally the main buyers of CDM credits – and a decline in industrial emissions in the wake of the global financial crisis in 2008 and 2009, which resulted in historic low demand for CDM credits.

With the Paris Agreement scheduled to become operational by 2020, a new era of market-based cooperation is set to begin. Under this new, truly global

regime, all countries are to contribute to climate change mitigation by adopting Nationally Determined Contributions (NDCs). In implementing their NDCs, Article 6 of the Agreement allows countries to cooperate by transferring mitigation outcomes internationally that can be used for NDC attainment: Under Article 6.2, countries can develop their own cooperative approaches in order to transfer mitigation outcomes. Parties may also choose to engage under Article 6.4, making use of the new market-based mechanism that will be supervised by an international body. For Africa, this represents an opportunity to build on the experience already gained and to develop a solid basis for its future role under the Paris Agreement. African countries have established domestic infrastructures and capacities under the CDM that could be used for Article 6 activities. Concepts such as Programmes of Activities and Standardized Baselines have proven particularly successful in Africa, showing that there is significant technical potential in the region. At the same time, there is strong interest from African countries to engage as players in a future carbon market and to develop domestic carbon pricing instruments.

With the goal of assisting African partner countries in preparing for the Paris Agreement and in order to promote carbon pricing and the emergence of a vital carbon market with a strong role for Africa, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports numerous initiatives in the region. In describing these initiatives, this brochure first outlines their different fields of operation and their geographic reach. This is followed by a brief introduction to the initiatives themselves. In subsequent sections, additional information is provided on related activities in the regions of West Africa, Southern Africa, East Africa and North Africa, followed by other initiative-related information, such as contact persons and the organisations involved. Readers wanting to find out more can refer to the further reading section for a list of recent policy papers, reports and other products developed by the initiatives. More in-depth information on each of the initiatives showcased in this brochure can be found online at: [www.carbon-mechanisms.de/en](http://www.carbon-mechanisms.de/en).

# Fields of Operation and Geographic Reach

Each of the initiatives supported by BMU has its own structure and comprises specific activities, thereby taking into account the specific circumstances under which it is being implemented. Despite these differences, all of the initiatives can be associated with one or more of the following fields of operation, thereby contributing to the promotion of carbon pricing and the emergence of a vital carbon market in Africa.

## Strengthening the African Voice

Assisting African negotiators in the UNFCCC climate negotiations and fostering local capacities in the area of global carbon markets is a pivotal goal of the German Environment Ministry. Support is provided by numerous initiatives by means of workshops and trainings, and by fostering knowledge exchange among negotiators. With these activities, the Paris Agreement and in particular its market-based components as well as its climate finance provisions are to be shaped and operationalised in a way that enables ample African participation.

## Unlocking Africa's Carbon Market Potential

Africa is home to numerous CDM activities and valuable experience has been gained in the implementation of innovative concepts, such as Programmes of Activities and Standardized Baselines. Ensuring the continuity of future-ready activities and exploring how promising CDM concepts can be integrated into the Paris regime are among the main objectives BMU is pursuing with many of its initiatives in Africa.

## Moving Towards Implementation: Article 6 Piloting

With the Paris Agreement scheduled to become operational by 2020, the global community is starting to move away from conceptual discussions and towards implementation. As piloting Article 6 activities in Africa and the involvement of the private sector will play an important role in this development, these are key components of a number of activities supported by BMU.

## Linking Carbon Markets with Climate Finance

The framework and the infrastructure introduced with the CDM have fostered the emergence of climate change mitigation project ideas in Africa. Some of these were not brought to the implementation stage, however, due to the difficulties involved in finding financial support in tight market conditions. Under these circumstances, climate finance represents an innovative way to make such projects viable. Climate finance provides developing countries with the financial support they need to implement their climate action, for instance through the Green Climate Fund (GCF). Results-based climate finance could also enable broader application and further development of many approaches and concepts that were developed in a carbon market context. Through some of its initiatives, BMU is supporting the transition of these CDM-based activities and approaches to the emerging field of climate finance.

## Developing Domestic Markets and Carbon Pricing

Carbon pricing is spreading worldwide and a growing number of countries are exploring ways to introduce carbon taxation or domestic emission trading schemes (ETS). In Africa, BMU has launched and is supporting a number of initiatives to assist its partner countries in this endeavour by exchanging experience gained, providing technical support and sharing lessons learned.



**The initiatives** supported by BMU differ not only with regard to coverage of these working areas, but also in terms of their geographic scope: While some initiatives focus on a specific African region or country, others have a global or continent-wide reach with individual activities being implemented in selected African countries. The map highlights the countries where BMU-supported activities in the area of market-based cooperation and carbon pricing are currently being implemented.



# At a Glance – German Initiatives in Africa

This section provides a general introduction to the initiatives supported by BMU in the field of market-based cooperation and carbon pricing. Readers interested in one specific activity can go straight to the respective section of the following sub-regional chapters (West Africa, Southern Africa, East Africa and North Africa), where in-depth information on country-specific activities can be found.

## Global Carbon Market



The BMU's Global Carbon Market Project assists public decision-makers worldwide in using market-based instruments for their national mitigation activities. Through studies and pilot activities, the project supports the strategic development of new instruments for market-based cooperation provided for under Article 6 of the Paris Agreement. The initiative also promotes private sector participation in developing and implementing market-based solutions, and advises both government agencies and the private sector on the potential benefits of the carbon market. Additional components of the initiative include the provision of trainings to prepare partner government representatives for the UNFCCC negotiations and supporting regional collaboration in the area of carbon markets. In Africa, the initiative is being implemented in North Africa (Tunisia) and East Africa (Uganda as well as additional East African countries, such as Burundi, Ethiopia, Kenya and Rwanda).

## West African Alliance on Carbon Markets and Climate Finance



The West African Alliance on Carbon Markets and Climate Finance creates a long-term structure for fostering carbon markets and result-based climate finance in West Africa that will integrate a variety of support activities. By setting up a permanent regional structure with a secretariat in Dakar, the Alliance aims to enhance the ability of West African countries to participate in international carbon markets and improve access to result-based climate finance for NDC implementation. The Alliance comprises 16 member states in West Africa (Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Nigeria, Liberia, Senegal, Sierra Leone and Togo).

## Climate Finance Innovators – Linking Carbon Markets with Climate Finance in Africa



The Climate Finance Innovators initiative aims at developing replicable climate financing models in African partner countries that are based on CDM components and activities. The initiative thereby establishes innovative linkages between UNFCCC market mechanisms and international climate financing institutions such as the Green Climate Fund. The project involves work with government partners and the private sector to formulate funding proposals that scale up existing pilot mitigation actions, thus mobilizing pre-2020 action with high sustainable development impacts. The project is being implemented in East Africa (Ethiopia and Uganda) and West Africa (Senegal).

## Nitric Acid Climate Action Group



In 2015, BMU launched the Nitric Acid Climate Action Group (NACAG) with the vision to equip all nitric acid plants worldwide with effective technology to abate nitrous oxide emissions as soon as possible and permanently. To facilitate the climate-friendly transformation of the global nitric acid sector, NACAG provides all governments and plant operators with guidance and information on technological and regulatory issues regarding N<sub>2</sub>O abatement. The initiative also provides financial support for partner countries willing to exploit this cost-effective reduction potential and take mitigation into their own hands from 2020 – for example in the context of their NDCs. In Africa, this global-reach initiative is active in South Africa, Zambia and Zimbabwe (Southern Africa) and in Tunisia, Algeria and Egypt (North Africa).

## Collaborative Instruments for Ambitious Climate Action

Collaborative Instruments for Ambitious Climate Action (CI-ACA) is an initiative implemented by the UNFCCC through its Regional Collaboration Centres (RCCs) and supported by voluntary contributions from a number of national governments, including the German Federal Government through BMU. CI-ACA offers tailored support to jurisdictions in developing carbon pricing instruments, covering the entire process from identification of possible policy options, to development of concrete proposals for use in instrument development and design, and through to instrument roll-out on the ground. In Africa, the CI-ACA initiative is being implemented in Senegal (West Africa) and in Uganda (East Africa).

## Carbon Pricing Leadership Coalition

With the aim to further promote carbon pricing, the Carbon Pricing Leadership Coalition (CPLC) brings together leaders from national and sub-national governments, the private sector and civil society. The CPLC serves as a platform for dialogue, enabling participants to exchange views on and experience with carbon pricing policies and instruments. Through dialogue and collaboration, the introduction of carbon pricing policies and instruments is to be promoted and implementation of existing policies strengthened. In 2018, a working group focused on Africa was set up to allow CPLC partners to engage and discuss how carbon could be priced in the context of sustainable development, the aim being to develop a narrative on carbon pricing that resonates with the realities and development projects of countries in the region. Working group members exchange regularly on recent developments in Africa and share lessons learned. CPLC's governmental partners in Africa are Ethiopia, Morocco and Côte d'Ivoire. With Germany closely involved in the support activities carried out by the CPLC in Côte d'Ivoire (West Africa), these are outlined in this publication.

## Partnership for Market Readiness

The Partnership for Market Readiness (PMR) is a World Bank initiative that promotes the establishment of a global carbon market and supports countries in preparing and implementing innovative carbon market instruments. The PMR provides financial and technical support while also serving as a dialogue forum to aid the sharing of experience between countries. In Africa, the BMU-supported initiative assists Côte d'Ivoire, Morocco, South Africa and Tunisia. Germany has been collaborating closely with Côte d'Ivoire (West Africa) and Tunisia (North Africa) in the field of carbon pricing, which is why this brochure describes their activities in somewhat greater detail.

## Update of the Southern African Power Pool (SAPP) Standardised Baseline

Standardized Baselines (SB) enable emission reductions to be determined in an objective and sensible way. They were developed under the CDM to reduce transaction costs and simplify processes. One such Standardized Baseline is the regional Grid Emission Factor (GEF) of the Southern African Power Pool (SAPP), an electricity system interconnecting nine sub-Saharan countries. This research project supported the process involved in updating the GEF, which can be applied in nine countries in Southern Africa (Botswana, the Democratic Republic Congo (DRC), Eswatini, Lesotho, Mozambique, Namibia, South Africa, Zambia and Zimbabwe).

- Strengthening the African Voice
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## A Southern African Power Pool (SAPP) Results-based Renewable Energy Financing Mechanism

The main objective of this initiative was the development of a regional pilot programme for use in testing Article 6 cooperative approaches. This work resulted in a concept for the Clean Energy Fund for the Southern African Power Pool (CEF4SAPP). Once operational, this fund could disburse results-based climate finance for renewable energy deployment activities in nine countries in Southern Africa (Botswana, DRC, Eswatini, Lesotho, Mozambique, Namibia, South Africa, Zambia and Zimbabwe).

## Reduction of Technical Losses in the Electricity Transmission and Distribution Networks

This research project explores options for using Article 6 of the Paris Agreement to support developing countries in achieving their NDC targets. It assesses whether existing instruments such as Standardized Baselines could be further developed and simplified to serve as accurate and transparent instruments for use in accounting for emission reductions achieved under the Paris Agreement's Article 6. The initiative is being implemented in Uganda and in three Southern African countries (Mozambique, Zambia and Zimbabwe).

## PoA Working Group

The PoA Working Group focuses on the scientific, regulatory and policy-making aspects of Programmes of Activities (PoAs) that originated as part of the CDM, but have become increasingly relevant for international climate financing and Article 6 of the Paris Agreement. As a global-reach initiative, the PoA Working Group does not focus on specific regions or countries. However, its work on fostering the programmatic CDM is particularly relevant for Africa, where PoAs have been implemented to a much greater extent than single CDM projects, thereby contributing, for instance, to the deployment of decentralized

technologies. The PoA Working Group provides a platform for dialogue, thus enabling the exchange of experience and coordination of measures to improve the rules for the programmatic CDM.

## Future of the Carbon Market Foundation

The Foundation Future of the Carbon Market was initiated with the aim of providing upfront financing for innovative and programmatic carbon market mechanisms to strengthen existing and develop future carbon market approaches, thereby contributing to the development of low-carbon economies. The Foundation currently supports a total of four mitigation activities in Africa, two of which – the programmes in Southern Africa (Zambia) and East Africa (Uganda) – are portrayed in this brochure.

## Offsetting the Climate Impact of German Federal Government Business Trips

In light of the fact that air travel is particularly climate-damaging, the German Federal Government has decided to offset the greenhouse gas emissions from all business travel that employees of ministries and subordinate national authorities conduct by air or by car. The programme started by offsetting the emissions from the legislation period 2014 to 2017, but is being extended on a yearly basis. The programme uses high-quality emission certificates generated under the CDM that come with additional sustainable development benefits. Among the activities selected for the period 2014 to 2017 were six African programmes, three of which are described in this brochure: One in West Africa (Nigeria), one in Southern Africa (South Africa) and one in East Africa (Rwanda).

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## Africa Climate Week

The Africa Climate Week (ACW) is a leading regional conference and exhibition for climate action related to markets and economic instruments. The event, supported by BMU and co-organised by the UNFCCC, the World Bank Group, the African Development Bank, the West African Development Bank (BOAD), the International Emissions Trading Association (IETA), UNEP and UNEP DTU Partnership, UNDP, and the Africa LEDS Partnership, is hosted each year by an African Government – this year by Ghana.

Under the heading ‘Climate Action in Africa: A Race We Can Win’, ACW 2019 will focus on how engagement between state and non state actors can be further strengthened in the key sectors for Africa (energy, agriculture and human settlements) – including the role of future carbon markets to achieve enhanced climate action – in order to meet the goals of sustainable development. With the finalization of the Paris Agreement Work Programme at COP24 – part of the Katowice Climate Package – the world has entered a new era in our collective efforts to address climate change. Whereas pre-COP24 efforts focused on defining the Paris Agreement, this new era is about enhancing national ambition to implement the Agreement. We will only succeed in delivering the Paris vision if we leverage the power of cooperation through financing, market mechanisms and technology. The Africa Climate Week 2019 is therefore crucial when it comes to building the ambition needed to close the gap.

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





# West Africa

West Africa is home to more than 300 million inhabitants and is characterized by rapid population growth. The region is united beyond national borders by common traditions and languages. Economic, commercial and social interdependencies are being reinforced. Countries in the region are working towards the vision of a borderless region, harmonized policies and a single currency. Strong political cooperation among the countries in the region provides the opportunity to address the most pressing development challenges, such as food and health crises, and also climate change. West Africa has recently become a focus region for BMU's activities in Africa. One cornerstone activity is the West African Alliance on Carbon Markets and Climate Finance, a multi-country initiative that also comprises country-specific support activities and close collaboration with other BMU initiatives in the region. West Africa also hosts some of the mitigation activities supported by BMU through initiatives such as the Future of the Carbon Market Foundation.





Cape Verde

The Gambia

Guinea-Bissau

Sierra Leone

Liberia

Senegal

Guinea

Côte d'Ivoire

Ghana

Togo

Burkina Faso

Benin

Mauritania

Mali

Niger

Nigeria



## The West African Alliance on Carbon Markets and Climate Finance

The West African Alliance on Carbon Markets and Climate Finance aims to enhance the participation of West African countries in international carbon markets and improve access to results-based climate finance. Active participation of West Africa in the UNFCCC negotiations is key in ensuring that their interests are represented. Likewise, members participating in international discussions become thought leaders in their respective countries. Therefore, the Alliance thus provides financial support to aid participation by members that would otherwise not have the means to attend the negotiations. Supported members serve as the chairs of the Alliance's thematic working groups. Four working groups on carbon markets and carbon pricing, transparency, climate finance and technology transfer have been set up.



**Ousmane Fall Sarr,  
Alliance Coordinator**

“We have to make carbon markets accessible for West African countries to make sure least developed countries do not miss the train under the Paris

Agreement as they did with the CDM. The active participation of African countries in designing Article 6 guidance and rules as well as the early onset of piloting activities lie at the core of fostering Africa's long-term position in the emerging carbon markets.”

The operationalization and technical implementation of the Alliance is supported by the West African Development Bank (BOAD) in collaboration with the UNFCCC Regional Collaboration Center Lomé, Climate Focus and the Dakar-based NGO ENDA Energie. In order to bring West African countries together in implementing and preparing for carbon markets and international climate negotiations, the Alliance also cooperates with other BMU-supported initiatives. In the context of such cooperation, the West African Alliance may receive support in the form of capacity building activities and peer-to-peer learning workshops as part of the Climate Finance Innovators

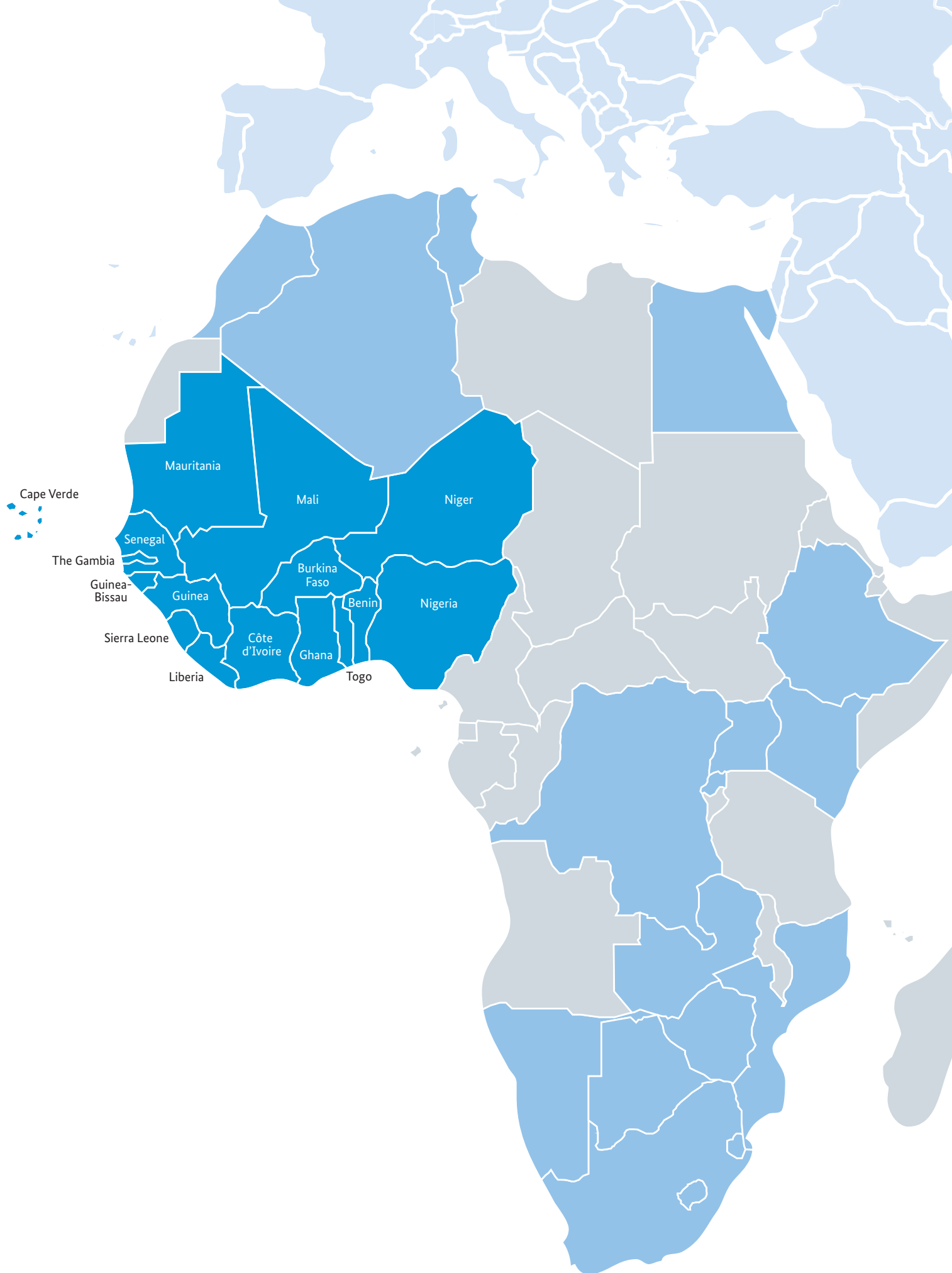
project, which aims to develop replicable climate financing models – based on CDM components and activities – in Ethiopia, Senegal and Uganda. The Alliance's cooperation with the Carbon Pricing Leadership Coalition (CPLC) and the Partnership for Market Readiness (PMR) further enables members to share experience gained in the process of developing domestic carbon pricing instruments.

The West African Alliance became fully operational in 2017. Following a call for applications for its Article 6 in-country readiness support programme in 2018, Togo and Nigeria were selected to be the first countries to receive tailored readiness support. The readiness support activities in Togo aim at enhancing the country's MRV capacities and provide recommendations on institutional arrangements and transition pathways for its CDM portfolio. Activities mainly focus on the energy sector and particularly rural electrification, a sector identified as most suitable for carbon market or climate finance support in close coordination with the national authorities. In Nigeria, the West African Alliance supports the government in preparing for the new Paris climate regime by exploring key issues, such as how carbon markets can support Nigerian NDC implementation, the institutional set-up needed to deal with the new conditions under the Paris Agreement and to participate in Article 6, and how the future might look for Nigerian projects under the CDM.

## Impacts and Achievements

The Alliance has grown in membership and now represents 16 West African countries – Alliance affiliation of all ECOWAS countries plus Mauritania was achieved in record time. In advance of the climate negotiations in Katowice, Poland, the Alliance successfully informed and enhanced the position of the African Group of Negotiators on Article 6 of the Paris Agreement, and a high level of representation of West African Parties in the negotiations.





## Climate Finance Innovators – Activities in Senegal

With the aim of developing innovative climate financing models, the Climate Finance Innovators initiative cooperates with governments and the private sector in order to link climate finance instruments with market-based mechanisms. The initiative is being implemented by Perspectives Climate Group in collaboration with Climate Focus, AERA, Carbon Africa, Afrique Energie Environnement and South South North. In West Africa, where the initiative is also being implemented, a Memorandum of Understanding has been signed with Senegal, setting out the conditions for initiative-related cooperation. Related activities in Senegal comprise two components:

1) The first consists of assisting Senegal in developing a climate finance proposal with the goal of it being submitted to a climate finance institution such as the Green Climate Fund (GCF). The initiative will support the entire development process as well as the selection of a suitable mitigation activity. The selected activity should be eligible for climate finance (e.g. meet GCF investment criteria), be prioritized by government stakeholders and link to market mechanisms and Article 6 under the Paris Agreement.

### El Hadji Mbaye Diagne, Directeur Général Afrique - Energie – Environnement Lead Coordinator of the African Group of Negotiators on Article 6

“Many important activities are already happening in Senegal in the area of carbon markets and carbon pricing instruments. We need to connect the dots and clarify how international cooperation under Article 6 can support Senegal’s climate change ambition, and this is where this project can make a relevant contribution.”

2) The second involves the initiative providing capacity building support. With the goal of strengthening Senegal’s national capacities in the fields of market-based mechanisms, Article 6 readiness and climate finance, the initiative will provide technical support, making available methodological concepts to generate multiplier effects for NDC implementation. The exact scope of the support will be agreed and developed in close consultation with the support recipient and Senegalese stakeholders. A relevant starting point for capacity building will be, among other things, Senegal’s application for Article 6 readiness support to the West African Alliance on Carbon Markets and Climate Finance.

## PMR and CPLC: Supporting Carbon Taxation in Côte d’Ivoire

Côte d’Ivoire is a middle income country in Western Africa that is a technical member of the Partnership for Market Readiness (PMR) and also a governmental partner of the Carbon Pricing Leadership Coalition (CPLC) hosted by the World Bank. In this role, Côte d’Ivoire is exploring possibilities to introduce a domestic carbon tax. The tax is to contribute to the achievement of the country’s NDC which aims at reducing the national greenhouse gas emissions by 28% by 2030 compared to 2012 and increasing the share of renewables to 42% in the power mix. The resulting carbon tax revenues are to be used to assist climate change mitigation activities in Côte d’Ivoire. This decision on revenue use must be seen against the backdrop that, in the past, a lack of finance has been identified as the main barrier to the development of climate protection projects in Côte d’Ivoire.

The PMR and CPLC activities in Côte d’Ivoire were kicked-off with a workshop in October 2018, initiating inter-ministerial dialogue on the potential, objectives and opportunities for a carbon tax in Côte d’Ivoire. A first mapping of the environment-related taxation framework has since been finalized in order to identify and select design options for the carbon tax best suited to the economic structure in Côte d’Ivoire. As a member of the West African Alliance, Côte d’Ivoire can regularly share its experience with the other countries in the Alliance.



## The Collaborative Instruments for Ambitious Climate Action: Exploring Carbon Pricing Options for Senegal

The Collaborative Instruments for Ambitious Climate Action (CI-ACA) initiative aims at assisting countries in the development of domestic climate policies instruments such as carbon markets, carbon taxes, and other emission reduction instruments with strong monitoring, reporting and verification components. One of the initiative's partner countries is Senegal, where the UNFCCC Secretariat and the Regional Collaboration Centre of Lomé are collaborating with Perspectives Climate Research gGmbH, Afrique Energy Environnement (AEE), the Department of Environment and Classified Establishments (DECC) Senegal and the National Committee on Climate Change (COMNAC) to explore the potential for introducing carbon pricing policies.

As part of these activities, a research study has been developed that evaluates various options for the introduction of domestic carbon pricing instruments. The work includes an analysis of the national legal, regulatory and fiscal framework, as well as a presentation of examples of carbon pricing schemes at the international level. A national consultation process identified the most relevant instruments for the prioritized sectors. Recommendations were made on the most relevant instrument for achieving Senegal's NDC targets and ranking of instruments according to national priorities and the feasibility of their implementation. The consultation process resulted in the identification of a carbon tax as the preferred pricing instrument for Senegal. Building on the study's findings, the initiative is developing an action plan that takes into account the experiences made in other countries of the region and allows for direct interaction and coordination with national policymakers. Following an evaluation and further development of the action plan with key stakeholders, on the ground support will be provided for the advancement and deployment of the carbon pricing instruments in Senegal.

## Improved Cooking Stoves for Nigeria Programme of Activities

*In Nigeria, about 75% of families still use three-stone fires and firewood for daily cooking. This enormous need for firewood has led to almost complete and increasing deforestation, especially in the poor northern parts of the country. Firewood is thus scarce in northern Nigeria and must be transported from the south, leading to high energy costs. The CDM Programme of Activities "Improved Cooking Stoves for Nigeria" aims at changing the situation. By reducing the amount of wood needed for cooking by 80%, the programme not only mitigates climate change but also leads to economic benefits and improved health for its users. The programme is used to offset the climate impact of German Federal Government business trips and more than 40,000 credits have been cancelled to offset emissions from 2015, 2016 and 2017.*



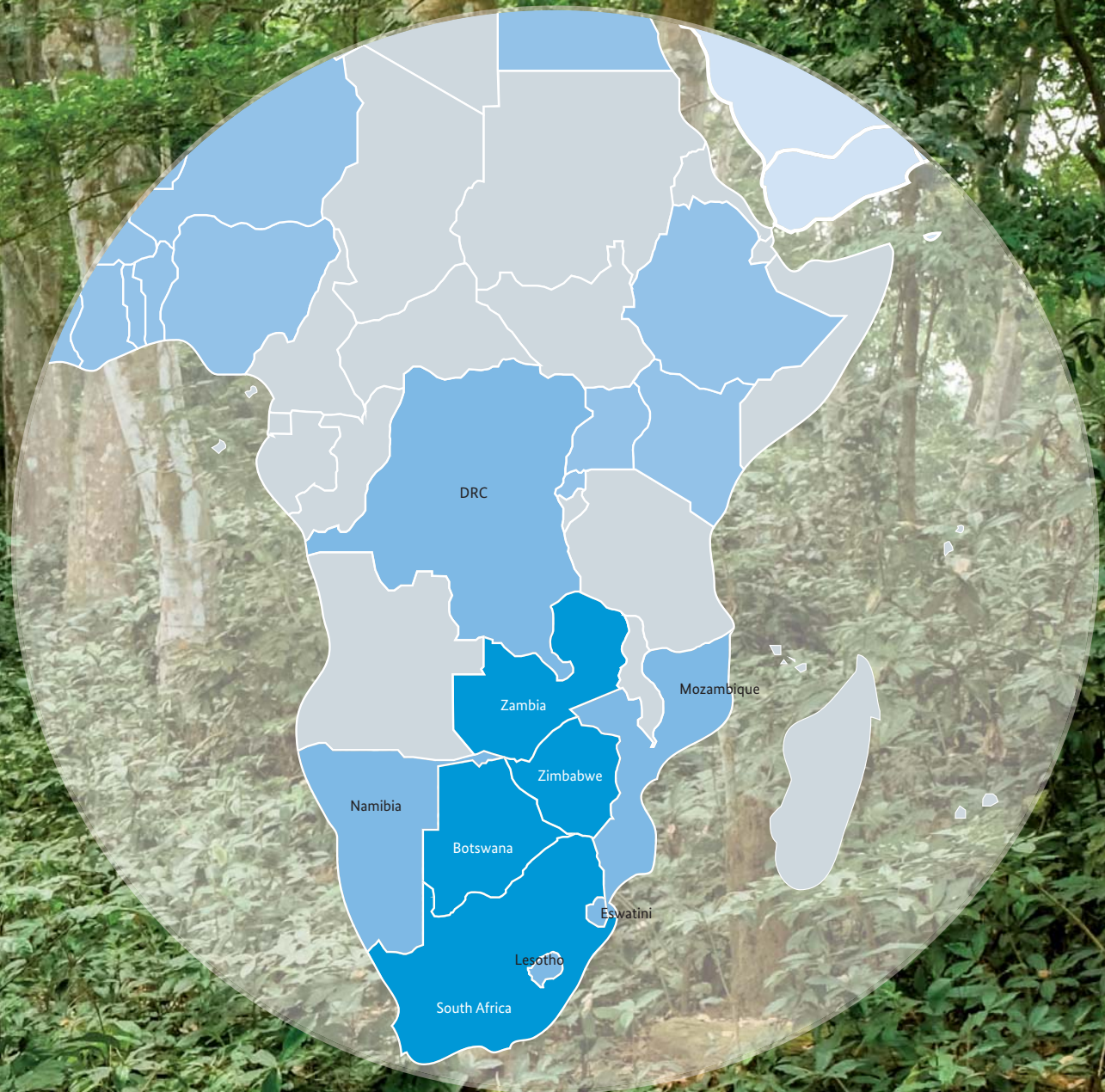


# Southern Africa

With the notable exception of South Africa, the Southern African region has in the past not been able to benefit from the global carbon market when compared to other regions. In order to enhance the role of Southern Africa in the future carbon market, BMU is funding initiatives that support project development by enhancing data availability and piloting new mitigation options. By way of its Nitric Acid Climate Action Group, BMU further supports partner countries in the region in realizing their mitigation potential in the nitric acid sector, while individual project activities are being supported through the initiative for offsetting the climate impact of business trips made by German Federal Government employees.









## Updating the Standardized Baseline for the Southern African Power Pool

Standardized Baselines (SB) were developed under the CDM to reduce transaction costs and simplify processes. They allow emission reductions to be determined in an objective and sensible way. SBs could in the future enable the development and MRV of climate protection programmes for market-based cooperation under Article 6 of the Paris Agreement. One such Standardized Baseline is the regional Grid Emission Factor (GEF) of the Southern African Power Pool (SAPP), an electricity system interconnecting nine sub-Saharan countries. With the GEF benchmarks expiring in 2017, there was a pressing need to update the SB. This project implemented by GFA Consulting Group in collaboration with the SAPP Coordination Centre (SAPP CC) and focal points of the member countries supported the updating process through numerous activities, including modelling and calculations, preparation of submission, validation and official approval of the SB by the UNFCCC Secretariat. The renewed Standardized Baseline enables the nine sub-Saharan countries to participate in future cooperation programmes under Article 6 of the Paris Agreement and simplifies access to public climate financing, for instance under the Green Climate Fund (GCF).

### Johnson Maviya, Environmental Officer at SAPP

“The Southern African Power Pool (SAPP) has taken a position to increase the contribution of renewable energy in the region as spelled out in the SAPP Pool Plan for the period 2019 to 2040 and this project presents an opportunity for that to be achieved.”



## Impacts and Achievements

The initiative has successfully renewed the Standardized Baseline (Regional Grid Emission Factor (GEF)), which enables the nine sub-Saharan countries to participate in future cooperation programmes under Article 6 of the Paris Agreement and simplifies access to public climate financing (e.g. Green Climate Fund). The regional GEF forms the basis for determining emission reductions through renewable energy and energy efficiency activities.



## A Southern African Power Pool (SAPP) Results-based Renewable Energy Financing Mechanism

With the goal of developing a regional programme for Article 6 pilot activities, this initiative developed a concept for the Clean Energy Fund for the Southern African Power Pool (CEF4SAPP) that is to support renewable energy deployment in the member countries of the Southern African Power Pool (SAPP). The project is being implemented by GFA Consulting Group GmbH and the UNFCCC Secretariat together with the SAPP Coordination Centre (SAPP CC), the focal points of the member countries as well as their national ministries of energy and national electricity regulators. Using the long-term energy planning of member countries, the concept of a “forward looking baseline” was developed that allows an assessment as to which renewable energy projects would be eligible to receive funding from the CEF4SAPP. This approach is essentially a proposal for the design of the first regional Article 6 pilot activity.

## Reduction of Technical Losses in the Electricity Transmission and Distribution Networks

The installation of Reactive Power Compensation (RPC) equipment at industrial facilities contributes to reducing the high technical energy losses in transmission and distribution networks. Whereas the technology is proven and an applied standard in industrialized countries, the technical losses continue to occur in nearly all developing countries, thus harbouring vast mitigation potential. This BMU-supported project assessed the regulatory framework and financing options for RPC installations in four countries: Uganda, Mozambique, Zambia and Zimbabwe. It was implemented by GFA Consulting Group GmbH in collaboration with representatives of energy regulatory authorities, transmission and distribution companies, ministries of environment and energy from all four countries as well as the Development Bank of South Africa (DBSA). It is planned to implement Article 6 pilot programmes to deal with emission reductions by installing RPC technology in the four countries in the course of 2019. Preparatory work is already underway. The programmes have a lifetime of six years.



## NACAG Activities in South Africa, Zambia and Zimbabwe

Aiming at the climate-friendly transformation of the nitric acid sector on a global scale, the Nitric Acid Climate Action Group (NACAG) is also supporting governments in Southern Africa in realizing the cost-effective mitigation potential in the nitric acid sector. In December 2018, a dialogue and exchange process was initiated with South Africa to discuss the NACAG initiative with plant operators and the Department of Environmental Affairs. All of South Africa's nitric acid producers have successfully operated abatement technology in CDM projects over the past decade. In light of the current lack of demand for CDM credits, NACAG offers support to aid continuation of these abatement activities. The government of South Africa is currently exploring options to join the initiative and has agreed to take further steps to intensify cooperation.

Dialogue has also been initiated with Zambia, where the initiative was presented to the Industrial Development Corporation (IDC) in December 2018. The IDC manages Zambia's only nitric acid plant, Nitrogen Chemicals of Zambia. It was agreed to further intensify cooperation between NACAG and Zambia in the future. The NACAG Secretariat also carried out a technical feasibility study of Zimbabwe's only nitric acid production plant, operated by the private company Sable Chemicals. The study entailed a three-day onsite visit and assessed whether the installation and sustainable operation of nitrous oxide abatement technology would be feasible at this specific site.

Building on the positive result of the study, it was jointly decided to initiate further steps in proceeding with plans to install nitrous oxide abatement technology at the plant.

## Improved Cook Stoves Programme for Zambia

*The Future of the Carbon Market Foundation provides upfront financing for innovative and programmatic carbon market mechanisms. In Zambia, the Foundation has signed an Emission Reduction Purchase Agreement (ERPA) with C-Quest Capital, which implements the CDM PoA together with its local partner COMACO. The programme involves the installation of up to 80,000 efficient cook stoves mainly made of local materials and assembled by the users themselves through training provided by project partners. The upfront payment by the Foundation has already been completely compensated through the cancellation of more than 160,000 credits on behalf of the Foundation. Moreover, the PoA strongly contributes to Zambia's climate policy framework, directly relating to targets of the country's NDC. In addition to its climate change mitigation impact, the programme delivers health benefits through reducing indoor air pollution and supports women who can spend time saved for collecting firewood on alternative activities like family care.*



## South Africa Renewable Energy Programme

*South Africa's growing energy demand is still mainly covered by domestic coal. Despite environmental conditions being very favourable for the use of wind or solar power, independent generation of electricity in private small-scale plants makes up only a fraction of total electricity generation. The South Africa Renewable Energy Programme (SA-REP) aims at changing the situation. The programme supports the development and implementation of small-scale renewable energy projects in South Africa by ensuring the financial viability of projects and*

*facilitating access to capital. The programme is one of the activities selected for **offsetting the climate impact of German Federal Government business trips** and a total of 73,030 credits have been acquired and cancelled for the purpose. The programme is associated with numerous non-climate benefits: In addition to minimizing the climate impact of energy generation, the programme creates new jobs for the local population country-wide and improves regional and national energy supply while reducing dependency on fossil fuels. By contributing to the breakthrough of renewable energy solutions, SA-REP makes a major contribution to South Africa's energy transition.*



# East Africa

More than 172 million people live in the East African Community region, which is deeply interconnected through political, economic, social and environmental cooperation between the member states. The main pillars of the East African economy are threatened by climate change and the resulting effects on temperature and precipitation, and the occurrence of extreme weather events in the region. The effects of climate change also have additional, cross-cutting implications for water availability, food security and human health. Besides developing and implementing climate change adaptation measures, countries in the region are keen to take a low greenhouse gas development path and mitigate climate change by promoting carbon mechanisms. Most recently, Eastern African countries have been working on a more strategic cooperation approach by establishing an alliance on carbon markets and climate finance. In light of the above, East Africa has been one of the focus areas for the German Federal Environment Ministry (BMU) for several years, with BMU supporting various initiatives aimed at promoting market-based mitigation activities in the region.







## Global Carbon Market Project – Uganda and East Africa

The main goal of the Global Carbon Market Project is to equip public and private decision-makers from the East African member countries plus Ethiopia with the necessary knowledge and skills to design and use existing and new carbon market instruments for the implementation of their Nationally Determined Contributions (NDCs). At the same time, the project promotes the participation of the private sector in developing and implementing carbon market mechanisms. It also provides capacity building for negotiators in the region through training workshops to improve their skills and build their understanding of the key themes in the UNFCCC discussions. The project additionally involves close collaboration with other carbon market-related activities in Africa that are funded by BMU, such as the Climate Finance Innovators initiative and the CI-ACA initiative.

### Impacts and Achievements

In Uganda, the Global Carbon Market project has conducted several awareness raising activities, among them trainings for public and private sector actors on key issues related to market-based approaches for the mitigation of climate change. Beneficiaries include public sector representatives – for example, 80 climate negotiators from six countries and 217 parliamentarians from Uganda's Parliamentary Forum on Climate Change. More than 50 enterprises were advised on how to utilize carbon markets, resulting in eight biomass energy activities. Across three countries, three standardized baselines (one completed, two in their final stages) have been developed and one has been updated.



### Climate Finance Innovators – Activities in Ethiopia and Uganda

The Climate Finance Innovators (CFI) initiative aims at establishing innovative linkages between market mechanisms and international climate financing institutions with the goal of developing replicable climate financing models. The project conducted by Perspectives Climate Group is being implemented in cooperation with Climate Focus, Carbon Africa, Afrique Energie Environnement and South South North.



**Tesfaye Hailu, Country Programme Manager at South South North**

“As part of this initiative, we are currently evaluating various off-grid energy models that work in the Ethiopian context and also fulfil the GCF investment criteria.

Once a clear model has been captured and the theory of change framed, we shall then proceed to prepare the funding proposal.”

Ethiopia and Uganda are two of three African countries (Ethiopia, Uganda and Senegal) to receive support from the Climate Finance Innovators initiative. In Ethiopia, a Green Climate Fund (GCF) proposal for off-grid sustainable energy access will be developed and submitted to the GCF. For this purpose, the Ministry of Finance in Ethiopia, which is the initiative's formal government partner and is accredited to the GCF, has signed a Memorandum of Understanding with the Climate Finance Innovators project. Further government partners include the Ethiopian Commission of the Environment, Forest and Climate Change.

As a first step towards developing the GCF proposal, a scoping process has been initiated for use in identifying and selecting suitable activities. In addition, the initiative will support Ethiopia's national capacities for accessing international climate finance as well as the transition from the CDM to Article 6. As part of the initiative, a Memorandum of Understanding has been signed with Ethiopia that formalises and reinforces project-related cooperation activities.

Work has also started in Uganda, where the CFI team conducted a first screening of the priority sectors in Uganda's NDC for their GCF potential. The initiative has initiated the drafting of a Memorandum of Understanding (MoU) with the Ministry of Water and Environment on preparing the Green Climate Fund proposal and related capacity development efforts.



## Collaborative Instruments for Ambitious Climate Action – Uganda

The Collaborative Instruments for Ambitious Climate Action (CI-ACA) initiative aims to assist Parties in the development of carbon pricing approaches for use in implementing their NDCs under the Paris Agreement and foster cooperation. As part of this initiative, RCC Kampala (with the support of the Global Carbon Market Uganda team) is conducting a carbon pricing study which includes a broader assessment of the current carbon pricing mechanisms such as carbon tax and cap-and-trade, as well as a hybrid system such as the South African system. The study also includes country chapters on Uganda, Rwanda, Kenya, Ethiopia and Mauritius and assesses their activities and carbon pricing potential. The study is still ongoing and will be completed by the end of the first quarter of 2019.

### Improving public health and protecting the climate: The DelAgua Public Health Programme in Rwanda

*In Rwanda, respiratory and diarrheal diseases continue to be the most common causes of death, together accounting for about a quarter of all childhood deaths. The DelAgua Public Health Programme in Rwanda aims to reduce preventable diseases and sustainably reduce child mortality. In cooperation with the Rwandan Ministry of the Environment, 600,000 modern water filters and efficient cooking systems are being distributed to poor families through the DelAgua programme. The new cookers ensure a much more efficient combustion process and reduce harmful fumes. The filters clean the water without heat, electricity or chemicals, thus eliminating the usual need to boil water. Together with the efficient cookers, a large amount of firewood or charcoal is saved and associated greenhouse gas emissions are reduced. The DelAgua Public Health Programme is one of the activities selected for offsetting the climate impact of German Federal Government business trips. More than 24,000 credits have been cancelled to offset emissions from 2015.*



## The Global Safe Water Programme

*One of the activities supported by the **Future of the Carbon Market Foundation** in East Africa is the Global Safe Water Programme, a multi-country, small-scale CDM Programme of Activities (PoA) covering Rwanda, Uganda, Nigeria and Kenya. The design and implementation of the PoA is managed by Impact Water in cooperation with local and international suppliers. The programme distributes water treatment systems to schools, thereby increasing access to hygienically-safe drinking water for students and teaching staff. The water systems replace water boiling with wood and charcoal on what are mostly unimproved cook stoves, thus reducing related carbon emissions. More than 2,000 water systems had been distributed by the end of 2018. The PoA outperforms on carbon emission reductions, with 64,000 credits already issued at the beginning of 2019 and another 270,000 credits expected to be cancelled on behalf of the Foundation by 2021.*



Ethiopia

**Evan Haigler, Impact Water's CEO, during a visit to the project site by Foundation representatives in November 2018.**



*“The upfront financing by the Foundation has been crucial in helping us to build up expertise, refine our marketing approach and business model, and even obtain follow-on emission purchasing contracts from other European governmental carbon buyers to expand our operations to other countries in the region.”*

# North Africa

Stretching from the Atlantic shores in the west to the Suez Canal and the Red Sea in the east, North Africa is a comparatively prosperous region, generating one third of Africa's total gross domestic product (GDP). Given that North Africa is highly vulnerable to the effects of climate change, rising temperatures, droughts and floods will have severe impacts on economic development in a region that is among the most water-scarce regions worldwide and hugely dependent on climate-sensitive agriculture. At the same time, the region is growing fast and facing increasing energy demand. Due to their heavy reliance on conventional energy sources and rising prices for oil and gas, energy supply has become a major challenge in countries like Tunisia and Morocco. As part of the global effort to fight climate change, North Africa's potential lies in increasing energy productivity and harnessing its renewable energy potential. In terms of renewable energy, the region has the largest potential in both solar and wind application. BMU's activities in North Africa comprise technical assistance in the identification of sectoral mitigation potential and the development of appropriate climate policies, Tunisia being a focus country. The Global Carbon Market Project, the Partnership for Market Readiness and the Nitric Acid Climate Action Group (NACAG) are key initiatives in the region supported by BMU.









## Global Carbon Market Project – Tunisia

The main goal of the Global Carbon Market Project in Tunisia is to equip public and private decision-makers with the knowledge and skills needed to use existing and also new carbon market instruments in implementing their national climate change mitigation activities. This encompasses trainings on UNFCCC negotiations, in particular on Article 6, developing concrete mitigation projects for use under the CDM or Article 6, supporting the improvement of regulatory frameworks in climate relevant sectors and developing methodologies for the MRV of projects designed for market purposes. The Tunisian cement sector, as a front runner concerning the design of carbon market concepts, will be among the pilots for enhanced GHG reduction measures. The Global Carbon Market Project is being implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH together with its local partners, the National Agency for Energy Conservation (ANME) and the Ministry of Local Affairs and Environment. The project involves close collaboration with the World Bank's Partnership for Market Readiness (PMR) and the NACAG initiative.

### Ms. Afef JAAFAR, head of the ANME studies and planning department, and ANME Focal Point

“The National Agency for Energy Conservation (ANME) began working on carbon markets at an early stage and has gained comprehensive experience through the realisation of CDM projects and the design of NAMAs/NMMs. The Global Carbon Market project will enable ANME to prepare for the new regime under Article 6 of the Paris Agreement on an institutional and a technical level, and identify potential pilot projects.”



### Ms. Afef JAAFAR - Responsible for the studies and planning department at ANME, PMR focal point

“The PMR is a very good opportunity for Tunisia to get ready for carbon pricing. Based on its experience CDM and as indicated in its NDC, Tunisia believes that carbon pricing can be an important lever to achieve its mitigation target, especially in the energy sector which represents 75 percent of the overall NDC objective.”

## Impacts and Achievements

In Tunisia, the national dialogue on co-processing in the cement sector led at the end of 2018 to the aimed-for adaptation of legal texts on emission limits for air pollutants from stationary combustion. A specialist group of negotiators can now participate in negotiations on Article 6 and NDCs under the UNFCCC, having benefited from their first training on these aspects in 2018. The group represented Tunisia at COP 24 in Katowice.



## Partnership for Market Readiness Activities in Tunisia

Tunisia's participation in the Partnership for Market Readiness (PMR) is part of its strategy to get ready for the introduction of carbon pricing instruments. Seen as a complementary lever, these instruments are to contribute towards a gradual low-carbon transition. As part of its PMR activities, Tunisia has proposed the implementation of numerous measures. Main activities include the implementation of impact assessments on the effects of energy subsidy removal and carbon pricing on socio-economic development, the updating of the mitigation targets and design of the MRV systems in the priority sectors, and the design of carbon pricing instruments best suited for priority sectors of the Tunisian economy. In the energy sector, for instance, the introduction of a carbon tax has been identified as the most promising policy instrument. In the cement sector, the process of identifying the most suitable climate policy instrument is still underway. These activities will build on Tunisia's ongoing activities in the field and contribute to reinforcing Tunisia's ability to implement carbon pricing instruments.



## NACAG Collaboration with Tunisia, Algeria and Egypt

With the aim of supporting partner countries in realizing the cost-effective mitigation potential in the nitric acid sector, the Nitric Acid Climate Action Group (NACAG) has been collaborating with many countries in the region.

As part of this collaboration, Tunisia has committed to permanently reduce nitrous oxide emissions from nitric acid production and regulate the sector by signing NACAG's Statement of Undertaking (SoU). Currently, the NACAG Secretariat is preparing a grant agreement to be signed with Groupe Chimique Tunisien, Tunisia's only nitric acid producer, on the purchase and installation of nitrous oxide abatement technology. A commercial and technical due diligence study was conducted in 2018 as preparation for the grant agreement.

An initial exchange process has also been initiated with Algeria and Egypt. In October 2018, a workshop was conducted in Algeria to discuss the NACAG initiative with representatives from several ministries. The initiative was met with great interest and it was agreed to extend the cooperation. Due to its large nitric acid sector, Egypt has substantial mitigation potential. This would make the North African country a key partner country. Discussions with the Egyptian government were initiated in January 2019.

## Impacts and Achievements

Tunisia is one of the countries that have signed the NACAG Declaration, confirming its commitment to help ensure abatement of N<sub>2</sub>O emissions from nitric acid production. Tunisia has also signed a binding agreement (Statement of Undertaking) to permanently use abatement technology in its nitric acid plants. All in all, the NACAG Secretariat has carried out workshops in more than 15 countries, including in Algeria, Tunisia, Zambia, Zimbabwe and South Africa, to advise on N<sub>2</sub>O abatement.



# Key Information on Initiatives

This section provides key information on the BMU initiatives, giving details of the organisations involved, contact persons and geographic scope.

## Global Carbon Market

### Implementation:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

### Other organisations involved:

In Tunisia: National Agency for Energy Conservation (ANME) and Ministry of Local Affairs and Environment

In Uganda: Climate Change Department of the Uganda Ministry of Water and Environment and Uganda Carbon Bureau

### Lifecycle:

2018 – 2021

### Contact:

Anne Gläser  
anne.glaeser@giz.de  
Torsten Greis  
torsten.greis@giz.de  
Sven Egbers  
sven.egbers@giz.de

### Geographic scope:

Global. In Africa: Tunisia, Uganda

### Further information:

[www.carbon-mechanisms.de/en/GCM](http://www.carbon-mechanisms.de/en/GCM)

## West African Alliance on Carbon Markets and Climate Finance

### Implementation:

West African Alliance on Carbon Markets and Climate Finance

### Other organisations involved:

West African Development Bank (BOAD), ENDA Energie Dakar, UNFCCC Regional Collaboration Centre Lomé, Climate Focus

### Lifecycle:

Ongoing since 2017

### Contact:

Alliance Secretariat  
westafricacclimatealliance@gmail.com

### Geographic scope:

16 member countries (Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Nigeria, Liberia, Senegal, Sierra Leone, Togo)

### Further information:

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

## Climate Finance Innovators – Linking Carbon Markets with Climate Finance in Africa

### Implementation:

Perspectives Climate Group

### Other organisations involved:

Climate Focus, Carbon Africa, Afrique Energie Environnement, South South North

### Lifecycle:

2018 – 2021

### Contact:

Stephan Hoch  
hoch@perspectives.cc

### Geographic scope:

Ethiopia, Senegal, Uganda, regional and global activities

### Further information:

[www.climatefinanceinnovators.com](http://www.climatefinanceinnovators.com)

## Nitric Acid Climate Action Group

### Implementation:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

### Other organisations involved:

Ministries and nitric acid plant operators in the partner countries

### Lifecycle:

2016 – 2022

### Contact:

Enrico Rubertus  
enrico.rubertus@giz.de

### Geographic scope:

Global. In Africa Algeria, Egypt, South Africa, Tunisia, Zambia, Zimbabwe

### Further information:

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

## Collaborative Instruments for Ambitious Climate Action

### Implementation:

UNFCCC Secretariat and Regional Collaboration Centres of Lomé and Kampala

### Other organisations involved:

In Senegal: Perspectives Climate Research gGmbH (PCR); Afrique Energie Environnement (AEE); Department of Environment and Classified Establishments (DECC) Senegal; National Committee on Climate Change (COMNAC).

In Uganda: Global Carbon Market Uganda implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

### Lifecycle:

Ongoing since 2017

### Contact:

Monique Nardi  
mnardi@unfccc.int

### Geographic scope:

Global. In Africa: Senegal and Uganda

## Carbon Pricing Leadership Coalition

### Lifecycle:

Ongoing since 2015

### Contact:

Lydia Ondraczek  
lydia.ondraczek.extern@bmu.bund.de

### Geographic scope:

Global. CPLC's governmental partners in Africa: Ethiopia, Morocco and Côte d'Ivoire

### Further information:

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



### Partnership for Market Readiness

#### Implementation:

The World Bank Group

#### Other organisations involved:

In Côte d'Ivoire: Ministry of Environment (CDM DNA Côte d'Ivoire), Ministry of Budget, Economy and Finances

In Tunisia: United Nations Development Programme - UNDP Tunisia, Agence Nationale pour la Maîtrise de l'Énergie – ANME (National Agency for Energy Conservation)

#### Lifecycle:

Ongoing since 2010

#### Contact:

Malin Ahlberg

malin.ahlberg@bmu.bund.de

#### For activities in Côte d'Ivoire:

Rachel BOTI-DOUAYOUA

rbdouayoua@gmail.com

#### For activities in Tunisia:

Afef JAAFAR

afef.jaaafar@anme.nat.tn

#### Geographic scope:

Global. In Africa: Côte d'Ivoire, Morocco, South Africa, Tunisia

#### Further information:

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

### Update of the Southern African Power Pool (SAPP) Standardised Baseline

#### Implementation:

GFA Consulting Group GmbH

Other organisations involved:

SAPP Coordination Centre (SAPP CC), Focal points of the member countries

#### Lifecycle:

2017 – 2018

#### Contact:

Joachim Schnurr

joachim.schnurr@gfa-group.de

#### Geographic scope:

Member countries of the Southern African Power Pool (SAPP): Botswana, DRC, Eswatini, Lesotho, Mozambique, Namibia, South Africa, Zambia and Zimbabwe

#### Further information:

<https://www.carbon-mechanisms.de/en/initiatives/research-and-dialogue/updating-a-standardized-baseline/>

### A Southern African Power Pool (SAPP) Results-based Renewable Energy Financing Mechanism

#### Implementation:

GFA Consulting Group GmbH and United Nations Climate Change Secretariat

#### Other organisations involved:

SAPP Coordination Centre (SAPP CC), Focal points of the member countries, National Ministries of Energy, National Electricity Regulators

#### Lifecycle:

2017 – 2018

#### Contact:

Joachim Schnurr

joachim.schnurr@gfa-group.de

#### Geographic scope:

Member countries of the Southern African Power Pool (SAPP): Botswana, DRC, Eswatini, Lesotho, Mozambique, Namibia, South Africa, Zambia and Zimbabwe

### Reduction of Technical Losses in the Electricity Transmission and Distribution Networks

#### Implementation:

GFA Consulting Group GmbH

#### Other organisations involved:

Representatives of Energy Regulatory Authorities, Transmission and Distribution Companies, Ministries of Environment and Energy from all four countries, Development Bank of South Africa

#### Lifecycle:

2017 – 2018

#### Contact:

Joachim Schnurr

joachim.schnurr@gfa-group.de

#### Geographic scope:

Mozambique, Uganda, Zambia, Zimbabwe

### PoA Working Group

#### Implementation:

Perspectives Climate Group GmbH

#### Lifecycle:

Ongoing since 2011

#### Contact:

Stephan Hoch

hoch@perspectives.cc

Axel Michaelowa

michaelowa@perspectives.cc

#### Geographic scope:

Global

#### Further information:

[www.carbon-mechanisms.de/en/PoA\\_Working\\_Group](https://www.carbon-mechanisms.de/en/PoA_Working_Group)

### Future of the Carbon Market Foundation

#### Implementation:

Future of the Carbon Market Foundation

#### Other organisations involved:

In Africa: C-Quest Capital, Impact Water, SEM Fund, SimGas

#### Lifecycle:

Established in December 2011; funding window will close in 2021.

#### Contact:

Martin Gauss

m.gauss@kommunkredit.at

#### Geographic scope:

Global. In Africa: Kenya, Senegal, Uganda, Zambia

#### Further information:

[www.carbonmarket-foundation.org](http://www.carbonmarket-foundation.org)

### Offsetting the Climate Impact of German Federal Government Business Trips

#### Implementation:

German Environment Agency

#### Other organisations involved:

German Federal Government

#### Lifecycle:

Ongoing since 2014

#### Contact:

Frank Wolke

German.DNA.DFP@uba.de

#### Geographic scope:

Developing countries, particularly least developed countries (LDCs). In Africa: Kenya, Nigeria, Rwanda, South Africa, Uganda, Zambia.

#### Further information:

<https://www.dehst.de/EN/carrying-out-climate-projects/business-trips-of-the-german-government/business-trips-of-the-german-government-node.html>

# Further Reading

Selected policy papers, research reports and background articles produced by the various initiatives.

## Global Carbon Market

- Namande, Gloria (2018): Facilitating Implementation - Supporting carbon markets and climate finance activities in the East African region. In: Carbon Mechanisms Review I4C Special Issue.  
URL: [https://www.carbon-mechanisms.de/en/CMR\\_I4C2018](https://www.carbon-mechanisms.de/en/CMR_I4C2018)

## West African Alliance on Carbon Markets and Climate Finance

- Hunzai, Tobias, Sandra Greiner and Ousmane Fall Sarr (2018): Preparing for Article 6: The West African Alliance on Carbon Markets and Climate Finance. In: Carbon Mechanisms Review I4C Special Issue.  
URL: [https://www.carbon-mechanisms.de/en/CMR\\_I4C2018](https://www.carbon-mechanisms.de/en/CMR_I4C2018)

## Climate Finance Innovators – Linking Carbon Markets with Climate Finance in Africa

- Krämer, Nicole, Stephan Hoch, Ousmane Fall Sarr, Thiago Chagas, Axel Michaelowa and Sandra Greiner (2018): Africa is getting ready for Article 6. Climate Focus, Perspectives Climate Group, Aera Group.  
URL: <https://www.climatefinanceinnovators.com/publication/africa-is-getting-ready-for-article-6/>.
- Climate Focus, Perspectives and Aera Group (2017): Linking the Clean Development Mechanism with the Green Climate Fund: Insights from Practitioners and Decision Makers in Africa.  
URL: [https://www.climatefinanceinnovators.com/wp-content/uploads/2018/11/Linking\\_the\\_clean\\_development\\_mechanism\\_with\\_the\\_GCF\\_Brescia\\_Dario\\_Galt\\_Hilda\\_Mayr\\_Sebastian\\_2017.pdf](https://www.climatefinanceinnovators.com/wp-content/uploads/2018/11/Linking_the_clean_development_mechanism_with_the_GCF_Brescia_Dario_Galt_Hilda_Mayr_Sebastian_2017.pdf).

## Nitric Acid Climate Action Group

- Rubertus, Enrico and Thomas Forth (2018): A Transformative Policy Approach: The Nitric Acid Climate Change Action Group (NACAG) - making global nitric acid production climate-friendly through international cooperation. In: Carbon Mechanisms Review I4C Special Issue.  
URL: [https://www.carbon-mechanisms.de/en/CMR\\_I4C2018](https://www.carbon-mechanisms.de/en/CMR_I4C2018)

## Collaborative Instruments for Ambitious Climate Action

- Michaelowa, Axel, El Hadji Mbaye Diagne, Igor Shishlov, Marjorie Ménard, Thierno Thioune, Mamadou Diobé Gueye, Aglaja Espelage (2019): Etude d'opportunité sur la mise en place d'un instrument de tarification carbone au Sénégal. Perspectives Climate Research gGmbH (PCR); Afrique Energy Environnement (AEE).  
URL: [https://www.perspectives.cc/fileadmin/user\\_upload/CI-ACA\\_Senegal\\_carbon\\_pricing.pdf](https://www.perspectives.cc/fileadmin/user_upload/CI-ACA_Senegal_carbon_pricing.pdf)

## Reduction of Technical Losses in the Electricity Transmission and Distribution Networks

- Thioyé, Massamba, Janak Shrestha, Malte Krieger, Martin Burian and Joachim Schnurr (2018): Forward-looking Baselines for Results-based Financing: A new approach for measuring climate mitigation contributions in the power sector. In: Carbon Mechanisms Review 02/2018.  
URL: <https://www.carbon-mechanisms.de/en/2018/cmr-2-2018-paving-the-way/>

## Offsetting the Climate Impact of German Federal Government Business Trips

- DEHSt (2018): The German Federal Government's Business Trips are Climate-neutral. German Emissions Trading Authority (DEHSt) at the German Environment Agency.  
URL: [https://www.dehst.de/SharedDocs/downloads/EN/publications/Factsheet\\_business-trips.pdf?\\_\\_blob=publicationFile&v=6](https://www.dehst.de/SharedDocs/downloads/EN/publications/Factsheet_business-trips.pdf?__blob=publicationFile&v=6)

# Abbreviations

ACW	Africa Climate Week
ANME	The National Agency for Energy Conservation (Tunisia)
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BOAD	West African Development Bank
CDM	Clean Development Mechanism
CEF4SAPP	Clean Energy Fund for the Southern African Power Pool
CI-ACA	Collaborative Instruments for Ambitious Climate Action
CPLC	Carbon Pricing Leadership Coalition
CFI	Climate Finance Innovators
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
DBSA	Development Bank of South Africa
ERPA	Emission Reduction Purchase Agreement
ETS	Emission Trading System
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Grid Emission Factor
ICAO	International Civil Aviation Organisation
IDC	Industrial Development Corporation (Zambia)
IETA	International Emissions Trading Association
LDC	Least Developed Country
MoU	Memorandum of Understanding
NACAG	Nitric Acid Climate Action Group
NDC	Nationally Determined Contributions
PMR	Partnership for Market Readiness
PoA	Programme of Activities
RCCs	Regional Collaboration Centres
RPC	Reactive Power Compensation
SB	Standardized Baselines
SAPP	Southern African Power Pool
SA-REP	South Africa Renewable Energy Programme
SoU	Statement of Undertaking
UNEP	United Nations Environment Programme
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change







