



**Wuppertal Institute**  
for Climate, Environment  
and Energy



Federal Ministry for the  
Environment, Nature Conservation,  
Building and Nuclear Safety

## **Linking Mechanisms: Carbon Markets, Climate Finance and National Policies**

**Final Workshop of the Project “Analysis of the Role Carbon Markets Can Play for Global Climate Finance from Today to 2020 and Beyond”**

**On behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety**

**FKZ UM12 41 155**

21 Mai 2014, 10:30 bis 17:00 Uhr

Berlin, Hotel Aquino, Hannoversche Straße 5b, [www.hotel-aquino.de](http://www.hotel-aquino.de)

### ***1. Background and Objectives of the Expert Workshop***

In future, mitigation actions will increasingly be financed from a mix of sources: from national financing, public international support and market-based sources. This raises the question how NAMAs, PoAs and new market mechanisms can interlink. Which influence does this new situation have on the accounting of emission reductions? And what does this mean for the design of climate finance?

These questions were discussed with selected experts on the basis of specific examples in several countries. The central issue was the different linking possibilities of market-based and non-market based greenhouse gas emission reduction mechanism with each other and with national policies of developing countries.

The background to the workshop was the research project “Analysis of the Role Carbon Markets Can Play for Global Climate Finance from Today to 2020 and Beyond”, which the Wuppertal Institute and Ecofys are undertaking on behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).



## 2. Summary

Main messages from the expert workshop:

- The different forms of financing emission reductions in developing countries entail significant opportunities. Some combinations of mechanisms are unproblematic while others need regulation.
- In case of overlaps it is important to clarify the ownership of emission reductions and avoid double counting of emission reductions and finance contributions.
- Overlaps of CDM projects and 2020 pledges are not a problem as pledges have no real compliance status. New rules only need to be found if pledges are translated into binding commitments.
- Overlaps of supported NAMAs and a national ETS are unproblematic. However, NAMA funders will need clarity on what happens with the emission reductions financed by the NAMAs.
- The removal of existing barriers needs to be pursued vigorously if a country's participation in international carbon markets is to be successful.
- The prospects of credited NAMAs are unclear. Most current NAMAs are packages of policy measures that would be hard to quantify for the carbon market. Some NAMA plans contain CDM projects or PoAs. However, it is doubtful whether these should be called "credited NAMAs". The packaging of policy measures is not uncommon.
- Which countries should be supported? Countries with negative mitigation costs, good governance capacities and sufficient financing options raise the question whether they should receive any finance. However, exactly these countries could be good pilot cases for the development of new market mechanisms.
- The crucial issue is not making emission reductions and climate finance accountable until 2020, but to establish a viable system for the time after 2020. Until 2020, different approaches can be tested and readjusted.

### 3. Agenda

Time	Item
10:30 – 11:00	<b>Welcome Coffee / Tea</b>
11:00 – 11:15	<b>Welcome and Introduction</b> Silke Karcher, BMUB, Division KI I 6 - German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety Timon Wehnert, Wuppertal Institute
11:15 – 11:40	<b>Linking Mechanisms: Carbon Markets, Climate Finance and National Policies</b> Input: Wolfgang Sterk, Wuppertal Institute
11:40 – 12:30	<b>Conceptual Considerations on Overlaps and Linking Possibilities of Mechanisms</b> Input: Carsten Warnecke, Ecofys
12:30 – 13:30	<b>Lunch Break</b>
13:30 – 14:45	<b>Linking Potential of Mechanisms in Costa Rica and Morocco</b> Input: Wolfgang Sterk, Wuppertal Institute Comment: Joachim Schnurr, GFA Consulting Group Input: Hanna Wang-Helmreich, Wuppertal Institute
14:45 – 15:45	<b>Linking Potential of Mechanisms in Ethiopia and India</b> Input: Hanna Fekete, Ecofys Kommentar: Nils Medenbach, KfW Input: Wolfgang Sterk, Wuppertal Institute
15:45 bis 16:00	<b>Coffee Break</b>
16:00 bis 16:40	<b>Concluding Discussion</b> Summary of Results, discussion possible further steps and recommendations
16:40 bis 17:00	<b>Summary of Results and Recommendations</b> (Wolfgang Sterk, Wuppertal Institute) <b>And Farewell bei the Host</b> (Thomas Forth, BMUB)

## **4. Report on the Expert Workshop**

### **Welcome and Introduction**

Silke Karcher welcomed the participants of the workshop and introduced them to the topic and to the project “Analysis of the Role Carbon Markets Can Play for Global Climate Finance from Today to 2020 and Beyond”. Ms. Karcher emphasised the importance of both maintaining the potential and competences gained through the CDM and making the experiences gained so far useful for other mitigation actions and climate finance, notwithstanding the fact that carbon markets currently show little activity due to the low level of mitigation ambition.

### **1<sup>st</sup> Input: Linking Mechanisms: Carbon Markets, Climate Finance and National Policies**

In the first presentation Wolfgang Sterk presented the project “Analysis of the Role Carbon Markets Can Play for Global Climate Finance from Today to 2020 and Beyond”.

- On the main issue of climate finance industrialised countries strongly emphasise the role market mechanisms could play.
- Against this background the project focussed on the questions of climate-related financing needs in developing countries, the mobilising potential of the carbon market compared to other sources of climate finance, reasons for the blind spots of the CDM in certain sectors and countries as well as possibilities for overcoming them. Furthermore, the project analysed which contributions developing countries could make themselves and how individual strands of the carbon market (CDM, PoAs, new mechanisms) could be interlinked with each other and with national policies of the host countries (including NAMAs). For this purpose the researchers defined and analysed country groups with differing use of the carbon market. On this basis, selected countries were analysed in detail. The expert workshop constitutes the conclusion of the project.

The following discussion among others issues raised the question of the role of historical responsibility and of mitigation potential and costs in the definition of effort sharing. Participants also noted that the share which the carbon market is supposed to raise among the entirety of climate finance has not been quantified.

### **2<sup>nd</sup> Input: Conceptual Considerations on Overlaps and Linking Possibilities of Mechanisms**

In the following, Carsten Warnecke detailed existing and potential overlaps and linking possibilities of carbon market instruments, national climate policies in the host countries and international climate finance. The questions of ownership of emission allowances and the necessity of avoiding double counting of emission units and financial contributions are of particular relevance. The analysis also considered impacts on incentive systems and financing sources, implementation levels and national integration. Practical examples from different countries served to illustrate the two-way implications between market and non-market based mechanisms and national policies. It became clear that some overlaps are more problematic than others. In particular overlaps that may lead to double counting of reduction units or efforts raise the necessity of regulation. Possible solutions for problematic overlaps could be a reform of E+/E-, a phaseout of the CDM within the boundaries of a new market mechanism (NMM), the deduction of CERs from the results of the NMM, or a cancellation of CERs

and accounting of the funding used for their purchase towards climate finance commitments.

The discussion in the plenary focussed on the possibilities of individual financing instruments to generate credits. Participants first discussed the question whether it would be possible to issue credits for the implementation of NAMAs. While some participants saw the issuance of credits for NAMAs as a good incentive for investments and also saw CDM projects and PoAs as possible parts of NAMAs, others rejected the concept of “credited NAMAs”. They

argued that most current NAMAs were packages of policies that would be hard to MRV for the carbon market. NAMAs were targeted at governments as actors and came from a philosophy of bilateral negotiations on what should be financed, not from a perspective of a globally valid implementation framework. They also doubted whether the term “credited NAMAs” offered any conceptual value added. Measures were either specific investments or sector-wide government measures. Specific investments could be implemented via the CDM while sector-wide measures were a matter for a sectoral NMM. Some noted, however, that climate finance might buy and cancel credits if there was little demand in the carbon market.

In addition, participants noted that the definition of results-based finance approaches in the areas of climate finance and carbon markets was still rather open. Mr. Warnecke emphasized that many things were possible under results-based finance, for example NAMAs with results-based finance or CDM projects with cancellation of the CERs. Results-based finance on the basis of public climate finance should, however, not lead to issuance of credits. Thomas Forth (BMUB) emphasized that the timing of finance in results-based finance and NAMAs was different and that the openness of results-based finance could be a chance to achieve additional emission reductions. However, in general the question of additionality in his view needed more attention in climate finance. In addition, Mr. Forth emphasised that the carbon market should not only be an accounting tool for emission reductions but should incentivise new investments from the private sector.

### 3<sup>rd</sup> Input: Linking Potential of Mechanisms in Selected Countries and Sectors

After the lunch break, participants discussed the linking potential of the various mechanisms on the basis of four country examples. Presenters elaborated on emission reduction potential and costs as well as existing policies and barriers to climate-friendly investments for each country. On this basis participants debated possible entry points for international cooperation and in particular carbon markets as well as linking options of the various mechanisms and instruments. Finally, participants pondered possible solutions for existing or emerging overlaps and double counting issues.

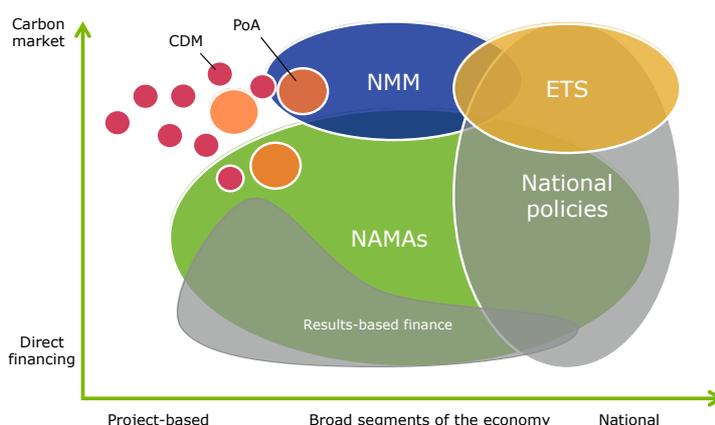


Fig 1: Schematic Overview of the Overlap of Mechanisms (Source: Ecofys)

### 3.1 Morocco's Electricity Sector

Wolfgang Sterk outlined that fossil fuels currently account for about 80% of Morocco's electricity supply and that nearly 100% of fossil fuels are imported. Morocco's motivation to use its substantial renewable energy and energy efficiency potential is correspondingly very high. The emission reduction potential for the year 2030 has been estimated at 40 Mt CO<sub>2e</sub>, the mitigation cost is mostly low or even negative. By 2020, installed solar, wind and hydro power capacity is supposed to be 2 GW each and energy demand is to be reduced 12% below BAU (15% below BAU by 2030). Morocco has established a national agency for renewables and efficiency as well as a solar agency. The most important barriers to climate-friendly investments include:

- The virtual monopoly of the state utility ONEE (only grid operator, buyer and regulator);
- Price negotiations project by project;
- Large-scale public projects instead of financing mechanisms for private investors;
- Fossil fuel subsidies;
- High upfront investment, lacking access to capital; and
- Limited technical capacity.

As Morocco has hardly contributed to climate change and has limited capabilities to invest in emission reductions from its own means, it should be supported by the international community. Carbon market readiness is low, existing CDM projects mostly have public owners. Due to the strong role of the state a government-based sectoral crediting approach could make sense. However, in addition to public investments a sectoral package should also include regulatory reforms to improve market access for private actors and create financial incentives for the decentralised expansion of renewables.

The following overlaps were presented for Morocco:

Overlap	Danger of Double Counting	Measures yes/no
Current Situation		
CDM and national policies	Mitigation effect	Reform of E+/E- necessary?
Climate finance and pledge	Effort	Unproblematic
CDM projects and pledge	Mitigation effect	Unproblematic? Or reform of E+/E- necessary? Or cancel CERs and count finance towards finance commitment?
Situation with proposed link with international mechanisms		
CDM in NMM boundary	Emission units	Accounting necessary
Policies in NMM boundary	Mitigation effect	Unproblematic
NMM and pledge	Mitigation effect	Unproblematic, reductions belong to government, NMM as means of implementation
Climate finance in NMM boundary	Mitigation effect	Adapt NMM target to avoid double counting?

The presentation was followed by a comment by Joachim Schnurr. He confirmed the strong dominance of the state in Morocco's economy from his own experience but doubted whether access to finance was difficult in Morocco. There were national energy and development funds as well as funding from the Emirates, Saudi Arabia and various international banks and funds. In addition, wind energy was so highly profitable that it did not need financial support to be profitable. Mr. Schnurr therefore questioned the necessity of climate finance and the additionality of wind power projects in Morocco. Other African countries were more in need of finance. The government of Morocco was in his view strong enough to implement its objectives. Other participants cautioned that the profitability of an investment always had to be seen in comparison to equivalent other investment options. In the case of own supply of electricity this had the result that even a profit margin of 12 or 13% might be far from being attractive for investors. In addition, Morocco was in their view a good pilot candidate for the implementation of an NMM in the energy sector exactly because of the strength of its government. Regarding the question whether CDM projects should be charged against Morocco's pledge participants commented that the global effort was lower without such an accounting, but a pledge had such a weak status that there was no compliance problem here. There might be double reporting but not double counting of emission reductions.

### 3.2 Costa Rica's Agriculture Sector

In the next presentation Hanna Wang-Helmreich presented the country case of Costa Rica. Its agriculture has a mitigation potential of 305 Mt CO<sub>2</sub>e over the period 2010 to 2030 at an average cost of 25 US\$/t CO<sub>2</sub>e. Costa Rica has a clear institutional architecture in the area of climate policy and has the goal to become climate neutral by the year 2021. Costa Rica also has developed strategies, plans and programmes to achieve this goal. It is forcefully promoting the development of NAMAs and started a voluntary national emission trading system (MDVCCR) in September 2013 which is using national units (UCCs). The agricultural sub-sectors cattle, coffee and sugar are participating in this system.

The barriers that are currently inhibiting climate-friendly investments in Costa Rica include a lack of financial resources and knowledge, which are preventing the use of low-emission technologies and organic fertiliser in agricultural enterprises. While there are laws and programmes with the aim of sustainable agriculture, these are being implemented only incompletely. In addition, inter-sectoral coordination and clarification of responsibilities could be improved.

These could be entry points for international cooperation. Costa Rica has a relatively high capability but only low responsibility for climate change. It should thus receive international support for its climate protection efforts. None of the 16 CDM projects in Costa Rica is located in the agricultural sector. Costa Rica participates in the Partnership for Market Readiness (PMR). Its market readiness has a median rank. The existence of the Costa Rican market offers various entry points for international cooperation. Costa Rican units could be purchased via climate finance and subsequently cancelled to support an innovative national instrument, or they could be converted into CERs or other internationally fungible units.

The following summarises current and potential overlaps in Costa Rica's agricultural sector:

Overlap	Danger of Double Counting	Measures yes/no
<b>Current Situation</b>		
CDM in MDVCCR boundary	Emission units	Need for regulation? Difference to other national policies (E+/E-)?
CDM and supported NAMAs	Mitigation effect	Donor problem: Risk of double financing
Supported NAMAs in MDVCCR boundary	Mitigation effect	Unproblematic?
CDM and neutrality target	Mitigation effect	Unproblematic?
<b>Situation with proposed link with international mechanisms</b>		
Purchase of UCCs via climate finance	Mitigation effect	Regulation necessary to prevent double financing?
Conversion of UCCs into CERs	Emissionsreduktionseinheiten	Accounting on installation basis
Supported NAMAs an MDVCCR boundary	Mitigation effect	Adapt NAMA or reform E+/E- to prevent double financing?

The subsequent discussion touched on a number of issues:

- In case of overlaps of NAMAs and an ETS the support could be used for the establishment of the ETS and subsequently be phased out.
- The overlap of supported NAMAs and national systems could lead to lack of clarity on the attribution of contributions. The reductions financed by NAMAs could possibly be used by companies to achieve their climate neutrality targets. It would be important for funders to have clarity on this from the start.
- Regarding the necessity of charging CDM projects against Costa Rica's neutrality target participants emphasised that it was actually legitimate for Costa Rica to use various instruments for achieving its climate neutrality target. The country did not say that the world was going to be climate neutral, only Costa Rica. For achieving the 2°C target it would be sufficient if the major emitters committed to absolute targets and MRVed robustly. It was not necessary to MRV a neutrality target like the one in Costa Rica exactly as long as no internationally tradable units were generated from its national ETS. It was more important that small emitters achieved an overall low-emission development pathway. Other participants cautioned that one should not forgo minimum accounting standards.

- Other participants commented that Costa Rica's neutrality target related to the year 2021. Double counting would need to be avoided from that date onwards, but up till then CDM projects and other mechanisms could continue as so far. Charging

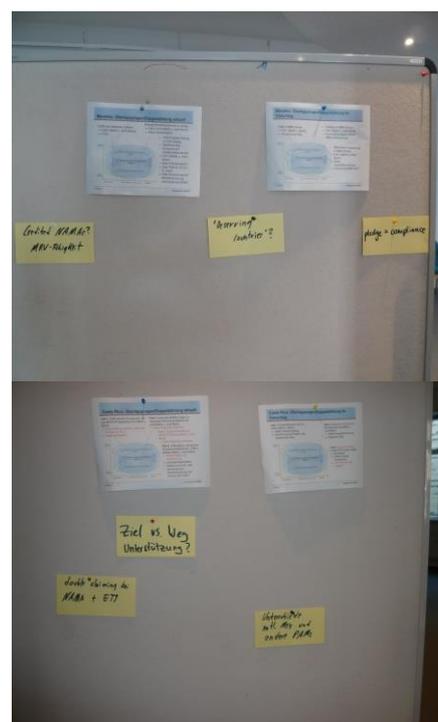


Fig 2: Discussion Issues Regarding Morocco and Costa Rica

REDD+ activities against the neutrality target was anyway difficult due to the lack of internationally agreed accounting rules.

- The question was raised whether a climate-neutral country would no longer be able to sell credits. Ms. Wang-Helmreich explained that afforestation had a key role in the achievement of Costa Rica's neutrality target while other sectors would be able to achieve climate neutrality only through offsetting. Further efforts would thus be needed in future. Other participants noted that Costa Rica might also become a sink, which would mean that it could sell emission credits to other countries if it overachieved its neutrality target.

### 3.3 Ethiopia's Electricity and Agricultural Sectors

Hanna Fekete presented Ethiopia's Electricity and Agricultural sectors as third country example of the day. Regarding the electricity sector she outlined that Ethiopia was planning to increase its electricity generation from hydropower from 7 TWh to 80 TWh in the year 2030. As the expansion of hydropower in Ethiopia is cheaper than the import of fossil fuels, this is the baseline scenario. The country also aims at further emission reductions of 20 Mt CO<sub>2</sub>e in the year 2030 through the export of renewable electricity. Agriculture has the highest share of the gross domestic product and greenhouse gas emissions in Ethiopia. In 2030, 126 out of 186 Mt CO<sub>2</sub>e could be avoided.

Already today Ethiopia has brought online a number of policies and measures to reduce its output of GHGs. The Climate Resilient Green Economy Strategy sets the framework for Ethiopia's mitigation actions and the Growth and Transformation Plan sets ambitious targets for the electricity sector and promotes the improvement of agricultural infrastructure. In addition, the Rural Electrification Fund supports renewables in lighting. There are currently no policies to promote mitigation actions in agriculture.

Ethiopia has high barriers to climate-friendly investments in the electricity and agricultural sectors. Upfront investments are high and the private sector is hardly involved. The envisaged expansion of hydropower and electricity exports entail a high dependence on Ethiopia's neighbours. In addition, there is a lack of awareness, technical capacities and acceptance of new agricultural practices.

Ethiopia has contributed only little to climate change and has low capability. Its carbon market readiness is also low; the two sectors considered have neither CDM projects nor PoAs nor other market-based instruments. International cooperation could on the one hand support Ethiopia's ambitious targets in the electricity sector (possible using a sectoral approach), on the other hand it could remove the barriers listed above through targeted pilot projects, policy advice, capacity building and provision of investment capital.

Nils Medenbach commented on the presentation by Ms. Fekete. He first highlighted that the low carbon market readiness was partly a matter of the sectors considered: The electricity sector was already CO<sub>2</sub> neutral and agriculture was a generally difficult sector. There were carbon market activities in the country (e.g. PoA activities in the waste and transport sectors) but these had hardly yielded actual projects due to the crisis on the CER market. This was currently leading to frustration within the Ethiopian government, which was otherwise an active partner. Ethiopia was also aiming at climate neutrality and many donors were actively promoting this goal. However, first the very high investment barriers would need to be overcome. The strong government would need to shoulder required initial investments, the private sector would only be able to become active little by little.

Joachim Schnurr added that Ethiopia was a prime example of what future finance via the Green Climate Fund could look like, based on programmatic approaches.

### 3.4 India's Cement and Iron&Steel Sectors

Wolfgang Sterk presented India's cement and iron&steel sectors as fourth country example. While India's cement sectors is among the most efficient globally, it nevertheless has a mitigation potential of about 100 Mt CO<sub>2</sub> in the years 2020 and 2030. Efficiency in the iron&steel sector varies; its mitigation potential has been estimated at about 40 Mt CO<sub>2</sub>e for the year 2020 and 140 Mt CO<sub>2</sub>e for 2030.

India is very active in the area of climate-friendly policies and measures. Next to climate action plans, activities in energy efficiency, credit guarantees and capacity building, India also has established a Perform, Achieve, and Trade (PAT) system under which energy savings credits can be traded.

Despite the existing policies and measures a number of barriers are inhibiting climate-friendly investments. Current waste legislation prevents the use of waste as alternative fuel; norms and standards are limiting the potential for the substitution of clinker. In addition, alternative fuels and clinker substitution have low acceptance among the population and efficiency does not garner much attention in companies. Further barriers result from the necessity of high upfront investments, limited access to capital, lacking waste collection and low availability of scrap.

To reduce these barriers international cooperation could focus on policy advice, capacity building and the provision of investment capital. Another option would be to create possibilities to purchase PAT credits internationally and link the PAT system with the international carbon market. Historically, India has made a limited contribution to climate change and it has a relatively low capability. It should thus receive international support for its efforts to achieve a low-emission development pathway. India has gained much experience with carbon markets. A quarter of all CDM projects are located in India and in addition to the PAT system it also has a national system for the trade of Renewable Energy Certificates (RECs).

Current and potential overlaps in India's cement and iron&steel sectors are as follows:

Overlap	Danger of Double Counting	Measures yes/no
<b>Current Situation</b>		
CDM and national policies	Mitigation effect	Adapt E+/E-?
CDM and PAT	Emission units	Difference to other national policies?
CDM and pledge	Mitigation effect	Accounting necessary?
<b>Situation with proposed link with international mechanisms</b>		
Purchase of PAT credits through climate finance	Mitigation effect	Donor problem: Danger of double financing via CDM and PAT
Conversion of PAT credits into CERs	Emission units	Need for accounting at project or system level
Climate Finance within PAT boundary	Mitigation effect	Need of/possibility for accounting to prevent double financing?

Subsequent to the presentation participants discussed which instruments should be assigned to which policy area and what the consequences would be. Participants noted that climate policy instruments use other accounting indicators than for example energy efficiency instruments. This had the result that for example the impact of the

Indian PAT scheme could not be directly compared with the impact of the RECs system. Other participants highlighted that there also was the philosophy of assigning efficiency and other climate-relevant programmes to climate policy. The actual contribution of a country would be much clearer if programmes that did not primarily pursue climate objectives were also taken into consideration.

### Summary of Results and Recommendations and Farewell by the Hosts

In conclusion, Wolfgang Sterk summarised some overarching questions of the day:

- Some combinations of mechanisms are unproblematic while others need regulation. In case of overlaps it is important to clarify the ownership of emission reductions and avoid double counting of emission reductions and finance contributions.
- Overlaps of CDM projects and 2020 pledges are not a problem as pledges have no real compliance status. New rules only need to be found if pledges are translated into binding commitments.
- The definition of “credited NAMAs” is problematic as climate finance is supposed to lead to mitigation in developing countries and not to offsetting in developed countries. In addition, many sectors are a good fit for NAMAs which had no MRV options in existing market-based mechanisms. Limitations of market-based mechanisms would thus be transposed into non-market mechanisms. Specific large-scale policy projects sometimes contain CDM projects or PoAs. However, one may question whether these should therefore be called “credited NAMAs”. Bundling of policies and measures is a common occurrence.
- Which ones are “deserving countries”? Do sectors in countries with negative mitigation costs and sufficient financing options preclude financing via the carbon market? Or should such countries be pilot cases for an NMM?
- Overlaps of supported NAMAs and a national ETS are unproblematic. However, NAMA funders will need clarity on what happens with the emission reductions financed by the NAMAs.

Thomas Forth concluded the expert workshop noting that the crucial issue was not making emission reductions and climate finance accountable until 2020, but to establish a viable system for the time after 2020. Until 2020, different approaches could be tested and readjusted. He also emphasised that emission reductions that are supported with climate finance must not be funded a second time via the carbon market. The issue was to promote mitigation and gain clarity in reporting.

Thomas Forth thanked all participants of the expert workshop for the good discussion.

**Annex: List of Participants**

Institution	First Name	Family Name
German Emissions Trading Authority	Malin	Ahlberg
German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	Hermann	Amecke
Öko-Institute	Martin	Cames
bridge-builders	Martha	Djourdjin
Ecofys	Hanna	Fekete
German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	Thomas	Forth
Bread for the World	Kirsten	Gade
Adelphi	Aki	Kachi
German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	Silke	Karcher
German Emissions Trading Authority	Karsten	Karschunke
TÜV Rheinland	Win	Maaskant
KfW Group	Nils	Medenbach
bridge-builders	Ole	Meier-Hahn
Bread for the World	Sabine	Minninger
German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety	Lydia	Ondraczek
Commerzbank	Ingo	Ramming
Ecofys	Frauke	Röser
Programme Office International Climate Initiative	Marco	Schiewe
GFA Consulting Group	Joachim	Schnurr
TÜV Rheinland	Günter	Schock
Wuppertal Institute	Wolfgang	Sterk
Wuppertal Institute	Hanna	Wang-Helmreich
Ecofys	Carsten	Warnecke
Wuppertal Institute	Timon	Wehnert
TÜV Nord	Rainer	Winter
German Emissions Trading Authority	Frank	Wolke