

## Chapter 27

# Mobilizing Private Sector Funds for Climate Change Adaptation: Nordic Climate Facility (NCF) as a Case Study

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**Abstract** Although estimates of the global climate finance flows vary, bulk of the funding has been targeted at climate change mitigation and only a fraction to adaptation to the impacts of climate change. Mitigation actions have also received more private sector funds as compared to adaptation. The current financial flows targeted at adaptation fall short of the current estimates for funding needs and call for increased private sector involvement and finance. This article discusses the mobilisation of private sector funds for climate change adaptation using experiences from the Nordic Climate Facility (NCF), a competitive partial grant facility, as a case study. Since its launch in 2009 NCF has approved financing for 49 climate change mitigation and adaptation projects in selected developing countries in Asia, Africa and Latin America. The aim of this paper is to showcase, using selected NCF projects as examples, how adapting to climate change can also have business linkages, especially when combined with mitigation activities, and how public sector funding can be used to leverage private sector funds through local business development for climate change adaptation.

**Keywords** Climate change • Adaptation • Climate finance • Private sector • Business

## Introduction

For a long time adaptation to climate change was absent from the international climate change debate. Calling attention on the need to adapt to climate change was regarded almost as admitting defeat, which meant that mitigation actions dominated

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the international discussions (Tanner and Horn-Phathanothai 2014). Developing countries brought adaptation on the agenda of international climate debate in late 1990s and today there is international consensus that adaptation is necessary especially in the developing world which is deemed most vulnerable to the impacts of climate change.

Despite of the acknowledged need for adaptation actions, the volume of climate finance targeted at adaptation has not yet reached levels that effective adaptation is estimated to require. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have committed to set the limit of global warming to 2 °C but even the 2 °C warming is likely to bear significant adaptation costs in particular for developing countries that are most vulnerable to climate change. The World Bank's Economics of Adaptation to Climate Change (EACC) study estimated for example that the cost of adapting to a 2 °C warmer world by 2050 comes with a price tag of 70–100 billion US dollars per year (Narain et al. 2011). To meet the adaptation costs entails thus massive financial resources for developing countries.

Any estimate of global climate finance flows depends on the very definition of climate finance. While there is no uniform definition for “climate finance”, a key requirement is that climate finance has the objective of either greenhouse gas mitigation or adaptation, i.e. reduction of vulnerability to climate change (Gupta et al. 2014). For UNFCCC “Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate impacts” (UNFCCC 2014). In the fifth assessment report of the Inter-governmental Panel of Climate Change (IPCC) climate finance has been defined more concretely as capital flows that are targeted at low-carbon or climate resilient development. The sources of climate finance vary but can derive either from public or private, international or domestic sources (Gupta et al. 2014).

The current climate finance available for adaptation does not yet quite fill the funding gap. The latest Global Landscape of Climate Finance 2014 report published by the Climate Policy Initiative (CPI) estimated that in 2013 the total climate finance flows amounted to 331 billion US dollars. Out of this, 302 billion dollars were utilized for mitigation, 25 billion for adaptation, and only four billion for projects with multiple, i.e. both mitigation and adaptation objectives. In addition, according to the CPI report, the entire 25 billion US dollars directed at adaptation activities originated exclusively from public sector sources (Buchner et al. 2014).

To estimate the financing available for adaptation is a challenge, which also the CPI's report rightly acknowledges. Data sources are in general unreliable but CPI estimates that adaptation funding by development finance institutions and multilateral development banks has without doubt leveraged some private sector funding because of the dual relationship between adaptation and development (Buchner et al. 2014). The decision on how to secure funding to strengthen especially developing countries' resilience will be one of the key topics in the upcoming COP meeting, to be held in Paris in December 2015. One of the key mechanisms will be the Green Climate Fund (GCF). While not yet operational, the GCF with

current pledges of US 10.2 billion<sup>1</sup> is expected to provide considerable adaptation funding. GCF's board of directors has already decided that 50 % of the funding will go to adaptation and 50 % of the funding will be allocated to Least Developed Countries (LDCs) (Green Climate Fund 2014, 2015). It has however already now become evident that in order to fill the "funding gap", private sector's involvement will be paramount (UNEP 2015).

## Approach and Methodology

The object of this case study is the Nordic Climate Facility and the purpose is, using selected NCF projects as material, to discuss tested ways to increase the private sector's involvement in adaptation efforts. The purpose of this paper is twofold: it showcases how public funding can be used to leverage private sector funding for adaptation efforts especially when combined with mitigation actions. Secondly, the paper argues that interventions with adaptation benefits to climate change can create business opportunities also in low-income countries.

The analysis is based on a qualitative assessment of selected NCF projects representing three project categories in use in the NCF—mitigation, adaptation and combination. The analysis has focused on the stated objectives and achieved results of the projects. A key question guiding the analysis has been to what extent has the project contributed to climate change adaptation and private sector development. In addition to the presentation and analysis of selected projects, the paper also presents a simple quantitative analysis of the sources and amounts of co-financing across the project categories and calls for proposals. The analysis and results presented in this paper are based on progress reports submitted by the projects selected to be showcased in this paper and on a simple quantitative analysis of co-financing and grant amounts for the whole NCF portfolio.

The following sections will present a quantitative analysis of co-financing for the whole NCF portfolio after which some projects the selected NCF projects representing the three project categories will be presented and analysed. Finally, the last section contains conclusions and implications for other similar initiatives. There are certain limitations to the conclusions that will be presented. First of all, as in all case studies, the results are not easily generalized or replicated. Secondly, the NCF has targeted applicants originating from the Nordic countries and replication of a similar programme in another geographical context may generate different outcomes.

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<sup>1</sup>As of June 2015.

## Nordic Climate Facility (NCF)

The Nordic Climate Facility (NCF) is a competitive financing mechanism that provides grants with co-financing requirements to encourage and promote innovations in areas susceptible to climate change in low-income countries. NCF is financed by the Nordic Development Fund (NDF) and administered by the Nordic Environment Finance Corporation (NEFCO). NDF is the joint development finance institution of the five Nordic countries whereas NEFCO is an international financial institution established by the Nordic countries that finances green growth investments and projects primarily in Russia, Ukraine and Belarus as well as climate projects across the world. Both institutions have their headquarters in Helsinki, Finland.

The NCF is targeted at private as well as public Nordic organizations with relevant experience that in partnership with local partners and, in some cases, with other partners undertake to implement projects in one or more developing countries eligible for NDF funding to generate both climate and development benefits. The main objectives of NCF are to: (i) facilitate the exchange of technology, knowledge, know-how and innovative ideas between the Nordic countries and low-income countries in the field of climate change; (ii) increase the low-income countries' capacity to mitigate and adapt to climate change; and (iii) to contribute to sustainable development and the reduction of poverty. NCF's purpose and objective is also to encourage testing of concrete concepts relating to climate change and, especially, to facilitate partnerships.

To date, NCF has launched five calls for proposals for innovative project concepts. Each call has focused on a specific theme in relation to climate change and development, and applicants with their partners are free to propose any relevant project that fits in to the theme. The first call, NCF1, launched in 2009 focused on *water resources* and *energy efficiency*. The second call, NCF2, launched in 2010 had two focus themes: *renewable energy* and *urban adaptation*. Since the third call, NCF3, launched in 2011 with the theme of *Innovative low-cost climate solutions with focus on local business development* more focus has been shifted towards various direct and indirect ways of supporting private sector development, promoting economic activity and facilitating private sector's participation in climate-related development efforts. The fourth call, NCF4, launched in 2013 looked for *Inclusive green growth projects contributing to private sector development*. The currently ongoing NCF5 has invited project proposals under the theme of *Climate Resilience in Urban and Private Sector Contexts*. The call also increased focus on gender aspects.

To date, 49 projects have been selected via two phase evaluation process out of altogether 580 applications for funding through the four calls for proposals and further projects are expected to be included in the project pipeline from the fifth call. At the time of writing, the cumulative NDF funding for five calls amounted to 19.2 million euros and, when also co-financing is accounted for, the total value of the programme was approximately 32.6 million euros. One project can receive a

grant between 250,000 and 500,000€ and the maximum support period is in principle from 2 to 2.5 years but in practise the average implementation period of projects can be slightly longer. NCF is a results-based instrument, and disbursements are linked to achieved milestones and realized co-financing. Only an agreed percentage of the total incurred and audited costs can be covered by NCF.

As the design feature of NCF is to support, as cost efficiently as possible, small-scale projects, longer term monitoring is currently not required or possible for NCF projects. The main results and impacts of individual projects are, however, captured in the final project reporting. In addition, the evaluation of the Nordic Climate Facility conducted in 2013 concluded that NCF has international added value as a quite rare mechanism combining innovation, leverage and partnership (Sigvaldsen et al. 2013). A recent independent assessment of selected NCF projects states that: *“All [NCF] projects also have a strong development agenda, highlighting the need not to separate development and climate projects into silos of their own, but rather merge these two financing opportunities in developing countries. Development co-benefits range from reducing the amount of water-borne diseases in communities, which have a direct effect on household income levels and children’s school attendance. The projects also result in increased local level employment and new types of income generating activities, to name a few.”* (Brüning and Hamro-Drotz 2015).

## Private Sector’s Role in Adaptation: The NCF Case Study

As discussed above, any estimates of total funding directed at climate change adaptation, whether originating from the public or the private sector, are challenged by the very nature of those activities since most forms of adaptation interventions are difficult to distinguish from standard development interventions. The dual relationship is further complicated by the fact that the spectrum of adaptation activities varies from traditional development interventions to activities that are targeted to address a specific climate change impact and that do not coincide with any type of activity usually understood as development (McGray et al. 2007). In addition, adaptation activities usually focus on the technical aspects of climate impacts and fail to address the reasons for which people are vulnerable to climate change in the first place (Eriksen et al. 2015). The debate related to the dual relationship between adaptation and development is not new and falls outside the scope of this paper, but it should be remembered that the difficulties in having a concrete operational definition of adaptation and its relationship to development means that also the amount of funding targeted at adaptation activities is, at best, an informed estimate (Narain et al. 2011; see also McGray et al. 2007).

Contrary to adaptation actions and impacts, assessment of mitigation impacts is fairly straightforward. Methodologies to define baseline emissions as well as monitoring of greenhouse gas emissions reductions are well developed and considerable amount of work to measure mitigation impacts has been conducted

especially via the development of detailed Clean Development Mechanism (CDM) methodologies (UNFCCC 2015). In the discussion on climate change and development the relationship between mitigation and development remains often overlooked. Developing countries are not big emitters and mitigation actions traditionally require large investments in industry and infrastructure that concern more the developed world. The truth lies somewhere in between since for example Africa's soil carbon is estimated to form a considerable share of world's carbon stock. What comes to mitigation and development, there can also be significant development co-benefits from some mitigation actions. Clean cookstoves are a typical example of such actions as they reduce greenhouse gas emissions but also deliver strong development impacts such as improved indoor air quality and reduced household energy costs (see for example Tanner and Horn-Phathanothai 2014).

As mentioned above, NCF projects are both climate and development projects. Projects are categorised either as mitigation, adaptation or the combination of both. The portfolio of 49 projects includes 14 pure adaptation projects, 16 projects that are classified as combination projects and 18 pure mitigation projects. In many projects the climate impacts do not always follow the labelling given but, as will be discussed below, mitigation projects often generate clear adaptation benefits and vice-versa. In the first and second calls for proposals most adaptation projects were oriented towards capacity building or feasibility studies, which sometimes were combined with small-scale yet tangible pilot activities. Since NCF3, only concrete projects or projects that had feasible direct linkages to subsequent concrete activities, have been granted funding.

During selection phases, scoring of project proposals has followed the same principles for both categories, i.e. both types could score equally well in evaluation. Assessment of adaptation impacts is, however, still somewhat more challenging especially in quantitative terms and due to the higher variety of project types as compared to mitigation projects, which has been clearly noted in the evaluation of projects proposals as well as in the subsequent monitoring of NCF projects.<sup>2</sup> Despite of these challenges and the competitive selection method of projects, the NCF portfolio is balanced between mitigation and adaptation projects.

### *Adaptation Funding in the NCF Portfolio*

The Table 27.1 shows the division of funding sources across adaptation and combination project categories for four NCF call for proposals. The total value of the current NCF portfolio is EUR 32.6 million of which NCF grant funding covers 59%. The value is calculated on the basis of actual total costs for 19 fully

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<sup>2</sup>For more information, please see NCF Annual Review for 2014 available at <http://www.ndf.fi/project/nordic-climate-facility-ncf>

**Table 27.1** Division of funding sources across project categories in NCF adaptation and combination projects

	NCF Call	Total project budget (EUR million)	Total co-finance (excl. NCF grants, EUR million)	% of total project budget	Private sector co-finance (EUR million)	% of total project budget	% of total co-finance (excl. NCF grant)
Adaptation projects	NCF1	3.20	1.43	45	0.74	23	52
	NCF2	3.04	0.79	26	0.16	5	20
	NCF3	1.49	0.37	25	0.27	18	74
	NCF4	1.00	0.50	50	–	0	0
		<b>8.72</b>	<b>3.09</b>	<b>35</b>	<b>1.17</b>	<b>13</b>	<b>38</b>
Combination projects	NCF1	3.20	1.33	42	1.29	40	97
	NCF2	0.51	0.17	33	0.13	25	75
	NCF3	4.09	1.49	37	1.49	37	100
	NCF4	3.45	1.36	39	0.75	22	55
		<b>11.25</b>	<b>4.36</b>	<b>39</b>	<b>3.66</b>	<b>33</b>	<b>84</b>

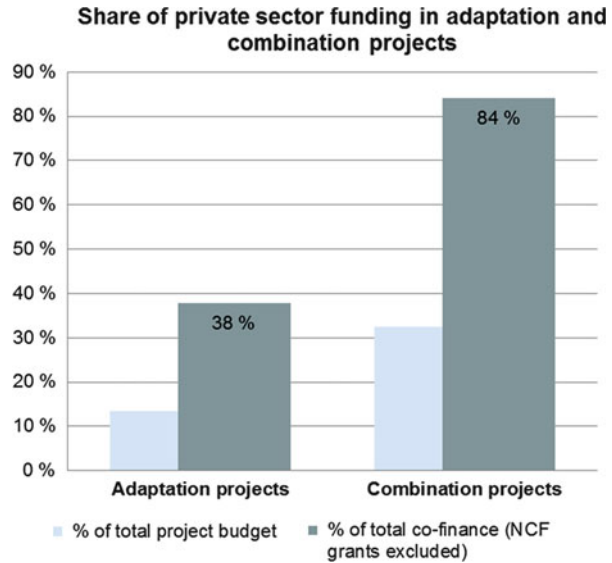
completed projects and on the budgeted total value of on-going and recently approved projects. NCF also allows limited in-kind contributions, as long as they are justified and recorded e.g. using timesheets to assess the actual value of all contributions.

The total amount of co-financing originating from private and public sectors alike covers 39% of the costs in combination projects and slightly less, 35%, in adaptation only projects. The share of private sector co-finance is 33% in combination projects and somewhat less, 13%, in pure adaptation projects. These findings are in line with the common perception that there is less private sector involvement in adaptation only projects. It is, however, important to note that in only four out of 30 NCF adaptation/combination projects there is no private sector finance at all. The Fig. 27.1 shows also which proportion of the co-financing (NCF grants excluded) has originated from the private sector.

As mentioned above, the estimated funding of 25 billion US dollars targeted at adaptation activities originated almost exclusively from the public sector (Buchner et al. 2014). While this is not the whole truth due to the challenges discussed in the introduction to this paper, there is growing awareness that in order to reach the funding target of 100 billion US dollars per year requires more active participation of the private sector in adaptation efforts. Based on experiences from the Nordic Climate Facility, arguments in favour of involving the private sector in adaptation activities should not focus on the private sector only as a source of funding but as a key actor.

To back this argument, an OECD working paper published in 2011 called for more attention to private sector's role in adaptation to climate change (Agrawala et al. 2011). Despite of its focus on European companies, the paper concluded that the private sector is crucial for adaptation not only as a provider of financing but

**Fig. 27.1** Share of private sector funding in adaptation and combination projects



because a country's success in adapting to climate change depends on the capacity of its private sector in responding to climate change impacts. Private sector's involvement in adaptation to climate change should be therefore seen as an opportunity for the private sector to generate new business and new sources of income (Agrawala et al. 2011).

In this context it is noteworthy to point out that the economic growth rate in many low-income countries has exceeded that of high-income countries (World Bank 2015). Growth in these countries was 4.9% in 2013 while being 1.4% for high-income countries. As the economic growth is forecasted to follow the same path in numerous low-income countries and translate into positive development outcomes, further discussion is needed on how linkages with future adaptation actions could be strengthened and synergies identified.

### ***Mitigation Projects with Adaptation Impacts***

There are several examples of NCF projects classified as mitigation only projects due to their primary focus but which also have adaptation co-benefits. An example of this kind of project is the *Scaling up low carbon household water purification technologies in the Mekong Sub Region* that is being implemented in Cambodia and Laos. In this case, NCF is mainly supporting the scaling-up and new product development to ensure the long term sustainability of the business, i.e. sufficiently high production volumes, increased coverage for sales network, and to develop Gold Standard emission reductions project to further support the



activities via carbon credits. Local companies are providing 85 % of the total budget of some 3.5 million euros.

The main target of the project is to achieve sales of 154,000 Ceramic Water Purifiers (CWP) that should lead to a total of 200,000 tonnes of monitored CO<sub>2e</sub> emission reductions by 2015 as mitigation benefits. At the same time, the project has generated adaptation impacts since households get access to purified drinking water in the likely case that climate change has further adverse impacts on the availability of drinking water. As development co-benefits, household members encounter better health due to reduced indoor air pollution and unsanitary drinking water. Households will also save time and money, as they do not have to obtain wood for boiling water, either. While not subject to monitoring as per NCF Grant Agreement requirements for this project, reduced usage of fuel wood from unsustainable sources for water boiling will undoubtedly reduce deforestation with linkages to various positive adaptation impacts, such as protection of land from floods.

Many efficient cook stove and sustainable charcoal projects, also present in the NCF portfolio, are similar to the project described above: they are typically designed to generate mainly mitigation impacts (e.g. as carbon finance projects) as well as direct development and health impacts but they also relate to adaptation co-benefits.

### ***Adaptation Projects with Business Linkages***

This section will take a look at three adaptation projects, where NCF funding has worked as seed money in support of local business development while at the same time increasing local communities' resilience and adaptive capacity. The NCF portfolio includes now 14 "adaptation only" projects out of which 10 have direct private sector and/or business linkages many of which are agricultural projects. The business and private sector linkages with adaptation are typically related to increased yields in agricultural sector and increased resilience of current businesses, i.e. also closely linked with development co-benefits. Climate change can have direct impacts especially on agricultural productivity and hence food security through a diversity of effects. Climate change is likely to have a direct impact on water resources causing more frequent droughts or floods or changing the rainfall patterns altogether as discussed recently e.g. by Tanner and Horn-Phathanothai (2014). The United Nations' Food and Agriculture Organization (FAO) has estimated that 40 % of world population, mostly poor, are reliant on agriculture on arid and semi-arid lands (ASALs). A key question with regard to food security and development, especially in Africa but also elsewhere, is therefore related to the question on how effectively agricultural systems are able to adapt to climate change for example through innovative ways of collecting and using scarce water resources or through the use of more climate resilient crops.

In addition to increasing the resilience of rural populations, adaptation actions in the agricultural sector can also create additional income and form a basis for commercial, albeit small-scale, business activity. The *Providing Assistance for Design and Management of Appropriate Water Harvesting Technologies in Arid Lands* project, completed in 2012, provided assistance for the design and management of water harvesting technologies in arid lands of Kenya in collaboration with the local communities, authorities and Nordic and Kenyan consulting companies. The objective of the project was to increase resilience of the local communities through improved water utilization techniques, mainly trapezoidal bunds (i.e. small dams that harvest rainwater) to contribute to increased long-term food security, health and income diversification for 15,000 beneficiaries.

This project was a typical example of an adaptation project where adaptation impacts went hand in hand with development impacts. The monitoring report from the first growing season in 2011–2012 showed that rainfall was low being well below the “design rainfall” for the design of the water harvesting structures. During the first growing season, the trapezoidal bunds produced crops valued at on average EUR 100 per bund. Under good management, there were strong indications that the bunds could yield crops valued at EUR 470 per successful season. These figures can be compared with the average estimated cost of 375 EUR per hand-built bund and approximately 820 EUR per bund built by mechanized means in the project. The returns were higher than the returns per acre under rain-fed conditions in the arid and semi-arid lands of Kenya. The project therefore contributed positively to income generation and food security for the households involved.

The *Mount Elgon Integrated Watershed Management Project*, implemented in 2013 in Kenya, addressed land degradation, forest resource conservation and improved livelihoods for approximately 7000 households in the Mount Elgon water catchment area through improved crop and livestock production methods. Farmers in the project area faced challenges in producing food for the entire year and were forced to buy food instead of being self-sufficient in food production. This has resulted in increasing poverty levels. Since the introduction of sustainable soil and land management systems (SALM),<sup>3</sup> together with improved crop and livestock production methods, farmers can produce sufficient food not only for their own use, but also to sell to the markets. One of the sub-projects, a quarter of an acre onion farm, generated baseline income of Kenyan shillings (KES) 12,000–15,000 for the local farmer per season.<sup>4</sup> After practicing SALM, the income increased to KES 40,000. In this case the SALM practises exercised included the building of trenches to protect the farm from river bursts, the use of compost, and increasing the distance of the planting rows. Once completed, the project had increased farmers’ cash income and can pave the way for the establishment of a co-operative type of

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<sup>3</sup>For a complete account of the SALM methodology, please refer to Wekesa, A. and Jönsson, M. 2014.

<sup>4</sup>One EUR equals approximately to 100 KES.

small-scale business activity in the future. This case project has also some likely mitigation impacts via sequestration, but they are not monitored.

A third example of an agricultural adaptation project is the currently on-going project in Bolivia, *Promoting cañahua in the Andean highland: a highly nutritive crop with a great market potential, adapted to extreme climate conditions*. Expected changes in precipitation patterns create a need for crops with short growing cycles and good tolerance for extreme weather conditions such as drought and frost.

Cañahua is a native but highly underutilised goosefoot plant of Bolivia and it is characterised by its high nutritive value and good resilience to extreme weather conditions. It is more tolerant to drought and frost, and mature in a shorter time, allowing farmers to obtain locally produced food and cash product for market devising successful adaptation process. The project is expected to generate local business opportunities among poor including households mainly headed by women. The total project costs are EUR 348,936 with NCF financing of EUR 269,952 with the rest covered by local private sources.

### ***Combination of Adaptation and Mitigation with Business Linkages***

Prolonged droughts in the Isiolo district in Kenya put great stress on the communities' water supplies, reduced livestock production and thus creating food insecurity and increased the incidence of water-borne diseases. The *Community based adaptation to climate change through environmentally sustainable water resource management project* implemented in the Isiolo District addressed these issues by increasing access to safe water and promoting hygiene awareness for selected vulnerable communities. The project ensured that more than 15,000 people living in the target area have improved access to safe water and 90% of them have improved knowledge on hygiene and sanitation issues.

At the same time, through the use of modern and innovative technology of 9 Grundfos LIFELINK water systems, the project also reduced emissions of greenhouse gases by replacing previously used diesel pumps. The heart of the innovative systems is a submersible pump driven by solar panels. The water pump includes a satellite link to a computer-based system with an integrated communication and surveillance module. The operating performance of the community water system can be monitored remotely and in case it breaks down a local service partner will provide the necessary maintenance. The communities pay for their water via mobile telephones, which are already widely used throughout the country, and the user fees are utilised to cover the operating and maintenance costs. In this NCF case, the private sector business incentive combined with a clear technology transfer component, has led to adaptation impacts alongside mitigation

and development benefits, generating also scaling-up activities elsewhere (Grundfos 2015).

Another example of a successful combination project is *The Cambodian Farmland Carbon (CAFACA)* tree planting project, which is expected to plant 300,000 trees as the key outcome. The total project costs are EUR 526,054 with NCF financing of EUR 386,130. The rest of the costs are covered by Nordic and local private sources as well as by revenues generated by the project.

The project will disseminate practical approaches to climate-resilient agriculture, including creative low-cost ways to organise tree planting in the farming landscape. The project has established a local company that connects the existing farmers' associations and small-holder farmers and supports them to increase their incomes from carbon sequestration via voluntary carbon credits and corporate social responsibility markets. The relevance of the project in terms of adaptation is related to climate adaptive functions of trees in the farming landscape, introduction of climate-resilient agricultural practices and increased climate change awareness of the farmers. Adaptation benefits are also expected to occur through decreased erosion and improved groundwater availability.

The ongoing pilot project of *Efficiency Enhancement and Entrepreneurship Development in Sustainable Biomass Charcoaling* is expected to reduce up to approximately 20,000 tonnes of CO<sub>2e</sub> annually by reducing deforestation in Ghana. The local population is being trained in plantation management and in efficient charcoal production utilizing efficient kilns. Development benefits are linked to poverty reduction impacts through improved efficiency in charcoal production and creation of local entrepreneurship. The adaptation benefits relate to improvement of energy security and reduced reforestation but the development components have also adaptation linkages. Out of the budget of EUR 848,000, EUR 308,000 is provided by private sector and EUR 30,000 by the local communities.

## Conclusions

As mentioned above, the CPI estimated that in 2013, 91.2% of the global climate finance flows were directed at mitigations projects (Buchner et al. 2014). The estimate is based on a categorisation of climate actions, which, despite of being understandably inevitable, fails to depict the variety of linkages mitigation projects have with adaptation impacts as discussed above. As far as climate benefits are concerned, several NCF projects indicate that the distinction between mitigation and adaptation is partially artificial. Based on the lessons learned from NCF projects, the division of mitigation and adaptation seems partially to be linked to the fact that adaptation impacts, especially when quantified, are more challenging to conceptualize and monitor whereas mitigation impacts are readily monitorable. Quantification of adaptation impacts needs therefore further development and longer term monitoring in general.

Business initiatives geared towards mitigation can also have notable adaptation impacts. Typical examples in NCF portfolio are sustainable charcoal, efficient cook-stoves, and water filters. These project types are rather common among mitigation-oriented project types in general. Also many adaptation projects can have mitigation (i.e. sequestration) impacts, especially when aimed at improving agricultural productivity and conserving the soil.

Lessons learned so far from 49 NCF projects indicate that it is possible to attract co-financing also from the private sector to adaptation projects, especially when combined with mitigation actions. While adaptation projects attracted 13 % private sector co-financing, in combination projects the private sector's share of funding is considerably higher, 33 %. Based on the NCF experience, the volume and value of current adaptation activities may be larger than currently captured by the climate finance flow estimates. NCF projects suggest that adaptation co-benefits may not be accounted for in activities labelled as mitigation.

Even if re-classifying some mitigation projects as adaptation or multi-purpose would not increase the actual adaptation co-benefits, it can be argued that re-classification, when applicable, could further help to conceptualize the still challenging adaptation concept and encourage the consideration of adaptation needs, actions and impacts also in the context of mitigation projects. In the long run, this could function in support of the general adaptation agenda and possibly also result in an increase of the much-needed adaptation co-benefits and funding. In addition, a more thorough understanding of the interlinkages between mitigation and adaptation impacts could help to improve project designs and lead to additional adaptation co-benefits, especially when taking into account the projected growth in many low-income countries and possibilities for synergies.

The NCF projects thus indicate that adaptation activities can attract private sector interest, co-funding and create business linkages—especially when combined with mitigation components.

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