

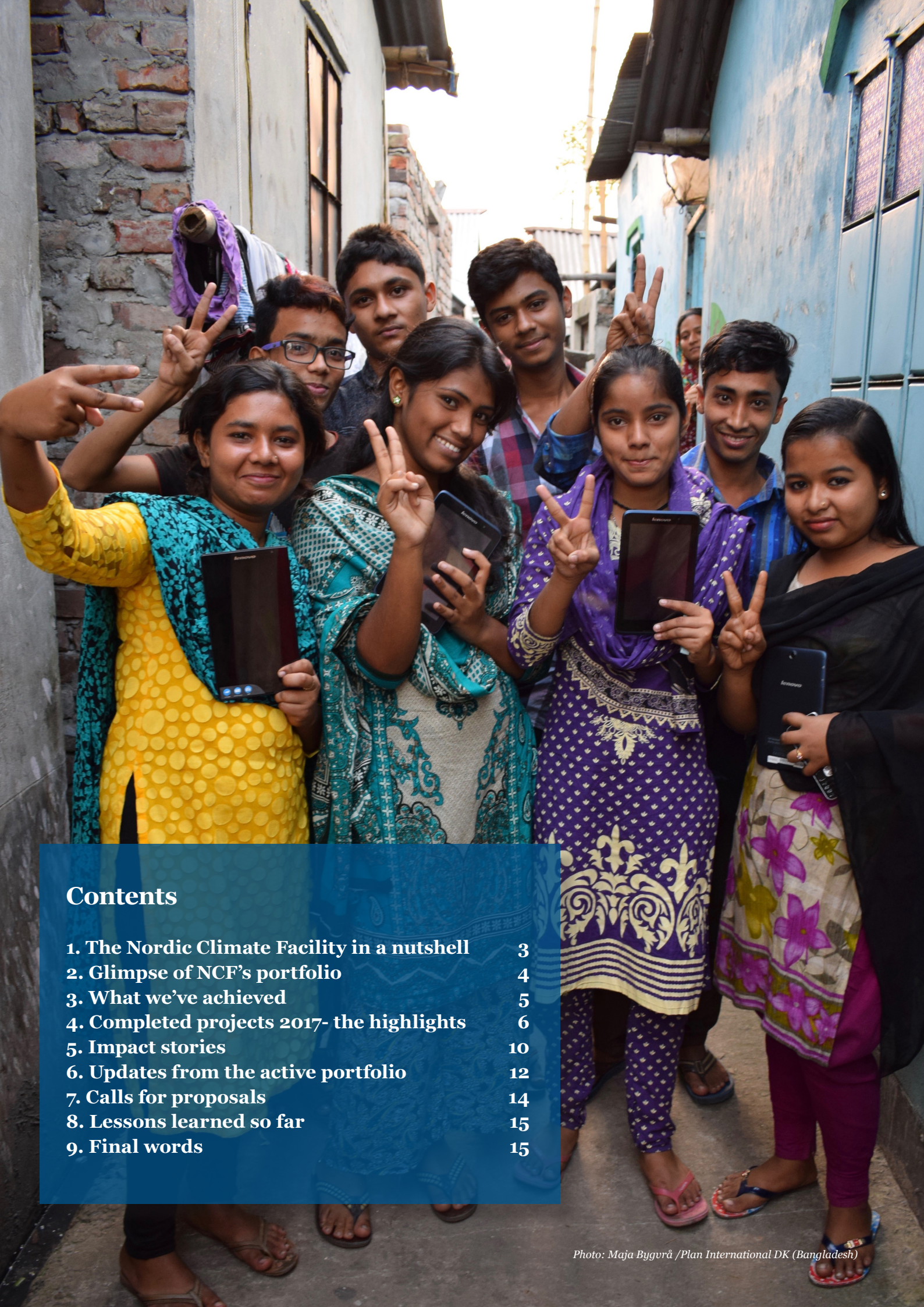
Nordic Climate Facility Results Report

2017



Nordic Climate Facility
Initiative by NDF





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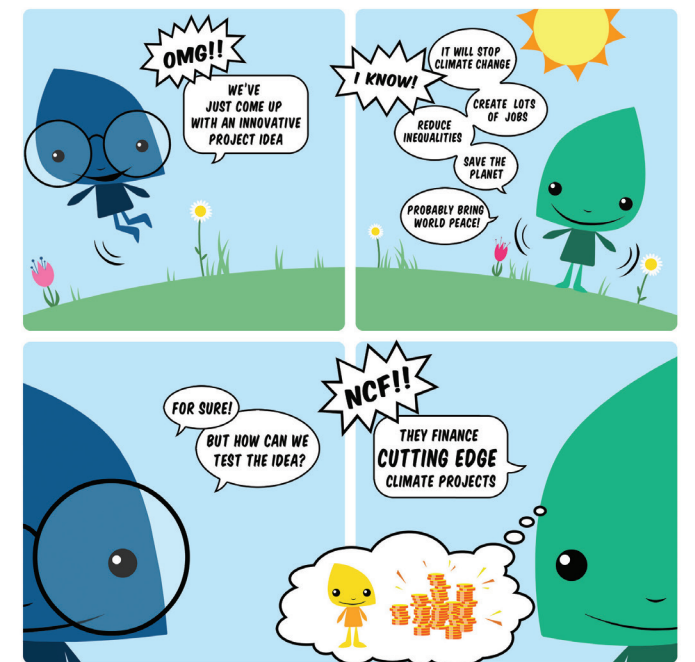
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Photo: Maja Byggrå / Plan International DK (Bangladesh)

1. The Nordic Climate Facility in a nutshell

The Nordic Climate Facility (NCF) is a challenge fund set up by the Nordic Development Fund in 2009 to finance early stage innovative climate change projects. Financing from NCF is allocated on a competitive basis with thematic calls for proposals arranged annually. Under each call, a Nordic organisation can together with partners apply for funding for their project idea. All project proposals are thoroughly evaluated and the highest scoring ones can receive financing between EUR 250,000 and 500,000.

NCF is fully financed by the Nordic Development Fund (NDF). NDF is administering all ongoing projects as of 2018. The Nordic Environment Finance Corporation (NEFCO) administered the first four calls for proposals.



NCF works towards the following five main objectives:



1. To increase low-income countries' capacity to mitigate and adapt to climate change



2. To encourage and promote innovations in areas susceptible to climate change



3. To build partnerships between Nordic and partner country actors, both private and public organisations



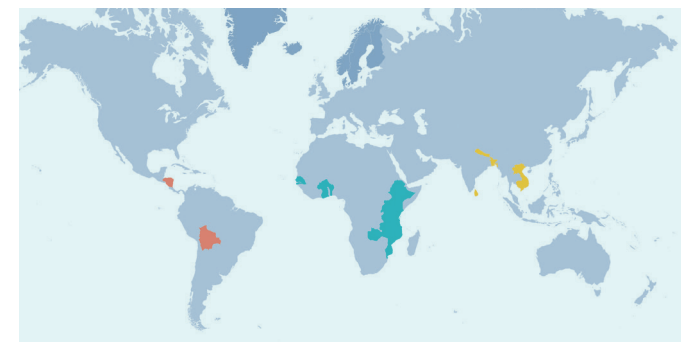
4. To contribute to sustainable development and the reduction of poverty



5. To leverage additional financing for climate action

NCF aims to build a portfolio of innovative green business concepts which have been tested, proven viable and are ready to be scaled-up and replicated.

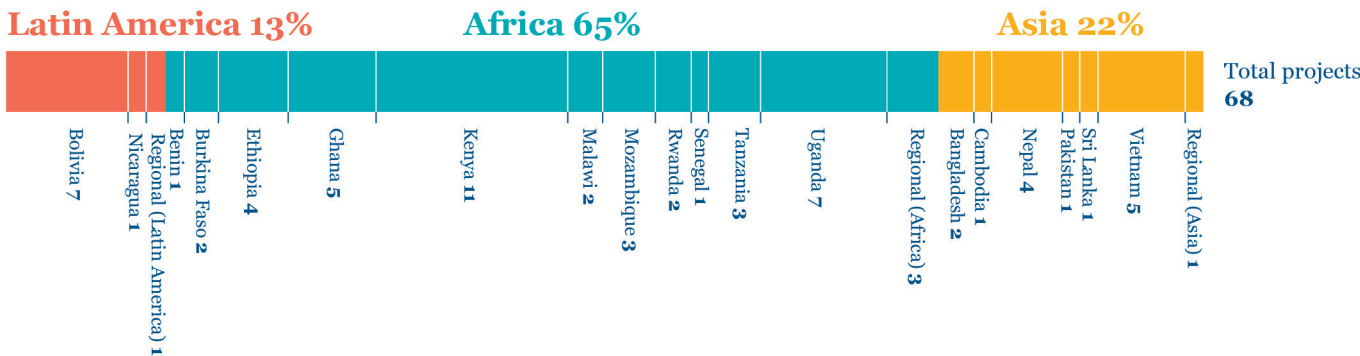
The facility can finance projects in the following **21 countries**:



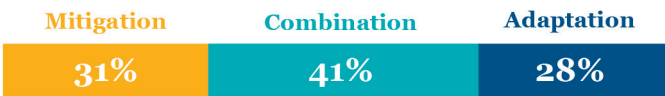
Africa: Benin, Burkina Faso, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Rwanda, Senegal, Tanzania, Uganda and Zambia
Asia: Bangladesh, Cambodia, Laos, Nepal, Sri Lanka and Vietnam
Latin America: Bolivia, Honduras and Nicaragua

2. Glimpse of NCF’s portfolio

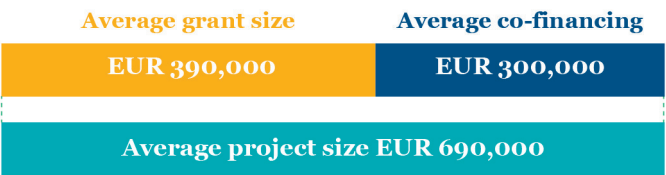
Since 2009, seven NCF calls for proposals have been organised and almost **600 project applications** have been received. The NCF project portfolio comprises **68 projects**. Out of these, 17 projects are under implementation and 51 have already been closed.



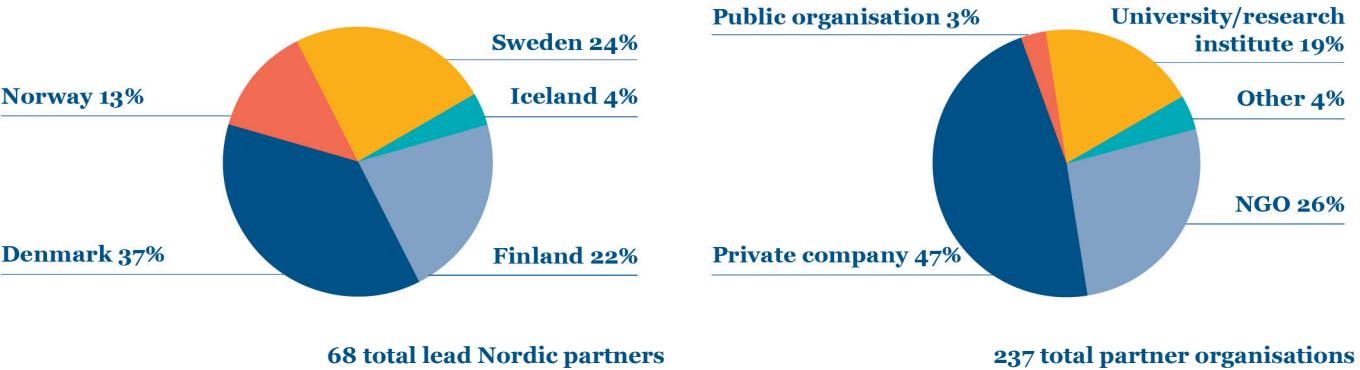
Projects under NCF aim to increase resilience to climate change (**adaptation**), reduce greenhouse gas emissions (**mitigation**), or encompass both adaptation and mitigation (**combination projects**).



The average size of an NCF project has been around **EUR 690,000**, with an average of almost **EUR 300,000** in co-financing from project partners and other financiers.



All projects are required to have a Nordic lead partner. The largest share of projects has been implemented by Danish lead partners, followed by projects with Swedish and Finnish leads. The majority of the project partners have been private companies, followed by non-governmental organisations.



The total value of the NCF portfolio is **EUR 46.9 million¹**, of which **EUR 26.6 million** is NCF financing and **EUR 20.3 million** co-financing.

To date, NCF has disbursed **EUR 20 million** in grants.

1. Includes all 68 projects in the portfolio. The number is actual for closed projects and expected for ongoing projects.

3. What we’ve achieved

NCF’s diverse portfolio has contributed to the fulfilment of the facility’s **five objectives**.

1. Increase low-income countries’ capacity to mitigate and adapt to climate change



Of the 51 closed projects, 20 were mitigation projects, 14 adaptation projects and 17 combination projects aimed at both mitigation and adaptation impacts. Based on reporting from 26 closed projects with direct mitigation impacts, the CO₂e emission reduction level was 15,600 tonnes/year on average or 407,000 tonnes/year in total.² For many of the projects, greenhouse gas emissions reductions have been achieved through the introduction of energy efficient appliances or fuels for cooking produced from locally available renewable raw materials, as well as enhanced carbon sequestration. Because NCF targets small-scale projects, reductions in direct emissions are quite modest, though there have been a few exceptions.

Projects aiming at adaptation impacts have, for example, introduced climate-smart agricultural practices and improved food conservation methods. Others have improved water resources management and promoted rainwater harvesting. These developments enhance beneficiaries’ food and water security, contributing to increased climate change resilience.³

2. Encourage and promote innovations in areas susceptible to climate change



NCF defines innovation as a solution that has the potential to improve the lives of people in developing countries more effectively than existing approaches. All projects selected for NCF financing have an innovative aspect. Therefore, 100% of the projects selected for NCF financing contribute to this objective.

3. Build partnerships between Nordic and partner country actors, both private and public organisations



NCF aims to promote partnerships and therefore, apart from Nordic partners, NCF projects have to have at least one local partner in the country of implementation. In addition, non-Nordic and non-local partners can be a part of the project consortium. On average, an NCF project has comprised of 3-4 partners.

2. Based on expected emissions reductions of 26 completed NCF projects with direct mitigation impacts. Actual mitigation impacts will depend e.g. on the realised level of utilisation of the implemented technologies.

3. Adaptation results are generally presented in a qualitative way, as it is challenging to identify quantitative indicators for the aggregation of results. So far, there are no universally accepted metrics for adaptation.

1.4 million beneficiaries
407,000 tonnes CO₂e emission reductions per year
129 multi-stakeholder partnerships developed

4. Contribute to sustainable development and the reduction of poverty



All NCF projects contribute to sustainable development. The development impact of each project varies with the scope. Many projects contribute to improved livelihoods by creating income-generating opportunities and/or job opportunities for the local population. Typically, the income-generating opportunities derive from business development in fields such as the sale of agricultural products, tree seedlings or cooking fuels produced from renewable sources.

In terms of job creation, new employment opportunities have been in food processing, production of non-wood forest products, manufacturing and maintenance of energy-efficient kilns and rainwater harvesting systems as well as waste recycling. In addition, several projects show positive health impacts through, for example, replacing harmful energy sources with cleaner alternatives and improving indoor air quality through the introduction of enhanced cookstoves or cooking fuels produced from renewable sources. Better food processing has increased food security and provided food with higher nutritional value.

5. Leverage additional financing for climate action

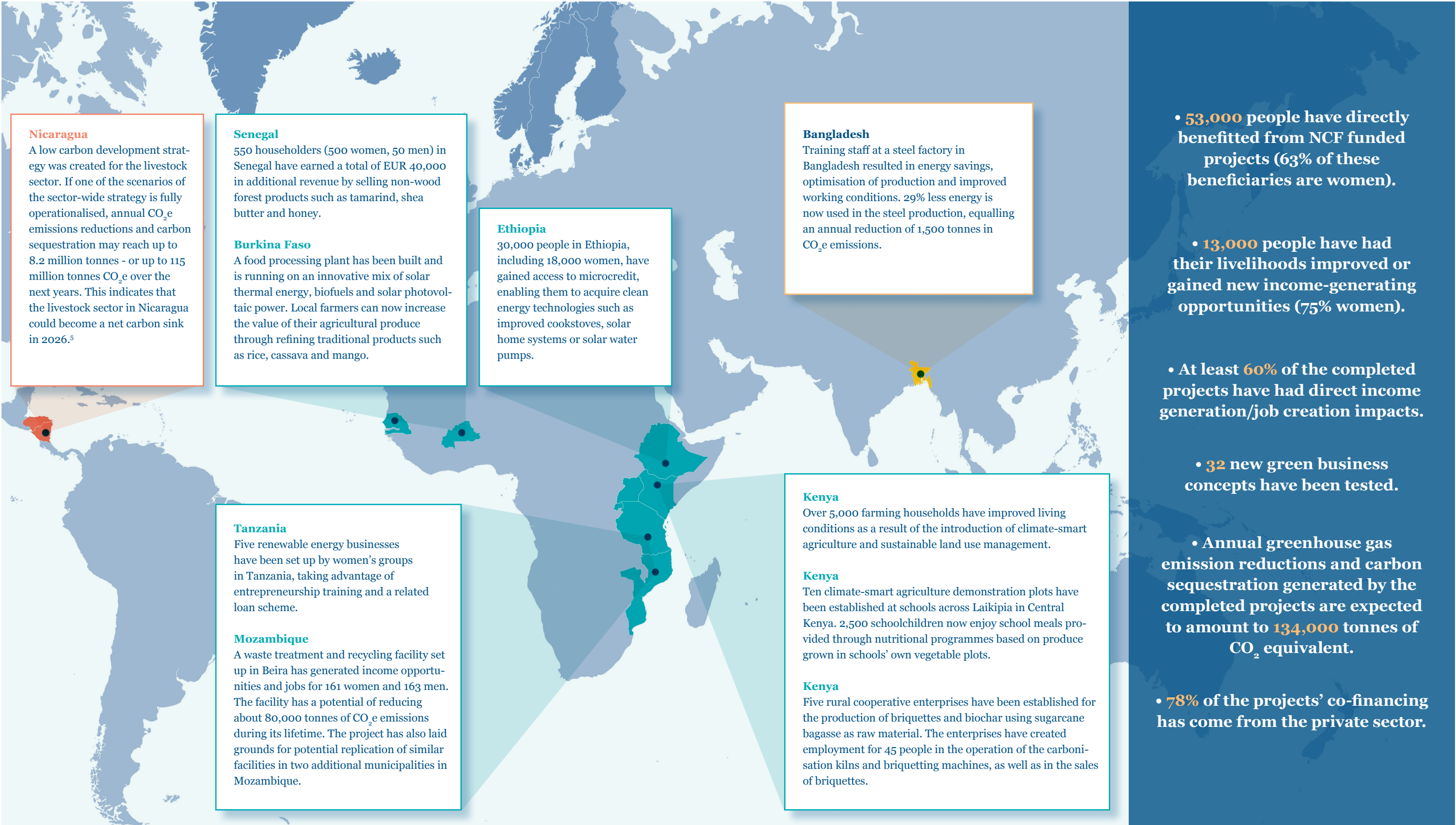


A key goal of NCF has been to leverage additional financing for climate action. The EUR 18.7 million that NCF has contributed in grant funding to completed projects has attracted another EUR 15.8 million in co-financing. More than half of that co-financing has originated from the country of implementation and about a quarter has come from the Nordic region. For every EUR 1 of NCF funding, EUR 0.85 has been leveraged in co-financing.

It is expected that after completion, NCF projects will continue to leverage financing for climate action through replication and scaling-up of activities. Out of the completed NCF projects, 85% have reported continuation of activities.

4. Completed projects 2017 - the highlights

During 2017, 14 projects were closed, five were partly completed and one was cancelled⁴.



4. The partly completed projects were closed prior to reaching all outcomes as the closing date had passed. One project was cancelled due to insufficient co-financing.

5. The operationalisation of the strategy depends on securing the substantial financing and other conditions needed for their implementation and thus there is uncertainty in the materialisation of the expected emissions reductions.

Women empowered

The focus on women and gender equality in NCF's fourth call for proposals has led to positive gender-related impacts of the closed projects. Of the 53,000 NCF beneficiaries of the closed projects, 63% are women. In terms of improved livelihoods or income-generating possibilities, there are 13,000 beneficiaries, of which 75% are women. The projects have succeeded in advancing and engaging women in business development and income-generating activities which in many cases have improved the social standing of women, their leadership skills, financial independence and self-confidence.

In Tanzania, 300 women were mobilised into ten women's groups which were introduced into a lending scheme known as the Village Community Bank (VICOBA). Each VICOBA has an average capital of around 25 million Tanzanian shillings (TZS) (EUR 9,000) and the individual loans can be between TZS 500,000 and 2 million (EUR 180 - 720). The lending scheme has allowed the women to access funds that enable them to pay for their children's school fees and start their own businesses. In organised groups, the participating women's level of confidence has increased, which has helped change the attitudes towards women in the local communities. The groups also provide their members with a platform for knowledge- and information-sharing. The women were supported and trained in the areas of entrepreneurship and leadership skills. Five renewable energy businesses were started as a result of this project. These focus on selling solar lanterns as well as efficient biomass and biochar cookstoves.



Photo: Anja Nystén/ NEFCO (Tanzania)

• **In Bandafassi, Senegal, 503 women** (90% of the total amount of the project's beneficiaries) forming part of the 24 established Economic Interest Groups have earned around EUR 40,000 as additional revenues from the sale of non-wood forest products and cookstoves.

• **3,200 women** (80% of the total amount of the project's beneficiaries) across Laikipia in **Kenya** were trained in climate-smart agriculture. This enabled them to produce a marketable surplus, and thus to generate additional income. The women were also empowered through their participation in all aspects of operating the value chains from production to sales and marketing.

• **18,000 women** (60% of the total amount of the project's beneficiaries) in **Ethiopia** gained access to a microfinance credit to purchase clean energy technologies such as improved cook stoves, solar home systems, solar water pumps and biogasifiers.



Photo: Paula Tommila/Gaia Consulting Oy (Ethiopia)

Innovation promoted

In Burkina Faso, a food processing plant has been established which allows the local farmers to process and conserve their agricultural products instead of selling them at very low market prices right after the harvest. The processing plant is unique as it runs almost entirely on renewable energy using an agricultural waste gasifier combined with solar thermal energy and solar photovoltaic power. The project has opened up new sales opportunities for local farmers who now can increase the value of their agricultural produce such as rice, cassava and mango, through their processing into refined products and thus increase their income which traditionally has been based on subsistence agriculture.

In Ethiopia, innovative business models have been developed to promote access to high-quality clean energy technologies (CET). During the launching phase of the business models, 30,000 micro-finance institution (MFI) clients gained access to CET microcredits and more than 550 low-income households and micro, small, and medium enterprises purchased and installed reliable and climate-friendly energy products. Through the CET credits, the MFIs received hundreds of new client applications, and they also mobilised around EUR 10,000 of savings as part of the CET credit client acquisition process. The project employed a bottom-up approach by starting with an in-depth demand assessment and thus addressed local culture and needs to ensure sustainable and appropriateness of the business mechanisms created. The project won the National Energy Globe Award Ethiopia in 2017. This award is the second to be won by the project, which was also given the 2016 Best Climate Practices Award by the International Center for Climate Governance.



Attieke (cassava couscous) processing at the food production plant in Burkina Faso. The process starts with peeling (first picture). The second picture presents the final product. Photo: Danish Technological Institute

Nationally Appropriate Mitigation Actions (NAMAs)

As part of the closed NCF projects, **three NAMAs** were drafted for the following national sectors:

- **Steel industry in Bangladesh.** If materialised, the NAMA could reach up to 1,500 tonnes CO₂e in annual emissions reductions.
- **Waste management sector in Mozambique.** If operationalised, the annual average CO₂e emission reductions are estimated at up to 173,000 tonnes CO₂e - or 2.1 million tonnes CO₂e over a time span of 23 years.
- **Livestock sector in Honduras.** If one of the developed scenarios is implemented throughout the sector, annual CO₂e emissions reductions and carbon sequestration could reach up to 2 million tonnes - or up to 29.3 million tonnes CO₂e over a time span of 14 years.

The operationalisation of all three NAMAs depends on securing the substantial financing and other conditions needed for their implementation and thus there is uncertainty in the materialisation of the expected emissions reductions. In the framework of the United Nations-led climate negotiations, NAMAs refer to "any action that reduces emissions in developing countries and is prepared under the umbrella of a national governmental initiative. They can be policies directed at transformational change within an economic sector, or actions across sectors for a broader national focus."⁶

6. UNFCCC (Retrieved from <http://unfccc.int> in February 2018)

5. Impact stories

Efficient fish smoking kilns have increased food security in Tanzania

Project: Reduction of greenhouse gases and deforestation related to food processing in Sub-Saharan Africa



Efficient fish smoking kilns use up to 80-90% less fuelwood compared to the traditional open-fire method. Photo: Matis (Tanzania)

Situation before project: The communities by Lake Tanganyika in Tanzania are dependent on fish as a valuable source of protein in their diet. However, as access to electricity and running water is non-existent, the only way of preserving the fish catch is by smoking and drying it. The traditional method for smoking the fish on an open fire is a labour-intensive process exposing the workers to heavy smoke and respiratory diseases; it also contributes to deforestation due to the large amounts of firewood needed. The traditional method also tends to result in low quality end products and a large amount of fish being ruined and thus unsellable.

Project results: As part of the project, 100 efficient smoking kilns were locally produced and distributed to 300 fish processors in 21 lake-side communities, along with training on their use. The kilns have an aggregate capacity to process 3,000 tonnes of fish annually while using 80-90% less firewood compared to the traditional open-fire method. The quality of the produce is high and post-harvest loss is reduced.

Highlighted positive impacts:

- **Enhanced income opportunities:** The higher-quality and better tasting product is in high demand and can be sold at higher prices.
- **Increased food security:** Overfishing, among other issues, has resulted in a decreased fish stock around Lake Tanganyika. Thus, a fish processing method that reduces post-harvest loss has a positive impact on food security around the lake-side communities.
- **Improved health conditions:** Smoking fish in the kilns drastically reduces the fish processors' exposure to health-damaging fine particles. Tests done on the traditionally smoked fish also showed concentrations of polycyclic aromatic hydrocarbons, whereas tests on fish smoked in the new kilns indicate practically no formation of this group of carcinogenic chemicals. The health benefits extend therefore to the entire community consuming smoked fish.
- **Augmented gender equality:** Fish processors are mainly women. Their income as well as their position as active community members have been strengthened as a result of the project. Further, women have more spare time for other activities while the fish is smoking since the process does not require constant attention as is the case in traditional smoking.

New sources of income for farmers in Kenya

Project: Climate-smart agriculture for improved livelihoods



Goat milk production has almost tripled since the farmers introduced upgrading practices such as improved feeding, tagging and records for breed tracking. Photo: Heli Sinkko/ NEFCO (Kenya)

Situation before project: 70% of the population in the focus area (Kisumu, Homa Bay and Bungoma counties in Western Kenya) is living in endemic poverty and improving agricultural productivity is a precursor for economic development in the area. Farming in this region is typically low-input, subsistence, rain-fed and low-yielding, further threatened by climate change. The land is degraded and non-productive and thus the population depends on combining farming with other sources of income for their livelihoods. Farmers are using conventional farming technologies which can further increase land vulnerability to impacts of climate change.

Project results: The project introduced sustainable land use management and climate smart agriculture practices to the farmers. These practices were used to increase the performance of four value chains that formed part of the farmers' additional sources of income: dairy goats, bananas, commercial tree nurseries and beekeeping. The project also supported the establishment of village savings and loaning groups to provide the farmers with financial services.

Highlighted positive impacts:

- **Enhanced income opportunities:** The farmers' sources of income were diversified through the development of the four value chains. For example, in the case of dairy goats, the project activities contributed to an increase in milk production per goat from below 1 litre a day to 2-3 litres a day. Consequently, the goat farmers have had better opportunities to develop their income base and invest in more animals. The tree seedlings farmer en-

terprise has allowed participating farmers to invest in farm assets through income earned from selling the seedlings. For example, one farmer in Chwele sold 4,000 assorted tree seedlings at the price of 4 Kenyan Shilling (KES) (3.1 euro cents) per seedling earning some KES 20,000 (EUR 158) that she invested back in farming inputs and in leasing additional land for growing crops. Based on interviews, 65% of participating farmers attributed their increased income and financial security directly to the project. The project has helped the farmers to shift from subsistence agriculture to market-oriented agroforestry farming.

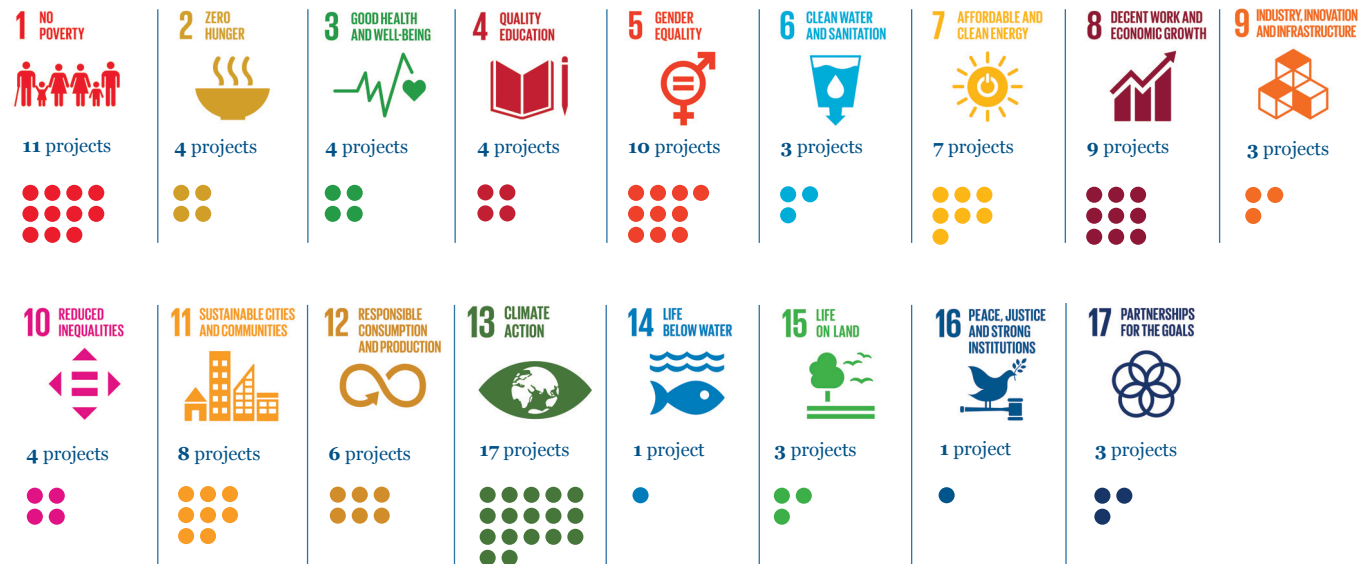
- **Access to finance:** The farmers were supported through the establishment of local financial services, i.e. 154 village savings and loan associations as well as two community savings and credit cooperatives. The loans were used for paying for school fees and in investing in farm inputs and livestock.
- **Increased food security:** 64% of the interviewed farmers reported that their food security had increased. Despite the drought in 2016, farmers have experienced an increase in food production and have now adequate food for 7 months with 3 meals per day as compared to 6 months and 2 meals prior to the project. The 5,308 farmer households are more resilient to climate change and have improved crop yields as crop production has increased by 44% from 2014 to 2016.
- **Access to education:** As a result of increased income, farmers have been better able to pay for their children's school tuitions. Between 2014 and 2016 school enrolment increased for girls from 70% to 74% and for boys from 76% to 79%.

6. Updates from the active portfolio

Ten projects initiated their implementation during 2017. Consequently, the active NCF portfolio, as of the beginning of 2018, consists of 17 projects under implementation in 10 countries covering three continents. EUR 12.4 million has been committed to the projects of which NCF has committed EUR 7.9

million and EUR 4.5 million is to be leveraged in co-financing from project partners and financiers.

The active portfolio is diverse where all the projects aim to contribute to the fulfilment of the United Nations Sustainable Development Goals (SDGs).



20 climate champions, local adolescents, have been recruited from two slums in Dhaka, Bangladesh, to play a key role in their communities as agents of changes.

“As climate champions we’ve helped to identify solutions for resolving the prioritised climate problems. We’ve also set up an information hub named the Climate Champions’ Corner, where information on these solutions is made available for the whole community.”

-Farjana Akhter, the President of the Climate Champions Group, Bangladesh.



Photo: Basanta Gautam/ Arbonaut (Bangladesh)

102 poor households in Da Nang, Da Nang, Vietnam have reconstructed or retrofitted their homes to make them more climate-resilient.



Photo: Inigo Ruiz-Apilanez / Arup (Nepal)

“This project has helped illiterate groups learn climate friendly business and participate in income generating activities. Women who used to be busy with household chores withdrew from their traditional work and actively participated in group mushroom farming and succeeded in breaking the sociocultural norm.”

-Bimala Gautam, chairperson of Ujyalo Mahila Sasaktikaran Kendra Nepalgunj, Nepal.

67,800 trees have been planted in Karachi, Pakistan in a tree plantation campaign to raise awareness about climate change and reduce the city’s carbon footprint.

In Bolivia, a first draft of a green microcredit scheme has been designed, which will enable farmers to invest in a biodigester that produces gas and bio-fertilisers from animal manure. The financial viability of the microcredit scheme will be tested during 2018.

Two youth brigades have been set up consisting of 46 adolescents (29 male and 17 female) from indigenous communities in Bolivia to raise awareness of climate change related issues both within their communities and more broadly through social media.



Photo: Morten Bo Johansson/ Forests of the World (Bolivia)

7. Calls for proposals

NCF’s seventh call for proposals was launched during 2017 under the theme *Climate as business - testing innovative green business concepts*. A total of 138 concept note applications were received, of which 121 were eligible. The eligible applications were reviewed by the NCF Evaluation Committee. By the end of 2017, 25 applications had been shortlisted and invited to prepare full project proposals.

NCF is open to a wide range of applicants; private companies, public organisations, NGOs, research institutions and others. Of the shortlisted applications, 72% had a private company as Nordic lead.

Nordic Road Show

An NCF Nordic Road Show was arranged for the first time to market NCF and its seventh call for proposal in all Nordic countries. Presentations were held in the Nordic capitals, with a total of around 200 participants. The road show was arranged together with the Nordic partners presented below.

Streamlined application processes

NCF’s application process was thoroughly revamped during 2017 to make the whole application and evaluation processes simpler, more streamlined, and thus more functional and attractive for potential applicants. Examples of the related improvements include:

- a new online application system;
- simplified application for the first application stage, i.e. the “concept note” stage;
- new, more comprehensive guidelines and templates;
- an improved evaluation process, involving the provision of individual feedback to all applicants;
- a project implementation manual, and;
- a glossary of frequently used terminology.

NCF will continue to enhance its processes in 2018, especially through further streamlining project implementation and monitoring processes, and developing a stand-alone website.



Photo: Morten Bo Johansson/ Forests of the World (Bolivia)

8. Lessons learned so far

NCF aims to continuously gather lessons learned from projects and spread this knowledge through various channels. Below are some of the main lessons learned. They are geared towards all challenge fund stakeholders; potential applicants and financiers, NCF grantees, and other challenge funds managers.

- **Set realistic targets and outcomes** (attributable to the project) already at the application stage.
- **Include final beneficiaries as early as possible in project design and planning**, as they can provide valuable input from the start, reduce the need for potential revisions of project design, and increase the probability of successful implementation.
- **Plan the start date and the implementation of activities carefully** as some project activities may depend on seasons. For example, a missed crop season can cause delays of up to a year.
- **Have knowledge about which approvals, permits and licences etc. are needed to implement a project** as obtaining them may take considerable amount of time delaying the project. Signing sub-agreements between project partners may also take time and cause delays.
- **Ensure maintenance is secured** via clear ownership, technical expertise and sufficient funding to enable continuation and sustainability in the long term.

• **Ensure implementation guidelines are available** already at the application stage so the reporting and monitoring requirements are clear from the start. Project Implementation Guidelines were developed for NCF’s seventh call for proposals.

• **Having gender specific indicators and targets from the start will improve gender-based project monitoring and reporting.** Calls for proposals with a specific focus on women and gender equality more often lead to results which have been disaggregated by gender.

• **Monitor projects a few years after completion** in order to capture impacts that may only be realised in the long run. NCF projects are considered completed when the set outcomes and outputs have been realised, e.g. solar panels have been installed or farmers have been trained in sustainable agriculture. Thus, only after a few years will the full climate and development impacts be observable.

• **Market calls for proposals well ahead of the launch** to ensure sufficient time for interested applicants to identify partners and develop the project concept.

• **Cancellation of a project may be necessary**, in case of severe challenges, in order to allow better utilisation of NCF funds.

9. Final words

2017 was an exciting year for NCF with plenty of results to be shared, as 14 projects completed their implementation. In addition, promising progress has been presented by projects that are continuing their implementation during 2018. The aim of this report is to share these results as well as lessons learned. The results and impacts vary due to the nature of NCF as a climate change challenge fund with both adaptation and mitigation projects in its project portfolio covering a wide range of sectors, technologies and activities. NCF is a rather unique instrument as adaptation and mitigation activities are fairly balanced and many projects combine mitigation with adaptation. Typically, only a fraction of global climate finance goes to towards adaptation activities.

Business concepts, technologies and methodologies have been piloted to assess their adoptability and sustainability. So far, NCF projects have directly benefited approximately 1.4 million people across Africa, Asia and Latin America. Benefits include access to renewable and affordable energy, new income-generating possibilities, job creation, improved health, food security, water availability, waste treatment, women’s empowerment and capacity-building.

The climate change and development impacts are usually not fully observable at the completion of an NCF project and it may

take some years for the impacts to be fully realised. However, the initial results help demonstrate the potential of the projects. This consequently may facilitate access to financing for both replication and scaling-up activities, and thereby leverage more funding for global climate action.

Currently, the NCF portfolio consists of 68 projects. NCF is expecting that 12-14 projects will be added to the portfolio during 2018 when projects selected under the seventh call for proposals commence their implementation. The portfolio will continue to grow in the upcoming years as two more calls for proposals are scheduled to be launched during 2018 and 2019.

2017 marked the end of NEFCO’s involvement in NCF as the last of the projects under NEFCO administration closed. NEFCO successfully administered the first four calls for proposals, playing a key role – along with NDF – in setting up NCF as one of the first climate change challenge funds. The seven-year long NCF collaboration between the two organisations has been dynamic and fruitful. Their experience and insights will be valuable for the continued administration of NCF by NDF.

More information about NCF and upcoming calls is available at: nordicclimatefacility.com and ndf.fi.



Nordic Development Fund

The Nordic Development Fund is a joint Nordic development financing institution that supports climate-related projects in Africa, Asia and Latin America.



The Nordic Environment Finance Corporation is an international financial institution established by the Nordic countries in 1990. NEFCO's green financing is targeted at small and medium-sized projects.

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