Nordic Climate Facility Results Report 2019





Nordic Development Fund

cover photo: Emeli Möller/NDF photo: Maja Bygvrå, PlanBørnefonden

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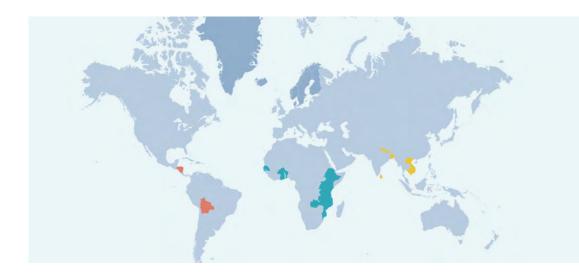
Contents

Introduction & Scope	3
Active NCF portfolio in 2019	4
Achieved results in 2019	5
Sustainable Development Goals of the active portfolio	6
Cross-cutting outcomes of projects completed in 2019	7
Completed projects in 2019	8-11
Discontinued projects in 2019	12
New NCF projects	13
Highlights from ongoing projects	14–15
NCF 9 applicants	16
An adaptive and collaborative approach to portfolio managemen	it 17

Introduction

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. 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. NCF financing is allocated on a competitive basis through calls for proposals to Nordic organisations and their partners with innovative project ideas. All project proposals received are thoroughly evaluated and those with the highest scores can receive financing between EUR 250,000 and 500,000. NCF is fully financed and managed by the Nordic Development Fund (NDF).

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

NCF works towards the following five main objectives:



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



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

To build partnerships

3 • between Nordic and

partner country actors, both private and public

To contribute **4** • to sustainable development and the reduction of poverty

organisations



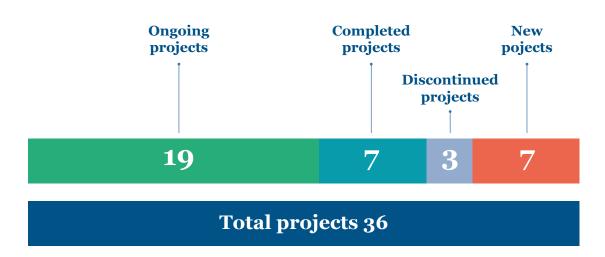
To leverage **•** additional financing for climate action



Scope

This report presents the results of active NCF-financed projects for the period from 1 January to 31 December 2019. As presented in the figure below, the active project portfolio in 2019 comprised of 36 projects. These are located in Africa, Asia and Latin America. Out of these 36 projects, 19 were ongoing (i.e., they started their implementation before 2019 and continue after 2019), seven were successfully completed in accordance with their implementation plans and three discontinued ahead of their planned schedule. In addition, seven new projects were signed and started their implementation during this period. The data provided in this report is based on reports from project implementers. During 2019, 15 projects were visited by NDF staff to monitor and track progress.

NCF portfolio 1 Jan – 31 Dec 2019



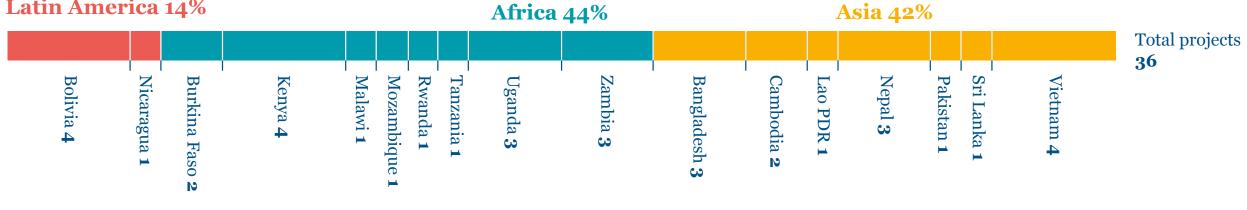
Active NCF portfolio in 2019

In 2019, there were 36 active projects in the NCF project portfolio. On this page, some basic data of the portfolio is presented.

Geographical distribution

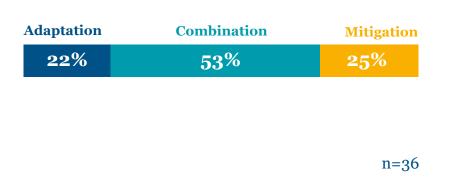
The active NCF portfolio was concentrated on Africa and Asia in 2019. In terms of countries, the most common ones were Kenya, Vietnam and Bolivia.

Latin America 14%



Climate change focus

Projects under NCF aim to increase resilience to climate change **(adaptation)**, reduce greenhouse gas emissions (mitigation), or encompass both adaptation and mitigation (combination projects). In the following, the distribution of projects in the active portfolio in terms of their climate change focus is presented.



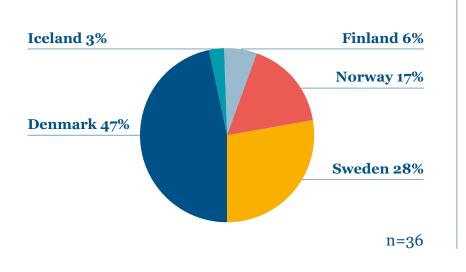
Funding

During 2019, the following amounts of funding were disbursed in the active portfolio.

Total financing in 2019	EUR 5,440,675
Co-financing	EUR 1,639,898
Grant financing	EUR 3,800,777

Nordic lead partner

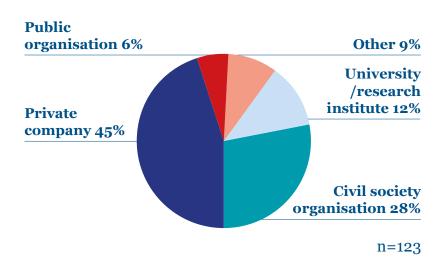
All projects are required to have a Nordic lead partner. In 2019, almost half of the projects were implemented by Danish lead partners, followed by projects with Swedish leads.





Type of partners

The 36 projects were implemented by a total of 123 project partners. In terms of type of organisation, private companies are largely the most common ones.



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Achieved results in 2019

On this page, outcomes of NCF-financed projects in 2019 are presented through an agreed set of indicators. The table presents results separately for the active portfolio in 2019 (which includes 36 projects, presented on pages 3 and 4 of this report), as well as for the seven projects successfully completed in 2019 (encompassing the full implementation period). The numbers presented are based on the projects' progress and completion reports.

Ongoing projects report on their progress for set milestone periods. These progress reports can occur at any time of the year. For the figures presented on this page, progress reports approved in 2019 were used as a data source. Therefore, some of the outcomes may have occurred during 2018, if they were part of a report approved in 2019. At the same time, some outcomes that took place during 2019 but reported in 2020 are not included in this report. The progress reports include information on projectspecific indi-cators, rather than the entire range of NCF indicators. Therefore, for the active portfolio, the progress reports may not show the full picture in relation to NCF's outcome level results presented on this page. For completed projects, the picture is more comprehensive as the completion reports include a section on the agreed set of NCF indicators.

Numbers have been disaggregated for gender where possible. Not all projects reported data with gender disaggregation, and therefore the total amounts for each indicator do not equal the sum of the gender disaggregated numbers.

NCF Indicator



Number of beneficiaries reached Women Men



Number of people with increased resilience to cl Women Men



CO2e emissions reduced or avoided on an annua



Number of green business concepts tested



New decent jobs created **Permanent jobs** women men **Seasonal jobs** women men **Parttime jobs** women men



Number of people with improved livelihoods Women Men



Number of multi-stakeholder partnerships deve



Amount of funds leveraged***

* Entails the results from the full implementation period of projects complete

- ** Assessed at project completion, not during project implementation
- *** Some of the reported expenditures have not yet been audited, and thus the final numbers might change after completion of audits



	Results of active project portfolio during 2019	Aggregated results of projects completed in 2019*
	13,522	27,485
	1,343	14,035
	1,980	13,059
nate change	6,535	18,135
	371	9,375
	248	8,369
basis (tonnes of CO2e/y)	n/a**	55,064
	5	31
		1 000
	461	1,309
	350	103 32
	_	71
	111	950
	-	500
	-	450
	-	256
	-	148
	-	106
	7,527	3,085
	232	1,843
	46	1,040
ped	n/a**	19
	1,639,898	1,423, 777



Nordic Climate Facility Results Report 2019

6

Cross-cutting outcomes of projects completed in 2019

During 2019, seven NCF-financed projects were successfully completed and three projects discontinued. The successfully completed projects are presented on pages 8–11. The discontinued projects are presented on page 12 together with related lessons learnt.

Among the successfully completed projects, three cross-cutting outcomes were identified: enhanced income opportunities, empowerment of women and sustainable forestry. These cross-cutting outcomes are presented on this page.



Enhanced income opportunities

Several of the completed projects have resulted in a diversification of income-generating opportunities and increased incomes.

One important source of increased income opportunities has been value chain development. In Bolivia, indigenous communities have moved up the value chain of sustainable timber. Now timber residues from forest management are converted into high-margin products in a local carpentry workshop established in the Chiquitanía region. Furthermore, several projects have supported the creation of new value chains. In particular, women's groups in both Nepal and Bolivia have been supported in the production of essential oils, body and hair care products, fodder plants and cash crops.

On the other hand, sales and marketing efforts have also supported income creation. In Bolivia, two indigenous producer associations established a company for selling non-timber forest products from the Bolivian Amazon region. Further, marketing and sales strategies were developed for coffee and non-timber forest products in Bolivia's Chiquitanía region.

Finally, renewable energy has provided to be a source of income to several communities. Over 50 people in Karachi, Pakistan - mainly women - have started new livelihood activities associated with the maintenance of biogas energy systems. Whereas in Nepal, 110 biogas plants benefitting 110 households of 10 different community forest user groups were installed.



Empowerment of women

Through the implemented projects, women now participate in decision-making processes to a higher degree, have enhanced their positions in their communities and show strengthened self-esteem. A driving force for these positive outcomes has been women's increased capacity to organise themselves, their participation in income-generating activities, and taking on the role as income-generators in their families.

In Bolivia, indigenous women's participation in the development of non-timber forest product value chains and thus improved family finances has led to positive outcomes. In the Chiquitanía area women have gained a stronger position in their communities and now participate in decision-making both on the community and family level. In the Bolivian Amazon region, the self-confidence of indigenous T'simane women has been enhanced as they are now for the first time generating their own income.

In Nepal, two different projects have supported wom-Another example of a strengthened stance of women

en-led entrepreneurship, leading to the establishment of dozens of businesses. Their income has increased, making the communities more resilient. As a consequence, the women's positions have been strengthened in their communities. comes from Pakistan, where community groups were established for the effective management and promotion of renewable energy installations. These groups were led by women where possible, while all groups consisted of mixed gender representation (out of all members, more than 50% were women).





Development benefits from forestry-related practices

Three of the completed projects promoted sustainable forestry practices.

A total of 32 hectares of degraded forest areas of the Chitwan and Nawalparasi districts in Nepal were restored by planting 54,000 high-value tree and fodder species. Furthermore, a total of 185 hectares inside the community forests was brought into use through the cultivation of medicinal aromatic plants. These participatory agroforestry initiatives have benefitted 5,000 households.

Agroforestry practices have supported a diversification of production for small-holder farmers. For example, the introduction of shade trees of productive use (such as fruit trees) in coffee fields has improved family and community income both in the Chiquitania and the Teoponte areas of Bolivia. In addition, nine sustainable forest management plans were developed in collaboration with indigenous communities and local organisations in Chiquitania, covering in total 64,000 hectares of forest.

Completed projects in 2019

On the following pages, all projects that were successfully completed in 2019 are presented. The projects had a varying focus in terms of sectors, geographic areas and target audiences. The presentations of the completed projects aim to summarise the main achievements of each project.





Community Driven Climate Adaptation-Making sustainable climate adaptation solutions accessible to the urban poor

Implemented by: PlanBørnefonden, Social and Economic Enhance Program (SEEP), ARUP

At the fringes of Dhaka, Bangladesh, the residents of Match Colony and Rail Line Slum are fighting a constant battle against the water and waste flooding their streets. Around 1,200 households inhabited the area in 2015 whereas the number of households at the end of the project in June 2019 was only around half of this due to massive evictions. For 3–4 months a year, during the monsoon season, the area is submerged by flood water. Due to inadequate infrastructure and services (including roads, drainage systems, waste collection, water and sanitation) and the low-lying nature of the area, Match Colony and Rail Line Slum were identified as communities in Dhaka most prone to the consequences of climate change. To add to this challenge, the ability to respond in a coordinated manner was hampered by the community's social and economic marginalisation. The target community has become more resilient through a number of small-scale interventions, increased understanding of environmental dependencies and better community organisation. This has diminished the impacts of flooding and water logging. During the course of the project, the partners have collaborated with the community – particularly a group of young people - around urban planning, civil engineering and social development. Through an extensive co-creation process, residents of Match Colony identified their most pressing challenges. Practical and affordable climate adaptation solutions for climate proofing





of the settlement were identified, co-designed and tested. One of the solutions tested was elevated paths.

"The project has brought significant changes in our community. Now we have elevated paths. We don't have to walk through filthy water and suffer from skin diseases and other health issues. Girls and women can walk without discomfort as now they don't have to lift their clothes to avoid dirty water."

- Rofigul Islam, Climate Champion

Bolivia

Increased resilience to climate change through enhanced local green growth development

Implemented by: Forests of the World; Apoyo Para el Campesino – indígena del Oriente Boliviano (APCOB), Fundación para la Conservación del Bosque Seco Chiquitano (FCBC), Asociación Forestal Indígena (AFIN)

The Chiquitano dry forest in Bolivia is one of the most important intact forests of Latin America. It is a transitional forest between tropical dry forest and the tropical rainforest of the Amazon, which makes it especially vulnerable to climate change. Deforestation caused by an extractive public development model puts at risk the conservation of the forest and the livelihood of the local communities. Green growth-related income generation as well as development of local organisations are perceived as the main means of sustainable development and adapting to the impacts of climate change. However, local entities often do not have what it takes to make these developments.

The project supported climate change mitigation by initiatives to prevent deforestation. Resilient agroforestry systems with coffee, production and transformation of non-timber-forest-products with low carbon emissions and added-value timber production have improved sustainability and job opportunities for local families. Innovative tools for planning and new techniques have improved community organisations and their capacity to engage in sustainable value chains, and promote and sell local production such as coffee, oils, nuts (chiquitano almonds), shampoo and wood products.



The Chiquitano forest was heavily affected by forest fires that started in August 2019. Communal leaders from the project were the first to alert and defend their territories during the fires. They also pushed local authorities to mobilise. In spite of the severity of the situation, the total affected area in Monteverde - the project area - was minor compared to other territories of the Chiquitano forest.

Bolivia

Indigenous Forest Management for Climate Change Mitigation and Adaptation in Northern La Paz

Implemented by: Nordic Agency for Development and Ecology (NORDECO), Fundación Teko Kavi, Wildlife Conservation Society (WCS)

The indigenous communities in the Bolivian part of the Amazon forest are highly vulnerable to climate change as their livelihood is closely linked to forest products and services. Thus, their subsistence strategy and resilience to climate change depends on the diversification of livelihoods. Analysis by project partners has shown that integrated and sustainable forest management in indigenous territories provides solid reduction of greenhouse gas emissions from deforestation and is an alternative to ensure integral longterm management of the forest.

The project improved the livelihoods and resilience to climate change of 272 indigenous households while contributing to reduced greenhouse gas emissions through indigenous people's territorial management and forest conservation. The communities reinforced their territorial management and forest conservation while increasing their income through enhanced production and commercialisation of sustainable forest products such as coffee, jatata palms - a roof material - and essential oil products. Two indigenous producer associations established the company Chomateo SRL with the objective of improving the production, transformation and commercialisation of sustainable forest products. They have signed sales agreements with cafes and coffee traders from Spain and the U.S., as well as with restaurants and food and beverage companies.





Nepal

Building Resilience and Climate Adaptive Planning in Urban Centers

Implemented by: Arbonaut LTD, Oxfam, Clean Energy Nepal

The two Nepalese project municipalities Birendranagar (Surkhet district) and Nepalgunj Sub-Metropolitan City (Banke district) in Nepal are struggling with climate change impacts such as extended drought periods, increasingly irregular rainfall pattern, floods and landslides caused by extreme monsoon events. At the same time, the municipalities are facing intensified pressure from unplanned urban growth and rapid rural-urban migration. These developments have increased unemployment, poverty and economic vulnerability to the climate extremes.

The project has supported 24 innovative green businesses in two Nepalese municipalities by providing seed grants. The grants have helped to increase resilience to climate change especially among marginalised, vulnerable and poor groups of the society. The project has especially focused on engaging women into entrepreneurship. The supported businesses and their products, as well as the project results, are promoted at http://www.ecobusinessnepal.com/. In addition, people from different levels of society were also involved in the preparation of a municipal adaptation plan, which is the first of its kind in Nepal. The adaptation plan integrates the topics of climate change adaptation and disaster risk management into periodic municipal development planning with a significantly increased budget.



Nepal

Reducing vulnerability to climate change in rural Nepal by supporting local business -renewable energy initiatives

Implemented by: Danish Forestry Extension (DFE), Wildlife Conservation Nepal (WCN), Himalayan Bio Trade Pvt. Ltd (HBTL), BioSynergy

Climate change remains a continuous threat, adversely impacting forest and its various production systems in Nepal. The community forests at Nawalparasi, Nepal, are prone to flash floods during every monsoon season and are reported to have the highest occurrence of forest disturbances such as grazing, forest fire, landslides and deforestation. The communities are highly dependent on forest resources for their daily livelihoods. Women spend hours collecting fuel wood and fodder in the forest and at the same time, they remain excluded from access to services and economic opportunities and are largely underrepresented in decision-making. The project revitalised the vulnerable indigenous and marginalised groups of 10 community forests of Nawalparasi district through participatory agroforestry initiatives benefitting 5,000 households. Nurseries and agroforestry systems were introduced with trees and medicinal aromatic plants. Women enterprise groups were formed, consolidated and strengthened into institutionally and economically independent officially registered groups. The process enabled the production and sale of essential oils and cash crops, ensuring women's economic freedom through forest-centred

opportunities.



development based on forest-land-management



"We are planting more trees, keeping livestock out of the forest, guarding the forest and at the same time generating income. Some of us have also installed biogas plants and even from that we can make money. We are now members of independent women's groups. We can talk with other community members and local authorities, and have secured our rights."

- Bimala Sinjali and Chandra Kumari GC, Members of women's group

Pakistan

Introducing renewable energy solutions to enhance energy security and build climate resilience in Karachi

Implemented by: World Wide Fund for Nature (WWF) Sweden, WWF Pakistan, K-Electric

For many communities in Karachi, the largest city in Pakistan, firewood sourced from mangroves is the most accessible and affordable source of domestic fuel. However, it is unsustainable and gravely affects human and environmental health. Firewood drives forest degradation and emits greenhouse gases in the atmosphere when burned. Burning firewood indoors causes chronic respiratory diseases, eye diseases, as well as burn injuries, especially among women and children.

During the project, three coastal communities received support to transition their communities to clean and renewable energy. In just over two years, 2,054 households installed solar energy systems and fuel-efficient stoves. In addition, 42 households now have access to clean energy through 12 new communal biogas systems. These biogas systems use cattle manure and toilet waste to produce methane gas. The switch to clean and renewable energy has improved the quality of life for residents, with children and women reporting more time available at night to study and work on additional income-generating activities. Over 50 residents, mainly women, have started new income-generating activities associated with the maintenance of biogas energy systems.

A resident in Gadap Town has noted that community members using fuel-efficient stoves have seen a decrease in chronic diseases associated with burning firewood such as



eye diseases, skin rashes, and coughs. The biogas plants have also helped to reduce firewood use and marine pollution. Since the biogas plants have been installed, there has been an 80% reduction in the use of mangrove firewood at the household level. Previously, manure was disposed of in the sea but is now processed for use in the biogas plants.

Vietnam

Exploiting the Synergies between Sustainable Urban Drainage Systems (SUDS) and Urban Farming in Vinh Yen City

Implemented by: NIRAS, Institute for Environmental planning – Urban and Rural Infrastructure, Vinh Yen City People's Committee

Sustainable urban drainage systems (SUDS) covers the handling of rainwater on urban surfaces and is often co-designed as part of urban green infrastructure. The project assessed the potential of implementing SUDS together with urban farming in Vietnam increasing urban areas' resilience towards flooding while providing tangible benefits for the local communities.

During the project, technical capacity and performance of the SUDS was monitored and assessed in order to understand the retention effects of SUDS and potential for combining urban farming with flood water retention. Also, a financial assessment was carried out. A flood risk analysis was one of the main outputs of the project. It enables the city government to take flood risk into account in its urban planning. The urban farming sites were piloted at households and at a public kindergarten in the Dong Da ward in Vinh Yen city. The findings and lessons have been compiled into a handbook guidance for the use of the public and local authorities. In addition, lessons from the project have provided a solid background for the Ministry of Construction to develop their official guidance on SUDS and green infrastructure.





Discontinued projects in 2019

During 2019, three projects were discontinued ahead of their planned schedule. Two of the projects concluded that the business concepts that they set out to test were not economically or socially viable in the given contexts, whereas one project was cancelled due to changes in partner implementation capacities.

These projects are presented briefly as follows:

- **Malawi:** This project aimed to sell solar home systems through a CSO-private sector partnership. Project partners: M-PAYG, Total LandCare Malawi and TLC Enterprises.
- **Mozambique:** The objective of this project was to develop renewable energy-based cooling solutions for small scale fishers in Mozambique. Project partners: Ocean Excellence, Samey, Rare and The National Development Institute of Fisheries and Aquaculture (IDEPA).
- **Burkina Faso:** The project's aim was to promote solar cooling as a tool to reduce power shredding. Project partners: Danish Technological Institute, ISOMET sarl and UNICOOL.

It is natural that not all NCF projects are completed as originally planned. NCF finances innovative projects in countries where markets may be immature and infrastructure insufficient, increasing the risk of new ventures. This heightened risk is also why NCF's grant financing is essential for organisations; the risks involved in testing and developing concepts in more challenging contexts are shared and thus lowered with NCF's support. At times, risks materialise and expected results become impossible to reach, leading to an early closure of the project. In those cases, valuable lessons learnt can be drawn both for the project implementers but also other organisations, such as those planning to enter the same market or region.

Based on an analysis of the discontinued projects during 2019, some of the key lessons learnt are presented on this page.

Lessons learnt from discontinued projects









• Asses level of infrastructure. The quality of infrastructure, such as roads or mobile networks, can significantly affect the economic viability of your business concept. It is therefore important to assess the quality of the necessary infrastructure and its potential impact on operations as part of the business or project plan.

• **Know the customers.** A market study might not always be enough to have a full understanding of the expected behaviour of customers. For example, it can be common for interviewed target customers to state a strong interest in the offering even though they do not have the means to purchase it.

• **Cater to market needs**. A product or service might be seen as interesting by target customers, however, if there are other, more basic, unmet needs, it is probable that those needs will take priority. Therefore, the product or service offered should provide a valid solution to a relevant problem that the target customers are facing.

• Plan enough time for regulatory arrangements. Legal and regulatory arrangements in NCF countries tend to take time. Most projects underestimate the time and effort needed to register a company or to gain a sales permit for their product or service.









• Ensure the product or service is affordable.

It is key to assess market prices not just in terms of direct competition, but also in terms of replacing alternatives that may look very different from the product/service in question. For example, ice is a relevant alternative for technologically sophisticated cooling options. The benefit of the product or service over other alternatives needs to be made clear to potential customers, and the cost justified. Furthermore, the cost-quality ratio needs to be clearly communicated; otherwise, the consumer will very likely choose the cheapest option, despite lower quality.

• Understand the competition. A proper assessment of where and how competitors operate is essential. It is good to note that there may also be market players such as NGOs or the government offering a competing product or service on a subsidised price, unsuccessful competitors selling off their inventory with below-market prices, or market entry strategies of new competitors that may include artificially low prices.

• **Recognise cultural differences.** A good understanding of cultural differences will help avoid misunderstandings between project partners of different backgrounds as well as potential false expectations relating to project targets. For example, the degree of compliance with sales targets may depend on cultural context.

New NCF projects

During 2019, Grant Agreements were signed with seven projects that started their implementation as part of the NCF portfolio.

Nicaragua

A platform combining localised weather data, climate projections and agrological information will be used in two ways: 1) sending agrometeorological projections and early warnings to farmers, and 2) testing a risk-rating platform developed for finance institutions that quantifies the credit risk for agricultural loans. The project is expected to provide more accurate weather data to 3,000 smallholder farmers as well as collaborate with at least two financial sector institutions.

Ingemann Supply AS and Ingemann Nicaragua S.A.

Bolivia

The project aims to develop a sustainable financing mechanism for integrated watershed management programs. During the project, these watershed programs will provide clean water to 12,000 downstream families and alternative development programs to 600 upstream families in exchange for the conservation of 12,000 hectares of watershed forests. At the same time, a rotating fund for scaling up the programs will be tested.

Stiftlesen GRID-Arendal, Fundación Natura Bolivia and Cuencas Sustentables.



Zambia

A new type of data-enabled cook stove and PAYGO fuel-supply solution will be tested in Lusaka, Zambia. Data collected from the cookstove is expected to verify use, reduce system downtime and unlock operational efficiencies to further improve affordability and thereby increase the penetration of the cook stoves and the pellets resulting in sustained development impact.

Emerging Cooking Solutions Sweden, Emerging Cooking Solutions Zambia, Mimi Moto B.V.



Bangladesh

A cooling and ventilation technology called the Cool Ceiling system will be introduced and tested in Bangladesh. The Cool Ceiling system is developed to reduce energy consumption and mitigate GHG emissions. During the project, 850m³ of the cool ceiling technology will be installed at three demonstration sites. Several tests and studies will be conducted to compare the cool ceiling technology to the traditional ventilation and cooling system used in Bangladesh.

JS Ventilation, ABG Interlinks Ltd



Cambodia

An innovative business concept, KjuonGo, will be promoted in the production and commercialisation of sustainable charcoal in Cambodia. The project aims to provide a legal and efficient alternative to the disorganised and inefficient charcoal value chain in Cambodia, reversing deforestation and reducing GHG emissions. This improvement will be done by providing technical assistance, introducing a common user-friendly digital platform to manage activities and payments among value chain players and improving efficiency of the charcoal production value chain.

UNEP DTU Partnership, Khmer Green Charcoal, Group for the Environment, Renewable Energy and Solidarity

Kenya

The project will demonstrate the utility of the Subsurface Water Retention Technology (SWRT) to increase farm system resilience, crop production and carbon accumulation in sandy soils. Typically, large amounts of water and nutrients are lost in sandy soils making them poor for agriculture. The project involves installation of impermeable water-retaining membranes on agricultural land. The membranes can prevent some of the water and nutrient loss thus offering a solution to increase agricultural production on sandy soils.

Swedish University of Agricultural Sciences, Jomo Kenyatta University of Agriculture and Technology, JKUAT Enterprises Limited, International Centre for Tropical Agriculture, and SWRT Solutions LLC

Tanzania

Families living without public energy supply, but on the outskirts of existing micro-grids, will benefit from electricity access in this project. The project partners team up with companies that install micro-grids in rural villages and sell high-capacity battery kits to families in surrounding areas. The batteries are portable and can be charged in the areas powered by micro-grids, providing a mobile solution for expanding the micro-grid reach. The project is expected to reduce 500 tonnes of CO₂e and 10 tonnes of black carbon.

Peoples Portable Power, Kakute Projects Company Limited and Per Gjode Consulting Limited.

Highlights from ongoing projects

The following pages present the progress during 2019 of some of our ongoing projects.

Cambodia

A small-scale biomass fuel pellet production system has been established with a production output of approximately 5 tons of pellets per month. The pellets are sold as cooking fuel to over 300 Cambodian households who have also purchased gasifier pellet cookstoves. Consumers purchase the gasifier pellet cookstove and pellet fuel bundle to switch from less safe, inefficient and smoky charcoal and firewood cooking while also saving money. One consumer, So Chantheng, purchased the Prime pellet stove and pellet fuel bundle in November 2019. She says "the stove is light and easy to place where I want. Using this stove with pellet fuel, I feel no longer afraid of burning twigs falling out of it that could cause a fire accident. I also noted substantial fuel savings from using this stove. I'm happy to recommend this stove to others."

Implemented by Differ AS, Prime Cookstoves AS, C-Quest Capital Cambodia Co., Ltd., C-Quest Capital Malaysia Global Stoves Limited



"The stove is light and easy to place where I want. I also noted substantial fuel savings from using this stove." – So Chantheng

Bolivia

In Bolivia, dairy farming families subsist on income from milk sales and cheese production. It is a country where cows' milk productivity is relatively low. Furthermore, climate variation is already negatively impacting the quality and quantity of feed available for cows in Bolivia. With the aim of increasing resilience to a changing climate, this project tests providing a probiotic animal feed supplement to dairy farmers in the highland of Challapata and the lowland of Capinota. The probiotic feed supplement has been designed to stimulate animal digestion. Bolivian farmers using the product, during the first three months, reported a marked increase in milk productivity. Statistically, the average milk production per cow being fed the supplement is 25% greater than for cows without the additive. The product also lowers the somatic cell count (SCC) of the milk produced, indicating better animal health.

The project is implemented by Biosa Danmark ApS and BIOTOP SRL

The average milk production per cow being fed the supplement is 25% greater than for cows without the additive.





oto: Johanna Zilliacus NDI



Solar Village has created more than 220 jobs in Zambia to date.

Zambia

In Zambia, the business around selling multifunctional battery sticks has been further developed. This battery stick powers an existing agricultural sprayer previously powered by 24 disposable batteries per year per farmer, as well as a range of in-home appliances, improving the quality of life off-grid. By scaling operations in Central Province and expanding to the Eastern Province, Solar Village has created more than 220 jobs in Zambia to date. One of the clients is Bornwell Moonga, who says he is thankful as light powered by the battery stick helps his children study in the evenings. Further, the battery-powered agricultural sprayer helps increase yields and thus improve food security for his family.

The project is implemented by Solar Village, Conservation Farming Unit and Alliance Ginneries



Nepal

Forty-nine micro-enterprises have been established and are up and running in Nepal, creating 232 new rural jobs. The enterprises produce and sell climate-friendly interlocking bricks using the compressed stabilised earth brick technology. The interlocking bricks are both cheaper and have a smaller carbon footprint than regular bricks. So far, 420 houses have been built in earthquake-affected areas in rural Nepal from the bricks produced by the project.

The project is implemented by Danish Church Aid, Practical Action and Build up Nepal

49 micro-enterprises have been established and are up and running in Nepal.

Vietnam

Data has been gathered to gain a better understanding about coffee farmers and climate in the central highlands of Vietnam as part of the first phase of a project aiming at improving seasonal and localised weather forecasting for coffee farmers. More than 90% of Vietnamese coffee farmers have experienced some detrimental impact of climate in the past few years, and interestingly, the type of impact matches the weather and climate records from the region very accurately. These include a longer dry season, droughts and increased temperatures. The data and research also showed that Vietnamese coffee farmers are very ambitious and keen to learn and optimise their practices by using digital technology (smartphone apps). With this information, the project will proceed to tailor their product to deliver more accurate information in a preferred format to coffee farmers.

The project is implemented by University of Copenhagen, International Centre for Tropical Agriculture, Sustainable Management Services Ltd and Real-Time Analytics







Vietnamese coffee farmers are very ambitious and keen to learn and optimise their practices by using digital technology.

In Vietnam, a seedling nursery has been created to provide affordable high quality seedlings for farmers in the project area.

Vietnam

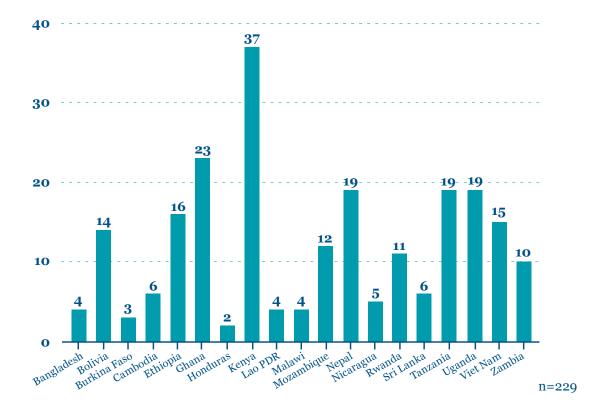
In Vietnam, smallholder farmers have been engaged in sustainable forest management practices in order to improve the livelihoods of poor communities and reduce negative environmental impacts. As one of the project's activities, a tree seedling nursery has been created to provide high quality but affordable seedlings for farmers in the project area. The nursery has been expanded from 5,000 m² to more than 10,000 m² and the supplying capacity has been improved from 1.2 million seedlings to 2 million seedlings per year. With this capacity, the nursery can provide enough seedlings for 1,000 hectares of re-plantation. The nursery expansion has created seven new jobs, bringing the total number of nursery workers to 16, out of which 13 are women and two are persons with disabilities.

The project is implemented by NEPCon, Spark Vietnam and Cam Lo Wood Pallet Factory

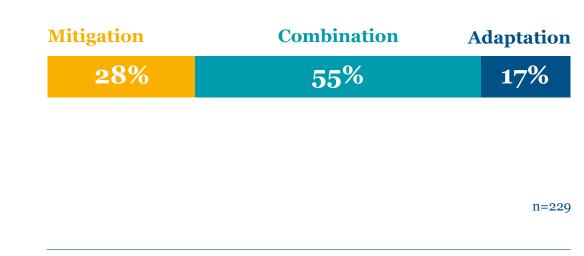
NCF 9 applicants

The Nordic Climate Facility's 9th call for proposals (NCF 9) was open for applications between 5 June and 9 September 2019. A record amount of applications was received this year. In total, 288 applications were submitted, and out of these, 229 applications passed the minimum eligibility criteria and were evaluated by the evaluation committee. Out of the evaluated applications, 45 were invited to submit a full proposal application in the end of the year.

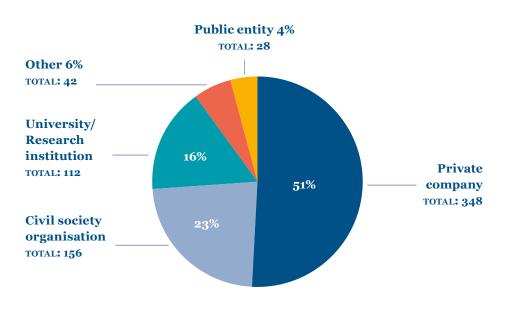
Projects were proposed to be implemented in 19 out of the 21 eligible NCF countries. Kenya and Ghana were again this year the most common ones.



As previous years, there were more mitigation-focused projects than projects focusing on adaptation. The majority of the projects were classified as combination with both mitigation and adaptation aspects.



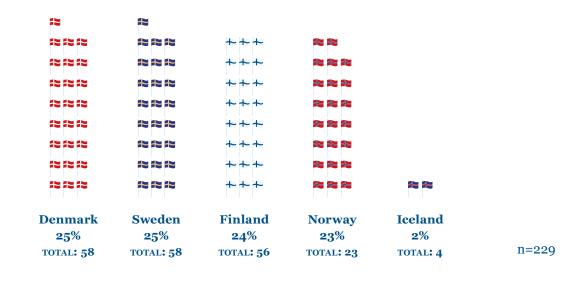
Private companies represented more than half (51%) of the full pool of applicants (n=686), reflecting NCF's focus on business development. On average, there were 3 proposed partners per application (686 applicants in 229 applications).



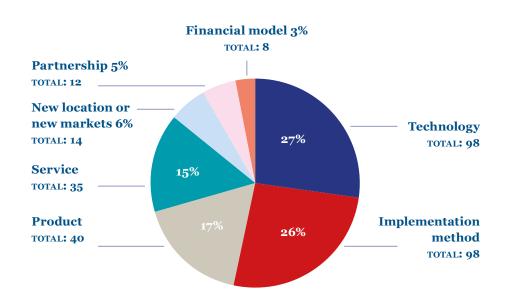




This year there was an equal spread between applications from Denmark, Sweden, Finland and Norway. The statistics are based on the country where the lead Nordic applicant is registered.



We also asked the applicants to categorise the innovation aspect in their proposal. More than half of all applications stated that technology or implementation method were innovative in their proposals.



n=686

n=229

An adaptive and collaborative approach to portfolio management

NCF's portfolio management aims to ensure that financed projects reach their intended results in an efficient manner. To that end, the NCF team at NDF has assumed an adaptive and collaborative approach to project monitoring.

Adaptive project management allows the projects to adjust the project based on learnings during project implementation. It is a practice that allows project implementers to enhance the original project plans as the projects progresses, to better reach its objectives. It is common that projects, due to complex contexts and other internal and external factors, cannot be implemented exactly as originally planned during the project design phase. To cater for these kinds of situations, the possibility for adaptive project management is provided for NCF project implementers.

To facilitate adaptive project management, the NCF team advises project implementers to contact them for discussing any potential challenges or unexpected opportunities they have come across during project implementation. This is the basis for the collaborative approach to portfolio management that has been adopted by NCF and that helps NDF staff to provide the needed support and approvals relating to the project implementation. An important part of the collaboration with project implementers is conducting project visits. NDF staff usually visits each NCF-financed project at least once during its lifetime in order to gain a more profound understanding of project progress. During 2019, NDF staff visited 15 projects under implementation. Apart from facilitating adaptive project management, the collaborative approach also helps assessment of the NCF project portfolio and dissemination of portfolio level results.







Nordic Development Fund

NDF is the joint Nordic international finance institution (IFI) focusing on the nexus between climate change and development in lower-income countries and countries in fragile situations.



Published in September 2020 Layout: Sanna Turunen