



Illustration: Rebekka Grönn

Growth in green finance brings opportunities

Responsible investors ranging from major international financial institutions to smaller funds and banks today increasingly see green finance as an important way forward – not least due to widespread global concern about issues such as climate change. “There’s an ongoing shift in the finance industry towards greener operations, and rapidly expanding global green finance represents a huge opportunity for economies and businesses in low-income countries,” says NDF’s Managing Director **Pasi Hellman**.

Hellman believes that this trend helps NDF to build productive partnerships with co-financiers. “All NDF projects can clearly be classified as green finance, because every initiative we support must have demonstrable impacts in terms of mitigating or adapting to climate change,” he explains.

NDF has recently diversified its forms of financing, adding concessional loans and equity to traditional co-financing grants. “We feel our role is to use public funds flexibly to support innovative projects in ways that can catalyse action and leverage additional financing, especially from the private sector,” says Hellman.

NDF seeks out initiatives that can be upscalable, replicable and soon self-sustaining. “One stumbling block is that investors and banks sometimes see green projects in low-income countries as risky – so we strive to use public

funds to de-risk such operations and demonstrate that they can be good commercial opportunities,” says Hellman.

Hellman cites several ongoing initiatives illustrating the increasing diversity of green finance provided by NDF, including the Green Guarantee Facility for African SMEs, launched under the auspices of the African Guarantee Fund in 2016, and the PROADAPT programme, managed by

the Inter-American Development Bank, which aims to build climate resilience into micro, small and medium-sized enterprises and local communities in Latin America. NDF’s new involvement

in the revamped Energy and Environment Partnership Programme of Southern and East Africa (see page 5) will add a further complementary dimension to this support. During 2017 NDF sponsored three high level conferences on green finance in Africa together with the African Guarantee Fund and the International Trade Centre. A similar meeting is planned for Abidjan in March 2018.

“Development finance organisations like NDF can help on the demand side of green finance as well as the supply side – by supporting capacity development, training, awareness-raising, early stage financing and project development for businesses targeting climate-resilient growth, clean energy and climate adaptation; while also offering diverse financial products on the supply side,” he adds.

“All NDF projects can clearly be classified as green finance.”

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Photo: Jagath Navinda



Forthcoming renewable energy projects funded by rAREH include this run-of-the-river hydropower development on the River Rwaza in Rwanda.

An equity boost for African renewable energy projects

Demand for renewable energy is rising rapidly across Africa, but all too often promising projects struggle to attract the necessary investment. To fill this gap, NDF is investing USD 8.2 million of equity in responsAbility Renewable Energy Holding (rAREH). In addition to NDF, the German development bank KfW and Norfund are also investing equity in rAREH. This private company was set up in 2013 by Germany's Ministry for Economic Cooperation and Development, KfW and the Swiss-based development investment company responsAbility Investments AG, to take advantage of opportunities in Africa's renewables sector.

"rAREH is not a typical private equity fund that only manages assets, since the company owns, develops and runs its own projects," explains NDF's Financial Administration Manager **Mats Slotte**. "All projects are thoroughly screened to ensure they are relevant from both a climate change and a development perspective, while also being worthwhile investments for owners in the long run."

NDF sees rAREH as an innovative way to channel patient capital into smaller solar, hydro and bioenergy pro-

jects that might otherwise not get off the ground. In many cases signing a long-term power purchasing agreement with the national grid operator under a feed-in tariff programme is a crucial step.

Slotte feels that involvement in rAREH fits in well with NDF's ambition to expand into different kinds of green finance. "This type of 'green equity finance' has an immediate effect on how projects are developed and built – while in the long run it creates stable projects with positive cash flows. This gives NDF's involvement a clear leverage effect, since the private sector are already keen to invest in more mature companies with up-and-running assets," he says.

rAREH's Nairobi-based implementation team are already working on nine approved hydro and solar energy projects in Kenya, Rwanda, Zambia, Uganda and South Africa. "Being among the owners of rAREH will now enable NDF to influence the company's future projects – while we can also expect dividends that can then be committed to new climate projects," adds Slotte.

NDF's liquid assets to go green

To align the use of NDF's liquid assets with its wider green financing activities NDF's Board has set a target that 100% of the fund's excess liquidity should be placed in green instruments such as certified green bonds and green equity funds.

"These bonds and funds have favourable focus areas such as renewable energy and energy efficiency, so this move complements our mainstream project financing activities, and will make us a truly green financing institution on all fronts," explains NDF's Financial Administration Manager **Mats Slotte**.

The vast majority of NDF's capital is tied up in climate change and development projects. More than 10% of the institution's liquid assets, which amount to about EUR 100 million in all, has already been invested in green instruments, and additional funds will be gradually transferred to such instruments as they are freed up from current commercial deposit schemes.

A highly valued partnership

NDF asked **James Close**, Director of the World Bank's Climate Change Group, to give his views on the ongoing and wide-ranging collaboration between the World Bank and NDF.

How important is climate change in the World Bank's work?

Recent catastrophic climate events across the globe have shouted the same warning: we must accelerate climate action and deliver on the goals of the Paris Agreement. Disaster preparedness and building resilience to the impacts of climate change, especially in the most vulnerable countries, is a key part of the World Bank Group's Climate Change Action Plan, which includes a commitment to mainstream climate change across the institution.

How closely do NDF's strategic goals and priorities match those of the World Bank?

NDF's mission is to provide financing and knowledge for climate change and development activities primarily in low-income countries, while following the global sustainable development agenda and the core objectives of the Nordic countries' development policies on climate change and poverty reduction. These goals are consistent with our own objectives. We both recognise that addressing climate change is essential to eradicating extreme poverty and creating shared prosperity. We cannot let the development gains of recent decades be eroded by climate change. Especially in Africa both our organisations are committed to building resilience and protecting the poorest and most vulnerable.

NDF provides flexible co-financing aiming to leverage further public and private financing for replicable and upscalable pilot projects, which may involve risks. How well does this approach fit in with your work?

NDF's approach complements ours, as it allows teams to access complementary flexible resources on a timely basis, and support innovation. This enables us to explore new concepts and collaboration with non-traditional partners. NDF's focus on jobs, private sector development and upscalable solutions is consistent with our ambition to leverage resources from new partners and mobilise commercial investment finance.

How has partnership with NDF benefited the World Bank in practice?

We really value our partnership with NDF, whose expertise and convening power also supports our work. For example, NDF hosted a major meeting on climate and health finance in Helsinki in 2016, bringing together funders from multilateral development banks, bilateral aid agencies and



Photo: NDF

foundations. We've also conducted fruitful related pilot work in Mozambique in collaboration with NDF. Through this partnership we've defined a new field: climate-smart health care.

How does the World Bank value NDF's efforts to act on emerging issues related to climate change?

NDF's additional resources and knowhow help us to understand the dynamics of emerging issues. NDF's support has particularly enabled us to scale up our climate change and health work as an important part of building climate resilience, enabling us to prepare an institution-wide approach and action plan to show leadership in this field and align with other researchers and policy-makers.

Do you feel that NDF brings any special Nordic perspectives to your joint projects?

NDF support provides opportunities for Nordic expertise and solutions, which are often at the leading edge. We appreciate NDF's ability to provide a platform for joint Nordic action, mirroring the priorities of the Nordic countries. We feel that both NDF and the World Bank can benefit from our close working relationship by exchanging ideas, learning together, and disseminating solutions and case studies.

How do you envisage collaboration between the World Bank and NDF evolving in the future?

We are particularly looking forward to expanded collaboration with NDF on climate change and health, utilising NDF's vision and stewardship, while amplifying impacts through our large network of clients and ability to leverage finance. We also hope to continue working together to address erosion, flooding and other climate-related risks facing coastal regions of West Africa.

Since taking on a climate-focused mandate in 2009 NDF has committed financial support amounting to **EUR 82.9 million** towards **27 initiatives** co-financed with the World Bank.

NDF's green financing showcased at COP 23 in Bonn

NDF's presentations at the 23rd Conference of Parties to the UN Convention on Climate Change (6-17 November 2017) attracted plenty of interest among NDF's existing and potential future co-financers, partners and other stakeholders.

NDF, the Nordic Investment Bank (NIB), and the Nordic Environment Finance Corporation (NEFCO) jointly hosted a special Financing Day event at the conference venue's Nordic Pavilion on November 14, focusing on the need to find creative and flexible ways to support climate-friendly developments, particularly through collaboration between the public and private sectors.

"In line with the wider theme of the Nordic Pavilion in Bonn, which was 'Nordic climate solutions', we especially sought to demonstrate how NDF is promoting effective climate finance by using public funds to leverage complementary private sector investments in climate activities in developing countries," explains NDF's Managing Director **Pasi Hellman**.

"We also aimed to show how the activities that we fund will support the Nationally Determined Contributions (NDCs) defined by our partner countries as agreed in the Paris climate pact, by promoting improvements in renewable energy generation and energy efficiency."

NDF's input to the Financing Day included a case study spotlighting the potential impacts of the ground-breaking Energy and Environment Partnership in Southern and East Africa (see page 5).

"As emphasised at COP 23, addressing the causes and consequences of climate change at the global level will

require action on a huge scale; but especially in impoverished countries and remote areas action often has to start at grassroots level with small steps. At NDF we aim to facilitate such piloting groundwork, which can later be scaled up and replicated to have a broader impact," adds Hellman.



Photo: NDF

*Panellists (from left) **Naeeda Crishna Morgado** (OECD), **Monojeet Pal** (African Development Bank), **Mahua Acharya** (Global Green Growth Institute), **Sheila Oparaocha** (ENERGIA International Network on Gender and Sustainable Energy) and **Charles Wetherill** (NDF), participated in a discussion on "Clean Energy Investments through Public-Private Collaboration" hosted by NDF in the Nordic pavilion in the COP 23 event in Bonn.*

Finding ways to fill the adaptation gap

Two further NDF projects designed to promote adaptation to climate change were also spotlighted in Bonn. "So far climate change mitigation has been the main focus for investors and innovators, but now the role that businesses can play in addressing climate risks and building climate resilience is at last starting to receive more attention," says NDF's Program Manger **Isabel Leroux**.

The Proadapt Programme, which NDF is backing in Latin America in partnership with the Inter-American Development Bank, aims to support private sector players' efforts to develop new solutions that will reduce climate risks. Potential initiatives include infrastructural improvements, climate risk assessment tools, and the provision of financial instruments to make businesses less vulnerable to climate change impacts.

"At the same time the new CRAFT facility (Climate Resilience and Adaptation Finance and Technology Transfer Facility), funded by NDF together with the Global Environment Facility, will be the first private equity fund in the world to focus on climate adaptation," says Leroux. "Its goal is to reduce climate vulnerability by transferring and scaling existing adaptation and resilience products and services between developed and developing countries. Such solutions may include climate-smart agricultural methods, modern data-based climate scenarios, and support services to safeguard vital energy supplies."

"Both of these projects aim to use concessional public sector funds to encourage the private sector to see climate adaptation as a growing business opportunity, as well as a challenge, and provide solutions that boost climate resilience," adds NDF's Managing Director **Pasi Hellman**.

Energy and Environment Partnership 2.0

NDF takes the reins of the Energy and Environment Partnership in Southern and East Africa with the launch of a new multi-donor trust fund

An 18-month planning process is due to culminate in early 2018 with the launch of the new Energy and Environment Partnership (EEP) Trust Fund under the leadership of NDF. This move opens a new chapter for NDF in fund management, while also providing a new window for resource mobilisation and engagement with new partners.

EEP is a clean energy financing facility providing early stage and catalytic financing primarily for private-sector-led projects in Southern and East Africa (SEA). It was first established in 2010 with funding from the Ministry for Foreign Affairs of Finland, the UK Department for International Development and the Austrian Development Agency.

For the last 7 years, EEP has been at the forefront of efforts to fast track energy access and inclusive and sustainable growth across the SEA region. It has established a strong brand for delivery and impact, backing more than 200 pioneering projects leveraging innovative clean energy technologies and energy access business models to transform lives and livelihoods. With the launch of the EEP Trust Fund, NDF will ensure that this proven and effective model will remain relevant in a fast-changing energy financing landscape.

“It makes good sense for us at NDF to host the next phase of EEP,” explains NDF’s Deputy Managing Director **Leena Klossner**, “since we can provide a sustainable base for longer-term planning and fundraising together with in-house capabilities for a truly blended palette of financing instruments to match the needs of projects on the ground.”

The new fund will directly help to realise the 2030 Sustainable Development Agenda and the Paris Climate Agreement, while reflecting NDF’s mandate and strategic horizons as a climate finance institution providing financing and knowledge for climate actions and development.

The fund’s more immediate goal is to enhance access to clean energy in the SEA region, especially among poor and underserved communities, by providing direct financing, facilitating investment, supporting business development, sharing knowledge and promoting policy engagement. It is designed to support countries across the region towards a climate-resilient, zero-carbon future.

NDF will also engage its own capital in the initiative and obtained approval from its own Board in October to contribute EUR 10 million to the first round of fundraising.

“We have been closely following and contributing to the discussions around blended finance, and have now developed a facility that puts these ideas into action,” adds **Charles Wetherill**, who coordinated the transition process for NDF, and will act as Manager for the new facility. “With the introduction of new EEP Innovation and Catalyst financing windows, we now have the tools in place to support transformational projects over a longer time horizon as the financing needs of project developers evolve.”



Photo: EEP

The installation of these solar panels on Kitobo Island in Lake Victoria, Uganda, financed through the Energy and Environment Partnership, has transformed the islanders’ lives by improving access to electricity for lighting, the refrigeration of fish, and other economic activities.

NDF projects acclaimed at the One Planet Summit

Two NDF projects were among 12 initiatives spotlighted at the One Planet Summit in Paris on 12 December 2017. Hosted by France in collaboration with the UN and the World Bank Group, the summit aimed to demonstrate how climate actions can be effectively financed.

The two featured NDF projects were the CRAFT facility (see page 4), and the West Africa Coastal Areas Programme (WACA), which aims to enhance resilience to coastal erosion and flooding in coastal provinces across West Africa.





The Nordic Climate Facility (NCF) is NDF's unique challenge fund, through which Nordic companies and organisations can seek financing of up to EUR 500,000 for innovative climate projects realised with local partners in 21 countries in Africa, Asia and Latin America.

NCF 7 - Support for innovative climate-related business concepts

A total of 138 applications were received for NCF's seventh project round, which has the theme *Climate as business – testing innovative green business concepts*. "We've now shortlisted 25 projects, and we expect to select approximately 12-15 projects for funding after reviewing applicants' full detailed proposals including budgets and results frameworks," says NCF Manager **Emeli Möller**.

"We were pleased that many applications for NCF 7 came from new potential partners, particularly actors in the private sector," adds Möller. "This may be partly thanks to a roadshow we ran around all five of the Nordic countries in autumn 2017 to promote our call for project proposals. During spring 2018 we're planning to go on a similar roadshow publicising our next call for proposals for NCF 8."

NCF's application process has recently been revamped to make it more user-friendly and accessible, and Möller believes this is making NCF even more attractive as a vehicle for climate-financing. "We've had a lot of positive feedback on our streamlined online application system and new online resources including simplified application guidelines, a project implementation manual, and an NCF glossary," she says.

Types of climate change action



Many of the projects proposed for NCF 7 combine actions designed to mitigate climate change with measures that will make local communities more resilient to the impacts of climate change.

Nordic lead applicants by type of organisation



The project round's theme, focusing on testing business concepts, has widely attracted applications from the Nordic private sector.

Targeting key development goals

The 25 projects shortlisted for NCF's 7th round have been designed to work towards the sustainable development goals (SDGs) defined by the United Nations, especially the following five key SDGs:



Two successful projects realised within NCF 4 are spotlighted below. All eleven projects from this round – the last to be jointly administered by NDF and the Nordic Environment Finance Corporation (NEFCO) – have now been completed.

New climate-smart methods for Kenyan farmers

More than 5,300 subsistence farmers in Western Kenya were trained on Sustainable Agriculture Land Use Management (SALM) methods through the NCF project Climate Smart Agriculture for Improved Rural Livelihoods between February 2015 and July 2017. The training was particularly designed to increase farming communities' income and resilience to climate change, by improving crop yields and encouraging a shift from subsistence farming to market-oriented agroforestry.

Initiated by the Swedish foundation Vi Agroforestry, the project has converted more than 5,700 hectares of farmland to SALM, while nearly a million tree seedlings have been planted, and ten demonstration sites and 210 commercial tree nurseries have been established.

"Thanks to the project, knowledge of climate-smart methods among local farming communities has increased greatly, and this is creating a lot of new opportunities for local farmers and their cooperative organisations," explains Vi Agroforestry's Deputy Regional Director **Wangu Mutua**. "The project has effectively shown how climate-smart agriculture can lead to multiple benefits in terms of increased food productivity and household incomes, enhanced climate resilience, and reductions in



Photo: C.Schubert

Most of the farmers trained through the project are women working on smallholdings.

greenhouse gas emissions, while also restoring degraded lands cost-effectively."

Income from the local production of cash crops including bananas and honey has increased significantly. According to Mutua, the project has also promoted gender equality, job opportunities for women and young people, and the inclusion of people living with HIV/AIDS. "We hope the project's positive outcomes will now influence policies promoting sustainable agribusiness more widely across Kenya," she adds.

Reducing emissions from waste management in Mozambique

Run by Danish engineering consultants Niras together with local partner 3R-Reduzir, Reusar e Reciclar, a joint venture of the Mozambican Association for Recycling and Carbon Africa, this NCF project has uniquely paved the way for a new pilot Waste Transfer and Recycling Centre (WTRC) in the city of Beira, while also formulating a Nationally Appropriate Mitigations Actions (NAMA) framework for waste recycling across Mozambique, in collaboration with the Ministry of the Environment.

3R's Director **Adriaan Tas** explains that the project is benefiting local communities in many ways. "In addition to employing eight people at the centre, Beira's WTRC purchases waste from over 100 local collectors," he says. "The project is also helping to clean up the city, especially by reducing the amounts of plastic waste that clog up drains and increase vulnerability to flooding."

Recycling reduces methane emissions from uncontrolled landfill sites, as well as emissions from the production of new material goods. The WTRC started up in August 2017, initially focusing on processing plastics, glass and metals, with organic waste separated for composting. "At full



Photo: Aliona Fomenko

Local waste collectors are trained to identify recyclable waste items.

capacity the centre will process 20-30 tonnes of waste per day, and reduce emissions by 4,000-5,000 tonnes of CO₂ equivalent annually," says Tas. "The project has also helped to build up a framework for collaboration between public and private partners with potential to transform the waste sector in Mozambique."

Photo: Ileana Holt



The project's "rainwater harvesting" systems have improved access to water for many local communities in drought-prone areas.

Pro-active preparations for climate change in rural Nicaragua

The wide-ranging NDF-backed Disaster Management and Climate Change Project, completed during 2017, has successfully enhanced the climate resilience of farming communities in northern Nicaragua. Different parts of this region face problems ranging from erosion and soil degradation to prolonged droughts and sudden floods. "The project has effectively helped many local farmers to improve their livelihoods and means of production, and prepared their communities to cope with disaster risks and climate change issues," explains **Ileana Holt**, a Nicaragua-based civil engineering consultant who has been monitoring and supporting the project from the start on behalf of NDF.

"In the highlands, the focus has been on measures to prevent disastrous landslides and reduce soil loss, agricultural burnings and forest fires," adds Holt. Nearly 5,000 farmers in vulnerable areas have been trained on farming methods, helping them to improve tree cover and conserve soils in more than 220 km² of farmland.

Consequent improvements in yields of crops like maize and beans have also benefited the farmers financially, increasing their productivity by more than 18% on average, according to a project evaluation and impact study conducted for NDF's partner agency the Inter-American Development Bank (IDB). The new methods also help to mitigate climate change by enhancing carbon sequestration in soils.

To address seasonal drought problems, the project has also set up more than 4,000 new "rainwater harvesting" systems, including four very large village reservoirs financed by NDF.

Lower-lying areas, contrastingly, face the increasing threat of heavy floods linked to tropical storms. More than 50 flood mitigation schemes, including drainage canals, flood retention walls and several bridges co-financed by NDF, have been realised through the project, benefiting almost 50,000 people in 140 sites vulnerable to flooding. "More reliable transport infrastructure improves local farmers' access to markets, as well as communications and security for isolated communities," explains Holt.

Holt emphasises that the project has also strengthened key institutions locally and nationally. "All the municipalities involved have now mainstreamed climate change into their planning processes, and created municipal-level risk management and climate adaptation plans," she says.

NDF funding has enabled training and equipment to be provided for dozens of local disaster prevention, mitigation and response committees. More than 7,700 people received training on risk management, environmental conservation and climate change through a major awareness raising scheme.

"We feel that this project can easily be replicated in other regions of Nicaragua or other countries, especially since we've learnt many lessons while realising interventions," adds Holt. "In the long run it will certainly help to achieve key national and international climate adaptation objectives."

The project was realised by Nicaragua's Ministry of Natural Resources and Environment, using mixed green finance including a USD 10 million loan from IDB, a USD 4.1 million grant from the Swiss Agency for Development and Cooperation, and a USD 3 million grant from NDF.



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