

Norfund Investing for Development

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A MESSAGE FROM

KJELL ROLAND

Managing Director



FOREWORD

The number of people living in extreme poverty has declined by more than 50 percent since 1990, and sustained economic growth has been the main driver of this change. Nine out of ten jobs in low- and middle-income countries are provided by the private sector. Efforts to reduce obstacles to private sector growth will therefore be crucial to improving the lives of the 700 million people still trapped in poverty and to creating new employment opportunities.

The Sustainable Development Goals adopted by the UN in September 2015 highlight the importance of the private sector for creating economic growth and combating poverty. Private financiers are expected to support economic growth and development, but many lack the competencies and risk appetite needed for investing in the poorest countries.

Norfund – the Norwegian Investment Fund for Developing Countries – was established in 1997 by the Norwegian Parliament. Norfund is Norway's most important instrument for private sector development in low- and middle-income countries. The resources we provide are additional to those provided by the regular market and help to catalyse further investment from other private investors. We contribute to the development of sustainable companies that provide jobs, generate government revenues and provide useful goods and services.

Norfund's portfolio is growing steadily. Our annual capital contribution from the Norwegian Ministry of Foreign Affairs has increased from NOK 175 million in 1998 to NOK 1,480 million in 2015. Norfund now manages an active portfolio of NOK 15 billion in approximately 700 companies.

The portfolio of investments by European Development Finance Institutions (EDFIs) has also grown rapidly, more than tripling in size since 2005. In 2015, the total EDFI portfolio was worth EUR 36 billion. If this trend continues, European DFIs may be able to mobilise new investments in developing countries at a level comparable to European Official Development Assistance within the next ten years.

In 2014, Norad initiated an evaluation of Norfund to better understand the fund's role as an instrument of Norwegian development assistance policy. The findings of the evaluation conducted by Gaia Consulting Ltd were very positive: Norfund has been successful in fulfilling its mandate. The instruments used, and our focus on specific sectors and geographies have generally matched the objectives of Norwegian development policy. The report, published in 2015, highlighted Norfund's success in active ownership, the efficiency of our project cycle, the additional value of Norfund's investments, and our ability to leverage capital.

The evaluators identified both quantitative and qualitative development effects of Norfund investments. They noted, however, that Norfund produces less external information about its contribution to development, compared to many other DFIs. The report recommended therefore that we further develop the monitoring, documentation, and reporting of our development effects, for instance by conducting in-depth assessments of selected investments. The evaluators also indicated that they would welcome more analysis of the effects of DFI investments at the macroeconomic level.

This report is a first response to the recommendations made. It describes the role of DFIs such as Norfund in the new architecture of global aid in which the role of the private sector is central. It also presents Norfund's mandate and strategy and explains how DFI investments contribute to development. It summarises recent findings on the macro-economic impact of DFI investments, and explains the channels through which Norfund's investments contribute to job creation and poverty reduction.

Norfund's strategy is to concentrate our investments in three sectors that are particularly important in driving development: energy, finance and agriculture. Chapter 4 explains the development rationale for investing in these sectors, Norfund's strategy, and presents case studies from our portfolio.

Norfund contributes to development by investing in potentially profitable businesses and focuses on the poorest countries. We ensure that our investments are additional and adhere to strict environmental and social standards. Many stakeholders want to learn more about our contribution to development. We hope this report will give you better insight into what we do, how we do it, and the developmental effects of our investments!

Kjell Roland Managing Director

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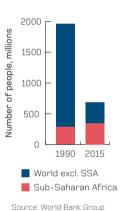




GROWTH, JOBS AND POVERTY REDUCTION

Economic growth that provides jobs has been the main driver of poverty reduction over the past 25 years. The private sector plays a critical role in job creation.

rill Figure The number of people living below USD 1.9 a day has declined



PROGRESS AGAINST POVERTY

World Bank and IMF data show that the global poverty rate has declined dramatically over the past 25 years and reached 9.6 percent in 2015. Progress has been particularly substantial in East Asia where the extreme poverty rate has dropped from 61 percent in 1990 to only 4 percent in 2015, and in South Asia where it decreased from 51 percent to 14 percent over the same period¹. These major achievements are due mainly to high and sustained economic growth in China and India.

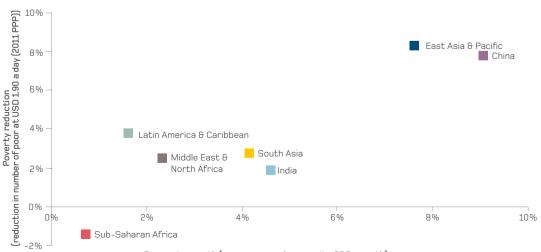
At the end of 2015, approximately 700 million people were living on less than USD 1.9 a day. Half of this group resides in Sub-Saharan Africa.

ECONOMIC GROWTH REDUCES POVERTY

The importance of economic growth to poverty reduction is illustrated by many cross-country analyses. In 2004, for example, Kraay published a study of a large sample of low- and middle-income countries showing that between 66 and 90 percent of the reduction in absolute poverty could be explained by growth in average incomes². Similarly, the UK Department for International Development (DFID) found overwhelming evidence in a review of cross-country research and country case studies, that rapid and sustained growth is critical for poverty reduction. DFID estimates that a 10 percent increase in a country's average income will typically reduce a country's poverty rate by between 20 and 30 percent³.

Rapid economic growth is possible and is influenced by the ability of a state to enact policies enhancing growth and promoting increases in productivity. Evidence from countries such as South Korea and Singapore has shown that even countries lacking significant natural resources can graduate from being among the poorest to the richest in fewer than 50 years if the political context is supportive and investment levels are high.







¹ World Bank Group (2016) ² Kraay (2004)

³ DFID (2008)

PROVIDING JOBS IS THE KEY TO POVERTY REDUCTION

Even if countries experience similar rates of growth, the impacts of this growth on poverty may vary depending on the extent to which poor people are able to participate in the growth process.

A review of the Millennium Development Goals conducted by the UNDP shows that broad-based growth across sectors has the largest impact on poverty reduction⁴. This is because it involves a large part of the labour force and provides opportunities for both self-employment and contractual employment.

The most important way to reduce poverty is to provide jobs, "Whether they are subsistence farmers, salaried workers, or self-employed entrepreneurs, poor people derive most of their income from work. This basic fact means that the level of employment, the quality of jobs, and the access which the poor have to decent earnings opportunities will be crucial determinants of poverty reduction," argues the Organisation for Economic Co-operation and Development⁵. The design and implementation of policies promoting inclusive growth should therefore be a key priority for governments seeking to reduce poverty.

The importance of employment is recognised by the poor themselves. More than 70 percent of the respondents in the World Bank's survey 'Voices of the Poor', said that getting a job is the best way to escape poverty.⁶ But unemployment is still seen as the most important problem that governments need to address, according to a 2015 Afrobarometer survey of 36 African countries7.

REDUCING OBSTACLES TO JOB CREATION

The private sector plays a critical role in job creation. More than nine out of ten jobs in low- and middle- income countries are provided by the private sector, and small- and medium-sized enterprises play a key role by providing more than 80 percent of formal jobs. In Sub-Saharan Africa, the private sector accounts for 93 percent of paid employment, compared to 77 percent in Europe⁸. To reduce poverty, it is therefore crucial to understand and mitigate the constraints that private enterprises face in creating jobs.

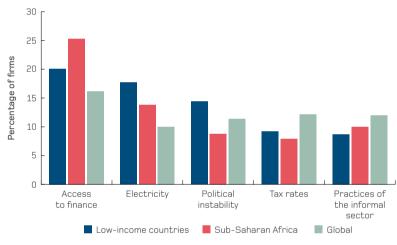
Companies face challenges that vary depending on the size of the company, the sector in which they operate, and the country in which they're located. However, there are common themes that apply

low-income across countries. In a World Bank Enterprise Survev of more than 130,000 companies in 135 countries, managers and business owners were asked to identify obstacles to the devel-

"THE LEVEL OF EMPLOYMENT, THE QUALITY OF JOBS. AND THE ACCESS WHICH THE POOR HAVE TO DECENT FARNINGS OPPORTUNITIES WILL BE CRUCIAL DETERMINANTS OF POVERTY REDUCTION"

opment of their businesses. Access to finance was regarded as a key constraint in all regions, and by

Ill Figure Main obstacles for enterprises



Source: World Bank Enterprise Surveys

more than 25 percent of the firms interviewed in Sub-Saharan Africa. Access to electricity was ranked

as the second largest challenge facing companies in low-income countries. including those in Sub-Saharan Africa. Better access

THE PRIVATE SECTOR PROVIDES NINE OUT OF TEN JOBS IN LOW- AND MIDDLE-INCOME COUNTRIES

to finance and to stable electricity supplies should therefore be key priorities for those wanting to boost economic growth.



- UNDP (2010)
- Hull (2009)
- World Bank Group (2002)
- ⁷ Bentley et al. (2015) 8 EDFI (2016b)

A NEW GLOBAL AGENDA FOR DEVELOPMENT

In 2015, world leaders adopted a new global development agenda for the next 15 years. This new agenda places greater emphasis on the role of the private sector in supporting sustainable growth.

THE SUSTAINABLE DEVELOPMENT GOALS

The United Nations' (UN) 'Transforming our World: The 2030 Agenda for Sustainable Development' was adopted in New York in 2015. It includes 17 Sustainable Development Goals (SDGs) that will direct global efforts to promote economic development, social inclusion, and environmental sustainability up to 2030.

Inclusive economic growth is recognised as a necessary condition for poverty reduction in the Agenda 2030 document, and Goal 8 is explicit in seeing work as a pathway out of poverty. Obstacles impacting on growth and job creation in the private sector are addressed by the new SDGs, including Target 7.1 (ensuring universal access to affordable, reliable and modern energy services) and Target 8.10 (strengthening the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all).



Climate considerations must be central to strategies for economic and social development. This is because although economic growth is crucial to reduc-

ing poverty, it is also a key driver of carbon dioxide emissions.

Low- and middle-income countries will be among the nations worst affected by the impacts of climate change, even though their

contribution to this problem, to date, has been proportionately small. It is expected that these countries will experience gradual sea-level rises, stronger cyclones, warmer days and nights, more unpredictable rains, and larger and longer heatwaves.⁹

In December 2015, the global community met in Paris and committed itself to a binding, universal agreement on climate change. It was decided that

temperature increases must be kept within the relatively safe range of between 1.5 to 2 degrees Celsius above pre-industrial levels. After 2020, USD 100 billion will be transferred annually from developed countries to developing countries to finance emission cuts and to help these countries cope with the effects of extreme weather

FINANCING: FROM BILLIONS TO TRILLIONS

Achieving the objectives of the new global development agenda requires a combination of improved policies, effective governance, and increased investment. Financing must be sourced from a mix of domestic resources, international aid, and private investments: preliminary estimates indicate that USD 1.4 trillion in incremental investments in lowand lower-middle-income countries will need to be mobilised each year between 2016 and 2030¹⁰.

The Third International Conference on Financing for Development held in Addis Ababa in July 2015, underlined the key role of private investments in meeting development financing needs. Similarly, a UN Sustainable Development Solutions Network report noted the importance of the role of private financiers which, it argues, have the potential to cover approximately half of all the investments needed. Private commercial financing, as the report emphasises, will be particularly important in meeting the global goals of agribusiness (for example, through investments to increase rural productivity) and infrastructure (such as investments in power, telecommunications, and transport).

The international community's recognition of the importance of private business activity, and the importance of investment and innovation as major drivers of productivity, inclusive economic growth and job creation have been major shifts in its strategic approach to global development. Development Finance Institutions (DFIs) and International Finance Institutions (IFIs) will take more prominent roles relative to traditional grant-based aid in the new architecture of aid.



THE THIRD INTERNATIONAL CONFERENCE ON FINANCING FOR DEVELOPMENT HELD IN ADDIS ABABA IN JULY 2015, UNDERLINED THE KEY ROLE OF PRIVATE INVESTMENTS IN MEETING DEVELOPMENT FINANCING NEEDS



THE NEW ARCHITECTURE OF AID

Policy-makers recognise the key role of private investments in low- and middle-income countries in promoting growth. In response, donor countries are scaling up their allocations to DFIs.

The role and importance of the private sector in financing development has increased: foreign direct investments have grown rapidly over the past two decades and now exceed official development assistance (ODA) to low- and lower middle-income countries. Private financial flows to developing countries has increased from USD 78 billion in 2000. to USD 402 billion in 2014.11 Many sectors that were once exclusively the domain of aid financing now offer attractive returns for commercial actors.

THE LARGE FINANCING GAP

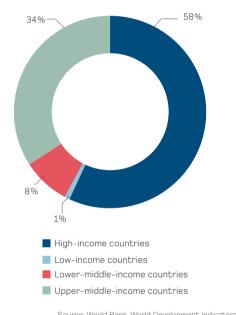
Private financiers are important for economic growth and development, but many require riskreturn profiles at market rates and lack the risk appetite and knowledge required to invest in the poorest countries. An analysis of foreign direct investment (FDI) shows that only a small share of global FDI (1 percent) goes to low-income countries while 58 percent of FDI goes to high-income countries. A report on the role and relevance of Nordic development finance notes that "markets are often very fragmented and most investment initiatives involve complex risk profiles and exposure towards uncontrollable events. In addition, [the] lack of reliable market information makes it difficult to match projects and investors, and the high degree of uncertainty and lack of effective risk mitigation tools mean that investors typically require a significant risk premium".¹²

Gaps are also evident in sectors that are of particular importance for development, such as agriculture and energy. Further, international capital flows are often made with short-term perspectives. If the global agenda for development is to be realised, the transformative role of private capital will need to be strengthened.

DEVELOPMENT FINANCE STRATEGIES

There are three complementary channels for development finance from the OECD DAC donor countries and multilateral institutions to low- and

Figure Poor countries fall outside global financial flows FDI flows by income group 2014, USD



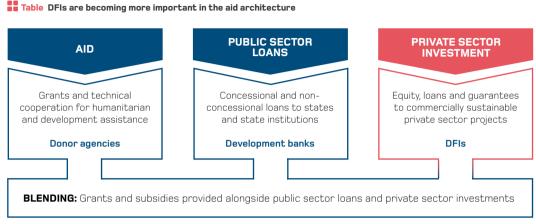
Source: World Bank World Development Indicators

middle-income countries: aid, public sector loans and private sector investments through DFIs. DFIs are often fully or partially funded by development aid

"THE FIELD OF DEVELOPMENT FINANCE HAS CHANGED DRAMATICALLY OVER THE PAST 15 YEARS, DURING THIS PERIOD...-OFFICIAL DEVELOPMENT ASSISTANCE AND OTHER OFFICIAL FLOWS... BECAME A MINORITY SHARE IN THE OVERALL MAKEUP OF DEVELOPMENT FINANCE"13

budgets and provide equity, loans and guarantees to companies operating in the world's most challenging markets. They play an important role in mobilising commercial investors and help to bridge the gap between public and private sector investments.





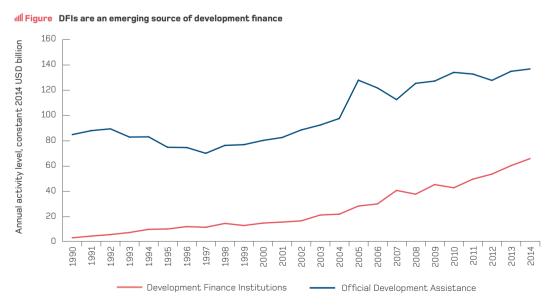
Source: EDFI (2016b)

SCALING UP DFIs

Policy makers in low- and middle-income countries are recognising the key role of private investments in promoting growth and, in response, donor countries are increasing their allocations to DFIs investing in private sector projects. In 2015, for example, the UK's Department for International Development (DfID) announced that they will allocate an extra GBP 735 million over the next three years to CDC, the British DFI. This was the first capital injection into CDC for two decades. In Finland, the development aid budget was significantly reduced, while a record high EUR

130 million was earmarked to capitalise the Finnish DFI, Finnfund.

DFIs represent one of the fastest growing sources of development finance in the world according to The Center for Strategic and International Studies (CSIS). While the overall level of aid remained relatively constant in real terms between 1990 and 2015, the level of DFI investments grew significantly. The total amount invested by DFIs is now equivalent to half the sum of all official development assistance (ODA) annually.



Source: EDFI (2016b)



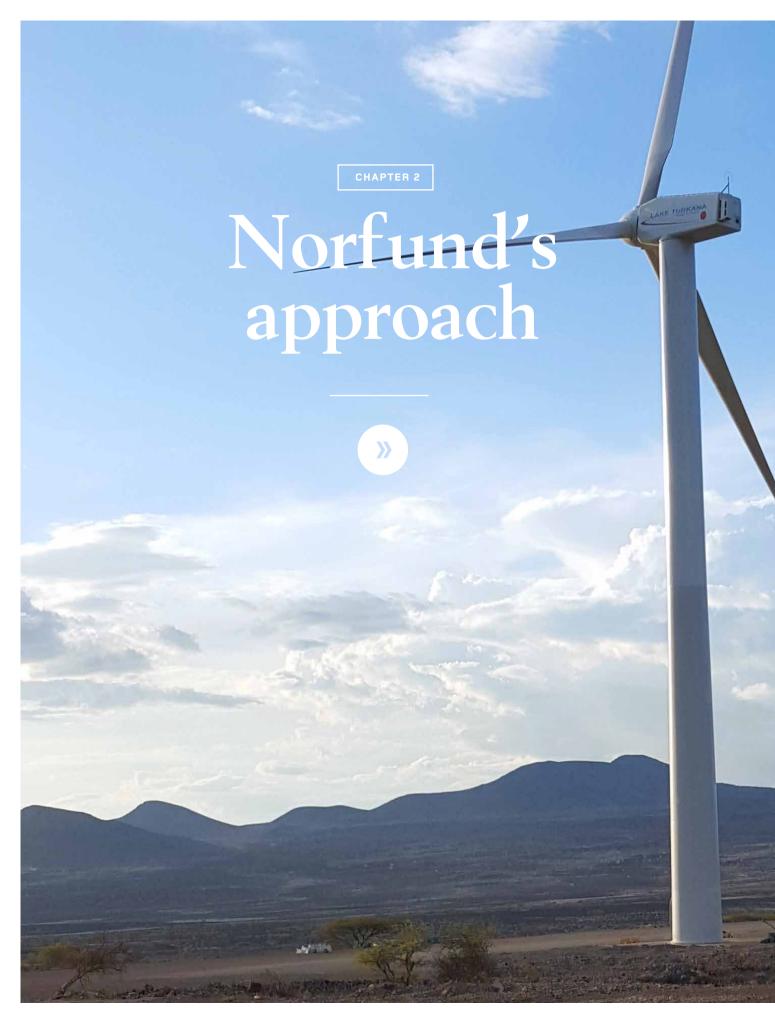
European Development Finance Institutions

In 1992, 15 European institutions formed the Association of European Development Finance Institutions (EDFI) to promote technical and financial cooperation between member organisations. Members are mandated to invest in developing countries and emerging markets, and cooperate on issues such as environmental, social and governance standards, measuring development effects, and jointly financing projects. Collectively, the member institutions employ more than 1,800 investment professionals and support staff, working from head-quarters in Europe and 42 overseas offices in more than 20 countries in developing regions.

Investments made by members of the Association of European Development Finance Institutions (EDFI) have become increasingly significant over the past decade. At the end of 2015, the combined investment portfolio of EDFI's members was EUR 36 billion and included 4,000 projects across low- and middle-income countries. This amount is more than three times the size of their combined portfolio in 2005, which stood at EUR 11 billion. If current trends continue, it will be possible within the next ten years for EDFI members to mobilise new investments in low- and middle-income countries at levels comparable to the value of European ODA13.









NORFUND'S MANDATE

Recognising the key importance of the business sector for creating economic growth and combating poverty, the Norwegian Government established Norfund in 1997 as an investment fund for developing countries.



Norfund's governance

Norfund is owned by the Norwegian Ministry of Foreign Affairs on behalf of the Norwegian Government. Constitutional responsibility for the organisation rests with the Norwegian Minister of Foreign Affairs. Each year, the Minister constitutes the General Assembly at which Norfund's Board of Directors is elected. The Board is responsible for ensuring that Norfund operates in accordance with the Norfund Act of 1997

CHANNELLING CAPITAL TO ENTERPRISE DEVELOPMENT

In 1995, the Norwegian North-South/Development Aid Commission argued that Norway should establish an investment fund as a key instrument of its development policy. Though Norad, the Norwegian aid agency, provided loans to Norwegian enterprises wanting to establish themselves abroad, the mandate of Norad restricted it from providing equity to companies. At this time, Norway was one of very few Western European countries that did not have a development finance institution (DFI). The proposal to establish Norfund was submitted to the Norwegian Parliament (Storting) as a separate matter in Proposition No. 13 to the Odelsting Chamber (1996-1997). The Norfund Act was approved on 9 May 1997.

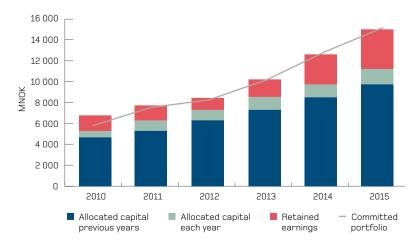
LEARNING FROM NORWAY'S DEVELOPMENT

Norway's own development experiences and the lessons learned probably influenced the country's decision to establish Norfund. Business growth and

electricity was an important pre-condition for enterprise development, Norwegian politicians prioritised investments in energy supply and infrastructure during Norway's own development. Financial institutions – particularly savings associations – also played an important role in facilitating business growth and job creation in nineteenth century Norway. Later, sector oriented government-owned banks such as the Industrial Bank and the Regional Development Fund, as well as targeted public investments in electric power supply, and in transport and distribution, played important roles in the development of Norway's business sector.

Today, Norfund is Norway's principal instrument for private sector development and job creation in developing countries. Since its establishment, Norfund's annual capital contribution from the Ministry of Foreign Affairs has increased from NOK 175 million in 1998 to NOK 1,480 million in 2015. Norfund now has an investment portfolio of more than NOK 15 billion.

Figure Steady increase in equity and committed portfolio



job creation had been central to Norway's development transition from a poor, agricultural country to a high-income economy. Recognising that access to

DEVELOPING SUSTAINABLE BUSINESSES

Norfund's mandate, as defined by the Norfund Act, is "to assist in developing sustainable business and industry in developing countries by providing equity capital and other risk capital, and/or by furnishing loans or guarantees". Its purpose is to establish viable, profitable undertakings that would not otherwise be initiated because of the high risk involved. Our commitment to developing sustainable enterprises is informed by three core concerns:

> Financial viability

Sustainable companies must be financially viable and, over time, must generate a profit. This is important because as companies grow and become more profitable, their development effects tend to increase. They hire more staff, for example, increase their engagement with suppliers and distributors, and produce more goods and services. When companies become attractive to private

investors, Norfund's finance may no longer be necessary. Our strategy is to exit investments when we are no longer additional and to reinvest the capital in new projects requiring risk capital.

> Governance and integrity

Sustainable companies are characterised by a high degree of business integrity and good corporate governance. They have clear processes and clear organisational structures, such as a board of directors. Sound governance helps companies to be stronger, more efficient and more accountable, to mitigate risks, and to safeguard against mismanagement. Robust anti-corruption measures and practices are needed because corruption is costly and risky. Good governance and integrity help companies to attract the investment and capital they need to facilitate further growth.

> Sound environmental and social performance

The companies in which we invest are required to have sound environmental and social practices. They must also comply with recognised international environmental and social standards, as well as national legislation and regulations. In many countries, rules and regulations protecting employees, the environment, and the rights of vulnerable groups are poorly enforced. Developers and investors therefore have a special responsibility to ensure compliance.

INVESTING IN UNDERSERVED MARKETS

High risk and limited knowledge make many private investors hesitant to invest in the poorest countries. Norfund invests in countries and sectors where businesses lack access to sufficient capital to develop and grow.

Our investments are additional to what the market offers investees. Additionality in our investments is essential, both in terms of increasing the quantity of investments as well as improving the quality of investments. We achieve this through our strategic focus on sectors, countries and instruments where capital is scarce, and by scrutinising Norfund's role in each individual investment. Norfund is willing to assume higher risks than many other private investors. We target some of the most challenging markets, including fragile states and least developed countries (LDCs).

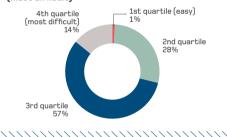
CATALYSING INVESTMENTS AND KNOWLEDGE

Private sector investments are critical for achieving

Norfund's investments are additional

In their 2015 evaluation of Norfund's investment portfolio, Gaia Consulting used international country credit scores and ratings (such as Standard & Poor's credit rating and World Bank's Ease of Doing Business ranking) to illustrate the cost of funding and access to capital in various countries. They found that "Norfund's strategy of concentrating investments in high-risk countries and regions supports its additionality claims as the majority of its portfolio is allocated to non-investment grade countries where private investors would not normally invest."

ill Figure Norfund's portfolio as of 31.12.15 classified according to World Bank's Ease of Doing Business ranking, in quartiles from 1 (easy) to 4 (most difficult)





Financial and value additionality

An investment by a development finance institution (DFI) is said to be financially additional if it is provided to an entity in a quantity, or on terms, or for developmental nurnoses that the private sector cannot otherwise provide An investment is also said to be additional in value if a DFI offers non-financial value that the private sector is unable to offer, and if this leads to better development outcomes. This may occur through, for example, the provision of knowledge and expertise, the promotion of social or environmental standards, or the fostering of good corporate governance.

development goals. Mobilising the private sector is

a central part of Norfund's mandate and we work to leverage experienced partners and additional private capital for our projects.

Norfund is frequently instrumental in financing the establishment and expansion

ASSIST IN DEVELOPING SUSTAINABLE BUSINESS AND INDUSTRY... THAT WOULD NOT OTHERWISE BE INITIATED" IN DEVELOPING COUNTRIES²

THE PURPOSE [OF NORFUND] IS... "TO

of companies, and in mobilising the participation of other investors. We leverage capital, for example, by sharing risks with industrial investors, and by strengthening the equity base and quality of projects. This can make it easier for companies to obtain bank loans.

In our role as a catalyst, Norfund leverages knowledge from co-investors, industrial partners and external board members. In our energy portfolio investments, for instance, our project co-investors provide the necessary expertise and technologies, and we offer professional guidance about their markets and operational environments.



¹ Gaia Consulting Ltd (2015) ² NMFA (1997)

NORFUND'S STRATEGY

Contributing to economic development and poverty reduction are key goals of the Norwegian Government's development assistance policy. Norfund's strategy directs how we fulfil our mandate and achieve these goals.



Platform companies

Norfund collaborates closely with industrial partners and other investors. We have established a number of 'platform companies' in cooperation with these partners, bringing together both capital and industrial expertise. SN Power, for example is a company that Norfund owns jointly with Statkraft. SN Power invests in hydropower in low- and middle-income countries, and increasingly in Africa.

CONCENTRATION AND EXPERTISE

Norfund's strategy is to concentrate on particular geographies, focusing on the energy, finance and agriculture sectors. The fund is limited in size and staff numbers, and this concentration allows us to make effective and efficient investments. It also enables us to develop sectoral expertise, build strong partnerships, and to leverage Norwegian industrial expertise, especially in energy and finance.

Our geographical focus, particularly in the poorest countries, allows us to build familiarity with local business environments, enterprises and politics.

ACTIVE, STRATEGIC MINORITY INVESTOR

Equity capital is Norfund's primary instrument because it is the scarcest type of capital and therefore particularly additional in value. Providing equity enables us to guide the strategic development of companies and to leverage other types of finance.

Our role is to be an active, strategic minority investor

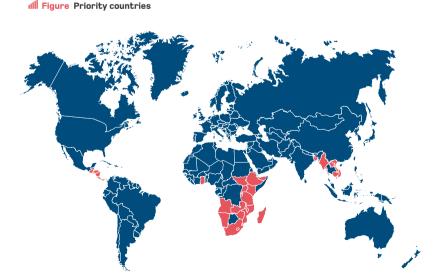
alongside private investors, and our ownership interests do not usually extend beyond 35 percent. We play an active role as an owner of the portfolio companies by contributing expertise, impacting directly on company strategy and governance, as well as company decisions about environmental and social impacts. It is crucial that we are proactive and have the operational ability to handle challenges and opportunities, and that we are able to work closely with our partners.

It is important that Norfund has well-defined lines of decision making and responsibility, and performs effectively as an active owner in its investments. Securing competent boards of directors for our portfolio companies is one of the important tasks we undertake.

INVESTING IN THE POOREST COUNTRIES

The Norfund Act of 1997 states that Norfund is allowed to invest in countries and territories classified by the Organisation for Economic Co-operation and Development (OECD) as low- and middle-income countries, or those that are poorer. We also invest in other countries that the Norwegian Parliament (*Storting*) decides may receive assistance through business aid schemes. Our investment strategy is geographically focused and we give priority to the least developed countries (LDCs) and to countries in Sub-Saharan Africa. We have five regional offices: in Maputo, Nairobi and Johannesburg in Africa; in Bangkok in Asia; and San José in Central America. We recruit personnel who have local expertise.

Norfund is a minority investor and our ability to mobilise industrial and financial partners is therefore an important part of our work. In some partnerships, we take a phased approach by investing first in a medium-risk country before moving towards lower-income and higher-risk environments.



DRIVING DEVELOPMENT AND JOB CREATION

Norfund invests in sectors that are important for facilitating business growth, job creation and poverty reduction:

> Increasing energy supplies

Access to reliable energy is a prerequisite for development. Poverty reduction is dependent on economic growth; economic growth, in turn, requires more energy. In poor countries, having access to a reliable electricity supply is the single most crucial factor for the development of commercial enterprises. Norfund contributes to increasing available energy supplies by investing in clean energy generation projects. We invest in proven technologies only: our portfolio includes hydro, solar, wind, biogas, and natural gas.

> Providing access to capital

Norfund's investments contribute to increasing access to capital in low- and middle-income countries. Access to capital is crucial for establishing and expanding businesses, and access to loans and saving facilities can help to reduce the vulnerability of individual households. Norfund invests in banks, microfinance providers, and other financial institutions. Our investments in banks target medium-sized and large institutions focusing on SMEs, the retail market, and clients that have not previously had access to financial services.

> Supporting the development of SMEs

Our SME-fund team invests in private equity and venture capital funds targeting SMEs in need of early phase or growth capital. Investing in SME funds through local fund managers helps to contribute to building and developing local businesses: local managers, for instance, can provide SME entrepreneurs with access to risk capital and advice and support.

> Developing the agricultural sector

Agricultural growth can drive overall economic growth and transformation, and has proven to be effective in reducing poverty in low-income countries. Norfund invests in agribusinesses in Africa in order to contribute to increasing productivity and to the development of agricultural value chains. We invest in companies across the agricultural value chain and give priority to investments that involve smallholders.

Impact investments

Norfund invests in 'impact investments', a special asset class that has a higher risk level than we would normally accept. The expected development impacts are particularly high and include categories such as:

Project development in renewable energy: In principle, businesses must have comprehensive plans and structures in place before Norfund invests in them. In the clean energy sector, project development can be costly and take time. Large-scale, complex projects, for example, may involve multiple stakeholders and local authorities in construction and distribution. In LDCs there are often few potential investments and Norfund therefore also invests in project development.

Early engagement in fragile states: Fragile states are characterised by particularly poor investment climates and high levels of risk. Development assistance is important particularly when countries are emerging from conflict and struggling with weak governance. Private sector development contributes to ensuring growth and providing employment.

Fund management in high-risk locations: In poor countries and markets in which SME funds are unavailable, the establishment of new, locally based investment funds can be effective in promoting SME development. Norfund invests in fund management companies in high-risk locations, which are instrumental in the establishment of private equity funds in these underserved markets.

MAKING THE MOST DIFFICULT INVESTMENTS

Norfund uses target figures (Key Performance Indicators) to guide the allocation of the fund's capital. These define the share of the portfolio that should be invested in LDCs, Sub-Saharan Africa, equity instruments, and new business start-ups. These allocations promote high levels of investment activity in some of the most difficult markets and most demanding instruments, and help us to fulfil our mandate by ensuring a high degree of additionality. We are required by the Norwegian Ministry of Foreign Affairs to invested at least half of the allocated capital each year in renewable energy.



Norfund's Portfolio Targets

Sub-Saharan Africa: > 50 percent

Least Developed Countries: > 33 percent

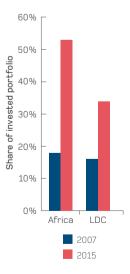
Greenfield Investments: > 20 percent

Equity Investments: > 70 percent.

Renewable Energy: > 50 percent of allocated capital

ıll Figure

Norfund's investment activity in difficult markets has increased





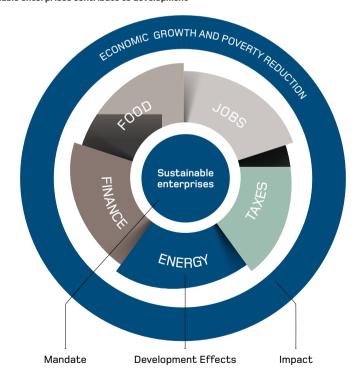


REPORTING PRACTICE

The growing importance of development finance institutions has been accompanied by increased stakeholder interest. Many stakeholders are particularly interested to learn more about our contribution to development.

Norfund's mandate is to contribute to the development of financially viable companies that have good corporate governance and sound environmental and social practices. To maximise our impact, we invest in sectors that are of particular importance for development. Enterprises provide employment opportunities, pay taxes and supply goods and services, thereby contributing to economic growth and poverty reduction.

Illustration
Sustainable enterprises contribute to development



REPORTING PRACTICE

Norfund is owned by the Norwegian Ministry of Foreign Affairs (MFA), and we receive policy guidance from the Ministry at our annual General Meeting and regular liaison meetings. We are required to

report annually to our owner and to detail investment activities by sector and by geography and provide updates about the performance of our investments. The MFA also expects Norfund to "continue its systematic efforts of measuring and reporting the development effects of its investments!".

Sustainable companies

Information on how we are fulfilling our mandate of creating viable companies in underserved markets is presented in Norfund's Annual Report and in our Annual Report on Operations. The internal rate of return indicates the extent to which we are succeeding in developing profitable companies. Environmental and social risks and impacts are also monitored closely, and reported on as appropriate (see chapter 5 for more information).

Development effects

The development effects of our investments is a key topic in the dialogue and reporting between Norfund and the Ministry. Our investments are expected to contribute to job creation, generate

Harmonised indicators

International Finance Institutions (IFI) have, historically, used a variety of monitoring systems to track the development results of their operations. Varying in structure and processes, these systems reflect the diversity of mandates, stakeholders, and organisational structures of such multilateral and bilateral development finance institutions. In an effort to standardise the criteria that IFIs use when assessing the impact of their work with private sector clients, Norfund and 24 other finance institutions agreed to adopt a set of Harmonized Indicators in 2013 for Private Sector Operations. The 38 reporting indicators include cross-cutting and sector-specific development effects. The full list of indicators is available at www.hipso.net.



public revenues, build competence and bring in technology. We collect data on key development effects from all investees each year in order to monitor these effects. Data collection requires time, accuracy and resources, and we seek to find the right balance between information need and reporting burden. Our reporting is aligned with the best-practice approach developed by the IFI Working Group on Indicator Harmonisation, in order to capture the most relevant development effects, and minimise the reporting burden on investees with financing from several such institutions.

The reporting captures development effects within company boundaries, such as the number of direct employees and the amount of taxes companies pay to governments. Indirect effects are not normally observed or calculated by companies. We seek to capture such effect through proxy indicators and through case studies.

Norfund is participating in the Let's Work initiative together with other DFIs, the IFC, the World Bank, and development organisations. The aim of the initiative is to provide effective solutions to the global jobs crisis by harnessing the potential of the private sector to create more and better jobs. Developing, refining and applying good practice methodologies for estimating indirect, induced and secondary job effects is one of the key objectives of the initiative.

Macro-level impact

It is technically challenging to find evidence of a single DFI's impact at the macro-economic level. Measuring the impact of private sector investments on economic growth and poverty reduction is therefore best done at the aggregate level.

RECOMMENDATIONS FOR FURTHER REPORTING

In 2014, Norad initiated an evaluation of Norfund to better understand the fund's role as an instrument of Norwegian development assistance policy. The conclusions of the evaluation conducted by Gaia Consulting Ltd, were very positive and stated that we had been successful in fulfilling our mandate. Further, the 2015 report indicated that our work, focused on specific instruments, themes and sectors, was fulfilling the objectives of the Norwegian government's development policy. The report also highlighted our successes in active ownership, our efficient investment process, and recognised that

Norfund's investments have often been additional and helped to leverage capital.

Good governance and compliance with environmental and social (E&S) standards are key characteristics of sustainable enterprises. In its 2015 evaluation of Norfund, Gaia Consulting notes that Norfund has been successful in "promoting the exchange of technical, financial, market and governance competence with investee firms". Norfund's influence, it observed, was particularly evident with respect to financial management and governance practices as well as environmental and social impact.

Although the evaluators identified both quantitative and qualitative development effects of Norfund investments, they noted that compared to many other DFIs, Norfund produces relatively little external in-

formation about its development effects. Gaia Consulting suggested that Norfund could improve its documentation of these effects. The report proposed, for instance, that Norfund could "consider reviews of [our] exited

"THE EVIDENCE GATHERED ON INVEST-MENTS POINTS TO THE EXISTENCE OF WIDER LOCAL AND REGIONAL QUANTITATIVE AND QUALITATIVE DE THAN CAPTURED WITH CURRENT REPORTING"³

investments to learn lessons about developmental outcomes and their sustainability" and that we could "conduct targeted in-depth DE assessments of selected strategic investments". The evaluators also indicated that they would welcome more analysis of the effects of DFI investments at the macroeconomic level.

FOLLOW-UP

Following Gaia's recommendations, Norfund initiated a study of the macroeconomic impact of DFIs (see p. 28) and we have reviewed our exited investments (see p. 24). Norfund has also conducted four case studies of portfolio companies, (see pp. 47-49, pp. 61-63, pp. 64-65 and pp. 76-79) and systematised historic data about development effects to help us improve the quality of future analyses.



SUSTAINABLE ENTERPRISES

Since 1997, Norfund has invested a total of NOK 18.7 billion directly in approximately 200 companies. Positive returns over time indicate that we are fulfilling our mandate of creating financially viable companies.

The Internal Rate of Return (IRR) for Norfund's portfolio, measured in investment currencies since inception, is calculated to be 5.4 percent. This indicates that we are succeeding in developing profitable companies. Profitability is a central precondition for a company's survival over time, and necessary for the creation of lasting development effects.

ANALYSIS OF EXITED INVESTMENTS

In the 2015 evaluation of Norfund, Gaia Consulting noted that Norfund had limited knowledge about the sustainability of exited projects. As part of our strategy process in 2015, we therefore conducted an analysis of the investments Norfund has exited since we were established. This is helping us to improve our understanding of our portfolio's performance.

Financial performance

All companies should be financially viable in the long-term. The analysis showed that IRR varied according to instrument, geography and deal type.

- > IRR for our exited direct investments was 5 percent. Loans had the highest IRR (9 percent) and funds had the lowest (2 percent). The IRR for equity was 4 percent.
- > The average IRR on direct investments was highest in Africa (12 percent). In Latin America, IRR was negative (-3 percent). Investees of funds in Asia and Africa also outperformed Latin America. The analysis of investees of funds showed that investing in LDCs provided reasonably good returns (an average IRR of 5 percent).
- Start-up and restructuring deal types have been challenging for Norfund. The IRR for both deal types was negative. In contrast, a far higher IRR value of 7 percent was reported for expansion deals.

Job creation

Getting a job is the most effective way of escaping poverty. Employment creation is therefore an important development effect of Norfund's investments.

- In most companies, the workforce grew during the holding period. 64 percent of Norfund's exited investments, including investees of funds, increased their workforce during this period. More than 33,000 direct new jobs were created, raising the total number of jobs in the 137 companies to 118,000.
- More profitable investments created more jobs than the less profitable investments. This was true both for the direct investments and the investees of funds.

Current status of exited companies

In 2015, we contacted former direct investments to learn more about their development after our engagement with them had ended.

- > 85 percent of the companies that were operational when Norfund exited are still operational today. The analysis showed that 34 out of 38 companies had been operational at the time we exited. Today, 29 of these companies are still operational: nine have been part of mergers and acquisitions, and 20 remain in their original form.
- > The operational companies are growing, increasing their profits, and hiring more people. Our survey data shows that the loans portfolios in all the financial institutions have continued to grow after Norfund's exit. Profitability continued to increase in almost 70 percent of the companies; 65 percent of the companies have continued to expand their workforce since Norfund's exit.



The dataset

- Data for 56 direct exits and ~200 indirect investments through SME funds.
- Job data available for 32 out of 38 relevant direct investments – and 105 out of 200 indirect investments.
- Current status of exited companies: data sourced mainly from companies' annual reports. The analysis covers the loan portfolio (N=10), profit (N=13), and workforce (N=17).

IN THE PERIOD 1997-2014, NORFUND EXITED 56 DIRECT INVESTMENTS AND MORE THAN 200 SMES THROUGH FUNDS



The operational companies are **growing**, increasing **profits** and hiring **more people**



Profitability increased in **70**% of companies



Job growth continued in 65% of companies



Funds: 9-11 years Equity: 5-7 years Loans: 4-6 years Average holding period for the exited direct investments was 6 years



85% of companies that were **operational** when Norfund exited are still operational today



Operational M&A Liquidated

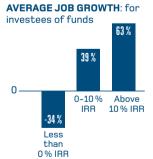
33,000 new jobs created

64% of companies increased their workforce during Norfund's holding period



Average IRR was 5% for direct investments





The most profitable investments created more jobs

JOBS AND TAX REVENUES

Sustainable companies contribute to reducing poverty by creating jobs and increasing government revenues. Jobs are created directly in investee companies, in their supply chains, and as a result of the goods and services our investee companies provide.



Sector-specific effects

Norfund's strategy is characterised by a concentration on three sectors that are particularly important in driving development, namely energy, finance and agriculture. Chapter 4 explains the development rationale for investing in these sectors, examines Norfund's strategy, and includes case studies from our portfolio that provides information about sector-specific development effects.

THE NUMBER OF JOBS IN NORFUND'S INVESTEE COMPANIES ROSE BY 9 PERCENT FROM 2014-2015

JOB CREATION THROUGH VARIOUS CHANNELS

Creating jobs for the large number of new workers who will enter the labour market in the years ahead is one of the main priorities for low-income countries. The companies in Norfund's portfolio contribute to job creation through five channels⁴:

- > By hiring new workers,
- > By purchasing goods and services from local enterprises, and enabling the enterprises to grow and hire more workers.
- By paying wages to workers who then spend the money in the local economy,
- > By reducing critical obstacles to the development of other enterprises, such as a lack of electricity or finance, and
- By paying taxes that enables the government to increase spending

The relative importance of each channel differs by sector. Direct jobs are very important in sectors such as manufacturing, for example, whereas indirect job creation is more important in sectors such as tourism.

For energy projects, secondorder effects are typically the most important. Providing reliable energy supplies makes production more efficient and can therefore help to increase employment.

INCREASING TAX REVENUES

Profitable companies pay taxes to the governments of the countries in which they operate. This increases a country's tax base, enabling governments to spend more on public services, such as health and education. This is directly beneficial to the poor. 10 percent increase in per capita income in low-income countries, as a DFID study shows, is associated with an average increase of 11 percent in education expenditure, 11.4 percent in health expenditure, and a 12.7 percent increase in tax revenues⁵. Tax-to-GDP ratios in low- and middle-income countries

Project-specific effects

Studies at the micro-level show that DFI investments have a number of positive effects on communities in which the projects are located. Gaia Consulting found evidence that Norfund's investments had, for instance, "leveraged industrial expertise, improved agricultural and marketing expertise of out-growers, improved skills of employees, improved gender equality (including participation, economic empowerment), ... ESG systems and management, ... stakeholder engagement and communication, infrastructure and access to energy and water, [and improved] demonstration effects, [and] ... health and educational conditions"⁶.

are increasing as governments modernise their tax systems. But tax revenues in most countries are below the OECD average of 34 percent, and finding ways to increase this revenue will be important to financing development.

DEVELOPMENT EFFECTS 2015

At the end of 2015, 382,000 people were employed in companies in which Norfund had invested, directly or through funds. 34 percent of those employed were women. From 2014 to 2015, the number of jobs in the companies in which Norfund has invested rose by 9 percent.

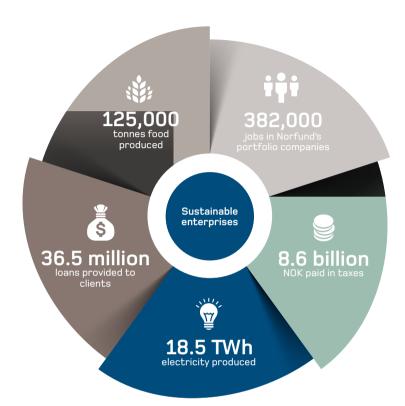
Our investee companies purchased goods and services worth NOK 22 billion from local suppliers in 2015, thereby contributing further to the growth of these companies. In the agricultural sector, indirect effects can be particularly strong because companies typically source most of their input locally.

The energy companies in Norfund's portfolio produced a total of 18.5 TWh of electricity in 2015 – an amount equivalent to the annual consumption of 25 million people in these markets. By increasing



- 4 Massa et al. (2016)
- ⁵ DFID (2008)
- ⁶ Gaia Consulting (2015, p.31)





electricity supplies, our investees are making it easier for new firms to be established and for existing firms to expand. Renewable energy sources generated 63 percent of the electricity, and Norfund's total renewable energy portfolio prevented about 7.4 million tonnes of CO₂ emissions in 2015.

Agriculture is one of the most important sectors for combatting poverty in Africa. In 2015, Norfund's agribusiness companies cultivated 45,000 hectares of land, and produced 125,000 tonnes of food. About 12,000 smalholder farmers were associated with the enterprises through outgrower contracts or similar arrangements.

Providing access to finance enables micro-, small- and medium-sized enterprises to grow and hire more workers. At the end of 2015, the financial institutions in which Norfund has invested had issued loans to 36.5 million customers. The microfinance portfolio of the Norwegian Microfinance Initiative (NMI) accounted for 31 million of these customers.

Female Future

Gender equality is an important priority in both Norwegian and international development assistance. Globally, women are underrepresented in decision-making processes. In 2016, Norfund decided to use funding from our Grant Facility Scheme to support female leadership talents in our portfolio companies in Uganda, Tanzania, and Kenya. Participants will attend the Female Future Programme developed by the Norwegian Association of Enterprises (NHO). The objectives of the Female Future Programme include: increasing the percentage of women in management decisionmaking processes in the boardroom; getting managers to ensure that more women are recruited to management- and executivelevel positions; and facilitating a good work-life balance for employees in executive positions.

MACRO-ECONOMIC IMPACT

Measuring the impact of development projects is challenging, but it can be captured through in-depth studies and research. Recent studies by the Overseas Development Institute show that DFIs have significant and positive impacts on economic growth, investment and productivity.

DFIs and their stakeholders are giving increasing attention to the effects of DFI investments on development. However, as Gaia Consulting's 2015 evaluation of Norfund has noted, most DFIs to date have

DFI INVESTMENTS HAVE HAD A POSITIVE EFFECT ON THE RATE OF GDP PER CAPITA GROWTH IN SUB-SAHARAN AFRICA

focused on project-level effects and the literature on the macroeconomic impact of DFI investments remains scarce⁷. This imbalance reflects a more general paradox in development: considerable attention is given to output level results rather than the outcomes and impacts of projects. To improve the understanding of the macro-level

impact of our investments, we have supported research by Massa, Mendez-Parra and te Velde at the Overseas Development Institute (ODI).

ECONOMIC GROWTH

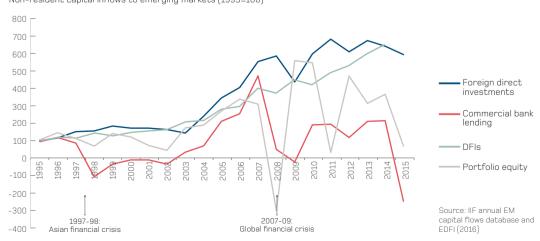
The research report *The macroeconomic effects of development finance institutions in Sub-Saharan Africa* written by Massa, Mendez-Parra and te Velde, includes a comprehensive literature review of the macroeconomic effects of DFIs⁸. It refers to a study of multilateral DFI investments that were conduct-

ed in the period 1986-2009, for example, in which Massa reported on their significant and positive impacts on economic growth. This study revealed that an increase of 10 percent in multilateral DFI investments in lower-income countries leads to a 1.3 percent increase in their economic growth rate⁹. Investments in agriculture and infrastructure were found to have the most significant role in promoting economic growth.

DFIs often act counter-cyclically during financial crises, and this further enhances their additionality. Te Velde's study of the impact of DFIs on growth during periods of financial crisis, for example, observes that during the 2008-2009 financial crisis, "international commercial banks pulled away from the perceived risk of long-term debt finance [in poorer countries], and in some cases DFIs filled the space" and contributed to growth 10.

According to new research by Massa, Mendez-Parra and te Velde, DFI investments have had a positive effect on the rate of GDP per capita growth in Sub-Saharan Africa. Currently, the DFI investment-to-







Gaia Consulting Ltd (2015)
 Massa et al. (2016)
 Massa (2011)

¹⁰ Te Velde (2011, p.11)

Illustration The impact of DFI investments on economic growth, investment, and labour productivity

Today the DFI investment-to-GDP ratio is 0.5%

If DFI investments increased by USD 15 billion, the ratio would increase to 1.5%

THIS WOULD INCREASE

- economic growth by 0.24 percentage points
- the investment-to-GDP ratio by 0.8 percentage points
- labour productivity by 4 percent

GDP ratio in Sub-Saharan Africa is approximately 0.5 percent. Were this ratio to increase by 1 percentage point to 1.5 percent (approximately USD 15 billion – or, in other words, were the current level of DFI investments to triple), the growth rate in per capita income in sub-Saharan Africa would increase by 0.24 percentage points. This increase would be particularly significant for a continent in which the average annual growth rate in per capita income has been 1.8 percent over the past decade.

CROWDING-IN INVESTMENT

DFIs catalyse private investment in countries, sectors, and regions that would otherwise struggle to obtain financing due to investor concerns about risk. Higher DFI investments are associated with increases in both foreign and domestic investment. In a 2011 study of investments in 26 countries, te Velde noted that there is a positive correlation between DFI investment and foreign direct investments. Te Velde argues that DFI investments 'crowd-in' other investors, and that a 1 percentage point increase in DFI investments as a percentage of gross domestic product (GDP) can lead to a 0.8 percentage point change in the investment-to-GDP ratio11. DFIs, he notes, have kept the investment-to-GDP ratio at least 1.5 percentage points higher than it otherwise would have been. This suggests that DFIs have an important leverage effect and that they can play a key role in kick-starting investments in developing countries.

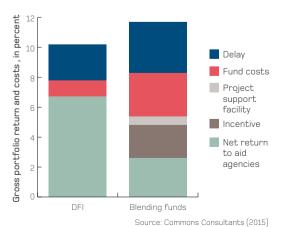
DFIs have a long history of catalysing private capital compared to many "innovative finance mechanisms". In a benchmarking study conducted by Commons Consulting, Nordic DFIs were found to operate more efficiently and with lower costs compared to many blending funds established during the last decade. The "net returns earned by governments

as owners of the DFIs," the study concluded, "were more than twice as high as the net return that ... aid agencies could expect to earn on their investments in the blending funds" This greater efficiency is due mainly to the high management costs and large incentive mechanisms associated with private sector blending funds.

INCREASING LABOUR PRODUCTIVITY

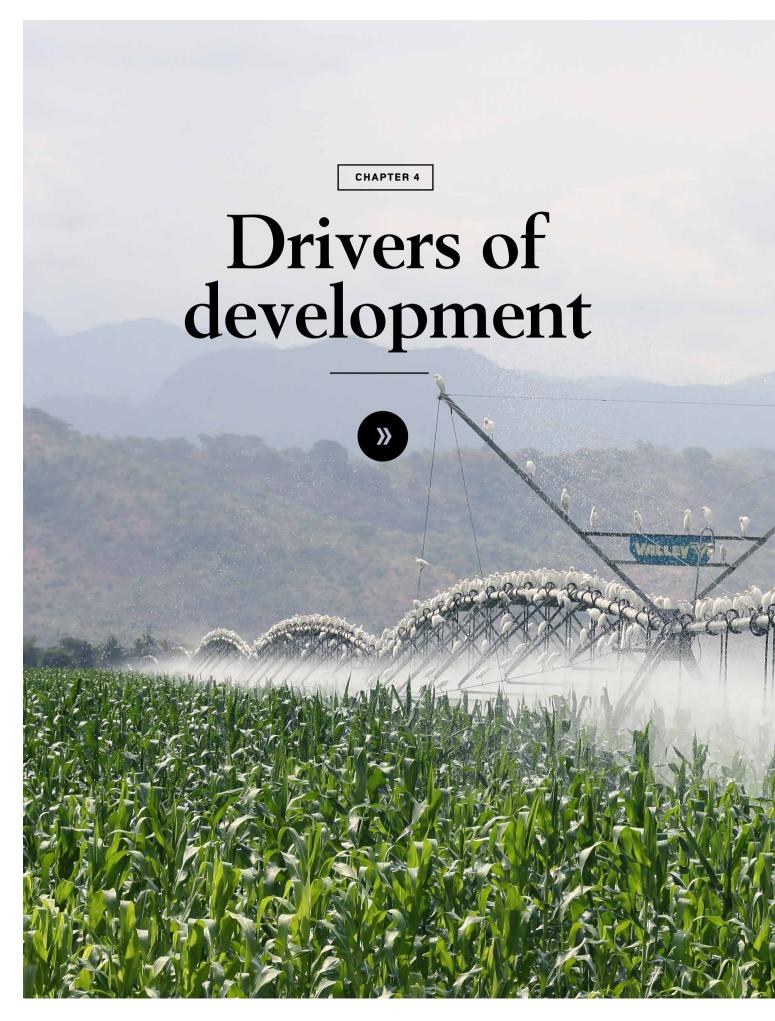
DFI investments also impact on the productivity of labour. As Jouanjean and te Velde note, for each percentage point change in the ratio of DFIs to GDP, the effect of DFIs on labour productivity is approximately 4 percent¹³. This suggests that DFI investments can raise labour productivity and contribute to promoting structural transformation.

ill Figure DFIs created higher net returns for aid agencies than blending funds



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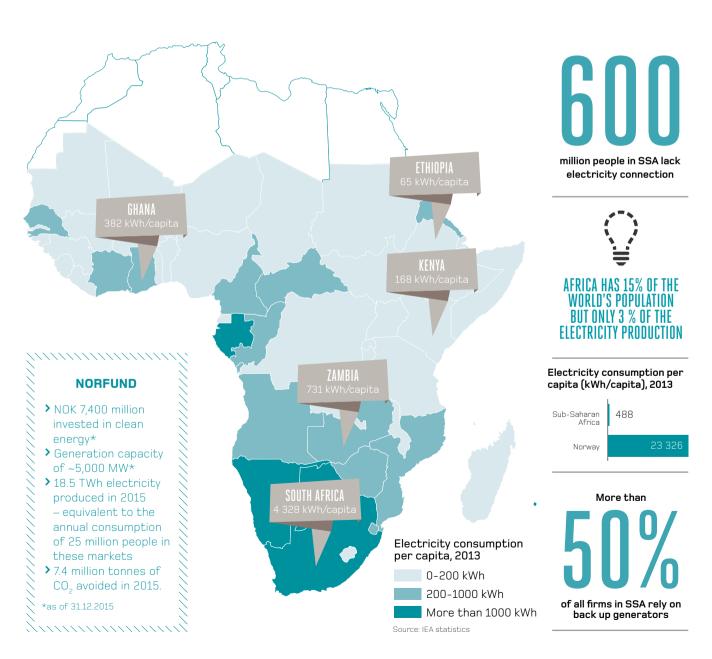
- ¹¹ Te Velde (2011)
- 12 Commons Consultants (2015)
- 13 Jouanjean and te Velde (2013)



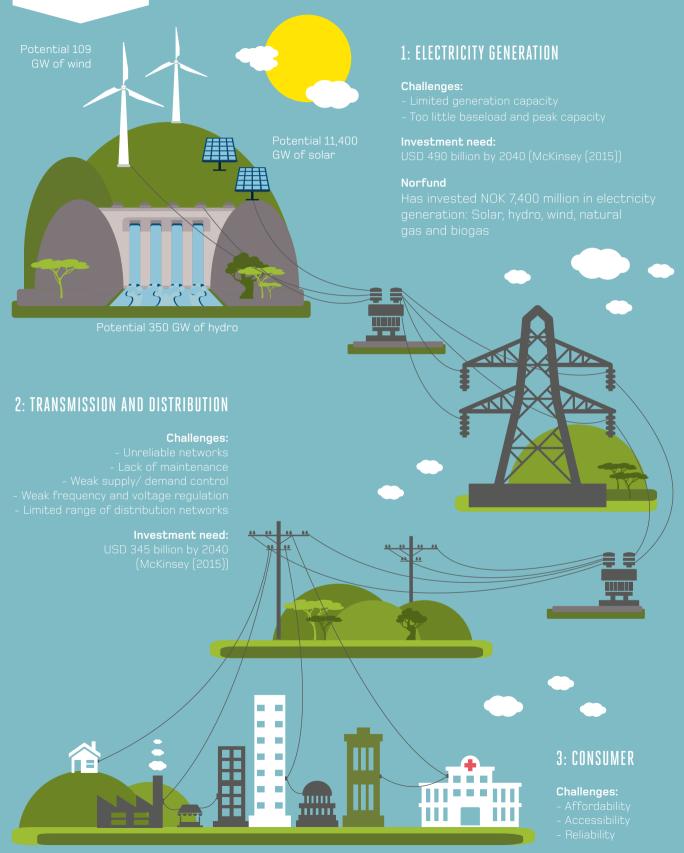


PART 1: ENERGY

Access to reliable electricity is critical for economic growth, job creation and social development. Yet, electricity was voted the #1 challenge for businesses operating in Africa. The unreliable energy supply makes many Africa-based industries and manufacturing sectors uncompetitive, slows job growth, and drags down annual GDP growth.







THE IMPORTANCE OF ENERGY

Clean energy is Norfund's largest business area and constitutes about half of the portfolio. The sector is a key area to Norfund because access to reliable energy is a prerequisite for development. Poverty reduction is dependent on economic growth – and economic growth, in turn, requires more energy. In poor countries, having access to a reliable electricity supply is a crucial factor for the development of commercial enterprises.

ECONOMIC GROWTH AND EMPLOYMENT

Efforts to promote growth and reduce poverty are hampered by a lack of reliable electricity. A literature

ACCESS TO RELIABLE ELECTRICITY IS A MAJOR CONSTRAINT FOR OVER 40 PERCENT OF BUSINESSES IN SSA

review of the links between energy use, economic growth and job creation confirms that energy and economic growth are closely linked¹. This is because the "increased use of energy leads to increased econom-

ic growth, [and] increased economic growth requires higher energy consumption. Energy use is either the cause or the facilitator of economic growth."² This relationship between electricity consumption and GDP per capita is relatively well understood, but the consulting company McKinsey notes that electrification rates are also related to levels of GDP: countries with electrification rates of less than 80 percent of

the population have a consistently lower GDP per capita³.

A World Bank Enterprise Survey of African businesses found that electricity access is a major or severe constraint for over 40 percent of businesses⁴, and more severe in lower income countries than higher income countries⁵.

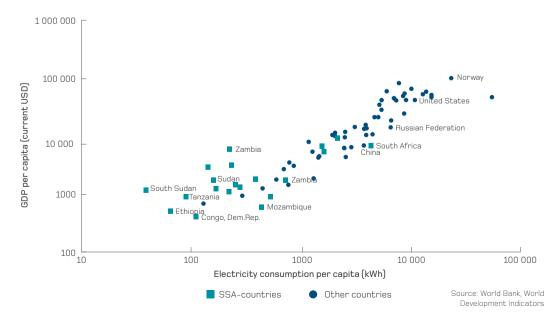
Measuring the impact of energy investments on employment is complex. A study conducted in 2013 by International Finance Corporation (IFC) evaluated the effects of private sector contributions on job creation and poverty reduction. The report found that projects in the energy sector have a direct impact on employment and that their effects on indirect employment are also significant. This is because the main job creation impacts in the energy sector happen not



Economic impact

A Steward Redqueen study of the economic impact of development finance institution (DFI) investments in power generation in the Philippines found that a 1 MW capacity addition yielded USD 1.86 million in GDP and 226 jobs⁶.





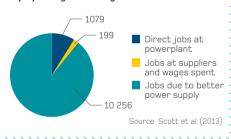


- 1 ODI (2016)
- ² ODI (2016), p. 14 ³ McKinsey & Co (2015)
- ⁴ IEG (2014) ⁵ ODI (2016)
- ⁶ Steward Redqueen (2015)
- 7 IFC (2013)

The Bugoye job study

The economic effects of power sector projects fall into four categories: 1) direct, 2) indirect, 3) induced, and 4) second-order. A study of the hydropower plant Bugoye in Uganda found that the effects of providing more and better power supplies led to the creation of 8-10 times more jobs than the number of direct jobs created during the construction of the plant and its operations. The study found that almost 1,100 jobs were created during the construction and operation phases of the project while the number of jobs created as a result of the larger and better power supply was estimated to be as high as 8,400-10,300. Across the estimated duration of the project, this totalled 218,000-264,000 person years.¹⁰ Norfund played a key role in developing the project and invested USD 8.4 million in the project which began operations in October 2009.

ill Figure The supply of electricity led to employment growth in Uganda



only in the investments themselves or in the equipment supply chain, but in how the electricity is used in the wider economy to stimulate additional production and how it reduces costs. These impacts are known also as second-order effects and fall into two categories: the effects due to the improved reliability of electricity (there are fewer interruptions to production) and the effects due to increases in the amount of electricity supplied to the grid (there are more connections, and the number of hours of work increases)8.

The effects of electricity outages on enterprises can be measured by their impact on sales. In Tanzania, for example, power outages cost businesses around 15 percent of annual sales⁹. In Sub-Saharan Africa (SSA), the average cost is 4.9 percent of annual sales.

SOCIAL DEVELOPMENT

Energy is essential to addressing the major challenges and opportunities the world faces today. Modern, high quality and reliable energy is needed for services such as lighting, heating, transportation, security, communication, and education. It is also important to ensuring better health, higher incomes, and improvements in the quality of life¹².

Ensuring access to modern electricity in health facilities in low- and middle-income countries is essential for improving health and wellbeing. The World Health Organization (WHO) defines access to essential medicines and technologies as one of the four key factors for ensuring universal health coverage¹³. Many of these "essential technologies" use electricity and cannot be provided without it. According to a study covering 11 countries in SSA, only 34 percent of the hospitals had access to reliable electricity14.

REDUCING GREENHOUSE GAS EMISSIONS

Energy production and consumption are enablers of development, but they are also major contributors to climate change and the sector accounts for about 60 percent of global greenhouse gas emissions¹⁵. Population sizes and energy consumption in developing increasing, and higher emissions from these countries are inevitable, though starting from a low level. If the average African emitted the same amount of CO, as the average Chinese, the world's total CO2 emissions would increase by around 4.9 billion tonnes¹⁶. That is equivalent to the total emissions of USA, or 130 percent of the emissions of the European Union. We also know that many developing countries are particularly vulnerable to the effects of climate change. If the universally agreed target of keeping global warming to less than 2°C is to be met, much of the new energy capacity will need to come from clean energy sources and large investments in renewable energy will be required.

Many renewable technologies, such as wind and solar power, have variable production and are dependent on the weather. To stabilise the grid, other reserve and balancing power sources are required. These could be supplied, for example, by natural gas - a domestic resource in many African countries and one which has a low carbon footprint compared to other fossil energy sources. It is estimated that reducing the use of coal over the next 20 years can achieve 80 percent of the required energy sector emission reductions globally 17.



UN SDG #7:

The UN Sustainable Development Goals (UN SDGs) were established in 2015. Goal seven is to "ensure access to affordable, reliable, sustainable and modern energy for all."11



- 8 ODI (2016)
- World Bank, Enterprise Surveys
- 10 Scott et al. (2013)
- 11 UN (2015a)
- 12 IEA (2014)
- 13 WHO (2016) ¹⁴ Adair-Rohani et al. (2013)
- 15 UN (2015b) 16 Fjose et al. (2015)
- 17 Global Commission on the Economy and Climate (2015)

REALISING THE POTENTIAL OF THE ENERGY SECTOR IN SUB-SAHARAN AFRICA

Sub-Saharan Africa's (SSA) power sector remains largely underdeveloped in terms of energy access, installed capacity and - consequently - overall consumption. Whether people can access electricity and, if so, how much they are able to consume are two important indicators of the extent of the energy sector's support for growth and development.

> Today I.1 billion people - 15 percent of the world's population - still lack access to electricity. Over 89 percent of these live either in SSA or South Asia, and 87 percent in rural areas.¹⁸. Seven out of ten of the world's fastest growing economies from 2011 to 2015 were African, but SSA lags far behind other emerg-

THE AVERAGE ANNUAL ELECTRICITY CONSUMPTION IN SSA. EXCLUDING SOUTH AFRICA. IS ONLY 150 KWH PER CAPITA: THE CONSUMPTION IN OTHER EMERGING MARKETS, SUCH AS BRAZIL, IS MORE THAN 2.400 KWH PER CAPITA ing markets in terms of consumption per capita¹⁹. Rapid economic growth in the SSA region since 2000 has seen energy use increase by 45 percent²⁰. However, the average annual electricity consumption in SSA, excluding South Africa, is only 150 kWh per capita.

In other emerging markets, such as Brazil, average consumption is more than 2,400 kWh per capita²¹.

The power sector in SSA is marked by "insufficient generating capacity, unreliable supplies, high prices,

and low rates of popular access to the electricity grid"22. The problem of inadequate supply of electricity is multifaceted and linked to the entire electricity value chain, including a lack of generating capacity, rundown existing stock, and limited transmission and distribution infrastructure²³. Investments are needed in the whole value chain.

FLECTRICITY GENERATION: **INCREASING SUPPLY**

Africa has 15 percent of the world's population but generates only 3 percent of the world's electricity²⁴. Generation capacity in SSA has stagnated over the last three decades and growth rates in the region are barely half of those in other developing regions. As a result, the gap between the electricity generation capacity in SSA and the rest of the developing world has increased²⁵.

To meet the estimated demand level in SSA of 1,600 TWh by 2040 (equivalent to 345 GW of electricity capacity), 292 GW of new capacity will need to be

Illustration The electricity value chain and causes of unreliable, insufficient energy consumption



ELECTRICITY GENERATION

- Limited generation capacity
- Too little baseload



TRANSMISSION AND DISTRIBUTION

- Unreliable networks
- Lack of maintenance
- Weak supply/demand control
- Frequency regulation
- Limited range of distribution networks



CONSUMER

Issues:

- Affordability
- Accessibility
- Reliability



- 18 IBRD/World Bank and IEA (2015)
- 19 Eberhard (2015)
- 20 IEA (2014)
- ²¹ McKinsey & Co (2015)
- ²² Eberhard *et al.* (2008) 23 IEA (2014)
- ²⁴ Eberhard (2015)
- ²⁵ Eberhard *et al.* (2008)

built over the next 25 years - in addition to capacity already under construction²⁶. The International Energy Agency estimates that about half the growth in electricity generation by 2040 will be from renewable sources²⁷. The cost of renewable technologies is declining and this makes these options more viable.

The potential power-generating capacity in SSA is substantial and remains largely unexploited. McKinsev estimates this to be 1200 GW - a figure that rises to 12,000 GW of potential capacity if solar power is included28:

- **Onshore wind:** Onshore wind energy has become one of the most competitive renewable power generation options and further cost reductions are expected. Wind power can deliver approximately 109 GW of capacity.
- > Solar: Sub-Saharan Africa's potential solar resources are huge. If just 0.02 to 0.05 percent of landmass were covered by solar panels, SSA would have 11,400 GW of potential solar capacity. Solar PV module prices declined by 75 percent from 2009 to 2014²⁹. Further reductions in total installed costs are expected.
- > Hydro: The technically exploitable resource potential from hydroelectric power is approximately 350 GW. New hydropower capacity is expected to reduce the region's average cost of power supply and could replace a proportion of oil-fired power³⁰.

- > Natural gas: SSA has substantial natural gas resources and the estimated delivery potential is approximately 300 GW.
- **Coal:** The power capacity from coal is estimated to be approximately 290 GW. Most of this capacity is in South Africa, Botswana, and Mozambique.

TRANSMISSION AND DISTRIBUTION: IMPROVING RELIABILITY

According to McKinsey, "effectively delivering generation capacity resolves only half the power challenge - building sufficient electricity trans-

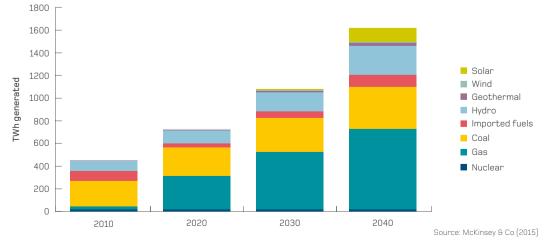
mission and distribution infrastructure to get power to customers is of equal importance."31 For the minority of people who have a grid connection in Africa today, the poor quality of electricity supplies limits energy consumption signifi-

AFRICA HAS 15 PERCENT OF THE **WORLD'S POPULATION BUT GENERATES** ONLY 3 PERCENT OF THE WORLD'S **ELECTRICITY**

cantly. The combination of inadequate power generation, weak supply/demand control, and poorly maintained networks leads to low reliability and frequent outages.³² Frequent power outages reduce production and sales, and damage equipment, In SSA, losses from the poorly maintained transmission and distribution networks are twice the world average³³.

This is a vicious cycle: poor quality grid supplies reduce utility revenues (payments are not made) and make it more difficult to increase tariffs. This constrains the availability of finance for further investments and maintenance³⁴.

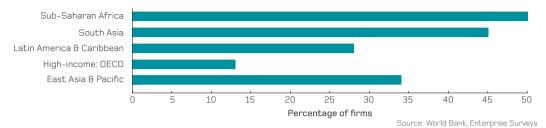
Figure Gas is expected to grow significantly in SSA. Evolution of technologies and energy supplied in SSA.





- 6 McKinsey & Co (2015) 27 IEA (2014) 28 McKinsey & Co (2015)
- ²⁹ IRENA (2015) ³⁰ IEA (2014) ³¹ McKinsey & Co (2015), p. 24 32 Statnett (2016) 33 IEA (2014)

ill Figure Percentage of firms owning or sharing a generator



To cope with the unreliability of energy supplies, households and more than half of all firms in SSA

HIGH POWER COST MAKES AFRICAN INDUSTRIES UNCOMPETITIVE, SLOWS JOB GROWTH AND DRAGS DOWN ANNUAL GDP GROWTH BY ONE TO THREE PERCENTAGE POINTS

use diesel or gasoline back-up generators³⁵. Using generators is expensive: the cost of power generated this way is three to six times the typical price paid by grid consumers. This "makes many

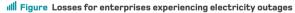
Africa-based industries and manufacturing sectors uncompetitive, slows job growth, and drags down annual GDP growth between one to three percentage points."36 Backup generators are also damaging to the climate and local environment.

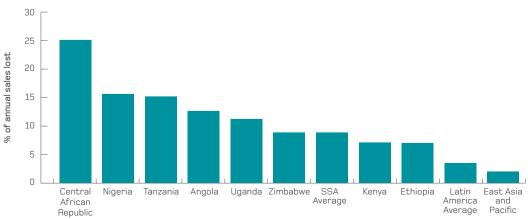
CONSUMER: ACCESSIBILITY AND AFFORDABILITY

Whether customers are able to consume electricity is determined by two main factors: whether there is access to electricity (this depends on the rest of the value chain working properly) and whether customers can afford electricity.

More than two-thirds of the population in SSA still lack access to electricity and only seven SSA countries - Cameroon, Côte d'Ivoire, Gabon, Ghana, Namibia, Senegal, and South Africa - have electricity access rates of more than 50 percent. Other SSA countries have an average grid access rate of only 20 percent, and the gap between the energy demands in the region and what can be delivered is increasing³⁷. Though efforts to increase electrification have intensified, these have been outpaced by population growth³⁸. New household connections in many countries are not keeping pace with this growth and the electrification rate, which is already low, is actually declining³⁹.

The average price of power in SSA is twice the price of power in other developing regions. Tariff increases have been particularly high in SSA countries that are reliant on diesel-based power-generation systems. Despite these increases, the tariffs still fall significantly short of the average operating costs⁴⁰.





³⁵ Eberhard (2015) ³⁶ McKinsey & Co (2015), p. 1 37 McKinsey & Co (2015)

38 IEA (2014)

39 Eberhard et al. (2008) 40 Eberhard et al. (2008)

Source: World Bank, Enterprise Surveys (newest available data)



THREE WAYS TO PROVIDE ELECTRICITY FOR ALL



Ørnulf Strøm
Assistant Director, Department for Climate, Energy and Environment. Norad

The Sustainable
Development Goal target
of ensuring universal
access to modern energy
has tended to lead to a
focus on the needs of
individual households.
However, we need to
maintain focus on large
scale energy supplies
as they are essential
for industrialisation,
employment generation,
and providing social
services

lectricity services are provided in three key ways: via a national grid, isolated mini-grids, or stand-alone systems. National grids are flexible, robust and serve a range of customers. Typically, they are a preferred solution for providing electricity, but will not be able to reach all rural populations within the near future. Mini-grids serve the needs of many customers. However, they are often expensive, and successful experiences with implementation, operation and maintenance are limited. Stand-alone systems, such as solar power, can potentially reach scattered populations and low-income groups that would otherwise not have access to electricity. Such systems have limited capacity and present substantial challenges related to maintenance and durability, but new payment solutions and business models may improve effectiveness.

The private sector is expected to cover much of the enormous investments required for universal access. But it often fails to reach those who are poorest, cannot afford to pay, and those who live in areas in which economies of scale are not possible. To ensure that no one is left behind, a framework for targeting efforts to provide electricity must include 1) a non-profit approach for the extreme poor, 2) a cost recovery approach for the subsistence segment, and 3) a commercial approach for the upper income market.

Dr. Kandeh Yumkella, former Executive Secretary of Sustainable Energy for All, noted that "the provision of one light to poor people does nothing more than shine a light on poverty". Providing access to energy is a task involving all sectors of the economy. If we are to assist in providing transformative change and fulfilling the aspirations of African nations to help millions of people climb out of poverty, then large-scale, reliable, high quality energy systems are needed.

РНОТО: Globeleq

DFIS - CLOSING THE INVESTMENT GAP

Substantial investments are needed to meet the rising demand for electricity but attracting private investments in the power sector is challenging. Excluding South Africa, no clean energy generation projects have been built in Sub-Saharan Africa (SSA) without the support of Development Finance Institutions (DFIs).

To achieve the growth required in the SSA region, McKinsev estimates that USD 490 billion of capital

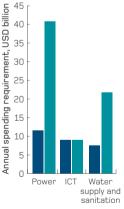
EXCLUDING SOUTH AFRICA, NO CLEAN ENERGY GENERATION PROJECTS HAVE BEEN BUILT IN SSA WITHOUT THE SUPPORT OF DFIS

investment will be needed to generate new electricity production capacity from now until 2040, and an additional USD 345 billion of investments will be needed for

transmission and distribution⁴. Transmission and distribution is traditionally the domain of the public sector while the private sector is increasingly involved in power generation projects.

On average, countries in SSA spend 2.7 percent of their GDP on the power sector, and some countries spend over 4 percent⁴². The high levels of spending have still not resulted in adequate financing for the sector because the revenues barely cover the operating costs, and the utilities contribute little to capital expenditure. Official development assistance (ODA) to public investments in the power sector has averaged only USD 700 million per year. This is far below the level needed to keep pace with economic growth, let alone expand access to electricity. The total value of private investments in the power sector has averaged just USD 300 million per year in SSA during the last decade⁴³.





Existing ExpenditureSpending Requirement

Source: Foster and Briceño-Garmendia (2010)



- 41 McKinsey & Co (2015)
- 42 Eberhard et al. (2008)
- 43 Eberhard et al. (2008)
- ⁴⁴ IEA (2014) ⁴⁵ IEA (2014)

CHALLENGING INVESTMENTS

A number of factors make private investments in the power sector challenging.

- Power generation projects are capital intensive and require large investments upfront. This magnifies the financial risks compared to less capital intensive types of investment.
- Power projects are fixed assets and cannot be moved. This means the funds used are locked in a country and liquidity is low.
- Most power projects in SSA have long development lead-times and a long payback period.
- In almost all cases, power has to be sold to the

local market and not exported. For international investors, this raises concern with the convertibility of local currencies and the repatriation of funds.

- In most power markets, especially in Africa, the only buyer of power from a power plant is the state or a state-owned utility. This is a very different market structure to almost all other commodities, where there are multiple domestic and international buyers.
- > The power sector tends to be politicised and highly regulated. As an essential part of a country's infrastructure, the power sector receives considerable policy attention that is often focused on price levels and also ownership. This raises political and regulatory risks risks which private investors find difficult to deal with. However, governments wish power assets to be priced as low-cost infrastructural investments. The market tends to be fixed price and fixed volume with few upsides, and considerable downsides.

DFIs TAKE ON RISKIER PROJECTS

Many countries face difficulties in financing much needed infrastructure because low domestic savings rates and tax revenues limit the available pool of domestic finance⁴⁴. The credit ratings of many countries are often below investment grade and this deters international investors. Funding from multilateral development banks and bilateral DFIs is therefore crucial⁴⁵. DFIs have a mandate enabling them to take on riskier projects than mainstream investors can and, in this sense, they are additional.

DFIs also play a role in helping to pioneer investments in the energy sector to demonstrate their financial viability, and to catalyze further investments from the private sector.



THE BENEFITS OF RENEWABLE ENERGY INVESTMENTS



Marius Holm *Managing Director, Zero*

CLIMATE CHANGE, driven by fossil energy, causes droughts, floods and extreme weather, which in turn obstructs efforts to reduce poverty. Energy poverty, too, can lock countries into a cycle of slow economic growth. However, economic growth potential can be unlocked through renewable energy investments. These can also help to reduce the reliance on fossil fuels in energy markets.

wo thirds of global electricity is produced from fossil fuels, making the energy sector the largest emitter of CO₂. Wind and solar power, the only energy resources that are truly abundant across the globe, currently provides only 4 percent of the world's electricity.

Still, recent growth and cost reductions brings optimism. The combination of steadily falling costs and short lead times in this sector are also indications of its significant growth potential.

While the transformation of China to an industrial super power was fuelled by cheap coal, transforming economies to-day have a wider range of energy options. In March this year, for example, a Mexican utility company signed a large scale solar power purchase agreement with Enel Green Power at the record low price 3.6 cents/KWh, and in Morocco the same company sell wind power at 3.0 cents/KWh.

So, if renewables are so cheap, what is there to worry about? Actually, there are quite a few things. Upfront investment constitutes most of the energy cost in renewables, making capital cost the primary cost driver. While solar and windgenerated energy can be delivered at low rates, the level of competitiveness depends heavily on interest rates available, the returns required by investors, and the perceived level of investment risks.

Smart market design, long-term bankable power contracts and risk alleviation will make for a perfect fit between renewable energy infrastructure and institutional investors, and tighten the trillion-dollar gap between current and the clean energy investments needed to limit climate change.

NORFUND - INVESTING IN CLEAN ENERGY SUPPLY

Investments in energy are fundamental to economic growth, job creation and social development. Norfund contributes to improving access to reliable energy by investing in electricity generation projects where the need for capital is large.

> Investing in electricity generation requires industrial competence, a thorough understanding of the market, and an ability to handle risks. That is why Nor-

NORFUND'S STRATEGY IS TO INVEST WITH - is to build a portfolio OR VIA - INDUSTRIAL PARTNERS

fund's long term strategy together with selected industrial partners, also known as "platforms".

Norfund invests only in commercially proven clean energy technologies. With a rapid cost decline in renewable technology (for solar and wind in particular), the financing cost becomes more important.

TECHNOLOGIES AND INDUSTRIAL PARTNERS

Norfund's strategy is to invest with - or via industrial partners. The competence we have built up in these long-term partnerships, and the ability to develop new projects rather than investing only in existing ones, have been essential to Norfund's success. Our strategic investment platforms in the energy sector are via the hydropower company SN Power (with Statkraft), the clean energy company Globeleg Africa (with CDC, the UK development finance institution) and through our partnership with the solar company Scatec Solar.

Hydropower

Hydropower has dominated our portfolio. In this sector, we have extended our long-standing partnership with Statkraft in a 50/50 joint venture with SN Power. This partnership focuses on large hydro projects in Africa, Central America, and South East Asia and will gradually increase the portfolio in Africa. SN Power was restructured in 2014 and the hydropower projects in South America and South Asia were transferred to Statkraft International Hydro Invest (SKIHI) where we continue to hold a minority ownership, but expect to exit gradually. Capital from these hydropower projects will be reinvested in higher priority regions. Norfund has invested with several partners in small hydro projects, and hopes to build on these relationships and make further similar investments.

Solar

Solar energy is increasingly competitive and accounts for a growing share of our energy portfolio. To date, we have built ca. 250 MWp (megawatt-peak) of solar power with Scatec Solar, primarily in Africa, and expect to increase our investments significantly.

Natural gas

In 2014, Norfund acquired a 30 percent stake in Globeleg Africa, one of Africa's leading independent power companies. Globeleg's main technology is natural gas but the company also has large wind and solar power projects in its portfolio. Investments in greenfield power projects through Globeleq

Table Norfund strategic investment platforms

	Technology	Geography	Installed capacity as of 31.12.2015
GLOBELEQ	Natural gas, wind, solar and oil	Sub-Saharan Africa	1,240 MW
sn power	Hydropower	Sub-Saharan Africa, Southeast Asia, Central America	2,580 MW
Scatec Solar Improving our fluture*	Solar	Africa, Central America	250 MWp



SN Power

The hydropower company Statkraft Norfund Power Invest AS (SN Power) is a 50/50 joint venture between the Norwegian state-owned hydropower company Statkraft and Norfund. SN Power was established in 2002: its mission is to become a leading hydropower company in emerging markets, and to contribute to economic growth and sustainable development.

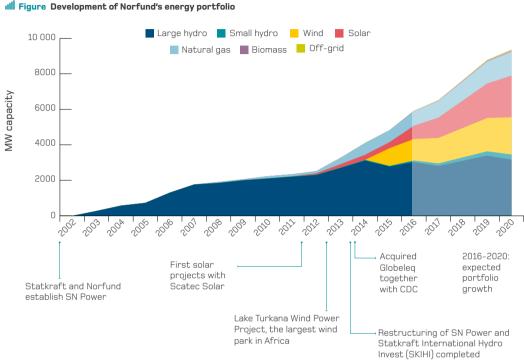
During SN Power's first four years in operation, it entered the markets in Sri Lanka (2003), Peru (2003), India (2004), Chile (2005) and Nepal (2006). The Indian expansion continued in 2009, when SN Power and the Tata Power Company, one of India's largest industrial companies, signed an exclusive cooperation agreement for the development of new hydropower projects in India and Nepal.

In 2005, Aboitiz Power became SN Power's partner in the Philippines. The following year, SN Power and Aboitiz launched SN Aboitiz Power (SNAP), where SN Power holds 50 percent ownership. Concurrently, SN Power increased its power portfolio by acquisitions in Peru, Chile and opening an office in Vietnam.

In 2009, SN Power set up SN Power AfriCA (later Agua Imara) to expand activities into Africa and Central America. In 2011, the SN Power subsidiary Agua Imara acquired 51 percent in Lunsemfwa Hydro Power Company (LHPC) in Zambia. Agua Imara also entered into a partnership with the power company EDM in Mozambique, and began the development of a power plant in Panama. In the same year, SN Power entered the Brazilian market with the acquisition of all shares in Enerpar. This marked SN Power's first investment in a pure energy trading company.

In 2013, Statkraft and Norfund agreed to restructure SN Power and prolong their cooperation within renewable energy until 2023. The new geographical focus is on Southeast Asia, Africa and Central America; regions that are more in line with Norfund's strategy and competencies. SN Power currently has operations in Laos, Myanmar, Panama, Philippines, and Zambia⁴⁶. The operations in South America and South Asia were transferred to Statkraft International Hydro Invest where Norfund holds an 18 percent share but aims to gradually sell down.





will make an important contribution to meeting Africa's rising energy needs and curbing the need for more polluting energy sources, such as coal and oil. Natural gas will help to provide necessary balance and stability in the grid which in turn will make it

possible to develop more renewable energy sources.

NORFUND IS GRADUALLY MOVING CAPITAL FROM SOUTH AMERICA AND SOUTH ASIA, TO SUB-SAHARAN AFRICA

Wind

Norfund has also invested in more than 900 MW of wind power. The largest plant is Lake Turkana Wind Power Ltd in Kenya which can

generate 310 MW. As the costs of wind production decrease, we expect growth in our wind portfolio, primarily via Globeleq Africa.

Off-grid and mini-grid solutions

Norfund recognises that many local communities in Africa are unlikely to have grid connections in the near future, and that off-grid and mini-grid solutions may solve this problem. Norfund's investments in the power sector have focused on energy generation rather than grid expansion and electrification — although Norfund has invested in off-grid solutions before.

Finding a viable business model for off-grid or minigrid solutions is challenging. We are currently exploring new off-grid/mini-grid business models and expect new investments in this area from 2016 onwards.

MOVING CAPITAL TO SSA

Norfund's strategy prioritises investments in specific geographical areas and in countries classified as least developed. Thus far, we have prioritised the regions of East Africa and Southern Africa, Central America, as well as selected countries in South East Asia. By doing so, we have built important competence and experience that we will use now that we gradually move more capital from middle-income countries in South America and South Asia, to low-income countries in SSA. Our key investment platforms have a mandate to invest across Africa – not strictly limited to Norfund's prioritised countries – and we expect to see the portfolios grow across the continent.

EQUITY INVESTOR

Approximately half of Norfund's total portfolio is invested in clean energy and most of this is equity. Norfund is primarily an equity investor because this high risk instrument is best suited to fulfilling our mandate.

It is also often the scarcest form of capital, particularly in the capital intensive energy sector. The size of the financing requirements in the energy sector's project-finance debt markets is substantial, and the degree to which we contribute is limited by our capital base. Norfund's role as an equity investor is widely respected and our participation often gives confidence to debt providers and increases our catalytic effect.

CREATING DEVELOPMENT EFFECTS

As this chapter explains, access to energy is vital for economic growth, for job creation and for social development. The main development effect of Norfund's clean energy investments is generation of electricity, and all the associated positive impacts on society. Additional development effects include direct jobs created, taxes paid to government, and reduction of climate emissions by displacing fossil fuels with renewable electricity.

By the end of December 2015, Norfund's energy portfolio had installed a total capacity of 4,800 MW and has another 600 MW under construction.

Financial benefits from Scatec Solar projects

South Africa's Council for Scientific and Industrial Research (CSIR) has analysed the financial benefits of the new renewables entering the grid in South Africa in 201547 The study found that from January to June 2015, the financial benefits from renewables exceeded costs by ZAR 4 billion. This was because: 1) solar and wind power replaced diesel- and coal-fired power stations. resulting in savings of ZAR 3.6 billion in fuel costs for Eskom (South Africa's electricity supply company). 2) The additional power generation avoided approximately 200 hours of outages or reduced load. This benefitted the economy by ZAR 1.2-4.6 billion. In total, the renewable energy projects saved up to ZAR 8.3 billion but cost only ZAR 4.3 billion in IPP tariff payments. Scatec Solar, with Norfund as an investor, contributed 190 MW of the total 1 GW of solar energy produced in South Africa. Scatec Solar entered the South African solar market in 2010. In April 2015, Scatec Solar was awarded an additional 258 MW under the South African renewable energy independent power producer purchase programme, which will be realized in 201748.

These investments generated a total of 18.5 TWh of electricity in 2015. This is equivalent to the annual consumption of 25 million people in these markets, and has reduced climate emissions by 7.4 million tonnes of CO₂.

RESPONSIBLE INVESTMENTS

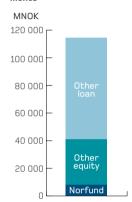
The environmental and social risks of building energy projects must be identified and comply with the requirements of national environmental authorities, and with Norfund's own requirements as an international investor. The location of energy projects is often predetermined: the position of a hydro resource, for example, may be determined by the geography of a river.

A number of project-related questions need to be considered. These include: Are people residing in the project areas? Will they need to move away from their property or lose access to agricultural land or fishing resources? Will the construction of a river dam harm fish species or create problems for downstream water users, such as farmers who depend on water for irrigation? Will communities be impacted by large vehicles moving through their villages during project construction? How will waste be disposed of? And how can fair and safe working conditions be ensured?

An Environmental and Social Impact Assessment (ESIA) is required to answer such questions, to identify potential negative impacts, and to mitigate any concerns. The studies must comply with the required national and international standards and be conducted by qualified consultants. Norfund requires that an Environmental and Social Management Plan is put in place, which contains mitigation steps, as well as other relevant management plans such as a resettlement action plan, a biodiversity management plan, a stakeholder engagement plan, and a health and safety plan. The implementation and fulfilment of these plans is a legal requirement and a condition of our investment agreements. Poor performance may lead to the suspension or withdrawal of Norfund's financing.

Norfund assesses whether sufficient funds are available to implement project mitigation plans. We also assess if enough staff with the right expertise are available to implement the various plans and mitigation programmes, and whether they are able to engage in dialogue with local communities. We ensure that every project's health and safety stand-

ill Figure Catalysing further energy investments



For every dollar Norfund invests in energy, other investors add 14 dollars.



⁴⁷ CSIR Energy Centre (2015) ⁴⁸ Scatec Solar (2015) ards are of a sufficiently high standard. All financed projects are legally obliged to transfer responsibility for such requirements to their contractors. This ensures that all the parties involved work according to the same plans and to the same standards.

Energy projects are required to report frequently to Norfund during the construction and operation phases on their progress in implementing social and environmental plans. For complex projects, independent third-party monitoring is common and provides us with continuous information on how well the companies are doing and whether we, as an investor, should require improvements in certain areas.



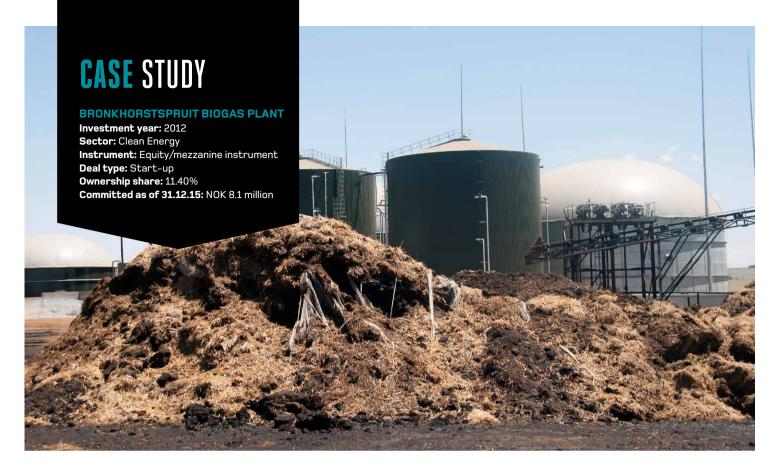


Environmental Social Governance (ESG) work at Bugoye hydropower plant

The 13 MW run-of-river hydro project, Bugoye, in the Kasese District of Uganda was developed by Norfund and Trønder Power. An Environmental and Social Impact Assessment revealed that plans to divert the river flow into a channel, approximately 5 kilometers in length, would have significant social and environmental impacts. Much of the land needed for the project had housing on it or had been cultivated by local residents. Norfund, as an investor, therefore requested that a Resettlement Action Plan be developed that showed how the relocation process would be carried out. A Livelihood Restoration Plan was also produced. This detailed how those farmers who would lose their farms would be compensated and how they would be assisted in restoring their livelihoods.

The impact assessment made it clear that the local population would experience a reduction in their water supply because of the river diversion. Mitigation steps included devising a minimum river flow – and this decision affected the design of the plant. Water-fetching points were constructed along the canal, and financial support for a local gravity water flow scheme was provided. The potential for stagnant water accumulation behind the canal was identified as a risk factor that could increase the transmission of malaria among local communities. A three-year malaria prevention programme, and a drainage management plan, were therefore also implemented.

The local health services were strengthened with supplies and an extended ward facility was constructed. An HIV/STD awareness programme was started in local communities and among the project construction workers. The Bugoye Participatory Committee was established to manage problems and grievances during the construction process. The Committee also ensured that an ongoing and effective dialogue was established between the local communities and the project company. In the operational phase, Norfund contributed funds to supply electricity to the local communities. We also initiated and supported the training of the company's appointed environmental manager.



ELECTRICITY FROM ORGANIC WASTE

Energy constraints are impeding South Africa's economic growth. The new Bio2Watt biogas plant produces electricity from organic waste, and is helping to reduce both the nation's electricity deficit and the amount of landfill waste.

SOUTH AFRICA'S PRIORITIES IN ENERGY

- Improve operations and maintenance practices at Eskom
- Add more capacity through independent power producers (IPPs)
- Improve energy efficiency
 Target of 30 percent clean energy by 2025



- 1 Eskom (2016)
- ² Goldstuck (2015)
- 3 The Shift Project Data Portal
- ⁴ Zuma (2015)
- ⁵ Department of Energy, South Africa (2015a)

outh Africa's demand for electricity has increased substantially because of its rapid economic growth and its efforts to electrify rural areas. As a result, the margin between peak demand and available electricity supply has narrowed. To prevent the collapse of the country's power system, Eskom – the state power utility – has enforced rolling blackouts (or 'load shedding')!

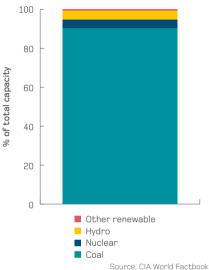
Increasing generating capacity is a key priority for the South African government. In 2014, economic growth in the country dropped to just 15 percent as a result of the ongoing power crisis—the slowest pace since the 2009 recession. Surveys show that outages have surpassed the problems of crime and competition as the most significant external threats to SMEs in South Africa². Many are losing income because of production outages and damage to equipment. While some

companies rely on back-up diesel generators as a source of energy, these are expensive and polluting.

To date, the energy mix in South Africa has been dominated by coal, and the country's total carbon dioxide (CO₂) emission from energy use is the 13th highest in the world³. But, according to South Africa's President, Jacob Zuma, the government plans to broaden its energy sources: "with regards to the long-term energy master plan," he says, South Africa "will pursue gas, petroleum, nuclear, hydropower and other sources."

South Africa's renewable energy potential is substantial. A successful renewables programme has already added more than 4,000 MWs of renewable energy capacity in less than four years, and aims to generate 10,000 GWhs from renewable sources.⁵





Renewable technologies such as wind and solar, however, are variable and require stabilising power and frequency regulation from other energy sources. The Minister of Energy, Tina Joemat-Pettersson, notes that South Africa must secure a reliable baseload supply while also reducing its greenhouse gas emissions. Achieving both objectives, she says, requires "a very fine balance".

Biogas is a renewable source of energy which is already contributing stable baseload power to the country's electricity grid, and the Southern African Biogas Industry Association estimates that biogas can contribute up to 2.5 GWs of generation capacity.⁷

NORFUND'S INVESTMENT IN BRONKHORSTSPRUIT BIOGAS PLANT

Bio2Watt's 4.4 MW Bronkhorstspruit plant is the first industrial scale biogas waste-toenergy operation in South Africa.

The project began in 2007, but it would take eight years before the plant could start operating. Both the biogas technology and the business model used in the Bio2Watt project were new to South Africa, and

meeting the government's regulatory and environmental licensing requirements was therefore time-consuming.

Through its Project Development Facility, Norfund committed a convertible loan to fund the last part of Bio2Watt's project development up to its financial closure stage, which was reached in early 2014. According to entrepreneur and founder Sean Thomas, having Norfund as a patient investor gave the greenfield project credibility, and catalysed investments from others. Norfund also provided around one third of the equity capital required for the project, and played an instrumental role in structuring the deal, defining the composition of the loan and equity provided, and the financing terms.

CONTRIBUTING TO DEVELOPMENT

The investment in the biogas plant complements Norfund's energy portfolio and fits well with our strategy of investing in clean energy in developing countries that have large energy deficits. The capacity of the Bio2Watt plant is smaller in scale to other projects in which we usually invest, but the investment gave Norfund the opportunity to contribute to technology transfer to South Africa and to introduce a new business model. On October 10, 2015, the plant began operating — eight years after the project started, and is now contributing to increasing electricity supply and reducing landfill waste.

Generating stable electricity with an innovative business model

The biogas plant processes 200-300 tonnes of waste every day. This waste includes manure from 25,000 cattle (the plant is located on the premises of one of the country's largest feedlots), as well as organic waste from the local municipality and nearby industries. When organic waste degrades, methane and CO_2 are produced. At biogas plants, this natural process is accelerated, the methane is captured, and electricity is generated by engines fuelled by the gas. While the technology is new to South Africa, biogas plants in Asia, Europe and the Americas have already been

commercial successes. The capacity of the Bio2Watt plant is relatively small (4.4 MW). However, unlike many other sources of renewable energy, the plant is able to generate electricity continuously and is therefore a stabilising source of energy for the grid.

The transfer of the electricity from the Bio-2Watt plant to the car manufacturer takes place through a process known as 'wheeling': after BMW purchases the electricity, it is then transported from the Bio2Watt plant through the grid network which is owned and operated by Eskom and the City of Tshwane Metropolitan Municipality. Billing is managed by the municipality. This agreement, in which an independent power producer is selling electricity directly to a private customer instead of the state-owned utility, Eskom, is the first of its kind in the country. The BMW factory receives 25-30 percent of its electricity from Bio2Watt. Ultimately, BMW hopes to source all its power from renewable energy sources.

The 10-year agreement provides BMW with a stable electricity price for the duration of the contract. Although this is higher than current grid prices, both BMW and Bio2Watt anticipate that the electricity supplied by Eskom will become more costly, and that this will make the biogas supply competitive within two to three years.

This assumption is supported by the NUS Consulting Group's forecast that "electricity prices in South Africa will continue to rise despite a slowing economy, as supply challenges persist. The short and long term outlook for electricity is for prices to increase as Eskom continues to deal with generation and infrastructure costs."

This business agreement is just one of many that were negotiated before the construction of Bio2Watt could commence. The success of the first biogas business model means that it can now be used as blueprint for other biogas projects. The Bio2Watt scheme has also led to changes in South Africa's regulatory framework. This, it is hoped, will make it easier and less time consuming to replicate similar projects.



(1) The BMW factory receives 25-30 percent of its electricity from the biogas plant. (2) The biogas plant processes 200-300 tonnes of waste every day.



Avoiding greenhouse gas emissions

Bio2Watt is supplying extra electricity to the grid, but it is also having other positive impacts by helping, for example, to prevent climate change and reducing waste. Methane is a naturally occurring gas that is emitted during the breakdown of manure and other organic waste. At biogas plants. this natural process of decay is accelerated. Methane - a gas almost 30 times more potent than CO₂ - is captured and then used in gas engines to generate electricity. While the combustion of biogas produces CO₂, the carbon in the biogas originates from plant matter that has fixed the carbon from atmospheric CO₂. Biogas production is therefore carbon-neutral and does not add to greenhouse gas emissions9.

Reducing landfill waste

Reducing landfill waste, and organic landfill waste in particular, is a challenge for the government and local municipalities. Bio2Watt's biogas plant is a convenient and environmentally friendly way for companies to dispose of organic waste. The company's original business model did not include revenue for handling waste securely, but this may become a new income stream because waste regulations in South Africa are tightening: from 2016, organic waste will no longer be permitted in landfills. Several large multinational corporations have 'zero waste to landfill' policies. By sending their waste to

Bio2Watt, they will be able to fulfil these commitments, receive a certification of disposal, and may also be able to reduce their costs.

The more frequent removal of manure from the feedlot to the plant has environmental benefits, too, by reducing river pollution, and raising standards of animal welfare. Waste water from the biogas plant is recirculated and reused for the grazing land, thus returning nutrients to the soil.

Creating jobs

The energy sector in South Africa provides jobs through plant construction and operations, and by supplying electricity to businesses. During the building of the Bio2Watt plant, for example, 190 people were temporarily employed for seven months. Approximately 7 people are employed directly by the operating plant. The biogas plant has also contributed to indirect job creation in the waste management and handling sectors. More than 20 jobs, for instance, have been created on the feedlot and at the waste companies.

Although the direct and indirect job creation effects of Bio2Watt are important, it is normally the second-order growth effects that are the primary motivation for DFI investments in the energy sector. The creation of jobs through the removal of obstacles to enterprise growth (such as

a lack of access to reliable electricity) is an example of a second-order growth effect. The power purchase agreement between Bio2Watt and BMW provides the car company with a stable electricity price for the duration of its contract with Bio2Watt. This is important for BMW because it is in the process of expanding its manufacturing and export facilities in South Africa.

BIO2WATT: THE WAY FORWARD

Bio2Watt is exploring additional ways to generate income. These include installing two extra gas engines to expand its capacity to 6-7 MW, selling the heat generated commercially, and using CO_2 emissions from the plant to grow vegetables in greenhouses.

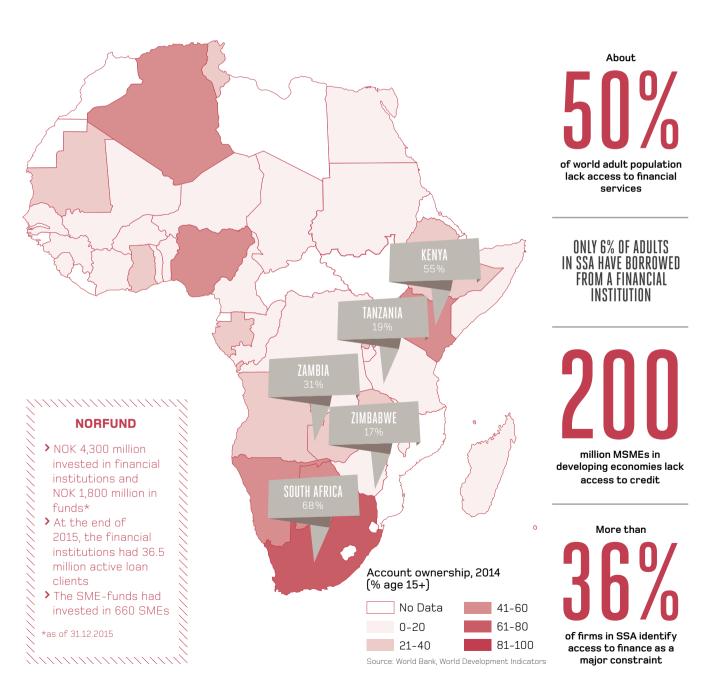
Norfund has given a project development loan for a second biogas plant project which Bio2Watt plans to build in the Western Cape Province of South Africa. Bio2Watt has entered its proposal for the development of this biogas plant in a new bidding round in South Africa's renewable energy programme, and is also looking at exporting the business model and developing further biogas projects in other African countries.



- 6 Buckhardt (2015)
- Department of Energy, South Africa (2015b)
- ⁸ NUS Consulting Group (2014) ⁹ Wilkie (2015)

PART 2: FINANCE

Access to finance is essential for business development and job creation. Providing increased access to capital and financial services in low- and medium-income countries can facilitate economic growth and reduce poverty.





2: MICROENTERPRISES

Challenges:

- Documentation requirements
- Limited financial literacy





FINANCE FOR DEVELOPMENT

A well-functioning financial system facilitates economic growth, and reduces poverty. For firms, access to finance is associated with innovation, job creation and growth. For households, access to finance has been found to facilitate entrepreneurship, strengthen resilience and reduce poverty. Providing access to capital via financial institutions, microfinance and SME funds is therefore a core component of Norfund's investment thesis.



Industry, innovation, infrastructure

Increasing the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit [...] is one of the targets of the ninth Sustainable Development Goal set by the United Nations

ECONOMIC GROWTH AND JOB CREATION

Financial institutions and equity funds contribute to economic growth by promoting the entry of new firms, encouraging enterprise growth and innovation, and reducing risk.

A well-functioning financial system is characterised by depth, inclusion and efficiency¹. Financial depth refers to the size of the financial sector relative to the economy, and is strongly correlated with income level. In high-income countries, for example, private credit-to-GDP is 103 percent, more than 4 times the average ratio in low-income countries.² Financial development generally boosts economic growth, but the effect weakens at higher levels of financial depth, according to IMF, who finds a significant, bell-shaped relationship between financial development and growth³. Low-income countries tend to have low levels of financial depth, meaning that the benefits of developing financial institutions are largest in these countries.

However, large amounts of credit in a financial system do not always correspond to the broad use of financial services, as credit may be concentrated

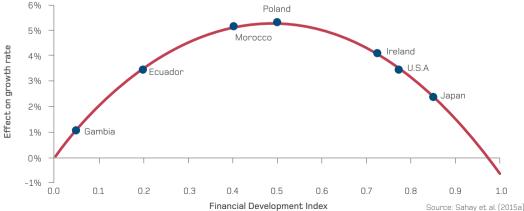
among the largest firms and the wealthiest individuals⁴. The World Bank Enterprise Surveys shows that access to finance is a more severe constraint for small companies than for large companies⁵.

Financial inclusion, the proportion of individuals and firms that use financial services, is therefore another important dimension of a well-functioning financial system. In a paper examining the linkages between financial inclusion and economic growth, IMF finds that "enabling firms to access credit markets, financing a greater share of investments with bank credit, increasing the number of households with bank accounts and credit cards, and using accounts to receive government transfers and wages have a positive impact on growth".

Financial inclusion is also important for job creation, since the highest rates of job creation are found in small and young companies⁷.

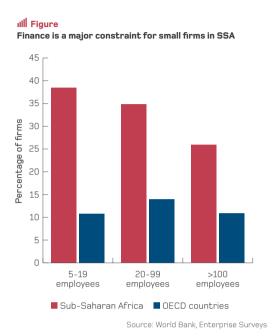
Financial efficiency refers to the ability of institutions to provide financial services at low costs, and is important for increasing financial inclusion.







- ¹ Cihák *et al.* (2012)
- ² World Bank (2015b)
- ³ Sahay *et al.* [2015a]
- 4 World Bank (2014b)
- ⁵ World Bank Enterprise Surveys ⁶ Sahay et al. (2015b, p.22)
- 7 Ayyagari et al. (2011)



REDUCING POVERTY

Financial depth and inclusion is also associated with poverty reduction. A study by Beck, Demirgüç-Kunt, and Levine shows that poor populations tend to receive a bigger income boost from economic growth in countries that have well-developed financial sectors and in which private credit accounts for a bigger share of GDP. Their paper finds that "greater financial development induces (i) incomes of the poor to grow faster than average GDP per capita, (ii) income inequality to fall more rapidly, and (iii) poverty rates to decrease at a faster rate"8.

Inclusive financial systems can increase incomes by facilitating entrepreneurship among the poor. In a study of the impact of access to finance on poverty in Mexico, Bruhn and Love found a sizeable effect

on labour market activity9. After the opening of a new commercial bank which focused on low- and middle-income borrowers the number of informal business increased by 7.6 percent, unemployment decreased by 1.4 percent and income levels increased by 7 percent.

Increased accessibility and effective tools for saving, sending and borrowing money, and for mitigating financial risks also help to reduce people's vulnerability in times of crisis caused, for example, by illness or poor harvests. This contributes to greater financial stability for individual households over the long term.

GENDER EQUALITY

A well-functioning financial system can promote gender equality. "When a woman has an account and a safe place to save outside the home, she also has greater control over finances and household incomes. Equipped with access to formal savings and credit, women participate more in the economy."10

Today, female entrepreneurs and employers often face disproportionately large barriers when trying to access finance. In developing countries, women are 20 percent less likely than men to have an account at a formal financial institution and 17 percent less likely to have borrowed from formal financial institutions in the past year11. This prevents them from participating fully in the economy and from improving their lives.

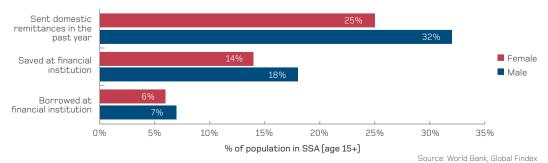
Greater female engagement and participation in the economy has clear economic benefits. Equal access to inputs such as bank accounts and access to credit can, for example, raise the productivity of femaleowned companies¹².



Decent work and economic growth

Strengthening the capacity of domestic financial institutions to encourage and expand access for all to banking, insurance and financial services is one of the targets of the eight Sustainable Development Goal set by the United Nations

Figure Different uses of financial institutions, by gender



- Beck et al. (2004, p.29) 9 Bruhn and Love (2014) 10 World Bank (2015c)
- 11 Isaac (2014) 12 Do et al. (2011)

INCREASING FINANCIAL INCLUSION

Efforts to increase financial inclusion in low- and middle-income countries must address two main issues: physical access and the relevance of financial products and services.

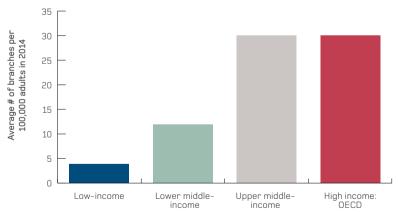
> 2 billion adults globally – about half the world adult population - are still financially excluded¹³. Lack of access to finance is also a major obstacle to the

200 MILLION MICRO TO MEDIUM ENTERPRISES IN DEVELOPING ECONOMIES LACK ACCESS TO AFFORDABLE FINANCIAL SERVICES AND CREDIT

establishment and growth of enterprises. This constraint is most severe in less-developed countries where financial markets are poorly established, regulatory and legal frameworks are weak, and risk management systems are less ro-

bust. Approximately 200 million micro to medium enterprises in developing economies lack access to affordable financial services and credit, according to the World Bank 14.

ıll Figure Few commercial bank branches in the poorest countries



Source: World Bank, World Development Indicators

REACHING UNBANKED INDIVIDUALS

Financially excluded individuals are forced to use cash, physical assets, or informal providers (such as money lenders or payment couriers) to meet their financial needs. Such informal mechanisms can be insecure, expensive, and complex. They may also offer limited recourse when problems arise.

Travel distance, cost and documentation requirements are some of the barriers to financial inclusion. In sub-Saharan Africa, for example, 27 percent of those without an account cite distance to financial institutions as a key reason they do not have an account¹⁵. Establishing more branches/outlets and employing new technology can increase access to finance.

Establishing branch offices is often costly. One way to overcome this constraint is for governments to permit banks to contract third party retail network agents (such as post offices and grocery chains) to provide selected products and services on behalf of the banks.

The use of mobile money accounts can also increase financial inclusion by lowering the cost and inconvenience of accessing financial services¹⁶. This technology has become widespread in Sub-Saharan Africa, where 12 percent of adults now have a mobile money account, compared to just 2 percent of adults worldwide¹⁷.

Digital financial services offer a wide array of benefits, including:

- > Connecting poor people more easily to the formal financial sector
- > Improving security (compared to storing cash at home or travelling with cash)
- > Encouraging users to save rather than to spend
- > Providing women with more financial authority within the family
- > Facilitating safer and speedier transactions 18

PROVIDING FINANCE TO MICROENTERPRISES

Microenterprises face many of the same barriers to access as households. Lack of information on business performance and credit history is a particular constraint for such enterprises, many of which operate in the informal sector. Intensive screening to collect information on the potential client can be necessary, including visits to the client's enterprise. This method is often practices by microfinance institutions (MFIs). These range in size from small non-profit organisations, cooperatives and self-help



- 13 Global Findex
- ¹⁴ World Bank (2013b)
- 15 Demirguc-Kunt *et al.* (2015)
- 16 World Bank (2014b)
- 18 Gates Foundation (2015)

Source: IFC (2010)

groups on one hand, to commercial and state banks, insurance companies and specialised microfinance institutions on the other. Today, the microfinance industry is estimated to have 200 million clients worldwide

Many microenterprises have limited financial literacy, and there have been reports of over-indebtedness as a result of the excessive use of financial services. Consumer protection is particularly important for institutions serving this customer group.

PRODUCTS AND SERVICES FOR SMEs

SMEs are diverse in terms of size, sector and financial needs and therefore require a wide variety of support institutions and a broad range of financial products and services. Which types of financial products and services that a company needs depend on factors such as the size of the company, the kind of business it operates, and on its strategy and expansion plans.

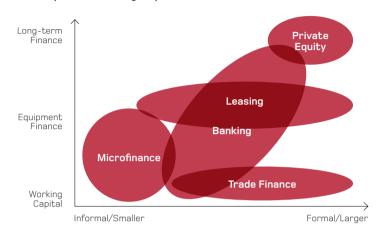
Financial services from banks

Bank lending is the most common source of external finance for SMEs. Companies usually require bank services for working capital and asset purchase. However, financial market imperfections, such as information asymmetries and transaction costs, are especially challenging for SMEs that are often not able to provide the information or collateral required by commercial banks¹⁹.

According to the World Bank Enterprise Surveys, only 17.6 percent of small companies in sub-Saharan Africa have a bank loan or line of credit, compared to 47.5 percent of companies in high-income OECD-member countries. The maturity of loans is also a challenge: most of the funding offered by financial institutions to SMEs in low- and middle-income countries is short-term. This makes the firms more exposed to rollover and interest rate risks, and can discourage longer-term fixed investments²⁰.

Commercial banks often perceive the costs and risks of serving SMEs in emerging markets as being too high. Yet microfinance institutions may not be able to provide loans that are large enough to meet the capital needs of SMEs. Small- and medium-sized companies may thereby find themselves squeezed between micro and large enterprise finance – a space referred to as "the missing middle".

IIII Figure
MSMEs require a diverse range of products and services



Equity and risk capital through SME funds

Private equity funds that are focused particularly on the SME market (SME funds) are often willing to invest in higher risk companies. Risk capital of this kind is usually more expensive than traditional bank loans. However, SME entrepreneurs and business owners who start or grow business typically need a committed, entrepreneurial partner who is willing to provide equity and risk capital structured according to the needs of their businesses. Instead of claiming collateral, the SME fund managers base their investments and loans on the potential of the SME's business plan. They usually take an active approach to their investments by acting as an advisor to the SMEs in fields such as management, marketing, financial planning and reporting. The costs of such capital thereby often include risk mitigation for business owners as well as professional advice and technical support.

Private equity is still negligible in low and middle-income countries. According to the World Bank, private equity financing averaged around USD 30 billion in developing countries in the period 2008-13, compared to USD 230 billion in high-income countries²¹.

Credit through non-banking financial institutions

Non-Banking Financial Institutions (NBFIs) supplement the services provided by banks and include leasing, factoring, insurance and trade finance. Banks typically offer financial services as part of a package deal, but NBFIs are able to improve services by unbundling, targeting, and tailoring these services to particular groups.



World Bank (2008)
 World Bank (2015a)
 World Bank (2015a)

DFIS - CLOSING THE INVESTMENT GAP

Development finance institutions (DFIs) are key instruments for channelling finance to SMEs in low- and middle-income countries. Their investments are often long-term, and help catalyse funding from private investors.

THE ROLE OF DFIs IN FINANCING MSMEs

Providing support for increased MSME access to finance in low- and middle-income countries is a key objective for most DFIs. At the end of 2015, 49 percent of the total portfolio of European DFIs (EUR 17.9 billion) was in the financial sector, including funds. 47 percent of this EUR 17.9 billion was in funds, 38 percent in banks, and 6 percent in microfinance institutions²². DFIs usually prioritise the strengthening of local financial intermediaries that increase access to capital and financial services for SMEs. Providing more direct forms of support to numerous SMEs is relatively costly and inefficient for DFIs. By using this 'supply-side approach', European DFIs have become important financiers of local SME lenders.

Providing long-term funding

A lack of long-term funding to the banks is one of the key reasons banks do not grant clients attractive loan products. DFI funding enables financial institutions and non-bank institutions to address the mediumand long-term funding needs of their clients.

An evaluation of the effectiveness of European DFI investments in African banks shows that DFI support does improve the financial strength and productivity of these financial institutions²³. DFI support, the evaluation notes, contributes to reducing maturity- and currency mismatches of the services that the financial institutions' offer to SMEs, it improves their capital adequacy and successfully mobilises domestic deposits. This makes financial institutions better placed to offer financial services sustainably to SME clients.

Providing high-risk capital with catalytic effects

DFIs are able to take on higher risks than most investors. DFIs are well-placed – and willing – to invest in funds typically undertaking larger investments in sectors or markets that are of particular develop-

Aureos Capital Limited

Aureos Capital Limited (Aureos) was established in July 2001 as a joint venture between CDC (the UK DFI) and Norfund. The objective of the joint venture was to create a strong fund manager in a market where there were no strong players, and enable mobilisation of capital to developing countries far beyond what Norfund and CDC could do alone. Aureos grew to be a global leading SME PE fund manager in emerging and developing markets. By delivering good financial results over time, Aureos succeeded in attracting an increasing proportion of private capital to the funds. Today, 'non-DFI investors' (including corporates, family offices, financial institutions and pension funds) is the Fund's largest investor category. The DFI's additional role as an investor base of the Aureos funds, as well as owners of the fund manager, diminished accordingly over time. Norfund exited Aureos Capital in 2009, but continued as an investor in the funds. Today, Aureos is incorporated in the Abraaj Group, a leading private equity investor in emerging markets, which manages investments of approximately USD 9.5 billion.

mental importance, have a particularly high risk, require close follow-up, or have a high potential for improving environmental, social and governance standards.

Active ownership

Some DFIs, such as Norfund, take an active ownership role as investors, providing professional advice and technical support on issues such as governance, strategic management, business finance and environmental and social responsibility.



NORFUND - INVESTING IN FINANCIAL INSTITUTIONS AND SME FUNDS

Norfund contributes to increasing access to capital and financial services for MSMEs and unbanked people by investing in financial institutions and SME funds. We give priority to equity investments and offer long-term financing.

Norfund has built a strong portfolio of investments in financial institutions and SME funds. Through a network of SME fund managers, Norfund has indirectly invested in a large number of SMEs in lowand medium-income countries. By the end of 2015, Norfund had invested directly in several locally owned mid-sized and larger financial institutions that have good growth potential and are suited to delivering financial services to SMEs and previously unbanked people. Norfund also makes investments in microfinance and other non-bank financial institutions, such as leasing, factoring and mortgage institutions that focus on addressing the financing needs of SMEs.

BANKS AND NON-BANK FINANCIAL INSTITUTIONS

Norfund's target investments include mediumsized and large bank institutions that are focused on serving SMEs, the retail market, and clients who have not previously had access to financial services. The banking sector in many of Norfund's priority regions is underdeveloped, characterised by a large number of relatively small banks with high costs, high margins and a limited scope of services offered to SMEs. Therefore, we aim to create efficient, scalable banks that can provide better and less expensive services through expansion and a reduction in costs.

We invest mostly in locally-owned financial institutions which have good growth potential and are suited to developing and delivering services. Equity Bank in East Africa and Brac Bank in Bangladesh are two medium-sized banks that have SMEs as their primary target group, and are major bank investments for Norfund. The banks' active outreach programmes provide support to previously unbanked people and to entrepreneurs.

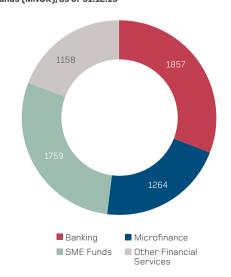
Basic financial literacy is essential in helping young entrepreneurs and the unbanked to overcome

barriers to accessing and using formal financial services. Providing girls and boys with equal education, and tailor-making financial training for female clients can also potentially reduce gender-based differences in financial literacy. Several of Norfunds investees offer basic training and professional advice on business development and financial fundamentals for their clients.

NORFUND INVESTS IN FINANCIAL INSTITUTIONS THAT ARE SUITED TO DELIVERING FINANCIAL SERVICES TO SMES AND PREVIOUSLY INBANKED PEOPLE

Norfund also invests in non-bank financial institutions that are dedicated to serving SMEs, such as leasing, factoring and lending institutions.

IIII Figure
Norfund's investment in financial institutions and SME funds (MNOK), as of 31.12.15





Equity Bank

Equity Bank is Kenya's second-largest bank and has more than 10 million customers. The bank is the leading inclusive bank in Africa, and operates in Uganda, South Sudan, Rwanda and Tanzania. Its main customer segment is unbanked individuals and SMEs – those described as being at the "bottom of the pyramid".

Norfund and NorFinance purchased a 12.22 percent stake in Equity Group Holdings Limited in 2015, as part of our strategy to support banks targeting entry-level and mass-market retail banking, and SMEs. This purchase has strengthened our investment portfolio in financial institutions in Africa.

Equity Bank is one of only a few banks that have succeeded in developing a scalable business model for efficient, high quality service delivery to a mass market in a developing country. The bank has a strong focus on women, and provides adapted products and training programmes for youth and female customers. Women are on the bank's Board of Directors and its management team.

The bank is a leader in financial innovation and was the first to introduce Europay-, MasterCard- and Visa-compliant ATM cards in Kenya. It has also played a leading role in championing agency banking in Kenya and provides 'on-the-doorstep' financial services for people in Kenya, Uganda, Rwanda, Tanzania, South Sudan, and the Democratic Republic of Congo. In 2015, the bank launched a new mobile payment and banking platform for its customers.

To improve financial capability and inclusion, Equity Bank offers quality financial literacy training and services to low-income women and youth throughout Kenya, and particularly those engaging in entrepreneurial ventures. The programme includes a 13-week class-room-based training course covering topics such as budgeting, saving, financial services, and debt management. The aim is to increase the financial capabilities of clients, and facilitate economic empowerment, increased productivity, and financial security.

SME FUNDS

Norfund invests equity capital in private equity funds, including venture capital and other investment funds that target SMEs requiring growth capital, expertise, and close follow-up.

Fund investments have been an important instrument for Norfund since our own start-up phase. By investing in SME funds and fund managers, Norfund is able to contribute to building both the formal economy and to strengthening local capital markets. Norfund invests in funds that have limited access to commercial capital (because of their small size or risk profile) as well as larger and more established funds where Norfund can be additional. We cooperate with other investors to achieve greater transparency in our investment funds both in terms of the funds' legal frameworks and fee structures.

Norfund has accumulated competencies in the selection of fund managers and appropriate fund structures. In some cases, we also invest through the establishment and ownership of fund management companies when an unmet demand is identified in the market, often in the least developed and most vulnerable states. In addition Norfund and Swedfund has established Kinyeti Venture Capital in South Sudan. This venture capital company has managed to invest profitably in small companies in Juba, the capital city, even during recent conflicts.

MICROFINANCE INSTITUTIONS

The Norwegian Microfinance Initiative (NMI) was established in 2008 by Ferd, Norfund, DNB, Store-

GroFin

GroFin Africa Fund offers loans and equity capital in local currencies to small enterprises in South Africa, Kenya, Uganda, Tanzania, Rwanda, Nigeria and Ghana.

Most of GroFin's shareholders are DFIs or other development institutions, including Norfund, CDC, EIB, Proparco, FMO, IFC, AfDB, and the Shell Foundation.

In addition to providing equity capital and loans, GroFin acts as an advisor to its clients in fields such as management, marketing, financial planning and reporting. This is a good starting point for establishing viable small enterprises over time.

The Client Protection Principles

Over the past years, consensus has emerged that providers of financial services to low-income clients should adhere to the following six core principles:

- > Avoidance of Over-Indebtedness.
- Transparent pricing, terms, and conditions of financial products.
- > Debt collection practices of providers will be appropriate, not abusive or coercive.
- Financial service providers will comply with high ethical standards in their interaction with microfinance clients.
- Timely and responsive mechanisms for complaints and problem resolution for clients must be in place.
- > The privacy of individual client data will be respected²⁴

brand and KLP. In 2016, the Danish DFI, IFU, also came in as a co-investor. The goal is to make NMI the leading Nordic microfinance platform and to integrate private and public capital so that poor people in low- and middle-income countries can be provided with access to financial services. At the end of 2015, the institutions in NMI's portfolio had more than 31 million active loan accounts. NMI is Norfund's most important channel for microfinance capital and has made over 30 investments: two-thirds have been direct investments in microfinance institutions through equity and loans. A third of NMI's investments have been made through funds.

THE GOAL IS TO MAKE NMI THE LEADING NORDIC MICROFINANCE PLATFORM AND TO INTEGRATE PRIVATE AND PUBLIC CAPITAL SO THAT POOR PEOPLE IN LOW- AND MIDDLE-INCOME COUNTRIES CAN BE PROVIDED WITH ACCESS TO FINANCIAL SERVICES.

In addition to our investments made via NMI, Norfund has invested directly in microfinance institutions in Myanmar and in five regional funds in Central America.

The microfinance institutions that Norfund invests in must adhere to the Client Protection Principles which describe the minimum protection microfinance clients should expect from providers.



24 Forster et al. (2010)

CREATING DEVELOPMENT EFFECTS

As this chapter shows, access to finance is vital for economic growth, for job creation, and for poverty reduction. The main development effect of Norfund's strategy of investing in financial institutions and SME funds is the generation of increased access to capital to individuals, microenterprises and SMEs. Additional development effects include the number of jobs created directly in Norfund's investments. The financial institutions in Norfund's portfolio employ a large number of people, 38 percent of whom are women.

RESPONSIBLE INVESTMENTS

Investments in Financial Institutions (FI) and SME funds have environmental, social and corporate governance (ESG) risks and rewards. Norfund's investees use forms of corporate governance, policies and practices that vary according to the types of institution.

All of the FIs and SME funds in which Norfund invests must comply with the minimum corporate governance standards we require.

The largest environmental and social (E&S) related risks facing financial institutions are rooted in their clients' or portfolio companies' E&S risks. These may be material and/or reputational.

Norfund always reviews the loan portfolios of a potential investee before deciding to invest in a FI. This way, we can assess the E&S risks of the institution. Norfund assigns an E&S risk categorisation (low, medium, and high), based on the E&S risks in the loan portfolio. Typically, microfinance institutions have low E&S risk category ratings: larger FIs that have clients from higher E&S risk sectors (for example, mining, oil and gas, large-scale agriculture, infrastructure, etc.) are typically categorised as 'high risk'. When Norfund invests in SME Funds with no existing portfolio, we make sure there is a robust and competent system in place to deal with ESG issues before the Fund starts investing.

All SME funds and FIs within Norfund's portfolio that are categorised as either 'medium risk' or 'high risk' are required to implement an environmental and social risk management system. This includes E&S action requirements such as compliance with local E&S legislation, ILO Core Conventions, and the IFC's Performance Standards on Environmental and Social Sustainability. An environmental and social

Environmental Social Governance (ESG) work at DFCU Bank

More than 20 percent of the borrowers of the Ugandan Bank, DFCU, are in high environmental and social risk sectors, such as construction, large-scale agriculture, and oil and gas services. DFCU has therefore implemented an Environmental and Social Management System (ESMS) to provide guidance and routines, and the bank has appointed a trained Environmental and Social Officer to manage its ESMS.

Many of the bank's clients lack awareness and training about environmental and social issues. Norfund has provided specialised training and assistance to personnel in DFCU and has helped the bank to become better equipped to identify and manage its high environmental and social risk transactions. DCFU has made significant improvements: within its own operations, DFCU is now compliant with the requirements contained in the IFC's Performance Standard 2 on Labor and Working Conditions (related, for example, to national employment, labour, and occupational health and safety laws). Notably, it also chose to integrate its ESMS into its credit routines.

risk management system monitors whether the E&S requirements are taken into account during the due diligence. It also ensures that the risks identified are appropriately remediated and managed during the tenure of the loan or the holding period of a portfolio company.



INCREASING ACCESS TO CAPITAL FOR MSMES IN CAMBODIA

According to the Cambodia Industrial Development Policy 2015–2025 issued by the Cambodian government, limited access to capital is one of the key obstacles to continued economic growth, poverty reduction and the development of the country's industrial sector. Hattha Kaksekar Limited, a Norfund investee as of 2007, is contributing to increased access to finance for micro-, small- and medium-sized enterprises in Cambodia.

ambodia's economic development over the past decade has been rapid. According to the World Bank's Development Indicators, the poverty rate in Cambodia has more than halved, declining from 53 percent in 2004 to 13.5 percent in 2014. Access to finance through well-functioning banking and microfinance structures is essential for enterprise growth. In 2015, banks and microfinance institutions continued to expand nation-wide to rural areas that were once without access to financial services. In fact, the number of people who had access to financial services doubled from 19 percent a few years ago to 42 percent in 2014. Today, Cambodia has 36 commercial banks, 11 specialised banks, 58 microfinance

institutions, and more than 1,400 automated teller machines (ATMs) across the country.

However, domestic credit provided by the financial sector accounts only for 47 percent of the country's GDP compared to 75 percent in India and 169 percent in China².

A LARGE INFORMAL SECTOR WITH MICRO-SIZED COMPANIES

According to a report by the Cambodian government's³, 97 percent of all enterprises in Cambodia are micro-sized. However, although these microenterprises are the main employers of the country, they generate only 30 percent of the formal jobs and 12 percent of the country's total turnover. A few large

enterprises generate 76 percent of the total turnover and 63 percent of the formal jobs. This results in a fragile industrial structure. Strengthening profitable and transformative small enterprises and converting them to formal registered medium-sized companies will contribute to increased economic growth and poverty reduction in Cambodia.



- ¹ World Bank, World Development Indicators
- ² World Bank, World Development Indicators
- ³ Government of Cambodia (2015)

Many small- and medium-sized enterprises in Cambodia (SMEs) fall into what has been termed 'the missing middle' category; while microfinance institutions are too small to offer the types of loans required by SMEs, commercial banks often perceive the costs and risks of serving SMEs as being too high. Data from the World Bank Enterprise Survey shows that only 27 percent of medium-sized firms in Cambodia had credit lines in 2015⁴.

NORFUND'S INVESTMENT IN HATTHA KAKSEKAR

Hattha Kaksekar Limited (HKL) was founded as an Oxfam food project in 1994 in response to the hunger challenges Cambodia faced at that time. The institution has committed itself to contributing to long-term social and financial sustainability in Cambodia and to improving the income of its clients. HKL provides loans, savings, and other inclusive financial services countrywide, particularly to women and low-income families in rural areas.

The institution has grown rapidly from being a small NGO in 1996, to being the fourth largest micro-financing institution in the country. Norfund made its first USD 1 million loan investment in HKL in 2007. This was followed by an equity investment in 2008 together with Oikocredit and Triple Jump. The objective was to help increasing the access to financing for Cambodia's micro-, small- and medium-sized enterprises (MSMEs). Even though this was a fairly small investment at that time, Norfund managed to add value and help to contribute to HKL's growth by active shareholding and board seat.

In the period from 2007 – 2015, Norfund invested additional loans and equity in the company and Norfund's shareholding increased from 14 percent to 21 percent.

Prior to Norfund's investment in 2007, HKL had Head Office and one small branch office in Phnom Penh and a loan portfolio of USD 14 million. By 2015, HKL's loan portfolio had increased 20 fold to USD 363 million, and the company has today 151 branch offices and more than 316,700 clients across all 25 provinces in Cambodia.

Equity investments, loans and Norfund's active ownership, professional support and long-term commitment have been crucial for HKL's growth, says HKL President and CEO, Mr Hout Ieng Tong.

HKL has made extensive developments in terms of its credit products, credit policy and procedure as well as growing its deposits. The rapid growth of the company required a new core banking system. Online core banking system was therefore established in HKL in 2010, and in 2012 HKL upgraded its system further to become the first MFI to offer an online banking system in Cambodia. In 2012, HKL also became the second MFI to launch an ATM system in Cambodia. This provided customers with easier access to cash and saved the time of customers because loan payments could be made electronically instead of only at HKL's offices.

HKL'S CONTRIBUTION TO DEVELOPMENT

HKL's primary contribution to development is through the provision of financial services to MSMEs that are largely ignored by commercial banks.

Increasing access to finance

HKL's target markets are MSME- entrepreneurs in semi-rural and urban areas. Agriculture is one of its key target sectors and accounts for 27 percent of its loan book. Seventy percent of its clients are female entrepreneurs – reflecting the important role women have in Cambodia in managing family cash.

HKL's geographic outreach has also expanded substantially. In 2008, the company reached just 19 percent of Cambodia's villages and 43 percent of the nation's provinces. By 2015, HKL had reached 66 percent of the villages and covered all the country's provinces.⁵

Providing employment opportunities

HKL has experienced tremendous growth. The company had 248 staff in 2007 and now employs more than 2,300 workers across the country. Almost 30 percent HKL's staff are women.

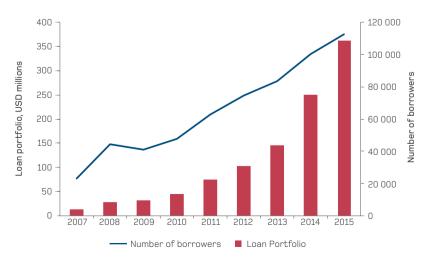
However, HKL's main contribution to job creation in Cambodia has been the job opportunities created as a result of its expanding loan portfolio. The number of active borrowers has increased from 23,253 in 2007 to 112,930 in 2016.

HKL's planned growth will be driven by branch expansion, and will facilitate more job opportunities in Cambodia.

Providing financial education

HKL's large network of credit officers works closely with the company's customers. Train-





ing is provided by HKL to enable credit officers to deliver financial education programmes designed to help people manage loans effectively and avoid indebtedness. Credit officers travel by motor cycle to customers in rural areas to discuss business ideas, the market potential and credit alternatives. The contact allows credit officers to evaluate the suitability of clients, validate customer loyalty, and to increase the ability of clients to make repayments. The Client Protection Principles for microfinance are important guidelines in this work.

HKL is growing with its customers. Small entrepreneurs lack finance. Access to microfinance gives customers the opportunities they need to create and expand their business ideas. HKL tries to minimise customer drop-out and helps them to increase their standard of living. In our experience, loyal clients borrow bigger and bigger loans—that's a good sign that client businesses are growing". - Mr Hout Ieng Tong, President and CEO, HKL.

HKL has adopted a Progress out of Poverty Index (PPI) Tool to chart the progress of its clients out of poverty, by measuring the percentage of its customers whose income is less than USD 2.5 a day.

Contribution to environmental and social protection

Environmental and social protection is an integral part of HKL's business operations and the company has established a Social and Environmental Policy to evaluate the borrowers and enterprises they consider to finance. In 2015, HKL assessed the environmental and social impacts of the businesses of 42 percent of its new borrowers. Its loans are evaluated based on the level of risk the loan may represent (factors that are considered include the risk of pollution, and the quality of the working conditions in each business) against an environmental and social exclusion list. Only businesses or activities that are not threatening either environmentally or socially can be considered for financing.

HATTHA KAKSEKAR: THE WAY FORWARD

HKL aspired to become a fully-fledged



financial institution for micro-, small- and mid-sized enterprises (MSMEs), and needed an experienced strategic partner and share-holder from the banking sector. Norfund and the other shareholders thereby decided to sell their shares. Through a competitive bidding process, Bank of Ayudhya - a top tier bank in Thailand with a clear leadership position in consumer banking - was selected as a preferred partner.

HKL's employees have extensive experience in microfinance and considerable knowledge in maintaining continuity when working with customers. When HKL converts to a bank, it will keep these same strategies: credit officers who know the customers they work with, who understand the business of HKL, and who will continue to spend time in the field to ensure that clients are receiving the best financial support and services.

"When we become a bank we will be able to expand to new segments and offer financial services to larger SMEs too", says HKL President and CEO, Mr Hout leng Tong.

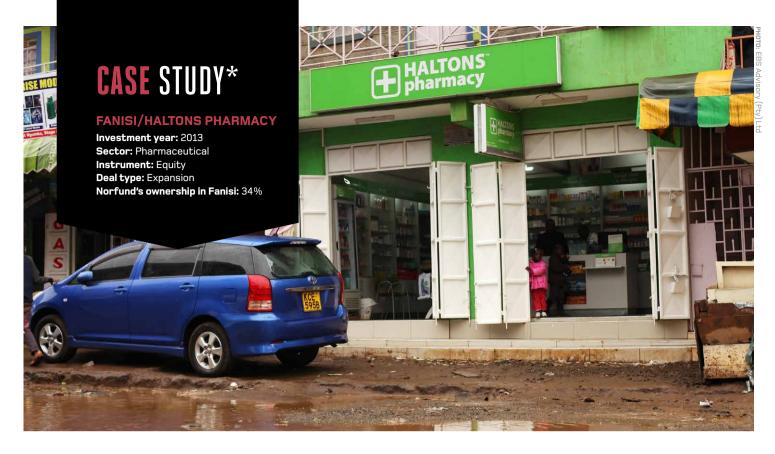


SUPPORTING ENTERPRISE GROWTH

Khen Pally is a mushroom-farmer and has been an HKL client for more than 10 years. Before she started receiving micro-loans from HKL, she only had one plantation. Today she has three plantations and hires 4-5 seasonal workers every year. Mushrooms are very marketable in Cambodia and Khen Pally plans to expand her business further because she is currently unable to keep pace with demand. Pally's HKL credit officer Sok Chenda advised her to expand her business 10 years ago. He still visits her every month and is an important businessdiscussion partner.



- 4 World Bank, Enterprise Surveys
- 5 HKL (2015)



FUNDING ACCESSIBLE PHARMACY CARE

Haltons Pharmacy is a Fanisi investee company and provides quality medicines and medical advice in Kenya through a national network of outlets, including outlets in rural towns.

FANISI

The Fanisi Venture Capital Fund invests private equity and venture capital in businesses that have substantial growth potential. Founded in 2009, Fanisi invests across diverse industry sectors in East Africa. The fund has a total capital of USD 43.5 million and has made risk capital investments ranging in size from USD 0.5 million to USD 3 million.

Norfund was instrumental in establishing Fanisi, initiating the appointment of a fund manager and investing both in the management company and the fund. Through Fanisi, we have helped to increase the supply of financial and technical support to SMEs in East Africa.

* Written in cooperation with EBS Advisory (Pty) Ltd.

he pharmacy sector in Kenya is dominated by individually-owned stores which provide prescription and non-prescription pharmaceutical products. Although these outlets tend to be good quality, they are often inconsistently stocked and rarely offer services beyond medicine dispensing. Their catchment areas are limited: most quality pharmacy outlets tend to be located in urban business areas, and residential areas and smaller towns tend to be underserved.

The National Quality Control Laboratories and the Pharmacy and Poisons Board in Kenya estimate that 30-40 percent of drugs in Kenya are counterfeit or substandard. This causes economic losses of KES 70 billion every year¹. Unethical practices in the pharmacy sector include operating stores without qualified personnel.

FANISI'S INVESTMENT IN HALTONS PHARMACY

Haltons Pharmacy is a Kenyan retail chain which was founded in 2007 and sells prescription and non-prescription pharmaceutical products. When the company had expanded to two branches, it needed additional capital to support further growth. The Fanisi Venture Capital Fund, attracted by the growth potential of Haltons, invested in the company in 2013. Following the investment, the company has already been able to increase the number of outlets to more than 50.

Fanisi is an engaged investor and offers Haltons dedicated support, including finance, retail, marketing and branding advice. Fanisi has provided guidance, for example, on Haltons' overall strategic performance, and has helped Haltons to recruit and appoint professionals with extensive expertise and experience at the





(1) Haltons are establishing pharmacy stores within Shell service stations.(2) Each pharmacy is staffed by pharmacy professionals.

managerial and board level. The expertise of the Board now includes retail pharmacy management, finance, branding, real estate and business strategy. The Board has been instrumental in setting the strategic direction of the company.

Supported by Fanisi, Haltons has put systems in place to enable it to achieve its key customer experience commitments: ensuring the availability of quality products, and achieving consistency in service, branding, and professional advice.

HALTONS' CONTRIBUTION TO DEVELOPMENT

Haltons is committed to ensuring the consistency, quality, availability, and affordability of its products.

Access to high quality and safe medicines

Fanisi's equity investment and support has enabled Haltons to increase the number of its outlets from 2 in 2013, to 52 in March 2016. Haltons now has the largest network of pharmacy outlets in Kenya, and has improved access to quality pharmaceutical products for a wide range of urban and rural consumers. Haltons also sells complementary household products and provides health services to its customers, such as blood sugar tests and blood pressure

tests. In 2016, Fanisi was awarded the prestigious prize 'portfolio company of the year' for Haltons Pharmacy by the Private Equity Africa Awards in recognition of its social impact.

Creating jobs for pharmacy professionals

Each Haltons outlet is staffed by between two and four pharmacy professionals who offer advice and services. Staffing levels have increased from 4 people in 2013, to 180 people in 2016. Employee capacity to become a dominant player in just three years and, at the same time, has helped to address wider challenges within the sector. In 2015, Haltons Pharmacy signed a partnership agreement with Vivo Energy Kenya to establish pharmacy stores within existing Shell service stations across the country. Haltons expects a two-or threefold increase in its store footprint over the next few years. Funding has been deployed to help the company develop the relevant systems and processes, to strengthen its branding, and to acquire more staff.

FANISI HAS ENABLED US TO PROFESSIONALISE THE WAY WE RUN THE BUSINESS BY PROVIDING FUNDS, EXPERT ADVICE, AND HELPING US TO IDENTIFY APPROPRIATE BOARD MEMBERS"

- Sam Njuguna, CEO, Haltons Limited

building has enabled the company to provide appropriate professional advice about the medicines it sells.

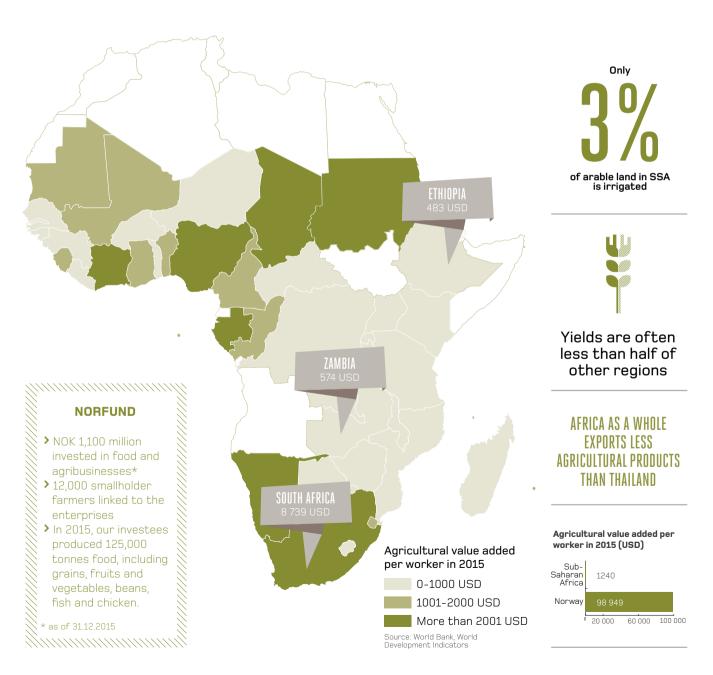
HALTONS: THE WAY FORWARD

In Kenya's pharmacy sector, unethical practices are problematic and Haltons is seeking to provide high-quality products and healthcare, professional engagement, and reliable customer support. Fanisi's investment and expertise has enabled Haltons



PART 3: AGRICULTURE

Agricultural growth can drive overall economic growth and tranformation, and has proven to be effective in reducing poverty in low- and medium-income countries. The agricultural sector in Africa is underperforming, but has significant potential. Investments are needed throughout the value chain.



AGRICULTURAL VALUE CHAIN

1: INPUT

Challenges:





2: PRODUCTION

Challenges:

3: PROCESSING Challenges:







O O



Challenges:

THE IMPORTANCE OF AGRICULTURE IN AFRICA

Norfund has selected agriculture as its third priority sector. The sector employs approximately half of Africa's workforce and plays an important role in its economy and development. Agricultural growth can drive overall economic growth and transformation, and has proven to be effective in reducing poverty in low-income countries. Agriculture is also vital in meeting the growing demand for food in Africa.

ECONOMIC GROWTH AND TRANSFORMATION

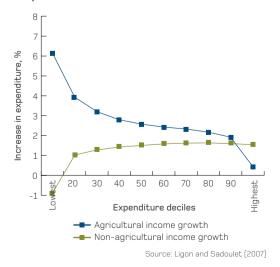
Agriculture is a large sector in most Sub-Saharan countries, accounting on average for 25 percent of GDP. The wider agribusiness sector (including input supply, processing and retailing), accounts for

GROWTH IN AGRICULTURE IS ON AVERAGE 2 TO 4 TIMES MORE EFFECTIVE IN REDUCING POVERTY THAN GROWTH IN OTHER SECTORS

nearly half of the region's GDP. The size of this sector means that its performance has a significant impact on economic growth.

Growth in agriculture also stimulates growth in other sectors. A UK Department for International Development (DFID) study of the relationship between primary agriculture and economic growth in low-income countries shows that growth in agriculture can stimulate the rest of the economy. This occurs mostly through consumption linkages because increased farm incomes can lead to strengthened demand for non-farm products and services. As economies develop, consumption linkages become

Figure GDP growth originating in agriculture benefits the poorest



less important and forward linkages to sectors in which the processing of agricultural output occurs become more important¹.

Better productivity in agriculture is typically the first step towards wider structural economic transformation, because it allows economic resources to be reallocated from activities of low productivity to higher productivity. Increases in agricultural output, for instance, facilitate growth in agri-based industries, such as the production of cocoa powder from cocoa beans, or processing of grain into flour. As GDP per capita rises, the share of primary agriculture relative to total output normally declines and the share of agriprocessing typically increases. Changes in output structure are also accompanied by changes in the occupational distribution of the workforce, with the share of employment in agriculture declining.

POVERTY REDUCTION

There is consensus that growth in agriculture is associated with a reduction in poverty. Cross-country regression analyses have shown that growth in agriculture is on average 2 to 4 times more effective in reducing poverty than growth in other sectors.²

In a study of 42 developing countries, Ligon and Sadoulet showed that a one percent GDP growth originating in agriculture results in an increase of more than six percent in expenditure for the poorest 10 percent of the population³.

Studies examining both differences across countries and changes over time have shown that agricultural development tends to precede improvements in income4.

DFID identifies three main channels for agricultureled poverty reduction:

- > wages and jobs
- > food prices and availability
- > multiplier effects on other sectors



1 DFID (2014a)

² DFID (2014b)

3 Ligon and Sadoulet (2007)

4 DFID (2014b)

Agricultural growth contributes to reducing poverty by increasing the incomes of farmers. The impact of increased agricultural output on farm incomes is strongest in small and open economies because these allow additional output to be exported to global markets without adversely affecting prices.

Job creation for unskilled labour is another direct effect of growth in agriculture. Horticulture, for example, is often labour-intensive, and growth in this sector therefore has the potential to create many jobs in primary production. The potential for employment creation in agricultural inputs, processing, and retail is also substantial. This growth potential is important because Africa's population is likely to double by 2050, and new jobs will be needed for the more than 600 million working-age adults who will enter the labour market by then⁵.

The cost of food accounts for more than half of household budgets among those with low incomes in urban and rural areas. Increased food supplies may effectively increase the incomes of net food purchasers if prices become more affordable.

Indirect effects of agricultural growth are also important. Farmers and farm employees often spend their increased income locally and on locally produced goods and services, and this contributes to growth and poverty reduction in rural non-farm economies.

The impact of agriculture on poverty reduction varies across countries. In a review of the literature

on the relationship between agriculture and poverty reduction, DFID notes that the correlation between agricultural productivity growth and poverty reduction is strongest in the poorest countries, where a large share of the population depends on agriculture⁶. In Sub-Saharan Africa (SSA), rural areas tend to be poorer than urban areas, and agriculture is the main source of income and employment.

MEETING THE GROWING DEMAND FOR FOOD

The Ending Rural Hunger report published by Brookings Institution in 2015, notes that 19 of the 20 countries with the greatest food and nutrition security needs are in Africa, and that all of these have low cereal yields. This is concerning given that demand for food in Africa is growing significantly as the population rises.

Urbanisation is a key feature of Africa's population growth. The rate of urbanisation, measured as the average annual rate of change of the percentage urban, is increasing by 1.1 percent per annum. Around

56 percent of Africa's population is expected to reside in urban areas by 2050.8 The growing demand for food will therefore be strongest

THE GROWING DEMAND FOR FOOD WILL BE STRONGEST IN URBAN AREAS

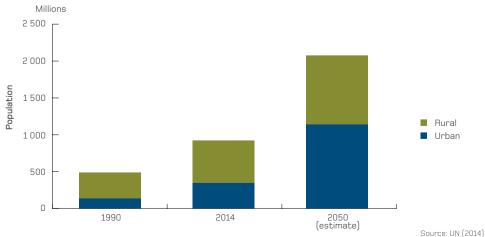
in cities. The rise of the middle class in urban areas will further impact on levels and patterns of food demand, and raise demand for higher value foods such as meat, dairy, and processed products.



Zero Hunger

The aim of the second Sustainable Development Goal set by the United Nations (UN) is to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture.

Figure Population growth in Sub-Saharan Africa





- ⁵ Ahlers *et al.* (2014) ⁶ DFID (2014b)
- ⁶ DFID (2014b) ⁷ Kharas *et al.* (2015) ⁸ UN (2014)

REALISING THE POTENTIAL OF AGRICULTURE

The agricultural sector in Africa is underperforming but has significant potential. Improvements in inputs and farming practices can lead to large increases in yields. Strengthening the value chains in agriculture can increase farm incomes and create jobs.



Large- and small-scale farming

Some crops are best grown under intensive production and require a significant proportion of manual input: others are more efficiently grown on larger, mechanised farms. Each country will need to find its own path in terms of farm size distribution and farming systems, but it is clear that small-scale farmers must receive particular attention given that most of the land in SSA is cultivated by them

Africa's share of many agricultural export commodities has fallen and its import of food products has increased. This has made the continent more vulnerable to global commodity fluctuations. Sub-Saharan Africa (SSA) is now a net importer of food, including staple foods such as maize and rice that have naturally favourable local growing conditions.

This poor global competitiveness is due to low and stagnant productivity. Compared to other regions, Africa has failed to realise significant improvements in agricultural productivity and its yields are often less than half the yields of other regions. China, for example, harvests three times as much grain per hectare than Africa, and the continent exports less agricultural produce than Thailand⁹.

Agriculture in Africa has significant potential for development. McKinsey Global Institute estimates that revenue from agriculture production in Africa could triple between 2010 and 2030 if inputs are improved, more land is cultivated, and if higher-value crops are introduced¹⁰. Agribusinesses both upstream

and downstream in the agricultural value chain also have development potential.

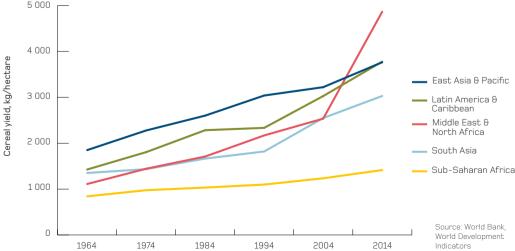
IMPROVING INPUTS

SSA's agricultural output has increased 2.5 percent annually since 1961. However, two-thirds of this growth is due to land expansion, and only one-third of this output is due to yield growth¹¹.

The productivity gap in Africa's agriculture is due to multiple factors, including the low uptake of modern farming inputs. Fertiliser is costly because of low procurement volumes, high shipping costs, and high inland transportation costs. A survey of six African countries found that only one-third of smallholder farmers use inorganic fertilisers, and just 16 percent use agrichemicals, such as pesticides and herbicides¹².

The introduction of high-yield seed varieties has led to sharp increases in agricultural productivity in countries such as India and Mexico. Using seed varieties that are better adapted to local conditions in Africa can help to increase yields. Staple foods on the conti-







- 9 World Bank (2013a)
- 10 McKinsey Global Institute (2010)
- ¹¹ Scaffnit-Chatterjee (2014) ¹² Sheahan and Barrett
- (2014)

IIII Figure Potential for tripling agricultural production revenues in Africa by 2030



Source: McKinsey Global Institute (2010)

nent include maize, beans, millet, sorghum, cassava, and sweet potatoes. Finding high yield varieties will be challenging because of this diversity and due to variations in Africa's agri-ecological conditions.

MODERNISING FARMING PRACTICES

The use of irrigation and mechanisation in Africa is low. Only 3 percent of arable land in Sub-Saharan Africa (SSA) is irrigated¹³ – the lowest percentage in the world.

Mechanisation rates are low. Of the total harvested area in the region, 65 percent is prepared by hand, 25 percent by draught animals, and 10 percent by tractors¹⁴. A reliance on hand tools, such as the hoe, severely limits operational outputs by reducing the timeliness of farm operations, and limiting the efficacy of essential operations such as cultivation and weeding.

Climate change is likely to affect Africa more severely than other regions. The continent is already vulnerable to droughts and floods, and it is expected that climate change will exacerbate this problem. The International Panel of Climate Change (IPCC) reports that "rural areas are expected to experience major impacts on water availability and supply, food security, infrastructure and agricultural incomes" and argues that these impacts will disproportionately affect the welfare of the poor¹⁵. The introduction of conservation farming practices has the potential to mitigate the effects of climate change. Conservation farming systems, such as zero or minimum tillage and crop rotation, use mulch cover to limit soil erosion and land degradation, reduce soil temperature, and

conserve moisture for plant growth. Such practices can increase yields and help to reduce emissions.

DEVELOPING MARKETS AND VALUE CHAINS

Gaining access to markets is challenging for farmers in Africa. Roads are often of poor quality, agricultural buyers need to reach remote villages, and many farmers lack price information that would enable them to get the best prices for their produce.

Better market performance will depend on infrastructural investments. Improving cold chain logistics, for example, can help reduce losses and transaction costs. Modern information and communication technologies are spreading rapidly in Africa and can help to improve market integration, reduce transactions costs, provide better price information, and facilitate market exchange.

In Africa's agricultural sector, informal value chains typically serve lower-income domestic consumers. Higher-income consumers are served by formal value chains in which there are more processing and stronger quality controls¹⁷. The potential for upgrading informal value chains and linking them to formal structures is substantial. Business models linking smallholder farmers to larger agribusinesses, for example, have shown that doing so can increase the skills, knowledge, and incomes of smallholder farmers.

The development of agribusinesses is crucial to realising the potential of Africa's agricultural sector. Value-adding activities (such as sorting, cleaning, packaging, processing and retailing) offer opportunities for agribusinesses of all sizes – from SMEs to large multinational companies.

Enhancing tenure security

Land ownership and land usage rights among individuals and communities in Africa are often informal, and a lack of secure land tenure is common. Some large land transactions have ignored the rights of local users, and consultation with local communities has been inadequate, failed to provide fair compensation, and threatened local livelihoods. A "decentralized, transparent and participatory process to allocate land, rapidly formalise community and individual rights, build community capacity to negotiate fair deals with investors, and reduce the transaction costs and tenure insecurity that discourage investors" is needed according to the World Bank. 16



Outgrower programmes

Projects linking marketoriented smallholders with agribusinesses make good business sense and have high development impact. These projects exploit the complementary character of each party: investors have access to capital, technology and markets; smallholders have access to land, labour and local knowledge. In outgrower programmes investors normally finance smallholder crop establishment upfront and agree to process the product post-harvest. Input supply and technical assistance may also be included in partnerships18.



- 13 Aquastat (2014)
- 14 Bruinsma (2003)
- ¹⁵ IPCC (2014, p. 69)
- ¹⁶ World Bank (2013, p. xxiv)
- 17 World Bank (2013)
- 18 World Bank (2013)

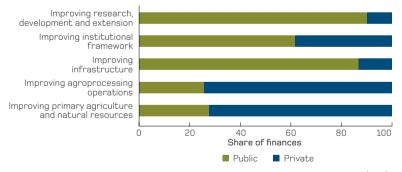
DFIs - CLOSING THE INVESTMENT GAP

Growth in primary production and agriprocessing in Sub-Saharan Africa (SSA) requires policy reforms and complementary investments from both public and private actors.

Private agents, especially farmers and entrepreneurs, account for most investments made in rural areas, according to the Food and Agriculture Organization of the United Nations (FAO). Public investments in agriculture have increased slightly in recent years, but the gap between the size of current investments, and the size needed to increase productivity and reduce rural poverty remains large. The United Nations Conference on Trade and Development (UNCTAD) estimates that the total annual investment gap in developing countries is USD 260 billion, and that 75 percent of the investments required can be met by private investors¹⁹.

The FAO, the International Fund for Agricultural Development (IFAD), and the World Food Programme (WFP) estimate that USD 139 billion in additional annual rural investment will be needed to achieve the Sustainable Development Goal of zero hunger by 2030. Approximately USD 118 billion of this is needed in Sub-Saharan Africa.

Figure Additional rural investment needs in developing countries to achieve zero hunger



Source: FAO, IFAD and WFP (2015)

Investments from private agents, from smallholders and large-scale enterprises, are needed throughout the value chain to realise the development potential of agriculture. The role of private investments will be especially important for improving primary agriculture (72 percent privately financed) and for improving agri-processing operations (74 percent privately financed), according to the FAO, IFAD and WFP²⁰.

Public investments are also needed, for example to finance "public facilities, such as transport infrastructure; services with economies of scale, such as research and development; or services normally provided by public authorities, such as land titling and tenure security²¹".

HIGH RISKS CONSTRAIN INVESTMENT

Attracting investors and accessing credit are two key constraints faced by farmers and agribusinesses in Africa. Formal banks are often reluctant to offer loans, and the high-risk nature of the sector limits investor interest.

Poor transportation and energy infrastructure make it challenging to manage farms, supply input materials, and get products to market. Attracting and retaining competent staff (especially management) in remote locations, and issues such as unclear land rights, also make establishing and running enterprises time-consuming. Income opportunities in this sector can be affected by price volatility in agricultural inputs and outputs, changes in government policies on imports and exports, and variable yields. For many mainstream investors, the risks associated with investing in Africa's agriculture are too high.

DFIs TAKE ON RISKIER PROJECTS

Agriculture is a key sector for many development finance institutions because of their development and additionality mandates. Such institutions are often able to mobilise funding from mainstream investors by mitigating some of the investment risks. The environmental and social (E&S) risks in the agricultural sector are considerable and need to be identified and well managed to facilitate long-term value creation. Development Finance Institutions (DFIs) are characterised by responsible investment practices and can play an important role in the development of a sustainable food- and agribusiness sector in Sub-Saharan Africa.



UNCTAD (2014)
 FAO, IFAD and WFP (2015)
 FAO, IFAD and WFP (2015, p 16.)



NORFUND - INVESTING IN THE FOOD AND AGRICULTURAL VALUE CHAIN

Primary agriculture and agribusinesses contribute to economic growth, create employment, and underpin food security. Norfund recognised that the investment deficit in the food and agribusiness sector was considerable and, in 2011, included the sector as one of our key investment areas. We believe that Norfund, like other development finance institutions, plays an important role in contributing to more and better investments in this sector in Africa.

Illustration Agricultural Value Chain

1: INPUT



2: PRODUCTION



3: PROCESSING



4: MARKET



Norfund's investments contribute to increasing productivity and to the development of agricultural value chains. We are willing to take higher risks and have a longer-term perspective to investing than many other investors. Our investments in the agriculture sector are also important because they help to catalyse other private investors, and we contribute to building sustainable practices through our focus on environmental and social risk management and mitigation. Norfund has invested in food and agribusinesses in East and Southern Africa, and our staff in Maputo and Nairobi play key roles in identifying and monitoring projects these regions.

TARGETING FARMS OF DIFFERENT SIZES

Our investments target farms of different sizes: smallholder farmers, small and medium-sized enterprises, and larger agribusinesses. Several of our microfinance and financial institutions have farmers as a key customer group.

We invest in small- and medium-sized enterprises through SME funds, such as Voxtra and Agri-Vie. Our direct investments mainly target medium-sized enterprises operating in the agricultural value chain. Equity is our main instrument but we also provide loans to enterprises.

FOOD AND AGRICULTURAL VALUE CHAIN

We target companies across the agricultural value chain – from input provision to processing and distribution. Priority is given to investments involving smallholders, either directly or indirectly, because of their important role in agriculture in Africa. Working with strong partners who have interests aligned with our own is a key element of our approach.

Inputs

Input companies producing high-yield seeds and fertilisers contribute to increasing productivity. Norfund has provided a loan to Yara to establish a fertiliser terminal in the port of Dar es Salaam in Tanzania. The terminal has improved offloading, and bagging and warehousing capacity, and is helping to increase the availability of specific crop fertiliser in the region.

Production

Primary producers need investment to boost production. These include investments to increase mechanisation, improve production techniques, and provide irrigation. We have invested in greenfield producers, such as Africado – a company which grows avocados in Tanzania, and Agrica – which grows rice in Tanzania. Smallholders are included in the value chains of several of our investments, including those in Africado and Agrica, for instance through outgrower models. Recently, we supported the expansion of several companies, including Agrivision (in Zambia), and African Century Foods (in Zambia, Zimbabwe and Uganda).

Processing

Processing companies can create value addition and help smallholder farmers gain better access to markets for their produce. Norfund has invested in Agrivision's Mpongwe Mill in Zambia, which mills maize and wheat for local and regional markets and provides smallholders with a market for their maize. Through the SME-fund Agri-Vie, Norfund has supported Vida Oil, a refiner and packer of coconut oil products. Vida Oil operates an outgrower programme which creates an effective route-to-market for many small-scale growers in Mozambique.

Logistics and distribution

Logistics and distribution services are important because they enable farmers to reach markets and help to reduce post-harvest losses. Norfund has invested in Freight in Time (FiT), an East African freight

Africado supporting national development priorities

The avocado producer Africado, in Tanzania, is an example of a successful Norfund investment. It has a nucleus farm of 140 hectares, and an 'outgrower' scheme in which 2,000 smallholders – nearly 500 of whom are GLOBAL G.A.P. certified – grow avocados. A review of the project conducted by Environmental Reliance Consultants concluded that Africado is fulfilling the Tanzanian government's objectives of creating employment opportunities, enhancing economic growth, and contributing to poverty alleviation. The development effects of the company include:

- > Employment: Africado has created employment opportunities in the Siha District of Tanzania, and most of its staff are from neighbouring villages.

 More than half of the employees are women.
- Income generating opportunities: In addition to the direct employment opportunities it provides, Africado has created income opportunities for around 2,000 smallholder farmers. These outgrowers have planted 85,000 trees with guidance from the company, including technical advice and training. Africado subsidises avocado seedlings from the company's nursery and guarantees the purchase of all export quality avocados.
- > Diversifying crops: The grafting of the Hass variety of avocado to local rootstocks has introduced a new type of avocado to the intensive agri-forestry agricultural system practised by smallholder farmers on the slopes of Mount Kilimanjaro.

 Africado has demonstrated the viability of an alternative cash crop in the Siha District following the increasing failure of coffee production.
- Increasing revenues: 60 percent of the land rent paid to the Siha Kiyeyo Rural Cooperative Society by Africado is distributed to the seven villages surrounding the project. The company is the largest taxpayer in the district and, in 2015, Africado won a local tax award for "tax compliance, transparency, timely payment, precise amount, good communication and trustworthiness in documentation".

and logistics company which provides a full range of logistics services, such as sea and air transport, import brokerage services, and warehousing and distribution.

RESPONSIBLE INVESTMENTS

Norfund's work in the food and agricultural sector helps clients to manage environmental and social (E&S) risks, and thus to add value to their operations. An in-depth E&S analysis is required as part of the due diligence process for all our investments. E&S issues represent material risks in this sector: poor performance, for example, can have negative impacts

on the environment, hurt profits, and impact on the livelihoods of employees and local residents. Land acquisition can cause conflicts with local communities whose livelihoods are traditionally land based, and the development of greenfield farm sites can lead to a loss of biodiversity and alter ecosystems. Safety and occupational hazards are common in this sector and must also be addressed.

Sound project design should include a professional assessment of environmental and social impacts describing how potential impacts will be minimised, possible alternatives, and the development of mitigation and management plans. A good Environmental and Social Impacts Assessment is necessary to understand the risks and to ensure that there is an alignment between developers and financiers on how to protect the environment, ensure that the livelihoods of affected communities are restored or improved, and that projects have positive development outcomes.

Norfund requires that the internationally recognised IFC Performance Standards for environmental and social sustainability are used as the basis for risk identification and risk management. This is specified in all our investment contracts. Any identified gaps are set as conditions for our investments and clients must report annually on compliance with the standards and their performance on any relevant E&S issues. Norfund follows up project performance closely with a view to reducing risks and adding long-term value.

CREATING DEVELOPMENT EFFECTS

Growth in agriculture, as this chapter shows, is closely linked to economic growth and poverty reduction. Agricultural growth contributes to reducing poverty by increasing incomes for farmers and farm workers, reducing food prices, and through its multiplier effects on other sectors.

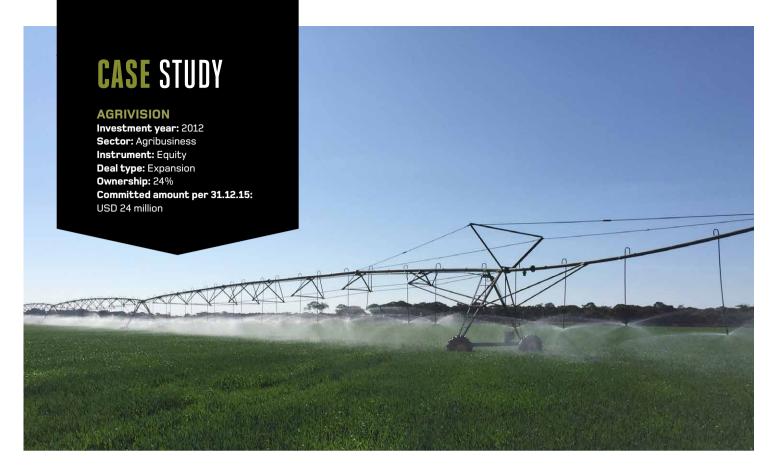
The development effects of Norfund's investments include increasing incomes for outgrowers, creating jobs for unskilled labour, and raising the availability of food in local markets. Tax payments to governments and the upgrading of infrastructure are further examples of Norfund's investment effects.

12,000 smallholder farmers were linked to our investees through outgrower contracts or similar arrangements in 2015. The direct investees in our portfolio produced 125,000 tonnes food in 2015, including grains, fruits and vegetables, beans, fish and chicken.



ESG risks and mitigation plans in African Century Foods

African Century Foods (AFC) is a company farming and selling tilapia fish and chicken in Zimbabwe, Zambia, and Mozambique Fish farming reduces pressure on unsustainable catches of wild fish. AFC targets poorer segments of the population and contributes to ensuring local food security. Norfund has supported the company in meeting local evaluations and IEC requirements and has helped to strengthen the company's E&S resources. We have also helped the company develop anti-corruption policies and maintain its GLOBAL G.A.P. certification.



A STAPLE FOOD PRODUCER IN ZAMBIA

The government of Zambia has identified agriculture as a priority sector for achieving economic development and reducing poverty. Agrivision – a Norfund investee company – is helping to increase national food production by utilising modern farming methods and new technologies.

ZAMBIA'S PRIORITIES IN AGRICULTURE³

- Expand the area planted through the development of farm blocks
- Promote crop diversification
- Increase the area under irrigation
- Promote agricultural mechanisation and the use of ICT
- Expand extension services
- Promote improved seed varieties
- · Improve access to finance
- Increase private sector participation

n Zambia, agriculture is a sector of particular importance to the state's strategic efforts to promote economic growth, achieve food security, and reduce poverty. In 2013, the sector accounted for approximately 20 percent of Zambia's gross domestic product and employed more than 60 percent of the country's labour force, making it the main source of income and employment for the majority of Zambians'.

Performance in the sector, however, is mixed and productivity is low. Maize, for example, is the staple food of Zambia and holds a central position in Zambia's agricultural political economy. Most smallholder farmers grow the crop and the country is self-sufficient in terms of production. But productivity is low and poverty remains common in rural areas, despite the massive subsidies flowing

to the sector. Currently, subsidies for maize input (such as seeds) and output (purchases of maize above market rates) absorb over half of the nation's agricultural budget at the expense of other key agriculture drivers such as rural infrastructure, research and development, and extension services².

There are success stories: wheat production has grown from almost zero in the early 1970s, to more than 300,000 tonnes in 2015. Zambia is now able to supply all local demand and export wheat to neighbouring countries, and employment has been created at various levels of the value chain⁴.

Overall, though, agriculture in Zambia is underperforming. Productivity in maize, wheat, and soya production could be increased significantly. The Zambian government sees the current failures as due partly to the fact that the sector has not effectively utilised "research and development, farm mechanisation, science and technology and information and communications technologies (ICT) to increase yields and maximise the comparative advantage of different areas of the country". Unpredictable agricultural trade policies, government interventions in maize markets, and unreliable power supplies have also deterred productivity-raising investments by farmers. Many investors perceive the risks of investing in Zambia's agriculture as being too high⁶.

Change is needed: Zambia's National Agriculture Policy calls for structural transformation⁷. There is a need, it argues, for greater private sector participation in farm production, processing, and trade. Zambia has the potential to both increase productivity and to become a major food exporter to Eastern and Southern Africa.

NORFUND'S INVESTMENT IN AGRIVISION

Agrivision Africa is a vertically integrated agribusiness company operating in local and regional markets.

Established in 2009, the company's operations began with the purchase of a farm with 210 ha under irrigation. Agrivision rapidly developed the farm and increased the area under irrigation to 1,565 ha. This caught the interest of the South African investment company Zeder, which invested in Agrivision in 2011.

2011 was also the year in which Norfund decided to invest in the agribusiness. Agrivision fitted well with our new agribusiness strategy, and our initial assessment of the company identified a number of positive development effects. MIGA, the political risk insurance arm of the World Bank Group, undertook an extensive environmental and social due diligence of Agrivision in 2010, and found it to be broadly in compliance with IFC standards. In September 2011, Norfund's Board of Directors approved the first equity investment in Agrivision of USD 10 million.

AGRIVISION'S CONTRIBUTION TO DEVELOPMENT

Agrivision's potential for increasing food production, supporting job creation, and promoting rural development fitted well with the Zambian government's strategic priorities. The fact that Agrivision was interested in expanding its operations into processing activities which would benefit the company as well as surrounding smallholders was also seen positively by the Norfund project team.

Producing food for regional markets

Equity investments from Norfund and Zeder have enabled Agrivision's expansion to continue. The company has acquired other underperforming large-scale farms in Zambia's Copperbelt Province, and now has 6,347 ha under cultivation. Agrivision has become a key regional staple food producer, supplying food to the Copperbelt Province in Zambia, and the Katanga Province in the Democratic Republic of Congo.

Conservation farming methods and modern technology are central to Agrivision's operations and have helped to increase its wheat, maize, and soya bean production. The practice of minimum tillage helps the company to limit soil erosion and improve the fertility

of the soil. With the help of Normalized Difference Vegetation Index (NDVI) images from a satellite-based

positioning system, Agrivision is monitoring its crops and tailoring its water and fertiliser usage to specific conditions in different areas of the farms. Agrivision's farms now produce approximately 10 percent of Zambia's annual wheat consumption.

Like other operators in the sector, Agrivision faces challenges with power outages. At the Somawhe farm in north eastern Zambia, pumping stations are needed to shift water from the main reservoir via long canals to the agricultural fields. When power is unavailable, the pumping stations and pivots stop working, water in the canals is wasted, and not enough reaches the fields. To mitigate these problems, Agrivision is examining options such as the installation of solar panels



Agrivision has more than 500 permanent employees.

AGRIVISION'S FARMS PRODUCE 10 PERCENT OF ZAMBIA'S ANNUAL WHEAT CONSUMPTION



- ¹ Rasmussen *et al.* (2014)
- ² Chapoto et al. (2015)
- ³ Republic of Zambia (2014) and Republic of Zambia (2013)
- ⁴ Mulikelela (2015)
- ⁵ Republic of Zambia (2014, p. 8)
- 6 World Bank (2014)
- ⁷ Republic of Zambia (2013)

THE KATUBA SCHOOL PROJECT

The education sector in Zambia is characterised by staff shortages, the uneven distribution of staff between rural and urban areas, shortages of educational materials, and a lack of classrooms. Agrivision has responded to these challenges by supporting the refurbishment and extension of Katuba School, located 8 kilometers from the company's farm in Mkushi.

This project was designed to improve access to quality education for children in the local community, including family members of employees who work at Agrivison's Mkushi farm. The project has supported the construction of classrooms, staff houses and latrines, and provided improved water facilities. A playground has also been built. Eight additional teachers were allocated to the school by Zambia's Ministry of Education as a result of this expansion, and the number of pupils has increased by 28 percent.

In addition to upgrading the school, Agrivision provides a school bus which transports children living at the farm safely and securely to school. Previously, the children walked a combined distance of 16 kilometres to and from the school every day.

*

and the construction of a new dam to capture and recycle water lost from the canals.

Ensuring the availability of quality staple food

In 2013, Agrivision acquired Mpongwe Milling in Kitwe, a plant with an annual production capacity of 60,000 tonnes of milled maize, and 16,000 tonnes of milled wheat. The mill plays an important role in ensuring the availability of staple food in local and regional markets: wheat processed here is for national consumption and export, and the maize is primarily for national markets. It is especially important for poorer households, many of which have low household food stocks and are highly dependent on staple food markets8. By developing a pre-mixed product for baking white bread, the plant is also helping to diversify the range of products available in the region.

Modern laboratory equipment at the mill enables staff to undertake thorough assessments to ensure the consistent quality of its raw materials and its finished goods. Currently, the plant is being audited for ISO 22000 certification of the company's food safety management. Achieving this status will increase the attractiveness of its products still further.

Providing market access for smallholders

Mpongwe Milling sources most of its maize from smallholder maize farmers. Purchasing is done at the farm gate, and through intermediaries, such as the Zambian Food Reserve Agency. In 2015, the mill partnered with the Zambian National Farmers Union (ZNFU) to procure maize from farmers participating in the LIMA credit scheme which provides agricultural input finance from Zanaco Bank to smallholder farmers. When crops are harvested, farmers deliver their produce to ZNFU and receive payments after the union sells the maize. Previously, maize could remain in storage for weeks before it was sold (a similar problem affects farmers selling produce to Zambia's Food Reserve Agency)9. But the agreement with Mpongwe Milling provides ZNFU with a ready market for maize and is substantially reducing payment delays. Smallholder farmers are paid by Agrivision within 24 hours.

Creating jobs throughout the value chain

By the end of 2015, Agrivision's farms employed a total of 318 permanent staff. A further 289 people were offered temporary employment during the 2015 harvesting season. The farm employees enjoy benefits such as housing, schooling, and coverage for medical expenses.

Mpongwe Milling provides direct employment to another 197 people, and contributes to indirect job creation through its distribution channels. In 2014, the company began selling its maize products through strategically placed container depots, each located near large compounds in the Copperbelt Province. Doing so has enabled consumers to have better access to staple food supplies. Nshima, a staple food in Zambia, is made from maize meal and demand for it is high. After just one year of operation, the mill sells 47 percent of its breakfast meal via 13 depots.

The containers are operated by independent managers, who receive weekly supplies of breakfast meal from the mill. However, the credit risk for these operations is assumed by Mpongwe Mills: the container managers pay only for the products once the first batch is sold.

At full capacity, the mill is able to supply 2,000 bags of breakfast meal per week to the depots. This provides the managers of the containers with a monthly income which is 9 times higher than the average monthly wage in the Copperbelt Province.

Electricity outages continue to impact production and monthly losses of up to 250 production hours have been recorded. The effects of these outages are felt even in the mill's distribution channels because fewer bags can be delivered to the containers. This, in turn, affects the income of the container managers. To counteract such

⁸ Famine Early Warning Systems Network (FEWS) (2015)

⁹ Burke et al. (2010)



(1) Mr. Mkiale opened this container depot in Chimemwe compound in December 2014. His son, Mr. Mkiale Jr., operates the container from 07:00 to 19:00 every day, and says he can easily sell 2,000 bags of maize meal per week. (2) Agrivision has become a regional staple food producer. (3) Mpongwe Milling sources most of its maize from smallholder farmers.





problems, the mill has invested in diesel generators and plans to use a further 20 containers once production is secured at a higher level. In total, the expansion will provide income opportunities for 33 container managers.

AGRIVISION: THE WAY FORWARD

The market for maize, soya and wheat in Zambia and neighbouring countries is large and Agrivision is keen to scale up its operations to meet demand. In 2015, the company raised USD 30 million in equity from IFC, Norfund, and Zeder, and is considering additional opportunities for expanding its operations.

Agrivision is also considering ways to expand its engagement with smallholder

farmers. Options include, for example, providing seeds from Agrivision's farms, the provision of training in conservation agriculture, and negotiating purchase agreements for maize.

For Norfund, Agrivision is a key partner in the realisation of our agribusiness strategy. We plan to continue our support for the company financially, and through board participation and technical assistance.







IDENTIFICATION



Deal size and share

Typical deal size: USD 5-20 million

Typical investment share: 20-35%

POTENTIAL PARTNERS MUST HAVE INDUSTRIAL COMPETENCE AND THE REQUIRED FINANCIAL RESOURCES

Norfund's project cycle begins with the identification of investment opportunities. Each year we are approached by companies seeking finance for establishing or growing businesses in low- and middle-income countries. We also search the market actively for projects that fit our mandate. Our regional offices in Bangkok, Johannesburg, Maputo, Nairobi, and San José play an important role in identifying potential projects and partners.

INITIAL SCREENING

The initial screening of potential investments is primarily a desk-based exercise in which we review material received from project promoters. Potential investments are screened first against Norfund's sectoral and geographical priorities. If there is a match, Norfund evaluates whether the proposed investments fall within our deal size and invest-

ment share range. Projects are then assessed against the exclusion list used by the Association of European Development Finance Institutions (EDFI). This list defines the sectors and practices in which EDFI members, including

Norfund, will not invest. Prohibited sectors include companies practising forced labour or child labour, and enterprises producing hard liquor, tobacco, or weapons. Projects are also screened against relevant social and environmental legislation.

Environment & Social risks

EDFI members, such as Norfund, use four Environment and Social (E8S) risk categories to assess environmental and social impacts:

C. Low risk: No adverse impacts or risks.
B. Medium risk: Limited potential adverse impacts (site-specific, readily addressed).
B+. Medium/high risk: Limited potential adverse impacts or risks, but some specific features with larger adverse impacts or risks.

A. High risk: Significant potential adverse impacts (cannot be mitigated or remedied, or only at significant cost).

During the first stage of project screening, Norfund considers the additionality of its potential investment as well as the catalytic effect and sustainability of the investment. Questions include: can capital easily be raised without Norfund's involvement? Could Norfund's role help to attract other investors to a particular project or sector? Does the initial project assessment indicate the commercial viability of the project and will the returns be acceptable?

During this phase of evaluation, potential partners are asked to provide information on the environmental and social (E&S) impacts of their projects. Norfund's project team assigns an initial risk category to the project and the promoters are given information about Norfund's requirements.

Norfund is never a majority shareholder. Our coinvestors are therefore closely assessed to ensure they are able to support the high standards we demand. Potential partners must have industrial competence and the required financial resources. Shareholders, board members and the senior management of the partners must also be clearly identified. Norfund's project managers are required to identify key risks and to rate projects according to four risk categories: financial, implementation, E&S, and reputational factors.

CLEARANCE IN PRINCIPLE

If a project fits our strategic priorities and passes the first screening stage, Norfund's project team prepares a first investment paper which is presented to Norfund's Investment Committee. This document, known as a Clearance in Principle (CiP) proposal, presents the project's strategic fit and includes our assessments of the partner, the project's financial structure, the commercial viability of the project, E&S issues, and the project's potential development impacts.

Norfund's Investment Committee is an advisory body which reports to Norfund's Managing Director, and is chaired by an external expert to ensure the independence of its assessments. If the Investment Committee approves the Clearance in Principle proposal, the project then progresses to a due diligence phase.



DUE DILIGENCE

Once a project receives 'Clearance in Principle' status from the Investment Committee, Norfund begins a thorough due diligence assessment of the potential investment. The focus areas of the due diligence evaluations are based on the Investment Committee's initial project appraisal and comments.

SCOPE OF DUE DILIGENCE

During the due diligence phase we assess, among other issues: the quality of a project and its execution strategy; the financial records; the financial model; the project market, demand and competition; the management team; alignment with the other shareholders; E&S risks and mitigation plans; and the legal and corporate structures.

Our assessments of E&S risks and impacts are guided by the performance standards developed by the International Finance Corporation (IFC). The standards include provisions for issues such as workers' rights, anti-discrimination and equal opportunities, health and safety, biodiversity, land acquisitions, and relationships with local communities. An assessment of a company's willingness to improve its standards and practices is an important element of the due diligence process.

When conducting a due diligence review, we typically seek third-party verification on aspects of a project. We require, for example, documentation such as feasibility studies, market assessments, and environmental and social impact assessments (ESIAs). Industry experts are often included as Norfund consultants during the due diligence stage.

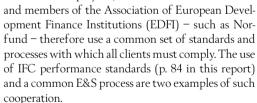
BUSINESS INTEGRITY

A thorough review of the partners that will be involved in a project is essential in the due diligence phase. A detailed overview of the ownership structure is always required; information about the owners, directors and senior management is also sought using databases and relevant networks. If there are indications of any 'red flags' or if any Politically Exposed Persons (PEP) are identified, an enhanced Business Integrity check may be required.

NEGOTIATIONS

During our negotiations with potential partners, Norfund reviews the appropriate investment instruments and the terms of the investment. Norfund is mostly an equity investor but also provides loans, or a combination of equity investments and loans. Before a final investment decision is made, Norfund will discuss a range of issues with clients, including Norfund's share of the investment, the price mechanisms, corporate governance, environmental and social impact, and Norfund's exit strategy.

Norfund always invests together with other partners. Negotiations therefore typically include the need to find common ground between several parties, each of which may have different perspectives and objectives. Development Finance Institutions (DFI) often co-invest in projects,





Norfund employee reviews project proposal

FINAL APPROVAL

A Final Approval investment paper is based on the due diligence assessment and an agreed term sheet outlining the structure of a proposed investment. Larger investments and projects considered to be high-risk also require approval by Norfund's Board of Directors. Investment decisions for all other projects are delegated to the Managing Director of Norfund and to Norfund's Investment Committee.



IFC PERFORMANCE STANDARDS FOR ENVIRONMENTAL AND SOCIAL SUSTAINABILITY¹

In 2006, the International Finance Corporation of the World Bank developed standards for social and environmental risk management when investing in developing countries. Revised in 2012, the standards are now globally recognised benchmarks for environmental and social risk management in the private sector and are used by development finance institutions, commercial banks, and other similar institutions.

Performance Standard 1: Assessment and Management of Environmental and Social (E&S) Risks and Impacts

Underscores the importance of identifying E&S risks and impacts, and managing E&S performance throughout the life of a project.

Performance Standard 2: Labour and Working Conditions

Recognises that the pursuit of economic growth through employment creation and income generation should be balanced with protection of basic rights for workers.

Performance Standard 3: Resource Efficiency and Pollution Prevention

Recognises that increased industrial activity and urbanisation often generate higher levels of air, water and land pollution, and that there are efficiency opportunities.

Performance Standard 4: Community Health, Safety, and Security

Recognises that projects can bring benefits to communities, but can also increase potential exposure to risks and impacts from incidents, structural failures, and hazardous materials

Performance Standard 5: Land Acquisition and Involuntary Resettlement

Applies to physical or economic displacement resulting from land transactions such as expropriation or negotiated settlement.

Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Promotes the protection of biodiversity and the sustainable management and use of natural resources.

Performance Standard 7: Indigenous Peoples

Aims to ensure that the development process fosters full respect for Indigenous Peoples.

Performance Standard 8: Cultural Heritage

Aims to protect cultural heritage from adverse impacts of project activities and support its preservation.





INVESTMENT

Norfund's investment agreements specify the amount Norfund commits to invest, the sequence of its disbursement, representations and warranties, and the applicable terms and conditions of the financial instrument.

DISBURSEMENT

The size of the investment, the investment period, and how the funds will be disbursed are specified by agreement. Disbursements are structured in different ways. Investment tranches, for example, may be linked to specific milestones in a company's

Use of offshore financial centres (OFCs)

Norfund always invests jointly with other investors, often through structures or funds that have been set up by others. In countries with weak legal systems and/or where there is a risk of corruption in a legal system, the administration and enforcement of laws and rules can often be ineffective and unpredictable. In such countries, it may be difficult for Norfund and its partners to ensure that adequate legal steps are taken in the event of financial irregularities or disputes.

This represents a risk that is too high for many investors and lenders. The jurisdiction of a third-party country is therefore sometimes employed for investments in certain countries. Using offshore financial centres (OFCs) places a special responsibility on Norfund to ensure that we have full oversight of the transactions taking place and that we do not contribute in any way to tax evasion or unlawful flows of capital.

Norfund is subject to the same guidelines as other state-owned companies and funds with international activities. Norfund exercises caution in its use of OFCs and follows OECD guidelines on tax-related matters. This includes avoiding both the use of countries that do not comply with Global Forum standards on transparency and effective information exchange, and avoiding countries that have not entered into tax information agreements with Norway.

business plan. Norfund may also request that the fulfilment of plans for the implementation of higher standards be a requirement for disbursements.

COMPLIANCE WITH STANDARDS

All project requirements that Norfund regards as important are made legally binding, including compliance with environmental standards and labour standards. We do not expect enterprises to be 'perfect' when we invest initially, but we expect companies to show a willingness to improve. An Environmental and Social Action Plan (ESAP) is also often included as part of the agreement, detailing what companies will need to do (and by when) to ensure that they are operating in accordance with the agreed standards for social and environmental performance.

An ESAP is not only part of the legally binding agreement between Norfund and the company, but also a working document. There are several key milestones in the roll-out of a project. Before financial close, first disbursement of capital, start of construction or start of operations Norfund can ensure various actions are taken. A company may be required to recruit a capable environmental manager. A solar plant may need to develop a drainage management plan to mitigate run-off and soil erosion. An agri-company may be required to improve its human resource practices by developing an employee handbook clearly explaining workers' rights and obligations and have induction training of new employees.

NORFUND'S INFLUENCE

In addition to being an active shareholder, Norfund would typically require at least one seat on the Board of Directors of a company in which we invest.

Norfund's nominated board members meet once a year to exchange experiences and discuss strategy and other relevant topics.



ACTIVE OWNERSHIP

Norfund is an active, strategic minority investor. This entails playing an active part as the owner of portfolio companies in order to contribute expertise, establish sound corporate governance, and set high standards. Securing competent boards of directors for our portfolio companies is one of the important tasks we undertake.

BOARD POSITIONS

The Board of Directors of an investee company is appointed to act on behalf of its shareholders and



Vocational Forestry Training

Norfund has invested in the Agri-Vie fund which, in turn, has invested in the New Forest Company (NFC). NFC - a company established in 2004 - is developing a vertically integrated forestry and timber operation in East and Southern Africa and currently operates in Uganda, Tanzania, Rwanda, and Mozambique. After an initial tree planting phase, the company shifted its activities to the harvesting and utilisation of timber in 2012. When it started its operations, the company relied mostly on unskilled labour, but needed more qualified staff as well as a stronger focus on occupational safety because of the increasing complexity and potential hazards of its business activities. Providing broad-based training at the start of new business operation typically helps to lower management risks and health and safety risks because appropriate standards and good working habits can be established. NFC's vocational training was supported by Norfund's Grant Facility.

to run the day-to-day affairs of the company. As an active owner, Norfund will normally be represented on the Boards of our investee companies. Norfund evaluates the composition of a company's Board and will identify the most value-adding competencies for an investment. We help companies identify individuals who are able to provide required competencies, using our Norwegian and international networks. These may include expertise in a particular industrial sector or finding appropriate experts in business development or corporate governance. In certain cases, a Norfund senior investment professional may be nominated to the Board.

To distinguish clearly between the role of a Board Member and a Project Manager, Norfund typically assigns each role to two respective individuals. Alignment and full cooperation between a Project Team in Norfund, and the Board of an investee company is important. Adherence to the principles of good corporate governance is critical.

MONITORING AND SUPPORT

Norfund's Project Manager and the supporting team assess the activities of investee companies from a shareholder's perspective. We closely monitor, for example, whether enterprises are:

- Operating in accordance with the strategy agreed
- Performing according to the financial plans
- Practising satisfactory corporate governance and internal control
- Following domestic laws and international standards
- Taking environmental and social concerns into account
- > Ensuring a satisfactory working environment

Norfund offers business development and support through its Grant Facility scheme. The scheme allows us to co-finance improvement initiatives such as management systems, governance policies and routines, energy efficiency, accounting, occupational health and safety, and capacity building. It is an important tool which helps us to practise active ownership and further enhances the development effects of our investments.



EXIT

We strive to create investment companies that are well managed, financially viable, and sustainable. The time horizon of an investment is decided when an investment is made, and a strategy defines how the Fund should exit. The life of an investment is deter-



Post-exit analysis of Locfund

In November 2015, Norfund received its final payment from Locfund – the first local currency fund in Latin America to focus on lending to microfinance entities (MFIs). Prior to the launch of Locfund in 2006 (by FMO, IDB and Norfund), MFIs in Latin America usually borrowed in USD from international funders and provided loans in local currencies to their clients. This created a currency mismatch and a serious risk to MFIs because currency devaluations could rapidly jeopardise the finances of institutions.

The post-exit analysis found that Locfund had supported a total of 45 MFIs in 13 countries and had more than 95,000 end-clients. The fund had largely met its development goals in terms of the average loan size for its end consumers (USD 935), the proportion of loans to female clients (64 percent), and the proportion of urban clients (63 percent). The fund also provided 100 technical assistance activities to MFI clients.

The fund yielded a positive IRR of 5.54 percent. The success of Locfund has paved the way for similar funds: Locfund II is double the size of the first Locfund, and many other funds have been launched, each with significant local currency components.

mined primarily by how long Norfund's investment is additional. The investment periods for loans and fund investments are clearly defined in our investment agreements. For equity investments, decision gates should be established. These are points at which an explicit position is required on whether to continue Norfund's ownership or to exit. Norfund is a serious, predictable and long-term investor. At the same time, we do not wish to remain in our role as the owner of a company for longer than is necessary.

POST-EXIT ANALYSIS

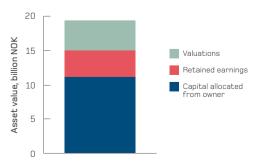
After we exit an investment, the Norfund project team will conduct an analysis of the investment. This describes the project and the key partners involved, the role of Norfund and the project's performance in terms of business, E&S risks, and development outcomes. The report includes an analysis of the role of external factors (for example, political and economic), evaluates the quality of Norfund's work, and lists the lessons learned. The post-exit analysis is then debated by Norfund's Investment Committee.



Norfund's operational income is the sum of interest, dividends and sale of shares. The income we receive when we exit companies is added to our capital base, and reinvested in new enterprises.

At the end of 2015, Norfund had a net asset value of NOK 19.4 billion, NOK 3.8 billion of which is retained earnings. Our success in increasing our assets has allowed us to invest at a greater scale than what would be possible with government funds alone.

Figure Norfund's net asset value as of 31.12.15





An exit occurs when a company's loans are fully repaid to Norfund or when Norfund sells its equity stake

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https://www.cia.gov/library/publications/the-world-factbook/

IIF, Annual EM capital flows database,

https://www.iif.com/content/detailed-capital-flows-database-annual-data

International Energy Agency, IEA statistics, available at

http://www.iea.org/statistics/

The Shift Project Data Portal, available at http://www.tsp-data-portal.org/

World Bank, Global Findex, available at

http://www.worldbank.org/en/programs/globalfindex

World Bank, Ease of Doing Business, available at

http://www.doingbusiness.org/rankings

World Bank, Enterprise Surveys, available at

http://www.enterprisesurveys.org/

World Bank, PovcalNet, available at

http://iresearch.worldbank.org/PovcalNet/

World Bank, World Development Indicators, available at

http://data.worldbank.org/products/wdi

ACRONYMS AND ABBREVIATIONS

AFD	Agence Française de Développement
CiP	Clearance in Principle
CO2	Carbon Dioxide
DE	Development effects
DFI	Development Finance Institution
DFID	Department for International Development (UK)
E8S	Environmental and Social
EDFI	European Development Finance Institutions
EFP	European Financing Partners
EIB	European Investment Bank
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
EU	European Union
FAO	Food and Agriculture Association of the United Nations
FDI	Foreign Direct Investment
FI	Financial Institutions
GDP	Gross Domestic Product
GWh	Gigawatt hour
ha	Hectare
IC	Investment Committee
ICCF	Interact Climate Change Facility
IEA	International Energy Agency
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International Finance Institution
IPCC	International Panel of Climate Change
IPP	Independent Power Producer
IRR	Internal Rate of Return
ISO	International Organization for Standardization
KPI	Key Performance Indicator

LDC	Least Developed Country
MFA	Ministry of Foreign Affairs
MFI	Microfinance Institution
MSME	Micro-, small- and medium-sized enterprises
MW	Megawatt
NBFI	Non-Banking Financial Institutions
NHO	Norwegian Association of Enterprises
NMI	Norwegian Microfinance Initiative
NOK	Norwegian Kroner
Norad	Norwegian Agency for Development Cooperation
Norfund	Norwegian Investment Fund for Developing Countries
ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
OFC	Offshore Financial Centre
PEP	Politically Exposed Person
SDG	Sustainable Development Goal
SKIHI	Statkraft International Hydro Invest
SME	Small- and medium-sized enterprises
SN Power	Statkraft Norfund Power
SSA	Sub-Saharan Africa
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Fund
USD	United States Dollar
WB	The World Bank
WFP	World Food Programme
WHO	World Health Organisation



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