AECF
Funding Innovation for Business in Africa

Impact Report 2014

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The AECF is a special partnership initiative of the Alliance for a Green Revolution in Africa (AGRA). AGRA is a dynamic, African-led partnership working across the African continent to help millions of small-scale farmers and their families lift themselves out of poverty and hunger. Through its programmes, AGRA develops practical solutions to significantly boost farm productivity and incomes for the poor while safeguarding the environment. AGRA, with initial support from the Rockefeller Foundation and the Bill & Melinda Gates Foundation, maintains offices in Nairobi, Kenya and Accra, Ghana.

This report is the outcome of close collaboration between KPMG IDAS and Triple Line Consulting:

The Fund Manager of the AECF is KPMG International Development Advisory Services

TRIPLE LINE CONSULTING
an IPE Global group company

KPMG International Development Advisory Services (IDAS) is the Fund Manager for the AECF. KPMG IDAS is a Centre of Excellence in development advisory work on the continent. It has adopted a pan-African approach to development, employing full-time development experts complemented by a network of champions across the continent to deliver services in programme and fund management, organisational assessment and development, rebuilding fragile and conflict affected states, renewable energy and adaptation to climate change, private sector development, good governance and public healthcare.

Triple Line has worked with KPMG IDAS since the AECF was launched in the capacity of AECF's monitoring, evaluation and learning partner. Its diverse, international staff and network of consultants are experts in monitoring, evaluation and learning, particularly in supporting the performance assessment of private-sector linked assistance and challenge funds. Other core service areas include: private sector development, governance and fragile states, challenge fund design and management, and social and economic empowerment.

The views expressed in the report are those of the Fund Manager and do not necessarily represent the views of AGRA or the AECF's donors.

The AECF portfolio covers a wide variety of projects, many of which have particular methodological challenges associated with impact assessment. The development impact data and analysis presented in this report represents the best endeavours of the Fund Manager and its Monitoring, Evaluation and Learning partner. It is important to note that assessing the development impact of the projects AECF funds is an ongoing process and that data may be further refined.

All photos taken by Kate Holt (KPMG IDAS) unless otherwise credited.

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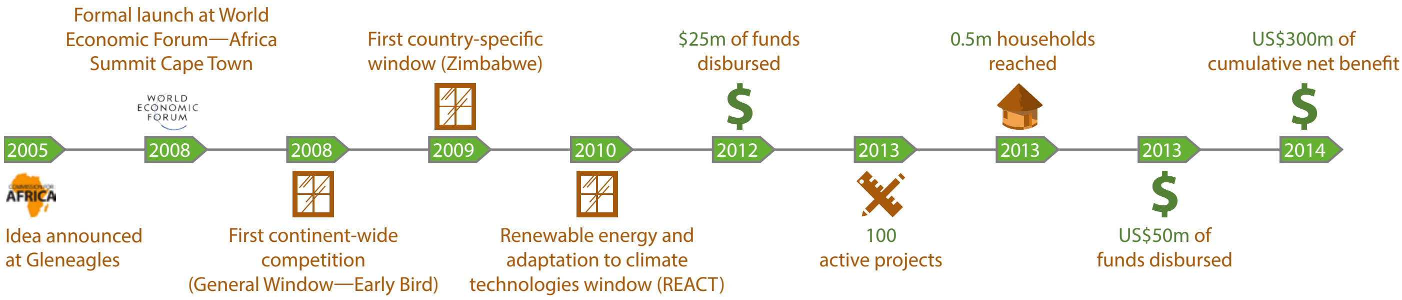
The Africa Enterprise Challenge Fund

The Africa Enterprise Challenge Fund (AECF) is a multi-donor funded financing vehicle which works to stimulate private sector entrepreneurs in Africa to find innovative and profitable ways of improving market access, and the way markets function, for the rural poor. The Fund awards grants and non-recourse loans to projects focused on agriculture, renewable energy and adaptation to climate change, and access to financial services and information, with the aim of improving household incomes and reducing rural poverty.

Funding is awarded through competitions, with applicants judged on the commercial viability, innovation, and potential development impact of their projects.

Since the AECF's inception in 2008 up to the end of 2014, US$244m has been allocated to the Fund by its donors. 208 projects spread across 23 countries in sub-Saharan Africa have been approved for funding via 18 funding competitions, directly benefiting nearly 7m people in 2014 alone.



The AECF's strategic objectives

According to most recent estimates, 415 million people in sub-Saharan Africa live on less than $1.25 a day.[1] This poverty is primarily a rural phenomenon, as over 70% of the continent's poor live in rural areas and the majority depend on agricultural activity for their livelihoods.[2] The potential for the rural poor to enhance their livelihoods is hindered by a series of interconnected market failures resulting from a lack of access to infrastructure, financial services, and information. Furthermore, the challenges faced by the rural poor will be exacerbated by the effects of climate change over the coming decades, with crop yields falling and food prices becoming more variable. Local SMEs with the ability to improve rural households' livelihoods, build resilience to climate change, and create jobs, are often unable to secure the long-term capital required to implement innovative projects.

In this context, the AECF's core objective is to contribute to the growth of sub-Saharan Africa's agricultural, agribusiness and renewable energy sectors resulting in sustainable benefits for the rural poor. Underpinning this are a number of strategic objectives which the AECF's Fund Manager adheres to when awarding grants and loans.

First, the AECF funds innovative and commercially sustainable business ideas that have the potential to positively impact the incomes of rural households. While the majority of these businesses are formal sector small and medium-sized enterprises (SMEs), the AECF occasionally funds commercial projects undertaken by larger national or multinational companies if the project is deemed to be significantly innovative and would not be implemented otherwise.

The AECF's **core objective** is to contribute to the **growth of sub-Saharan Africa's agricultural, agribusiness and renewable energy sectors** resulting in **sustainable benefits for the rural poor.**

Secondly, the AECF aims to improve the way agribusiness and other market systems work, thereby facilitating market entry for rural poor households and businesses. Having an impact on the rural poor is central to the AECF's strategy. Critically, this 'market systems' objective increases the likelihood that the resulting improvements in livelihoods are sustainable and replicable; and, projects that lead to significant market systems impacts ('systemic change') pave the way for others to enter and further develop markets.

Thirdly, the AECF aims to stimulate the development and use of affordable and accessible technologies for the benefit of the rural poor. The Fund Manager selects business ideas that utilise technologies with the potential to scale.

Finally, ensuring AECF funds have a catalytic effect by leveraging private sector investment is a fundamental part of the strategy. This will maximise the impact of AECF funds and also ensure project risks are shared with recipient businesses and third party funders.

How the AECF has been designed to meet its strategic objectives

While the AECF has grown rapidly since 2008, the tools it uses to realise its strategic objectives have remained constant. Many of these are typical of challenge funds and comparable funding mechanisms, while others are unique to the AECF.

In order to effectively identify the most innovative projects in specific sectors and regions, the AECF Fund Manager has run a series of targeted competitions requiring potential grantees to submit their ideas and business plans. The primary focus throughout has been on funding projects in the agribusiness sector, as the majority of the rural poor are already engaged in agricultural activities. However, in recognition of other urgent challenges facing the rural poor in sub-Saharan Africa, specific competitions targeting renewable energy, adaptation to climate change and post-conflict states have also been run.

As well as enabling the AECF to identify the most innovative projects, the competition format ensures private sector companies with local knowledge are incentivised to take risks.

The Fund Manager utilises a number of techniques and project selection criteria to maximise the impact AECF funded projects have on market systems. While identifying projects with the potential to develop markets which the rural poor use is not straightforward, experience has shown that innovative projects with commercial motivation and potentially replicable business models are more likely to have a systemic impact. Promoting competition by funding clusters of projects with similar business models (e.g. PAYGO solar) has also been effective in developing markets for the poor.

The co-financing method implemented by the AECF is characteristic of challenge funds. This approach requires businesses to match AECF grants and loans with their own cash, in-kind funds and third party finance. In this way, AECF catalyses and leverages private sector investment, shares risk with fund recipients, and ensures recipients have demonstrated financial commitment to the success of their projects.

Finally, a unique feature of the AECF is the recent introduction of AECF Connect which works to facilitate linkages between projects and commercial investors to bring successful business models to scale and further stimulate private sector investment in projects that benefit the rural poor in Africa.

The AECF **catalyses and leverages private sector investment, shares risk** with fund recipients, and ensures **recipients have demonstrated financial commitment** to the success of their projects.

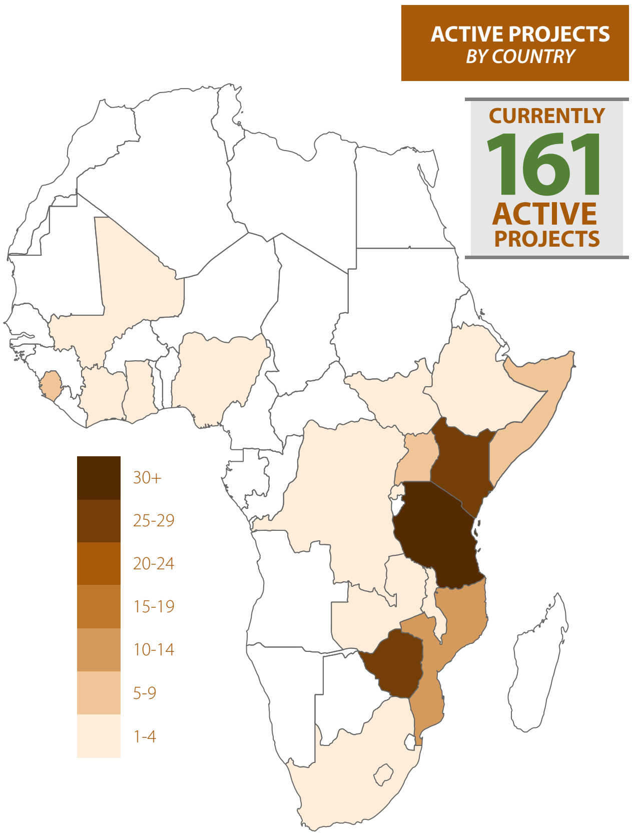
The AECF's impact in 2014

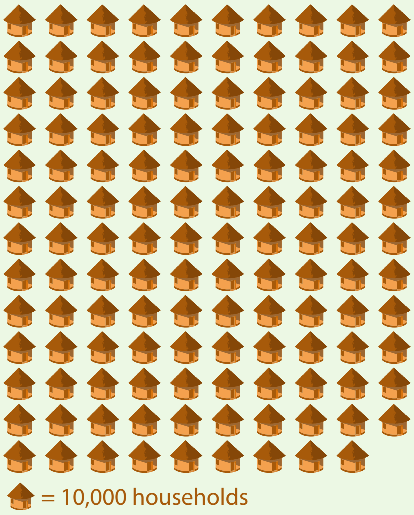
The 161 active projects funded by the AECF directly benefited 1.45m households in 2014. Once the baseline number of households (those already benefiting from projects before they received AECF funding) is deducted, this number reduces to 1.39m new or net beneficiary households – approximately 7m people. This represents a 48% increase on the number of net beneficiaries from AECF funded projects in 2013. In total, AECF funded projects delivered US$117m of benefit to poor households in 2014, with each household benefiting by US$84 on average.

These strong development impact numbers demonstrate that the AECF's portfolio of funded projects is having a significant impact on the rural poor in Africa. However, an important observation is that a large proportion of the increase in the number of beneficiary households and resulting total net benefit is driven by a relatively small number of projects which have reached maturity. In aggregate, AECF's portfolio of projects is still relatively immature. As more projects mature and move to scale over the coming years, the development impact of AECF funded projects is expected to grow substantially.

The AECF measures its impact primarily in the form of additional household income rather than new jobs created. For example, in the case of an AECF funded project working with rural smallholder farmers as suppliers, the profits the smallholders accrue as a result of the project would be captured as a financial benefit to the household, rather than as a job created.

The Fund reports jobs created where those jobs relate to direct and salaried employment in a funded business. By this measure, AECF has helped create over 5,100 jobs since 2008, with a cumulative wage bill of US$60m. 34% of these jobs have been taken by women, and 64% by employees under the age of 35.





1.39m

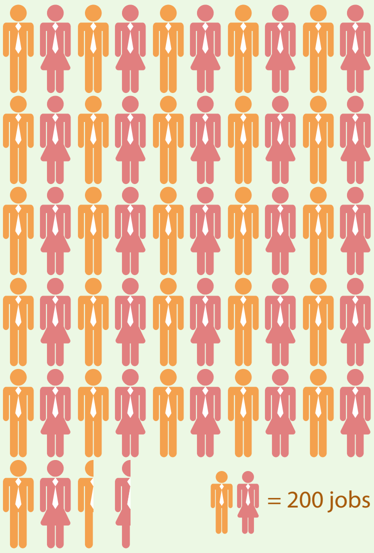
households reached or approximately

7m

people.

$117 million

total net benefit to poor households



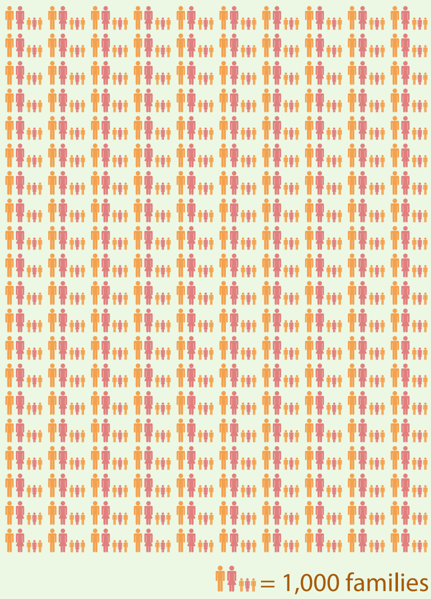
5,100

jobs created in AECF funded businesses since 2008.

Improved access to clean, sustainable energy for over

200,000

families.

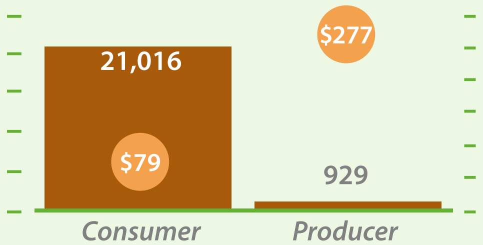


AECF beneficiaries: producers and consumers

Where rural households purchase a good or service from the AECF funded business – as is the case in the majority of financial services, information, renewable energy and input supply agriculture projects – they benefit as a consumer. Where households sell a good or service to the project and generate more income than previously – as is the case with agricultural processing, trading and contract farming projects – they benefit as producers.

In 2014, projects that have consumer-beneficiaries impacted 23 times as many households on average than those which have producer-beneficiaries. However, producer-beneficiary projects benefited each household by over three times as much on average.

All active projects



In addition to the direct impact on household incomes, AECF funded projects reported varying levels of impact on market systems in 2014. For example, 30% of projects reported replication of their business models by other firms to varying degrees, while 29% of projects reported having an impact on the legal and regulatory environments in which they operate.[4]

Quantifying the degree to which the AECF has funded projects that harness local knowledge is challenging and better demonstrated qualitatively through individual project case studies. However, business ownership may be used as a proxy to demonstrate the utilisation of local expertise in solving problems facing the rural poor. In 2014, 58% of the projects in the AECF portfolio were run by nationally-owned businesses. These projects have been particularly prevalent in fragile or post-conflict states, where nationally-owned firms are the first to emerge as they have a better understanding of how to navigate challenging business environments.

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29%

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For further analysis of the AECF development impact in 2014 please refer to annex three.

By the end of 2014, the AECF had committed US$144m in grants and loans to projects. This has been matched by US$401m committed funds from businesses undertaking AECF projects and third party sources. In total, this represents US$2.78 of matched and third party investment for every US$1 of AECF funding – clear evidence of AECF's success in leveraging private sector investment in solutions which raise the incomes of rural households and contribute to the growth of Africa's agribusiness and renewable energy sectors.

For every

US$1

of AECF funding,

US$2.78

has been matched by projects and third parties.

The cumulative net benefit to poor households from the AECF funded projects was approximately US$361m at the end of 2014. During the same period, the Fund disbursed US$77m, resulting in a Development Rate of Return[5](DRR) of 4.69. While the DRR for the entire portfolio is somewhat modest, there is significant variation. Older AECF competition windows with projects that are moving to scale have DRRs of over six, while newer windows with few established projects have DRRs of less than one. It is therefore reasonable to argue that funding the AECF represents excellent value for money as a development impact mechanism, provided younger projects in the portfolio continue to mature and move to scale – much as many of the projects funded in the first few years have already done.

Impact by sectors

Projects funded by the AECF fall within five main sectors: agribusiness (66% of active projects), renewable energy (14%), financial services (10%), adaptation to climate change (6%) and information (4%). Given the Fund's heavy weighting towards agribusiness, it is unsurprising that projects in the sector benefited the highest number of households in total – 569,000 or 41% of the total households reached by AECF projects in 2014. Agribusiness projects were also responsible for US$65.35m of direct net benefit to poor people, or 56% of the total net benefit from AECF funded projects, last year.

Despite only making up 4% of active projects, information projects benefited 515,000 rural households (37% of total households reached) and were responsible for US$30m of net benefit (26% of total net benefit). However, all of this impact is due to Mediae's Shamba Shape-Up project which benefited an estimated 515,000 households by US$58 each on average, making it the project with the greatest impact in the portfolio last year.

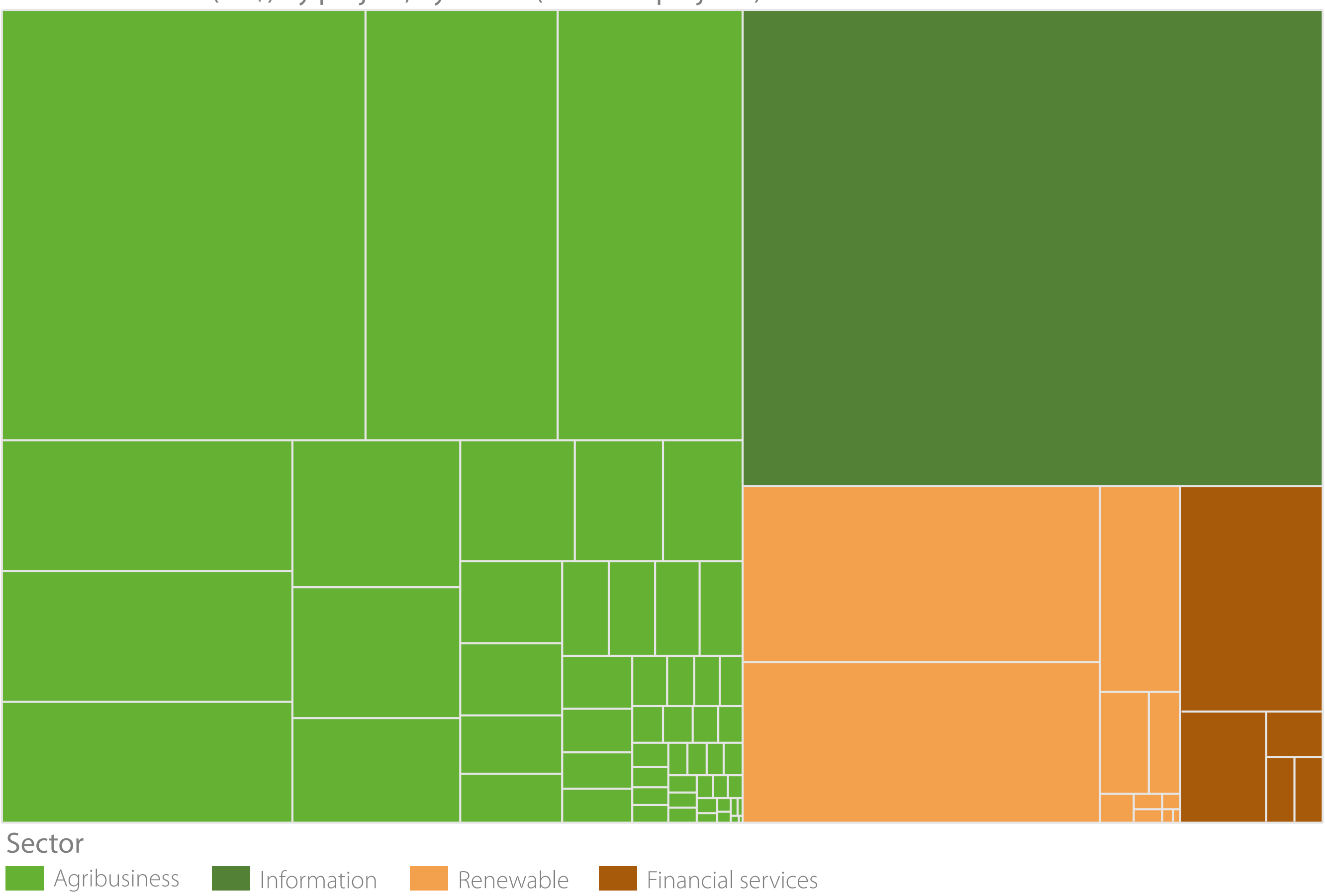
The following pages of this report present detailed analysis of the commercial performance and development impact of AECF funded projects in each key sector.

AECF 2014 total development impact by sector (all active projects)

Sector	Total number of households	Net benefit per household	Total net benefit	Number of jobs created*
Adaptation	450	$58	$0.03m	167
Agribusiness	569,000	$115	$65.4m	3,340
Financial services	84,800	$61	$5.21m	248
Information	515,000	$58	$30.0m	90
Renewable energy	224,900	$72	$16.1m	1,309

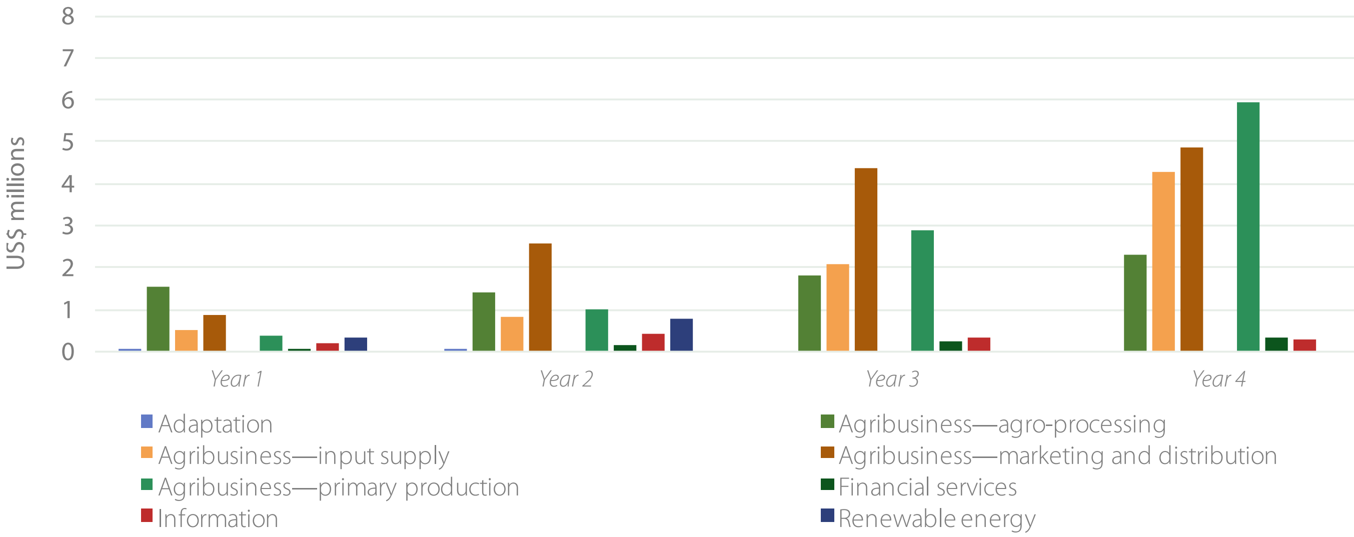
**Since 2008*

Total net benefit (US$) by project, by sector (all active projects)



Commercial performance

Average project revenue by sector by project age (all active projects)



It is estimated that at the end of 2014, 57% of active projects in the AECF portfolio were in the design or early operation phases. This is unsurprising as a similar percentage of projects are less than two years old. In contrast, only 15% of active projects in the portfolio are estimated to be moving to scale.

The strong revenue growth of agribusiness projects is indicative of the relatively developed agricultural industry and related markets in sub-Saharan Africa. Primary production projects have exhibited high overall revenues compared to other sectors, but have negative EBITDA and gross margins until year four. This is primarily driven by crops such as avocado, oil palm and macadamia, which can take seven to ten years to reach maximum yield and profitability. In contrast, agro-processing projects are profitable at an early stage with stable gross margins, despite demonstrating more modest revenues. This is due to the fact that agro-processing is generally viewed as a high value-add agricultural activity (*see section on Africa's untapped agribusiness potential*).

Input supply projects are on average profitable in year one but not again until year four. This is potentially driven by high costs involved in expansion. However, these projects have exhibited a very high rate of revenue growth and larger gross margins than agro-processing projects.

The Fund Manager expects that the majority of successful projects will only post profits (measured by EBITDA) once they move to scale. At this stage in the portfolio's development, revenue growth and gross margin can be evaluated as indicators of future commercial viability.

It should be noted that while agricultural trading projects have had high overall revenues each year, they represent a fairly small sub-sector of AECF projects, which have struggled to control costs and remain profitable.

Renewable energy is a significantly less mature industry in Africa than agribusiness. Nevertheless, the AECF has funded projects with innovative business models, particularly in the off-grid energy and PAYGO solar sub-sectors. The majority of these are at a very early stage and have tended to post losses to date – despite promising revenue growth and gross margins. However, a number of projects are already providing global public goods through CO_2e emissions reductions.

Rural financial services and information projects in the AECF portfolio have exhibited high gross margins - symptomatic of the higher margins found in service sectors generally. Despite this, these projects have demonstrated weak commercial performance, with negative profits and low revenues. Financial services projects in particular have struggled to profitably extend services into rural areas without the support of larger institutions. Nevertheless, some AECF funded financial service and information projects have produced very high levels of development impact.

Development impact

The development impact generated by AECF funded projects – both in terms of direct benefit to households and jobs created – varies significantly by sector. Identifying these differences is a critical part of monitoring and results measurement within the AECF. It has the potential to inform future project selection and can provide insight into how the AECF can more efficiently disburse funds in order to maximise its impact on the lives of the poor poor.

While the table to the right clearly shows that information projects reached substantially more poor households on average than other sectors in 2014, this data is skewed heavily by the success of the Mediae Shamba Shape-Up project and the very small data set (six projects in total). This is not to say that funding information projects cannot reach a large number of households and have significant development impact, but rather that the AECF has not funded enough of these projects to draw any firm conclusions about performance at a sector level. The same is true of adaptation projects, which are also too new to have reported substantial development impact.

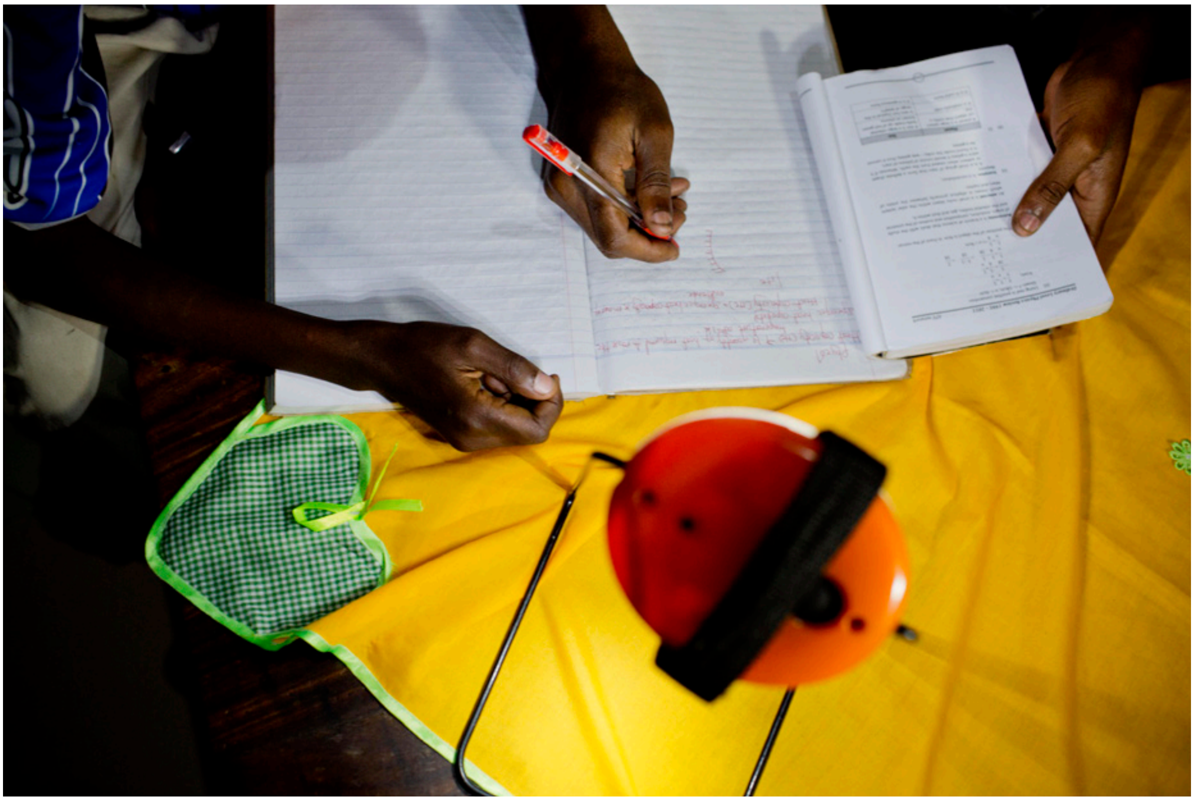
Discounting information projects, the sectors which impacted the highest numbers of poor households on average last year were input supply, renewable energy, and financial services projects. This is due to the fact that these types of projects engage with beneficiary households as consumers, a model which is easier to scale to impact large numbers of people. Within the renewable energy sector this extensive reach has been driven largely by the success of PAYGO solar projects, which provided over 200,000 households with off-grid solar energy in 2014 alone (*see page 27*).

Average impact of AECF projects by sector (all active projects)

Sector	Total number of households	Net benefit per household
Adaptation	45	$57
Agribusiness: agro-processing	782	$270
Agribusiness: input supply	12,529	$100
Agribusiness: marketing and distribution	1,413	$479
Agribusiness: primary production	222	$134
Financial services	4,991	$61
Information	85,851	$58
Renewable energy	10,223	$71

Renewable energy projects produce relatively small benefits per poor household, as is to be expected for typical consumer-beneficiary projects. Despite also engaging with poor people as consumers, input supply projects provide households with more robust benefits, delivered primarily as a result of yield improvements for smallholder farmers, a core demographic targeted by the AECF.

Financial services projects have delivered modest net benefits per household while engaging with beneficiaries as consumers. However, projects within the sector have not reached as many households as other 'consumer-beneficiary' projects, due in part to challenges faced in extending services into poor areas (*see section on access to financial services in poor areas for further analysis*).

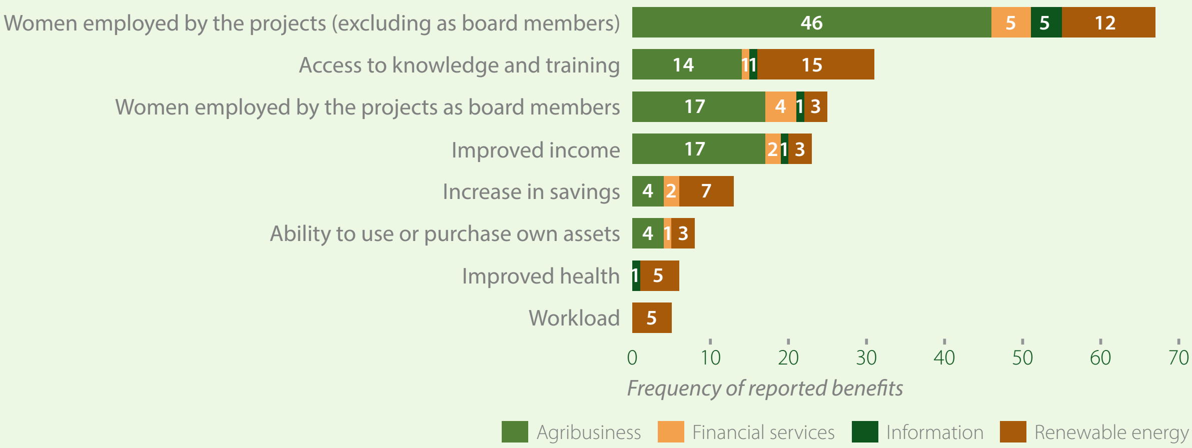


The gender impact of AECF projects

An analysis of the gender impact of the AECF would require detailed household level data to review impacts on gender roles, control of assets and behaviour at a household level. The Fund Manager is currently exploring ways to improve the data it collects on the gender impact of AECF funded projects. For instance, it is currently piloting an SMS survey methodology of a solar PAYGO project's customers in order to identify whether men and women derive different benefits from products. The Fund Manager has also recently revised the data it collects on gender as part of the site visits it conducts. Improving the data collected and analysis undertaken in this area is an ongoing process.

Projects in the AECF portfolio target rural households, the vast majority of which contain both genders, and benefits are measured in terms of net financial income change to a household. It is assumed that the household is receiving the benefit whether it enters the household via the male or female member. The graph below highlights the benefits that were reported as accruing to women explicitly as a result of AECF projects in 2014.

Frequency of benefits for women from AECF projects



Based on a sample size of 82 active projects.

The most frequently cited benefit to women in the portfolio is job creation, both in management positions (board members) and as other staff (e.g. suppliers, direct employment). The majority of these jobs are focused on agriculture, due to the weighting of the AECF portfolio towards the agribusiness sector. Nevertheless, only 34% of the positions created by AECF funded projects in 2014 were filled by women. This can be attributed to the fact that in traditional and conservative rural areas most formal jobs are taken by men.

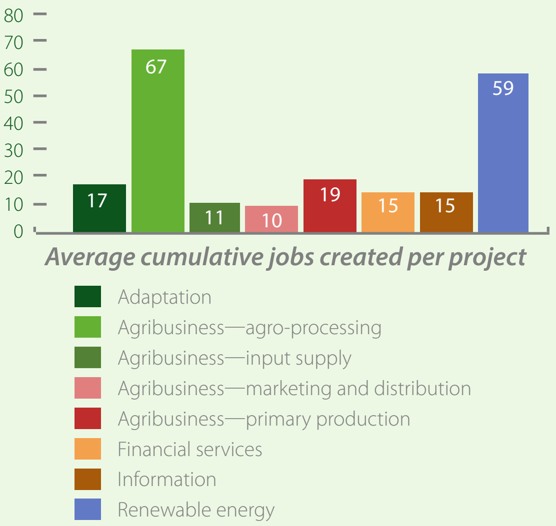
The portfolio analysis undertaken indicates that a number of AECF projects have delivered important benefits to women, particularly through improvements to women's health and the lightening of workloads. Across the regions in which the AECF is active, women are traditionally responsible for the collection of fuel for cooking and household energy consumption, frequently using inefficient cook stoves in unventilated homes. These tasks are both physically demanding and time consuming, and disproportionately affect the health of women. Women can spend several hours a day collecting wood loads of 20kgs or more. This reduces the time available for other aspects of livelihood improvement. Additionally, longer hours of exposure to smoke in kitchens leads to higher levels of lung and eye diseases. The AECF is supporting projects to alleviate these gender-specific issues – 11 projects are specifically working to improve the availability and accessibility of alternative energy and fuel sources, and are consequently improving the lives of rural women.

Marketing and distribution projects produced the highest net benefit per household by a considerable distance. However, these projects constitute a fairly small sub-sector within agribusiness and the average net benefit is heavily skewed by a single project with high household impact.

As a sector with a significant amount of projects, agro-processers have been successful in producing US$270 of benefit per household on average. These projects primarily deliver benefits through purchasing agricultural commodities from smallholder farmers, which are then processed and sold as finished products.

Primary production projects can simultaneously address many of the constraints smallholder farmers face by providing them with inputs, training, access to credit, and a guaranteed market. These projects benefit a small number of households on average, and to date have delivered modest benefits per household for a supplier project. The Fund Manager is confident that as some of the primary production projects involving crops that take several years to produce significant yields (e.g. avocado, oil palm and macadamia) begin to mature, the average net benefit per household from these projects will grow further.

Average number of jobs created per project by sector (all active projects)



As aforementioned, job creation is low across the AECF portfolio as the focus has been on increasing the incomes of the rural poor rather than creating jobs. Agro-processing projects create considerably more jobs than other sectors, as they directly employ rural people in the processing of agricultural goods. Renewable energy projects have also created a substantial number of jobs through their rural distribution networks. However, significant full time job creation, even in the agro-processing sector, is capital intensive. Other sectors such as input supply and financial services provision are not labour intensive, and are unlikely to directly employ significant numbers of rural poor.

Despite the variations in development impact by sector, the AECF is committed to maintaining a diverse portfolio in order to contribute meaningfully to the growth of sub-Saharan Africa's agricultural, agribusiness and renewable energy sectors. While this will mean a continued focus on agribusiness projects, the Fund Manager recognises that resilience to climate change, access to quality information and financial services are a fundamental part of improving the livelihoods of the poor people. Furthermore, business models that are successful in a specific country or region may not be suitable in others, and the AECF will continue to ensure that projects are selected on a case-by-case basis to ensure the potential for development impact is maximised. The following section of the report focuses on the key development challenges currently facing the African continent, and highlights the ways in which AECF funded projects are working to address them in order to lift rural Africans out of poverty.

The Fund Manager recognises that resilience to

climate change,

access to

quality information

and

financial services

are a fundamental part of improving the livelihoods of the rural poor.

High impact from Shamba Shape-Up

Shamba Shape-Up is an infotainment or edutainment television series produced by The Mediae Company (Media for Education and Development). It is broadcast in Kenya, Tanzania and Uganda. Using a reality TV farm makeover format, the show aims to equip viewers with the tools and techniques required to boost productivity on their farms (known in Swahili as 'Shambas') and consequently improve their livelihoods.

An impact evaluation study carried out by a consortium of universities and private firms used household surveys and statistical methods to ascertain the level of development impact produced by the show in 2013. After surveying 10,000 households, the study estimated that Shamba Shape-Up benefited 429,000 households and generated benefits totalling US$24,700,000. The Fund Manager used the increase in the show's viewership figures between 2013 and 2014 as a factor for extrapolation to estimate 2014 impact. It is estimated that in 2014 Shamba Shape-Up benefited 515,000 rural households and provided total benefits of US$30m – the highest development impact from a single project in the AECF portfolio.

It should be noted that these figures may be conservative, as the original study focused on the impact on dairy and maize farmers only and did not take into account urban viewers.

It is estimated that in 2014 Shamba Shape-Up benefited

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The additionality of AECF funding

The Donor Committee for Enterprise Development (2014) notes that a fundamental task for a challenge fund manager is to ensure that any public money disbursed is additional – 'i.e. will not be used to support activities that the business could and would undertake anyway'. The DCED describe two ways in which additionality can be reported on – input additionality and development additionality. Input additionality refers to whether public input resources – usually finance – are additional to what the recipient business would have done anyway. Development additionality is concerned with the output, i.e. outcomes and impact achieved as a result of additional public resources. Therefore, reporting on expected additional development results still requires specifying why the agencies' input activities are considered additional (DCED, 2014).

Qualitative and quantitative analysis of the portfolio over 2014 has highlighted the input and development additionality associated with the AECF. Input additionality is important when there is a perceived market failure in the commercial banking sector which leads to low levels of investment in higher risk and innovative businesses, and in turn damages economic growth and associated social benefits. The input additionality of AECF has been cited by grantees as its ability to bridge the gaps in traditional commercial financing which prevent businesses from accessing finance.

Funding also enabled projects to be implemented at a quicker pace and greater scale, leading to more significant development impact and higher profits.

Building upon previous qualitative analysis, this year's analysis focuses on demonstrating the development additionality of the AECF: how the Fund has enabled grantees to address the business constraints entailed in working in rural sub-Saharan Africa. The table below highlights the high number of grantees which identified and evidenced positive changes or improvements that have taken place in their businesses as a result of AECF funding (e.g. increased productivity and profitability, enhanced brand identity, value and appeal). All grantees active in 2013 and 2014 reported and produced evidence on one or more positive change or improvement attributable to the AECF.

Type of development additionality	Definition	Number of projects
Increased productivity and profitability	Funds are invested in making production methods more efficient and effective, resulting in improved quality and/or quantity of goods and services. This should drive an increase in project revenue, profit and profit margins.	42
Enhanced brand identity, value and appeal	The branding of goods and services provided by AECF projects are enhanced using additional funding, leading to an increase in perceived value and customer appeal.	32
Expanded production or service provision	Additional funding enables grantee to scale-up production and service provision.	31
Access to new markets	The business is able to expand into new geographies and demographics as a result of the AECF funded project.	26
Competitive advantage and differentiation	The business is able to develop a product which differentiates it positively from other products in a shared market as a result of the AECF funded project.	22
First mover advantage	Additional funding enables the business to be the first in a market (regional or sectoral) to offer a particular product.	20
Supply chain security and sustainability	Material, financial and human resources entailed in the production, distribution and sale of goods and services are secured in a sustainable manner using additional funds.	18

Based on a sample size of 82 active projects.

Quotes from projects highlighting additionality of AECF funding

'The most significant impact that funding from AECF will mean to this project will be a ***much shorter implementation time*** *for the project and for its benefits to be realised—and most significantly a* ***much greater outreach into the rural areas****'.*

One project commented that Ugandan commercial banking interest rates, which range from 22% to 25%, would make it 'impossible to distribute the vaccine with ***an end-user price that is affordable to the rural farmers****'.*

'The ***implementation of this project would not be possible without AECF finance*** *due to the fact that most financial institutions would be less interested in financing the smallholder farmer portion of the business'.*

'Thank you for the catalyst that made our adventurous plans possible. With the news we had won US$1m of loan funding and the immediate cash injection of the US$150,000 grant we were able to go to market with demonstrable investment already on board. On the back of AECF's commitments we were able to raise a further ten million dollars of funding. ***Our first factory is on the verge of go-live, a place almost impossible to have imagined three years ago when we sat waiting to deliver our funding pitch to your team in Nairobi.****'* AgriProtein Technologies

10 things we've learned about running an enterprise challenge fund

1

Challenge funds are about starting races, not picking winners.

2

Rural customers make rational purchasing decisions.

3

Unlocking ways for rural people to pay for things incrementally and remotely is the transformation for rural energy access (and probably other things).

4

Competitions work, but proactive targeted portfolio generation needs to be a core activity to elicit even better innovations.

5

It's rarely just about the technology: due diligence of a company's execution capability is critical.

6

Branding and the language of doing business is key.

7

Local knowledge is critically important when making investment decisions. An idea that works in one place won't necessarily work somewhere else.

8

Understand the people in the business – they're the ones who will make it fly or hold it back.

9

Funding business ideas in fragile and conflict affected states almost always stimulates additional private sector investment and development impact.

10

Doing business in Africa is hard, and an entrepreneur who can talk the talk should not be given funding over the one who can't... but who has been out there getting the job done.

Addressing Africa's most urgent development challenges

Africa's untapped agribusiness potential

Agricultural production has the potential to be a pathway out of poverty for many of Africa's rural poor. It represents the primary source of income for 90% of the rural population in Africa and accounts for 60% of total employment on the continent.[6] The sector reaches many of the rural poor that the AECF seeks to benefit. It is for this reason that the AECF portfolio is weighted towards projects in the agribusiness sector. Moreover, agricultural-induced growth has the greatest potential to generate benefits for the poor compared to other sectors, and the benefits of its growth are disproportionately felt by them: one study found that one percent of growth in GDP, as a result of agriculture generated expenditure growth, led to six percent growth amongst the poorest decile of the population.[7,8]

Agricultural productivity in Africa is the lowest in the world and less than 20% of the 184m hectares of arable land in sub-Saharan Africa are cultivated, according to FAO estimates. The constraints facing the agricultural sector include policies in agricultural output and input markets and trade, land access and security of land tenure, poor water and transport infrastructure, and financing. Broader challenges must also be addressed, for example climate change will require the introduction of draught resistant varieties of crops. Increasing pressure on environmental resources also necessitates that farming methods are made more sustainable, a particular issue in cases where smallholders are forced into short-term survival strategies which damage the long-term viability of ecosystems.

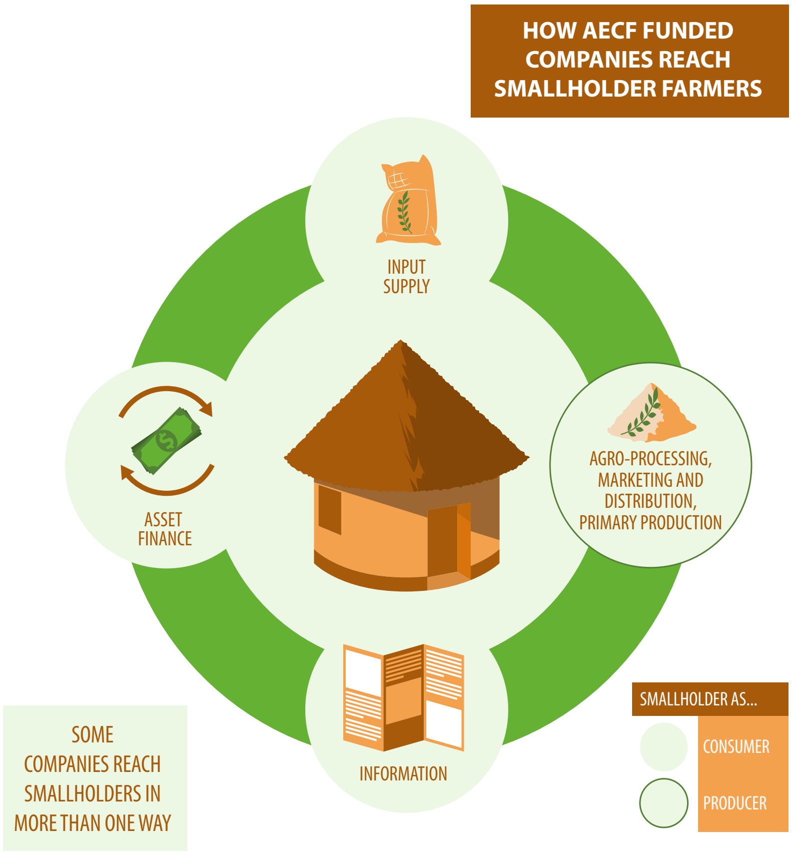
The challenges faced are significant, but opportunities exist to overcome them. These are underpinned by increasing global demand for food due to population growth and rising incomes. The way that food markets are changing is also relevant: sourcing from smallholder farmers is an increasingly important strategy many buyers use to secure and diversify supply and to fill the gaps that are emerging as a result of increased demand – a factor driving supply chain integration in the sector.

Reaching smallholder farmers

Smallholder farmers, who often run their farms with only household labour and no access to machinery, make up the majority of African farmers. Plot sizes are typically less than two hectares. This makes smallholders more vulnerable to risks than larger farmers. In this context, the AECF supports smallholders to increase their productivity and profitability so that they are able to grow their assets and progress from subsistence into sustainable and secure livelihoods.

To ensure scale and sustainability of impact, the AECF achieves this goal by funding companies with innovative business models which address the challenges smallholders face and which reach them as consumers and producers. Companies that facilitate smallholder farmers to access markets and which help improve how markets work are central to the AECF's approach – particularly where these companies bring affordable and accessible technologies and access to information and financial services.

The AECF does not generally fund large scale primary agricultural production companies as the development impact of these agribusinesses on the AECF's target group is generally quite limited. Instead, the AECF focuses more on businesses and projects that directly benefit smallholder farmers. This frequently results in funding growth SMEs which find it difficult to raise funds from commercial banks. The AECF therefore plays an important market development role.



Smallholders as consumers

One of the biggest obstacles smallholders face to increase their agricultural productivity is accessing high quality inputs. For instance, the majority of smallholders still rely upon recycled seed which gives diminishing yields over time, and most do not use fertilizers or pesticides due to their high cost and limited availability in local markets.

The AECF has funded nearly 50 input supply companies to provide smallholders with better and more affordable farm inputs such as certified seed, vaccines and day-old-chicks. The impact of such inputs can be transformative. In some cases, such as Dryland Seed, farmers have increased their yields by up to 150% as a result of using certified hybrid drought resistant seed.

An inability to access finance is also a fundamental barrier which prevents smallholders from investing in inputs and methods to increase their productivity and quality of output. Formal lending to agriculture is limited by its seasonal cash flows and high risk, the lack of formal land titles and collateral, the heterogeneity of agricultural commodities and regions, and banks' and other financial institutions' inexperience with agribusiness.

The AECF funds financial institutions to help them overcome some of the supply side constraints faced when seeking to provide services to rural smallholders. The AECF also funds agribusiness projects that provide short-term financing to smallholders which is recoverable from produce sales. For example, Northern Farming pre-finances inputs and provides working capital at affordable rates to farmers who benefit by being able to scale-up and increase their incomes.

Inadequate and unequal access to information hinders the effective functioning of markets and inhibits the spread of improved farming practices. The information and media companies the AECF funds have the potential to reach large numbers of smallholder farmers with vital, easily-accessible information. This can include advice on improving farm practices and maximising crop yields, caring for poultry and livestock, and getting the best commodity prices. The Mediae Company is the most notable example currently in AECF's portfolio, with its popular TV series Shamba Shape-Up.

Smallholders as producers

The AECF funds over 40 processing companies. Businesses of this type will be fundamental in unlocking Africa's agricultural potential through purchasing raw materials from smallholder farmers and transforming them for sale in local markets, urban centres, or for export. They are particularly important for several reasons. Most directly, they typically generate a net benefit three times higher than an input supply project for each farmer that sells to them.

From a market systems perspective, processing companies build the capacity for value retention within sub-Saharan Africa. While it is the case that processing companies benefit fewer households on average when compared to input supply companies, processing companies tend to create relatively larger numbers of formal sector jobs. This is significant because many of these jobs will involve upskilling and training and may in aggregate have a catalytic impact through supporting the development of human capital in the sector in the region.

Companies funded by the AECF often create impact by building on and enhancing skills smallholder farmers already have. In some cases, AECF funded companies engage with smallholders as both consumers and producers, possibly reflecting a broader trend of increasingly integrated agricultural supply chains. One of the learnings from this is that more integrated relationships between the producing smallholder and a funded company tend to generate greater benefits to the smallholder.

TANGA FRESH ®

Tanga Fresh

Tanga Fresh collects, processes and markets milk from over 3,000 smallholder dairy farmers in Tanga Region, Tanzania. Currently, Tanga Fresh is processing 40,000 litres of milk per day. In 2014, it collected 15.3m litres of milk from 47 milk collection centres in the Tanga, Coast and Morogoro regions from 3,800 farmers who achieved an increased annual net income of over US$1,000 per farmer.

Photos: Tanga Fresh

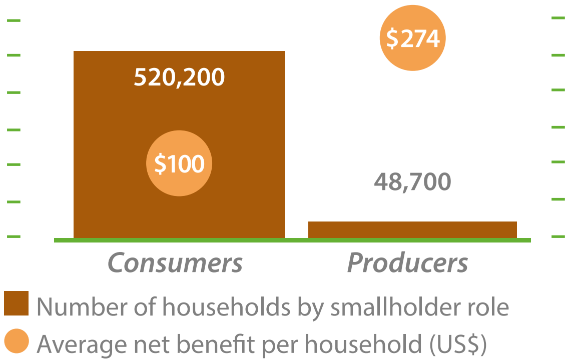
Challenges and questions

Companies which reach smallholders as consumers typically benefit more households than companies which engage with smallholders as producers. However, the former tend to generate lower average net benefits than the latter. This data highlights a perennial question the AECF faces in terms of how best to balance its portfolio of funded projects, specifically, whether to focus on one type of project over another.

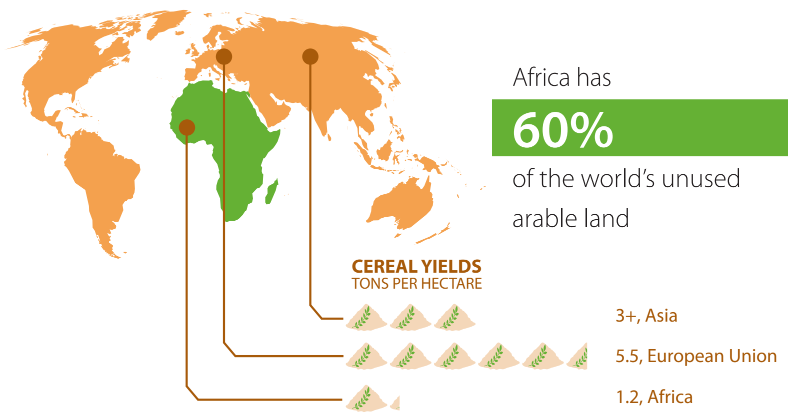
The AECF's strategic objective of improving the functioning of market systems suggests the answer may be to continue funding a variety of project types in recognition of the developmental importance of linkages across the sector. However, an opportunity exists for the AECF to better understand whether projects which generate comparable total net benefits in aggregate, but which are different in terms of reaching smallholders as consumers or producers, are developmentally different or more transformational in other ways at the level of the household or wider economy.

Another area for further consideration is how to assess the appropriateness of agricultural projects where there is a lag between investing in crop planting and the time taken for a crop to mature and yield income benefits. Such investments have the potential to be transformative sources of sustainable revenue – cocoa, once in the ground, provides 30+ years of production. The challenge is how to manage the fact that cocoa, and other tree crops such as avocado and macadamia, take several years before they yield income.

(All active agribusiness projects)



Finally, while significant potential exists to further drive positive and sustainable developmental impact through supporting smallholders, it is important to recognise the factors that may prevent this occurring. For instance, in some contexts – particularly where population pressure on land is high – it may be that smallholder farm sizes are diminishing to a point where the income they generate is insufficient to lift households out of poverty. In this case, an alternative mechanism may be better suited to alleviating poverty.



Transforming energy access and climate resilience

Approximately 600m rural people in sub-Saharan Africa not only lack access to electricity, but are becoming increasingly vulnerable to the impacts of climate change. A lack of access to reliable energy services greatly affects and undermines health conditions, restricts opportunities for education and development, and reduces a household's potential to rise up out of poverty. Further, it is predicted that extreme weather events will diminish income generating capacities for smallholder farmers in the years to come. Agricultural yields will decrease, arable land will become less productive and water will become scarcer than ever.

Against this backdrop, the investments made by the AECF's Renewable Energy and Adaptation to Climate Technologies (REACT) Window are showing that business innovation has the potential to reach people in ways that large-scale government investment in grid extension and climate adaptation infrastructure are over-stretched to deliver. Three years after inception, REACT has committed over US$30m to 38 companies with innovative business models providing increased access to clean energy, financial services and climate smart solutions for the rural poor. Over a million people are benefiting from the products and services offered by these companies.

REACT has been instrumental in generating a highly promising energy access solution which may prove to be as transformative to electricity access as wireless technology has been to telephone communications.

PAYGO: energy access for all

The PAYGO business model is essentially a microfinance platform for household energy systems. The concept of packaging already existing technologies such as photovoltaic panels, energy efficient LED lamps, mobile money and GSM transfer mechanisms into one affordable solar home system has transformed the future of off-grid energy access. Through the use of mobile money, low-income consumers are now able to 'pay-as-they-go' for their energy, sending small increments of money every day and enabling them to gradually pay off their systems or to simply pay for the amount of energy used over a given period of time.

This is done through an information technology system that controls the platform, accepting automated payments and conducting system activation and monitoring. These mobile smart units are able to provide households with light, mobile charging, radio, and in some cases even a small television or fridge. The systems are often used to run mobile charging businesses or to power small rural shops, enabling SMEs to increase their income generating potential by extending opening hours and improving night-time security.

OFF·GRID ELECTRIC

In Tanzania, Off Grid Electric offers customers pay-as-you-go solar solution, where customers only pay for the energy they use and the company provides complete support and technical services.

M-KOPA SOLAR

M-KOPA combines mobile and solar technology to help customers light up their homes, charge their phones and tune into the radio. All this comes at the flick of a switch and for less than the normal household spend on kerosene. The system can be purchased with a deposit of US$35, followed by 365 daily payments of 43 cents – paid using a mobile money service. The company took two years to reach 100,000 customers, and just eight months to reach the next 100,000. M-KOPA is now selling 500 new systems each day across Kenya, Uganda and Tanzania.

Source: http://www.m-kopa.com/press-release/200000th-home-connects-to-m-kopa/

Photo: M-Kopa

'Pay-as-you-go' solutions for clean energy solar home products have been forged from the convergence of a unique set of recent innovations both globally and within East Africa: mobile payments; systems for the remote monitoring and control of electrical equipment; LED lighting; battery technology; and the falling costs of solar photovoltaic panels. These solutions are, in effect, end-user financing mechanisms and are proving successful in addressing the prohibitive up-front costs of purchasing solar home systems. They allow payments for such systems to be made incrementally, matching or beating the costs that rural people already pay for poorer quality energy sources such as kerosene and dry cell batteries.

In 2012, the AECF invested over US$10m into a cluster of seven start-up PAYGO companies. Since the beginning of AECF funding during the start-up stages of these seven companies, over US$120m in equity and debt financing has been leveraged and new players are now entering the market place. AECF projections estimate that a further US$480m will be invested in this technology over the next three years. With the right backing and distribution infrastructure, the companies have the potential to provide clean electricity to millions of off-grid African homes and small businesses – but the possibilities extend even further. Millions of un-banked rural customers will develop credit histories and the technology can become a financing mechanism for a wider range of household appliances and equipment such as solar water pumps or milling machines: making all of these affordable to rural customers by offering the ability to purchase them through incremental payments with very low transaction costs.

PAYGO solutions for clean energy solar home products have been **forged from the convergence of a unique set of recent innovations** both globally and within East Africa.

Creating a market for alternatives to firewood and charcoal for cooking has proven to be much more challenging and remains the 'elephant in the room' of rural energy access. REACT companies that are trying to market clean energy alternatives such as biomass pellets or a complete shift to bio-fuels are essentially asking consumers to give up a widely available, unregulated resource for an unfamiliar product that comes at a price and is subject to taxation and regulation. The business models are complex as they rely upon sophisticated supply and distribution networks not just for producing the fuels, but also the new generation cook stoves. In addition, there has been market spoilage in the past through subsidies and the distribution of free stoves. More progressive public policies will be critical in establishing a more permissive environment for these kinds of clean energy investment. Nevertheless, businesses must strive to design innovative business models that are able to secure profits and scale-up in the long-term – with mechanisms such as REACT poised to invest into them.

Photo: M-Kopa

Small to medium sized independent power generation from biomass waste or commercially viable renewable fuels can also feed into isolated mini-grids and help electrify the national grid. This cluster of REACT investments has the potential, if successful, to shape policy regarding renewable energy Independent Power Producers (e.g. on feed-in-tariffs), develop supply chains and unlock future commercial investment into the 1-12 MW range of power generation. Renewable power generation projects like these have the potential to reduce dependence on high carbon fuels and enable countries to commit to cleaner alternatives such as biomass, hydro and geothermal technologies. A mix of renewable energy and fossil fuels can not only spur low cost industrial development in sub-Saharan Africa, but also contribute to carbon emission reductions that result in a global public good.

The AECF has so far allocated over US$4m to supporting businesses with climate smart technologies, i.e. products and services that help rural smallholders adapt to climate change. These include improved soil tillage technologies for food production, climate risk insurance for smallholder farmers and forestry related business models. The portfolio of these companies is still rather young and the models yet to show signs of success.

In the third round of REACT additional climate adaptation business models are expected to address improved access to water; irrigation; climate smart agriculture; and businesses specifically operating in arid or semi-arid areas. The solutions offered by the businesses aim to help rural people cushion themselves from the adverse effects of extreme weather events; variability in rainfall patterns and changes in average temperatures; and strengthen their food and income resilience.

Creating a **market for alternatives to firewood and charcoal for cooking** has proven to be much more challenging and remains the **'elephant in the room' of rural energy access.**

Power Generation

Cummins Cogeneration

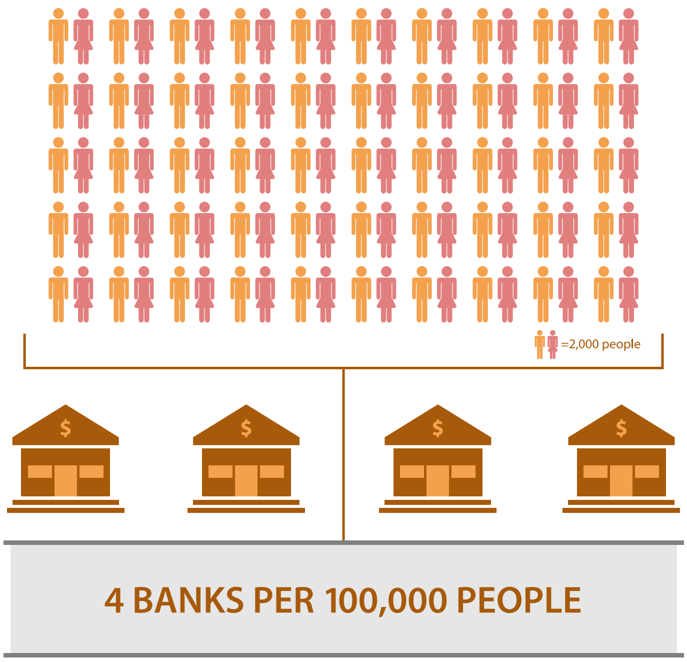
Cummins Cogeneration has been involved in a biomass power generation project in the semi-arid Baringo County of Kenya, which aims to generate 11 MW of electricity to the national grid by using the invasive Prosopis Juliflora plant as feedstock. After having overcome regulatory and financing hurdles, the project now shows capability in creating a large socio-economic impact through sustainable supply of feedstock from smallholder farmers surrounding the power plant. This is having the impact of clearing the land of the noxious weed, and opening it up to more productive use, thereby improving the farmers' income generating capacity and climate resilience.


CKKL biomass gasification plant, Baringo, Kenya

Photo: Cummins Cogeneration

Access to financial services in rural areas

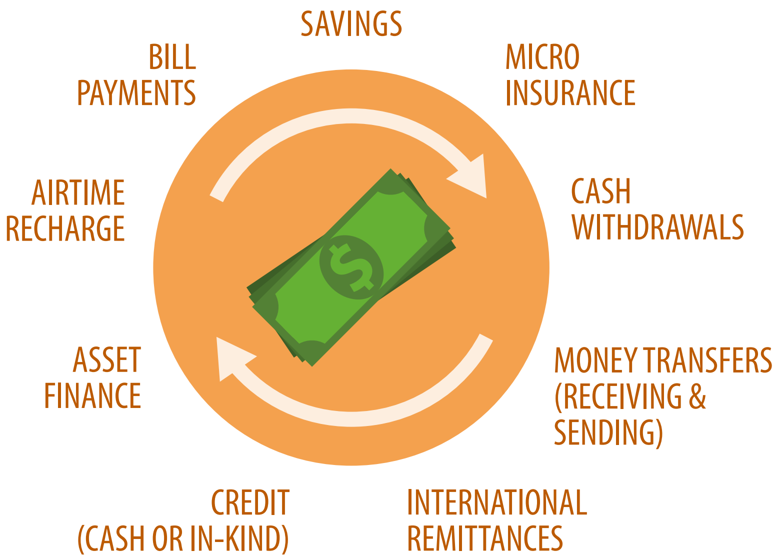
Inclusive financial services play a pivotal role in driving economic growth and reducing income inequality by enabling rural households to save, secure credit to invest, and overcome the limitations associated with conducting transactions in cash.[9,10] However, three quarters of sub-Saharan Africa is unbanked,[11] with only four bank branches for every 100,000 adults (compared to 34 per 100,000 in the US).[12,13] The rural poor in particular are often perceived as being a credit risk or not commercially viable to service. Furthermore, the fragile and conflict-affected states where many of sub-Saharan Africa's rural poor live often do not have the required regulation, nor the stability of government, to support viable financial systems.[14]

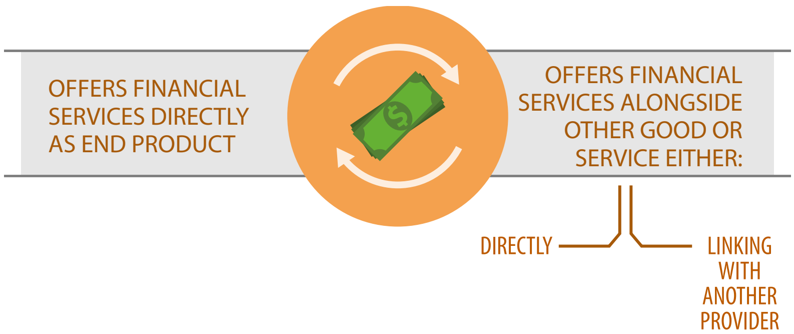


Micro-finance institutions have improved the supply of financial services to rural areas but many lack the capacity to match the needs of rural households due to structural weaknesses, varying quality of services and a lack of regulatory supervision and coordination.[15] Member-owned financial institutions have been key in mobilising savings, but are often too small, without proper governance and are not targeted at rural households.[16] Combined, these factors lead to financial services being absent or malfunctioning for rural communities, particularly smallholder farmers wishing to access savings, money transfers, payments and credit products. It is against this backdrop that the AECF has been supporting innovative and profitable ways of improving access to financial services for rural households.

In 2014, 17 AECF funded projects offered a financial service as an end product. Additionally, six other projects have a financial service as a component of their project, but not as a final product offering. This is indicative of the depth and complexity of business models which the AECF is supporting in order to improve the livelihoods of the rural poor. While some are still in the early stages of set-up and implementation, other financial services projects have delivered significant development impact in the past year. Collectively, all AECF funded projects with a financial service component reached approximately 1.3m men and women in 2014 alone, helping to bridge the financial service provision gap they face.

One of the main financial services sub-sectors which the AECF has focused its funding on has been mobile and electronic money. Increasingly, mobile money is viewed as a viable substitute for traditional banking in regions with low levels of access to financial services, primarily due to its low cost and scalability.[17] When successfully implemented, these platforms enable users to make cashless payments, send money to friends and relatives at a low cost, and obtain micro-credit and insurance products. The often cited success story is Kenya, where mobile payment penetration is at 86% of households.[18]





All AECF funded financial service projects have reached approximately

1,300,000

men and women in 2014 alone.

However, the AECF has had mixed success when funding mobile money projects, with several projects closing before producing significant development impact. Some projects have been unable to overcome regulatory issues, such as obtaining the correct licenses to operate at scale. Another project was denied access to the hardware and software platforms it required to roll out its services by the country's leading telecommunications company, who are now the nation's leading mobile money provider. Having limited marketing budgets, others have struggled with getting sufficient numbers of rural farmers to adopt their mobile money platforms.

A fundamental lesson the AECF has learnt from its experience funding mobile and electronic money projects is that, in general, the size of the business is a critical success factor. Mobile money projects across sub-Saharan which have been very successful in reach and uptake have been implemented by large companies, which are often telecommunications providers rather than financial service organisations. Like M-pesa in Kenya, these businesses have the infrastructure, government relationships and marketing budgets required to roll out mobile money platforms for large numbers of people. Clearly, these types of companies are not those most in need of AECF funds. It should be noted that not all AECF-funded mobile money projects have struggled (*see the CABS box*), and mobile money has been a crucial component of the success of the PAYGO solar projects supported by the Fund.

textacash

Central African Building Society (CABS)

CABS provides mobile banking services to urban and rural communities via its branch and Textacash agent touchpoints throughout Zimbabwe. The platform allows users a safe and convenient means to send and receive remittances, pay bills, purchase airtime, buy funeral cover, access cash and simply to shop. In a recent development, users can also receive money from abroad. In 2014 the AECF commissioned an impact verification study which found that 180,000 households benefitted from CABS's mobile banking services of which 18,000 were based in the rural areas. The study estimated that in 2014 the total development impact to rural households was US$3.5 million, the main benefits coming from savings to households in paying remittance and other transaction fees. Textacash agents also reported significant quantifiable and qualitative benefits from running agency operations which have impacted positively on their bottom line and their standing in the community.

The insurance and asset finance financial service sub-sectors are viewed by the Fund Manager as having more potential for significant development impact in the future. Projects providing micro-insurance products, such as weather-linked crop insurance for smallholder farmers, are enabling rural households to plan for the future and become more resilient to the effects of climate change. Meanwhile, an AECF funded project has enabled rural Zambian entrepreneurs to build their microenterprises by offering asset leasing finance for products worth under $15,000 accompanied by delivery, installation, training and repair services. Furthermore, projects that are not solely delivering financial services, such as some PAYGO solar providers, are now acting as asset financers by allowing customers to use their solar systems as collateral to purchase other products once they own them outright.

AECF financial service projects have also impacted on the legal and regulatory environments in which they operate through lobbying and engaging with local, district and national government bodies to represent the needs of rural communities. Positive regulatory changes attributable to the AECF to date have included the introduction of a 0% VAT charge on solar products in Kenya, the establishment of regulation around weather indexed insurance satellite data in Zimbabwe, and the introduction of a Micro-finance Bill in Zimbabwe.

Due to its ability to empower rural households and strengthen core agricultural markets, increasing access to financial services in rural sub-Saharan Africa will continue to be at the core of the AECF's strategy. Learning from some of the challenges faced in this sector so far, the Fund Manager envisages supporting more agricultural and renewable energy projects with a financial service component that increases accessibility for the rural poor, as well as projects offering asset finance and insurance services.

microenergy credits™

MicroEnergy Credits (MEC)

MEC helps financial institutions start clean energy lending programmes and strengthens these with cloud-based technology and last mile services. Together with two microfinance institutions in Kenya (Equity Bank and Juhudi Kilimo) MEC has increased access for rural communities to solar lighting products and improved cook stoves by linking potential renewable energy customers to microfinance institutions to finance their access to these products through tailor-made loans. They are also working towards the collection and sale of carbon credits derived from carbon emission reductions accompanying the use of clean energy technologies. Supporting the sale of clean energy technology products to rural households, particularly those at the 'bottom of the pyramid', has been one of the biggest challenges in the East African renewable energy marketplace and MEC has been working successfully to overcome this. To date, the AECF has supported MEC to reach over 6,000 households.

Private sector development in fragile and conflict affected states

The development of the private sector in fragile and conflict affected states is critical in promoting economic development and improving the incomes of the rural poor. Public institutions are often weak or non-existent and therefore unable to deliver the basic services and regulatory environment required to foster growth and job creation.[19]

However, commercial funding for businesses in fragile and conflict affected states is scarce. As in the case of Somalia, this funding vacuum may be the result of a total absence of local banks and other investors, as well as a political climate which is unstable enough to deter even the most risk-seeking foreign investors. In other countries investors and bank finance are present, but weak legal and regulatory frameworks prevent them from investing in projects which require high upfront capital expenditure, have seasonal incomes, or take years to become profitable – as is the case with many agribusiness projects. The AECF works to fill this funding vacuum by providing businesses with grants and loans which would otherwise be unattainable. It is enabling a number of commercial projects which would not have happened without the AECF grant element.

Finding the right projects to fund has meant running specific competitions focused on businesses in fragile and conflict affected states, such as the South Sudan Window (SSW) in 2011 and the Post Conflict Window (PCW) in 2012. The rationale for running focused competitions is that projects operating in these environments may not be as innovative or have the potential for as much total development impact as a project in Kenya or Tanzania. Yet innovation is relative, and the projects that the AECF funds in Somaliland, South Sudan, Sierra Leone, Liberia and Democratic Republic of Congo are often the first of their kind in the region.

Somaliland Beverage Industries

The funding vacuum in fragile states

Somaliland Beverage Industries (SBI) is an AECF funded project whose experience clearly highlights the funding vacuum in which many successful, innovative and profitable businesses in fragile and conflict affected states operate.

Despite having a proven track record of sustained profitability and the sole license to bottle Coca Cola in Somaliland, the company has been unable to access debt or equity finance. This is due in part to the fact that Somaliland (a self-declared state within the borders of Somalia) is unrecognized by any other country or international organisation, making insurance and commercial finance almost non-existent.

The AECF has stepped in to fill some of the funding gap faced by SBI, by providing funds to support the development of juice production which will source guava fruit from local smallholder farmers.

The **projects that the AECF funds** in Somaliland, South Sudan, Sierra Leone, Liberia, and Democratic Republic of Congo are **often the first of their kind in the region.**

While few AECF projects operating in fragile and conflict affected states have reached maturity, there is already considerable evidence that filling the funding vacuum in these areas means projects are characterised by high levels of additionality – they simply would not have happened at this scale without the AECF. Although this is somewhat intuitive, it demonstrates that there are businesses in these countries with the potential to have a large development impact while remaining commercially sustainable. AECF funding in fragile environments is therefore less about de-risking businesses and more about creating opportunities per se. This is fundamental when any business operating at scale or adding value through processing, rather than simply trading, can have a transformative effect in the area of operations.

It is not just the money disbursed by the AECF which enables businesses in fragile states to upscale, innovate and reach more of the rural poor. SMEs operating in post-conflict and fragile environments often have lower levels of human capital compared to more stable low-income countries. This can be a consequence of 'brain drain', continued lack of access to education due to instability, or lack of exposure to modern business practices.

From an Excel one pager to QuickBooks: Financial Management transformation at Tawakal Livestock Trading Company

When first visited by the AECF, one of the Tawakal Directors used an excel spreadsheet to maintain records of income and expenditure as the company had neither an accountant nor an accounting system. Additionally, documents to support expenditures were not maintained. The AECF Fund Manager saw this as a potential risk.

Today the company has addressed the key corporate governance concerns raised by the Fund Manager, employing a graduate accountant and installing QuickBooks accounting software. The company has consistently submitted accurate and timely reports, while verification exercises during routine AECF visits have demonstrated that amounts reported in the periodical reports agree with figures in the accounting system. In addition to signed monthly bank reconciliations, Tawakal maintains adequate and fully authorized accounting documents necessary in supporting operational and capital expenditures.

In Somaliland, employers can deduct and remit payroll tax to the government or pay gross salaries with the expectation that staff will remit tax themselves; both alternatives are legal and taxes can be remitted monthly or annually. Tawakal implements the former and as such remits the payroll taxes on a monthly basis to the government.

Tawakal has been a model for other AECF funded projects, including those in stable countries. Against the odds, the grantee has willingly addressed all of the Fund Manager's concerns and exceeded expectations for a company in an environment where the enforcing agents are weak or non-existent.

However, the legal, accounting and compliance processes and procedures which the AECF requires projects to demonstrate have helped companies improve levels of corporate governance. While the Fund does not provide these projects with direct advice or technical assistance, the high levels of compliance demanded and discussions with AECF project managers on why these requirements are necessary has resulted in significantly improved corporate governance procedures, such as the introduction of employee contracts for full time staff and the implementation of enhanced accounting procedures.

The formalisation of corporate governance procedures benefits AECF funded businesses in fragile states as it reduces the likelihood of fraud by employees, better positions them to raise more capital in the future, and provides managers with a better quality of management information. This increases the likelihood of upscale and expansion, further job opportunities for the rural poor and transformative changes in the region. In fragile states, the AECF as a catalyst is particularly significant as governments are unlikely to require or enforce the same levels of formal corporate governance procedures.

Private sector development in fragile and conflict affected states can also play a part in creating incentives for peace. The formation of economic relationships across tribal and ethnic lines and the creation of jobs and other economic opportunities, particularly for young people, can play a key role in promoting stability within a region. As projects in the PCW and SSW portfolios mature, the AECF should conduct research to measure any impacts they have had on fostering peace and stability. Anecdotal evidence already points to positive results. Beneficiaries of the Honeycare project in South Sudan, for example, explained that the project has created a sense of opportunity where before there was none.

Working with businesses in fragile and conflict affected states has not been without its challenges. So far, the demonstration effect – the success of AECF funded projects attracting other investors to invest in projects or similar businesses in the region – has not materialised. Countries like South Sudan can rapidly descend into conflict, quickly destroying any gains made by the rural poor. Despite this, funding projects in these environments with the potential to benefit rural households and which are sensitive to the causes of conflict will continue to be an important part of the AECF's strategy.

Impacting market systems

The development of market systems which are inclusive of rural communities and rural businesses is a central focus of the AECF. The Fund aims to develop market systems and facilitate market access for the rural poor because poor men and women are dependent on markets for their livelihoods. Consequently, if these market systems are improved to work more effectively, fairly and sustainably for the poor, their livelihoods should improve and levels of poverty decrease.

The rationale for systemic change

Making Markets Work for the Poor (M4P) approaches centre on understanding economic systems and guiding actions to improve the way in which those market systems serve the poor.[20] An M4P approach recognises that improving the functioning of core markets requires strengthening the functions that support the markets, such as regulatory regimes, market information and capital markets. The AECF funds projects that will not only raise the incomes of rural households, but also strengthen core and factor markets ('systemic change').

The AECF recognises that any systemic change which supports the operations of funded projects increases the potential for favourable and sustainable changes for other businesses and therefore for the people in the communities where these businesses operate. By funding projects with the potential to strengthen and deepen market systems, the AECF ensures that the finite funds it has available have a sustainable and catalytic impact on rural businesses and households.

By funding projects with the potential to strengthen and deepen market systems, the AECF ensures that the finite funds it has available have a **sustainable and catalytic impact on rural businesses and households**.

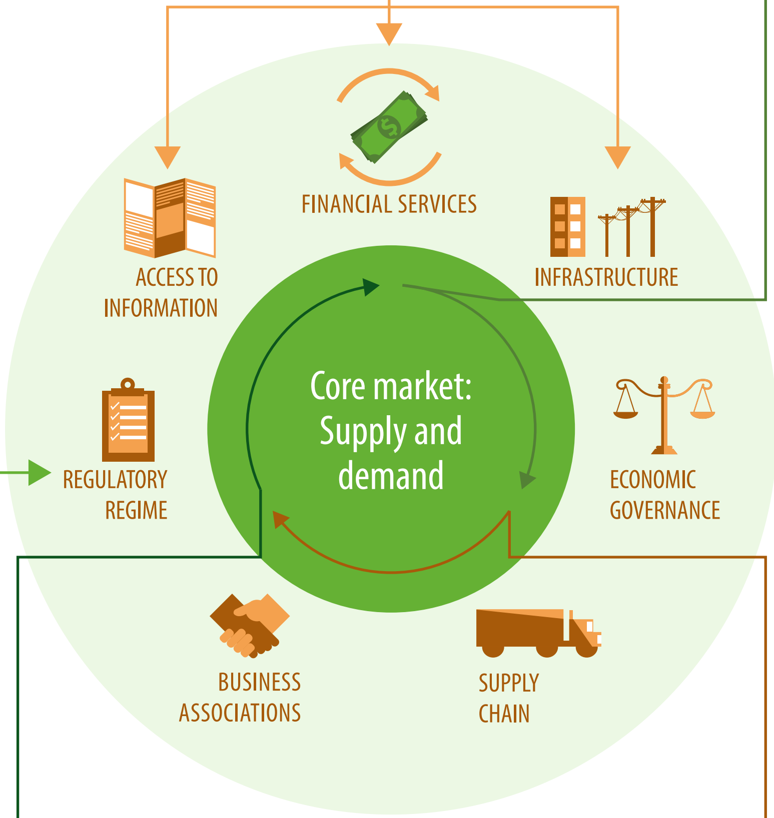
The Fund Manager works to select business ideas with the greatest potential for market systems impact. The general hypothesis is that projects which demonstrate two key characteristics – innovation and commercial motivation – are the most likely to result in systemic change. The logic is that it is commercial motivation that drives investment and growth. If a project is not commercially motivated it is unlikely to have a large scale impact, as it is financially unfeasible to go to scale without being profitable.

Innovation is also a vital indicator of systemic change potential. A project that is copying existing business models in a context where that way of doing business is common is unlikely to change the way others do business, while a business idea that introduces a new technology or business model will, if successful, force others to adopt the new approach to remain competitive.

Changes in factor markets: this refers to shifts in the availability of land, labour, capital, financial services, and information as a result of the AECF project e.g. land prices increase or access to finance becomes more widespread.

Crowding in: Other businesses have entered a sector or value chain as a result of the improved incentives and business environment created by the AECF project.

Changes in the business regulatory environment: Changes in laws and regulations, or implementation of laws and regulations as a result of the AECF project. Rather than being risk averse and avoiding business ideas that may struggle to get legal and regulatory approval, the AECF may decide to deliberately select such business ideas based on the logic that (a) the regulations/regulatory process in question is considered to be holding back investment and growth of a sector and (b) where the prospects of changing the approval process seem reasonable.



Copying successful practice: Other rural households not engaged with the AECF project copy or adopt project behaviours or technologies as a result of seeing project beneficiaries improved livelihoods.

Copying of the business model by other businesses: Replication of the grantee's business model by other businesses or investors. Successful businesses, by their very nature, have a demonstration effect on others. Whilst this is likely to have a larger impact in more volatile markets there will be some systemic impact in any market – particularly from projects of a sufficient scale. Naturally, the private sector would like to crowd-out the competition by creating a monopoly situation while, in contrast, the AECF is interested in business model replication across sectors and geography.

Adapted from: Springfield Centre for Business Development

Five key types of systemic change are tracked within the AECF: copying of the business model by other businesses, 'crowding in', copying successful practice, changes in the business and regulatory environment and changes in factor markets. These categories of systemic change and their interconnected impacts on core markets are laid out in the infographic above. While some of the above changes are driven by AECF funded projects, others result simply from the existence of an AECF funded project (e.g. business model replication). Crucially, these changes would not have occurred without AECF funding and are therefore attributable to the AECF.

Evidence of systemic change in the AECF portfolio

The Fund Manager analysed a random sample of 82 projects to determine the types of systemic change that have occurred as a result of AECF funding in 2014. It is worth noting that the AECF portfolio comprises projects at different levels of maturity and scale. Therefore the reported levels of systemic impact vary greatly across the portfolio.

Changes in the business regulatory environment

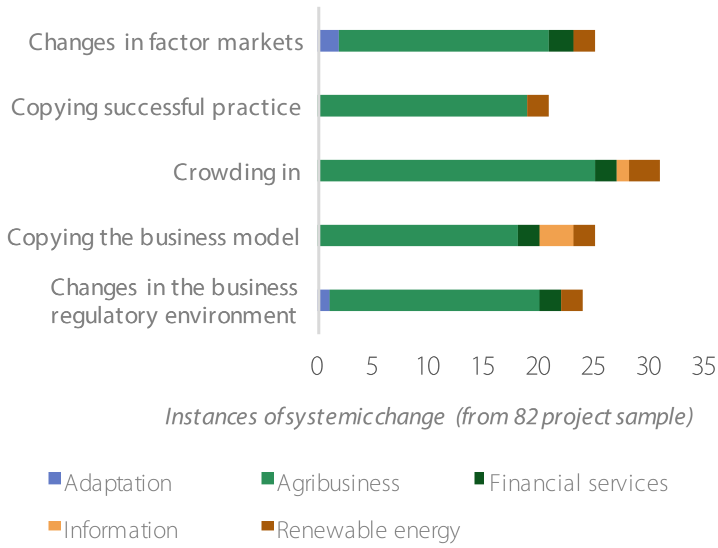
Close to a third of projects from the sample succeeded in bringing about either concrete regulatory change, or initiated a dialogue concerning changes in regulation. The businesses the AECF has worked with have successfully lobbied local and national governments to enact regulatory change, resulting in substantial impact both within their sectors of operation as well as across the broader business regulatory environment.

A pertinent example of this is Agribusiness Project 42 in Zimbabwe, which has influenced changes in tariffs, increasing the surcharge on imported finished goods. This is a boost for local manufacturers across all sectors in the country as it should increase domestic demand for locally manufactured goods. In a narrower but nevertheless significant case, Agribusiness Project 81 initiated the formation of the Rice Council of Tanzania, who work with the Tanzanian Government to ensure there is a well functioning rice market.

Other AECF funded projects have changed the business regulatory environment in their countries by requiring new legislation or regulations to be developed specifically for their products. Agribusiness Project eight registered the first baculovirus product for use in Kenya, which will make future registration of similar products more straightforward.

Replication - copying the business model, crowding in, and copying successful practice

Instances of replication can have a particularly powerful impact on the sector in which the AECF funded project operates. The replication of a project's business model can improve the functioning of a market for the poor. This is particularly the case if the business benefits the rural poor as consumers, as increased competition should result in lower prices, better products and improved distribution networks. Agribusiness Project 17, operating in Tanzania, reported that a competitor started sourcing milk from small dairy keepers through Milk Collecting Centres soon after they did. Local competitors of Agribusiness Project 92, based in Kenya, copied their initiative of providing seed packs and other promotional items free of charge in an attempt to create long-term interest in their agricultural input products.
Crowding in is an important market systems outcome



as it provides evidence that improved business environments and incentives have arisen as a result of AECF funded projects and their operations. Examples of crowding in include contract farmers who supply agricultural produce to AECF projects in Tanzania and Malawi being sold seed and fertilisers by agro-dealers who have started coming to their areas of operations.

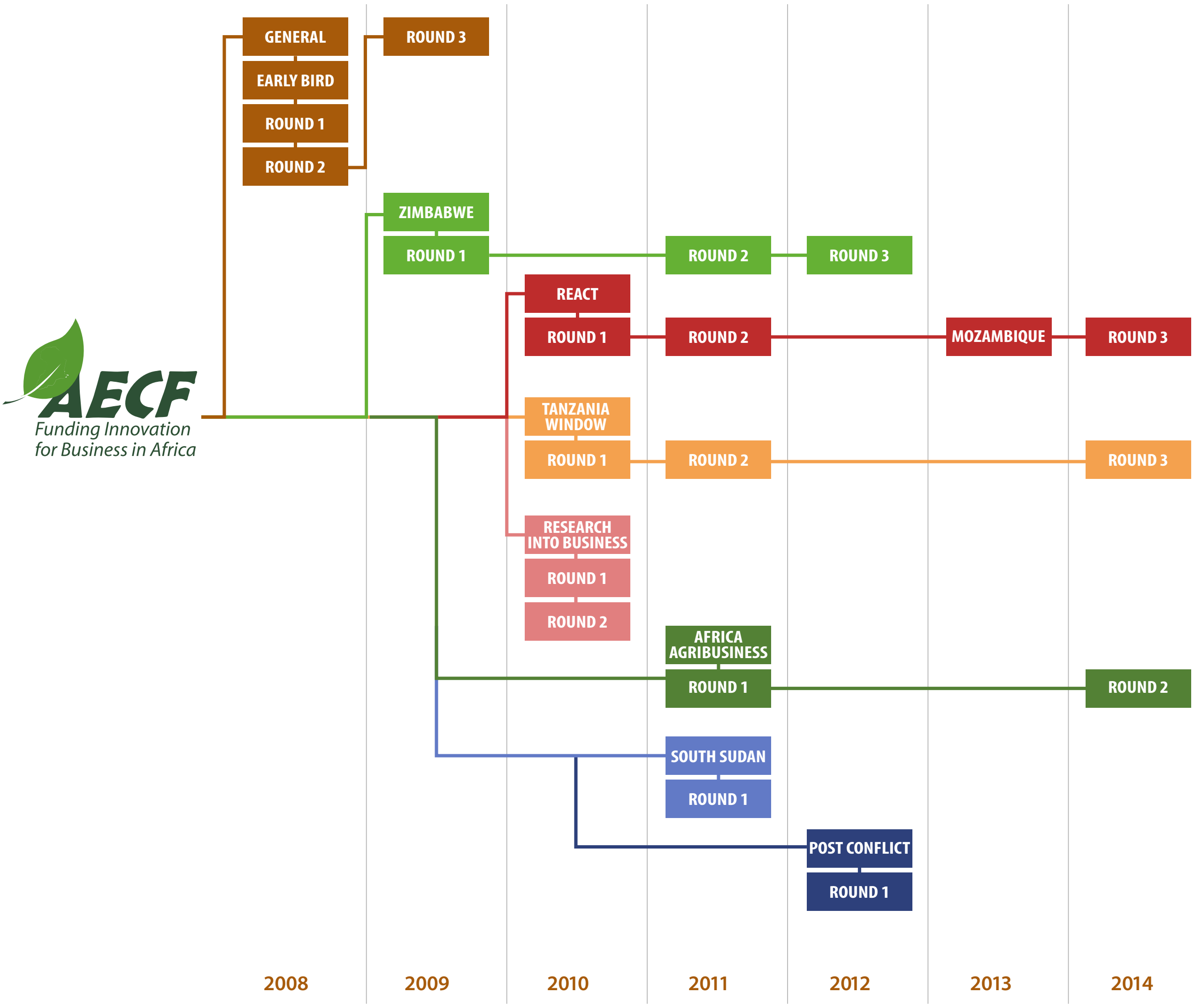
Copying of successful practices that have been previously demonstrated by AECF funded projects have the potential to be transformative, as these are systemic impacts which can occur outside of a strict business framework. For example, Agribusiness Project 24 in Tanzania has observed farmers contracted by the business using avocado farming skills on other crops like coffee and bananas. Significantly, the business has also seen farmers who are not in the project now planting avocado after seeing the benefits to other farmers.

Changes in factor markets

While the AECF explicitly funds projects whose business models aim to strengthen information and financial markets, there are also instances of this type of systemic change occurring without it being the focus for the AECF project. For example, Renewable Energy Project 114 in Tanzania has reported an increased number of mobile money kiosks in areas of operation as customers use them to pay for their solar systems – an example of improved access to financial markets for the rural poor.

Running a successful challenge fund: technical learnings from the AECF

The AECF has evolved to meet the changing requirements and expectations of its donors and in response to practical lessons learned through managing multiple competitions and grantee relationships over an extended period. This section presents some of these lessons and illustrates how key design considerations and trade-offs must be judiciously balanced.



Competition platform

The AECF has changed from being a single fund running standard agribusiness competitions annually to a competitions platform that responds to donor demand for competitions focused on different sectors, themes or geographies.

The AECF's flexibility has been a critical factor in its success in terms of mobilising significant amounts of funding. In addition, being a multi-competition platform offers important advantages stemming from operational efficiencies and brand recognition.

Country versus continent

The country-based versus continent-wide competition eligibility design decision is a significant one. From a cost-efficiency perspective, it is understood that country-based competitions create portfolios of projects that are easier and less expensive to manage and have greater potential in terms of systemic impact, particularly when clustering projects in important sub-sectors. It is also accepted that country-based competitions are cheaper to run due to lower marketing and related costs. While this latter point may be true, a different picture emerges when analysis is undertaken to identify the key factors driving fund management cost-efficiency more broadly.

Such analysis rests on the fact that the approval rate of applications for country-based competitions tends to be lower than that of continent-wide competitions. This is likely due to the fact that country-based competitions have fewer eligible applicants than continent-wide competitions which results in business plans of lower quality being submitted.

This is relevant since application quality and approval rates are key factors in terms of competition cost efficiency. Higher quality applications lead to higher approval rates at competition stage and better quality applications result in larger amounts of funding awarded on average per grantee. Together these factors mean a lower proportion of the total funding committed to a competition is required to undertake due diligence and related activities, since these costs are fixed and incurred per applicant and per funding contract. The important insight is that, counterintuitively, continent-wide competitions tend to be more cost-effective from a fund management perspective than country-based competitions. In the longer term, country-based programmes can be more cost effective to manage as the monitoring, learning and dissemination within a country context is more manageable.

Competition size

More obviously, competition size is a basic determinant of cost efficiency: the larger the amount of money available in a competition, the less expensive the marketing of the competition in percentage terms. For this and other cost efficiency reasons, the AECF will only run a competition if more than US$10m is available.

Marketing and branding

Effective marketing and branding is crucial to ensure the AECF attracts the best business ideas. This begins by developing a brand for the Fund as a whole, and extending to the sub-brand for each competition window underneath this. The AECF's established track record and reputation give it an important advantage here, since the AECF 'umbrella' increases the attractiveness of competitions to businesses compared to standalone or single competition challenge funds.

At the level of each competition window, dedicated resources are required to market competitions as widely as possible and through appropriate channels and networks to reach the target applicants. For instance, sector-based competitions require access to different marketing channels than broader geographic based competitions. For these kinds of reasons, a material portion of the cost associated with establishing a new window results from effort developing new marketing materials and identifying and engaging appropriate marketing channels. Once a window has been set up however, future competition rounds are able to reuse existing materials at less cost.

Relationship with business

The AECF has developed from a 'light touch' matching grant facility – funding particular budget items on a shared cost basis – to a mechanism which provides funds in support of business plans and agreed development outcomes. This has resulted in a number of operational changes over time, with two of the most significant being that the AECF has developed closer relationships with each business, and that loans have been introduced alongside traditional grants.

The decision to increase the depth of relationship that the AECF has with each grantee was driven by the realisation that a 'light touch' approach was risky in terms of due diligence and unsatisfactory in terms of adequately measuring development outcomes for the community of donors that fund the AECF. This changed approach has had cost implications. For example, the time taken for the Fund Manager's staff to conduct an organisational assessment visit, work with each business to ensure business plans are robust, and to put in place results measurement plans. However, this cost is balanced by the value of improved oversight of funded businesses, an increased focus on development outcomes, and enhanced confidence in development impact reported.

The AECF has **developed from a 'light touch' matching grant facility** – funding particular budget items on a shared cost basis – to a **mechanism which provides funds in support of business plans and agreed development outcomes.**

Grants and loans

The AECF was the first challenge fund to offer loans, a move made in response to interest by donors to shift towards loans rather than grants as a way of maximising the leverage of donor funding. As such, the introduction of loans has been an experiment in the context of the challenge fund modality. Conceptually, it could be argued that offering loans alongside grants confuses the logic of a challenge fund mechanism. It also creates operational and governance challenges, for example, challenges associated with enforcing loan repayments across multiple legal jurisdictions or in terms of establishing governance arrangements for the management of repaid funds. Increasingly the Fund Manager is of the view that challenge funds, such as the AECF, are not appropriate vehicles through which loans should be provided. The reality is that, if a business is successful and growing, it will be facing cash flow challenges. Repayment of loans will slow down growth and impact while unsuccessful projects will be unable to repay AECF loans anyway. In due course it may be desirable to assess the case for the AECF to become a grants-only facility and to offer loans through innovative ways of partnering with financial institutions.

Networking among AECF grantees

Where possible, the Fund Manager facilitates linkages between grantees who have the potential to work together to improve their businesses and have a larger impact on beneficiaries. This has been achieved in a number of ways. For instance in Zimbabwe a special livestock task force meeting was convened in 2013 for all of the grantees involved in the livestock sector, and in Tanzania a marketing conference was held for applicants wishing to apply for funding available through the Tanzania Round Three competition. One of the most interesting examples of networking is in the form of a group of poultry grantees spread across Mozambique, Zimbabwe, Tanzania and Ethiopia who communicate on a regular basis to provide advice to each other on technical matters.

Building an effective monitoring and results measurement system

The AECF's monitoring and results measurement system must collect data that enables it to confidently assess the development impact of the business projects it has funded. The challenge has been to build a monitoring system that gets this 'just right', carefully balancing key practical considerations.

The first of these is that the AECF creates development impact through funded businesses. These businesses do not have the expertise to calculate reliably the development impact their activities generate. Additionally, one of the reasons the AECF is attractive to businesses is because it is seen as a 'business friendly' fund. For these reasons the AECF is continuing to adapt its monitoring approach to the needs of grantees and tries not to overburden them with reporting requirements. The AECF has sought to do this in several ways, including by introducing the concept of the 'last hard number'. Simply put, this is a number (or set of numbers) that a business uses as an integral part of its operations and which it is able to report directly from its own management records. The last hard number is a key component of the beneficiary model the AECF uses to calculate the development impact of each project. Having extracted the last hard number from a business, the role of the Fund Manager's team is then to identify the causal relationship between the last hard number and the development impact. The concept is a valuable one because it means businesses report actual data that they collect in the normal course of doing business, helping ensure high quality data, minimising data collection costs, and making it possible for the data to be effectively verified by the Fund Manager's staff.

A second practical consideration stems from the fact that a small sub-set of the AECF's projects account for a disproportionate share of the total development impact achieved across the portfolio. In recognition of this, the AECF undertakes a tiered approach to results measurement to focus resources on projects which are identified as being 'high impact'. These are subject to an additional level of interrogation and verification of data in line with the DCED Standard.

A description of AECF's approach to monitoring and results measurement is presented in annex three.

MANAGE

Inform the Fund Manager in decision making and disbursement of funds.

Provide evidence on whether to grant additional funding to businesses.

LEARN

Understand reasons for the success and failure of projects, and provide support to projects in developing business models.

Improve future grant management and impact of the fund.

SHARE

Disseminate best practice.

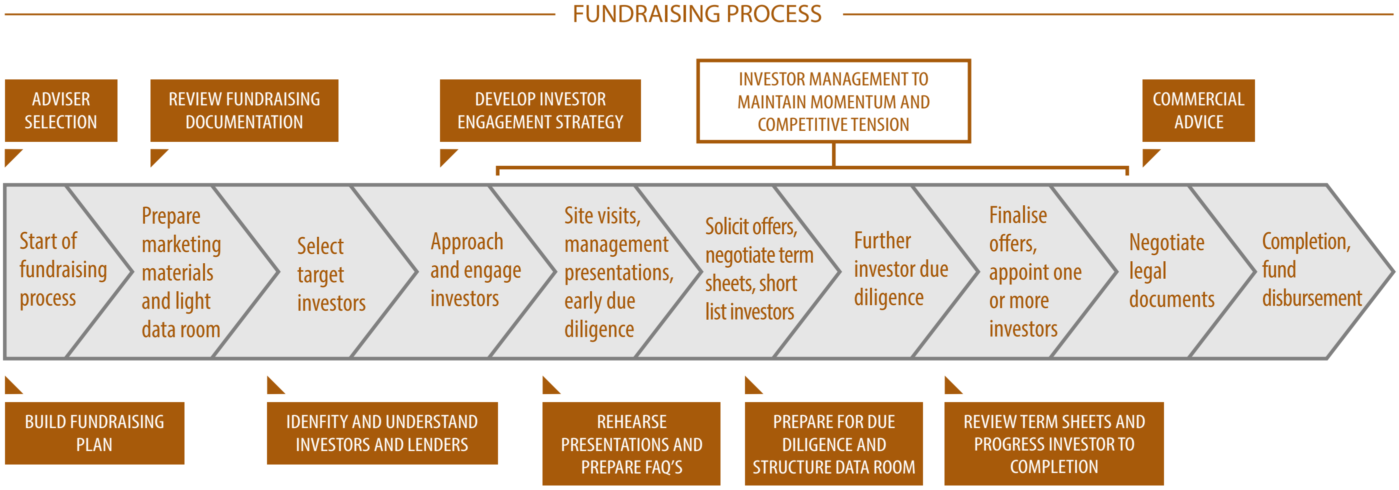
Publicise results and learnings.

BE ACCOUNTABLE

Provide evidence of impact.

Connecting successful projects with commercial funding: lessons from AECF Connect

Connect supports AECF grantees in their journey to raise additional capital to continue the development and expansion of their business. The diagram below describes the fundraising process and the support offered by Connect.



Connect was launched in 2013 with the goal of facilitating US$25m of additional funding for AECF grantees by mid-2017. By May 2015, US$6.5m had been raised for six businesses. In addition, Connect had established a pipeline of live fundraising mandates to a value of US$28m. Key learnings and insights regarding the investment market as it relates to the AECF portfolio can be found on the following pages.

Many investors but limited competition

Connect has identified 300+ investors and lenders who invest in private businesses in Africa. Despite this, the SME private financing market is relatively uncompetitive: transaction costs are high and funding terms and availability is frequently out-of-step with what is required to successfully bring businesses to commercial scale.

The challenges faced by businesses when seeking finance from funds stem from factors such as:

- Narrow investment criteria, which dramatically reduce the universe of funders-to-projects
- Investment managers have small teams with limited experience and, hence, low levels of capacity
- A tendency for investors to collaborate rather than compete

It is arguable that a more effective investment market could be achieved by having fewer but larger investment funds with a broader remit. An example of one such investor is Novastar Ventures, which has recently invested in SolarNow, an AECF grantee operating in Uganda in the off-grid solar system market. SolarNow was supported by Connect in their recent equity fundraising, and continue to be supported in 2015 as they seek to raise more debt to fund their growth.

Connect helps AECF grantees navigate this market, finding investors with matching investment criteria, the right appetite for risk, and the capacity at that time to take on and complete a new investment.

solar now

'Connect streamlined our investor documentation, helped us communicate with prospective investors and negotiated on our behalf. Crucially, Connect ***accelerated the investment process****, increased the appetite of new investors and* ***enabled us to secure better deal terms****.' Willem Nolens, CEO*

The amount of funding required is growing rapidly

For instance, a survey of 33 businesses in AECF's renewable energy and climate change adaption technologies portfolio (REACT) showed they have raised approximately US$200m to date and plan to raise a further US$700m+ over the next three years. The REACT portfolio includes businesses that are growing quickly and have a capital intensive business model, however, many of the businesses are still early stage and not yet appropriate for mainstream capital markets.

The markets in which REACT businesses operate will be challenged to secure capital at this scale and need international asset managers to allocate an increasing percentage of their capital to these markets if the growth aspirations for these businesses are to be realised.

Connect helps the AECF grantees compete for capital just as they do for customers. At the same time, Connect can promote the market to investors outside the region with the medium term aim of increasing the overall amount of capital committed to the region.

The 'impact investing' market is changing as it matures

The definition of 'impact investing' in Africa is evolving as the market matures and positions itself in relation to commercial investment management. Venture philanthropy, investing for impact, and venture investing can all lay claim to the impact investing label but operate very different business models. Many 'impact investors' are becoming increasingly commercially-oriented, possibly in response to poor financial returns they have historically achieved.

It may be that the middle ground certain funds have tried to occupy – for instance, selecting businesses based upon their commitment to smallholders or the Bottom of the Pyramid whilst also promising internationally comparable returns on capital – cannot be achieved. Alternatively, it may be that selecting businesses primarily based on their potential to achieve high development impact risks excluding those whose business models reach less far into the Bottom of the Pyramid, but who are able to scale much more readily, stimulate wider market systems effects and therefore generate higher development impact in aggregate.

This trend confirms the need for grant funds to overcome some risk hurdles that are too high for impact investors, but equally as an AECF grantee has matured, it can scale-up and become attractive to an impact investor.

Annexes


Palm
Bamboo
RockPhosphate
MicroSolar
solarPV
EssentialOils
Cocoa
Baobab
Tomato
Sorghum
Biodiesel
Stoves
Nuts
Chillies
Biogas
cotton
SoyaBeans
Vegetables
mushrooms
Goats
Legumes
DairyImprovement
BatteryCharging
Wind
Hydro
AgriculturalWaste
Groundnuts
WeatherRiskInsurance
MobileBanking
RenewableEnergyFinanceProducts
Agriculturalinputs
Rice
Fungicide
Mangoes
Hydro
Fruit
Peas
MicroFinance
Sunflower
Roses
SoilAnalysis
HumanPower
Minigrids
Storage
MoneyTransfer
Forestry
Flies
Pigeon
SeedPotatoes
CreditReference
Avocados
Garlic
Sesame
Macadamia
Solar
Maizeseed
Maize
Poultry
Cassava
Cattle
Seed
Oil
Seeders
Coffee
Fertilizer
DistributorFinancing
ConservationAgriculture
Honey
Cow
Dairy
Fish
Fertilizer
Machinery
Bamboo
SafflowerSeeds
TissueCulture
Bananas
CropInsurance
Blended
Agriculturalinputs
TomatoSeed
Information
cashew
Vaccine
Vegetables
Pellets
Biomass
ConservationAgriculture
RenewableEnergyFinanceProducts

1. Introduction to the AECF portfolio

1.1. Windows

The AECF is made up of eight different sub-funds or windows. The decisions about which windows and competitions to run and, ultimately, where in Africa the projects are located, has been the result of donor decisions. The focus of each window is presented in the table below. Different financing modalities and services are in operation for each window. This has important management and transactional cost implications.

AECF's eight windows

	Window	Year Launched[21]	Focus
GW	*General Window*	2008 (now closed)	Open to applications from agribusinesses and rural financial services providers based anywhere in the world provided that the project/innovation/business idea proposed for AECF funding would take place in Africa.
ZW	*Zimbabwe Window*	2010	Open to business ideas to be implemented in Zimbabwe in the fields of agriculture, agribusiness, rural financial services and value chains which extend from rural Zimbabwe to local and international markets.
RIB	*Research into Business Window*	2010	RIB has the aim of stimulating the private sector to commercialize existing, readily available and near complete agricultural research and technology products for the benefit of the rural poor in Africa.
TZAW	*Tanzania Agribusiness*	2010	Open to business ideas to be implemented in Tanzania in the fields of agriculture, agribusiness and rural financial services. The widest possible range of agribusinesses are eligible for support.
REACT	*Renewable Energy and Adaptation to Climate Technologies*	2010	Open to business ideas based on low cost clean energy and solutions (technologies, products, and services) that can help rural people adapt to climate change.
AAW	*Agribusiness Africa Window*	2011	The AAW supports business ideas in the fields of agribusiness, financial services and value chains which extend across Africa and international markets.
SSW	*South Sudan Window*	2011	Supports business ideas in the fields of agribusiness, associated service sectors and value chains which extend from the Republic of South Sudan to local and international markets.
PCW	*Post Conflict Window*	2012	Created to provide opportunities for applicants from post-conflict countries (Democratic Republic of Congo, Liberia, Sierra Leone and Somalia/Somaliland). Supports business ideas in the fields of agribusiness, associated service sectors and value chains.

1.2. Governance structure

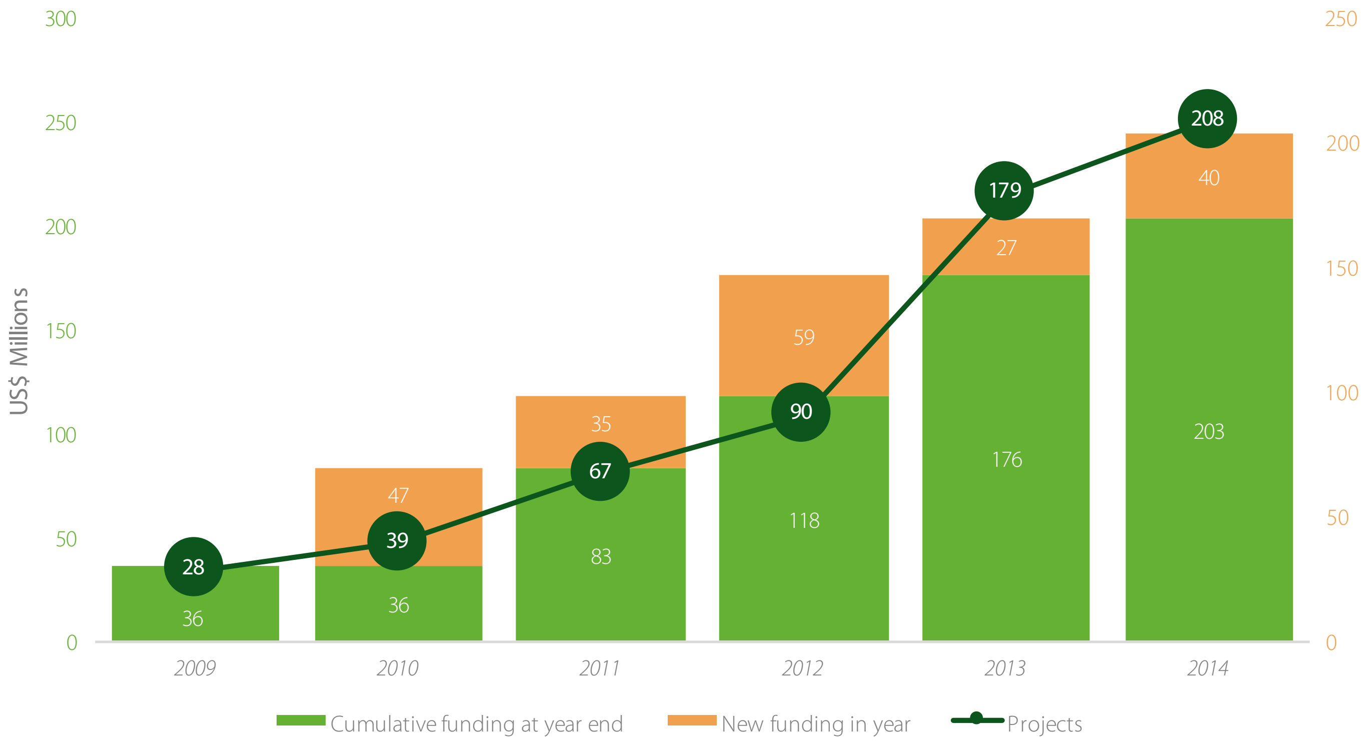
The AECF is a special partnership initiative of the Alliance for a Green Revolution for Africa (AGRA). An AGRA Board Sub-Committee (the AECF Committee) provides the governance structure for the AECF and is accountable to the AECF's donors. The AECF Committee, and the Executive Manager of the AECF (an AGRA employee), are responsible for strategic issues while the Fund Manager, KPMG IDAS, manages the affairs of the AECF on a day-to-basis. An AECF Investment Committee (a Sub-Committee of the AECF Committee) is responsible for making investment (grants and loans to businesses) decisions and also for oversight of portfolio performance.

1.3. Portfolio size

Since the launch of the AECF in 2008, the amount of funds available has grown from US$34m to US$244m by December 2014. The Fund initially grew by 131% between 2009 and 2010, and then continued to grow rapidly through to 2012. In 2013 the AECF Committee imposed a moratorium on new competitions, which slowed the growth of money made available to the Fund in 2013 and 2014.

As of December 2014, the Fund comprised a portfolio of 161 active projects, eight of which are currently on hold (some undergoing additional due diligence checks), and 17 that are still in the contracting phase. 13 projects had closed and nine projects either withdrew or were withdrawn from the funding process before reaching the contracting stage at the end of 2014.

Growth of the AECF portfolio – funds available and projects funded



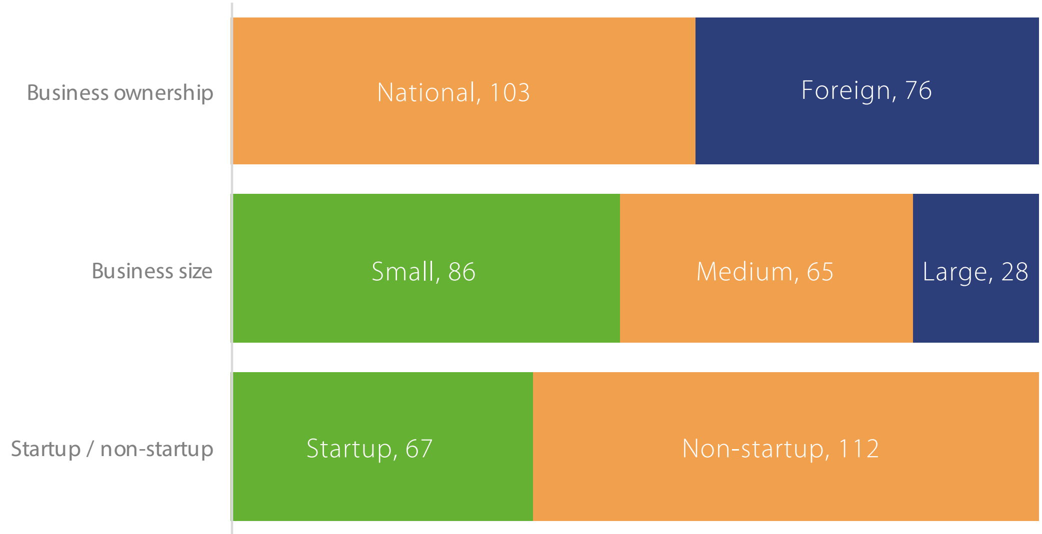
Projects versus businesses

The AECF funds specific projects as opposed to funding businesses in their entirety. As such, the performance of projects rather than the performance of the business as a whole is what is primarily assessed. However, approximately 69% of the active businesses in the portfolio may be considered as 'the same' as the projects, with no or only limited activities occurring outside of the project.

1.4. Profile of businesses implementing AECF funded projects

The graphs below provide a sense of the types of businesses which have received AECF funding for projects.

Profile of business implementing AECF funded projects (all projects apart from REACT Mozambique)



Business ownership

Business ownership is categorised as follows:

1. National: the business is owned by citizens of the country the project is in, or listed on the national stock exchange
2. Foreign: the business is owned by citizens of another country, or listed on a foreign stock exchange

Business size

Business size is classified according to annual company revenue:

1. Small: less than US$1m annual revenue
2. Medium: between US$1 million and US$10 million annual revenue
3. Large: greater than US$10 million annual revenue

The AECF does not discriminate on the basis of business size per se. However, the Fund's additionality criteria works against larger businesses with access to commercial sources of finance. It is unsurprising, therefore, that 84% of businesses the AECF works with have less than US$10m annual revenue. It should also be noted that the Fund's capacity, co-financing, and impact at scale requirements will naturally work against very small businesses.

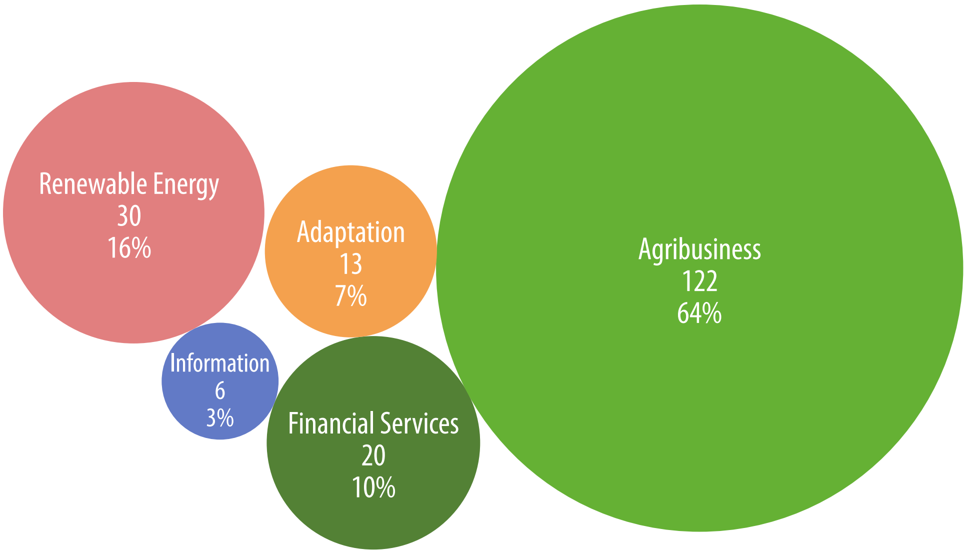
Business type

37% of businesses that have undertaken AECF funded projects are startups. The number of startups is particularly high in sectors which are less established in sub-Saharan Africa. For example, over 85% of the Fund's renewable energy projects are run by start-ups.

1.5. Distribution of projects by sector

AECF funded projects are grouped into five thematic areas or sectors: agribusiness, financial services, information services, climate change adaptation and renewable energy. The following diagrams show the spread of projects across the five sectors by number of projects and funds disbursed.

Number of projects by sector (All projects, 2014)



The AECF started as an agribusiness fund with a secondary focus on rural financial services in 2008. More recently, other sectors such as renewable energy and climate change adaptation technologies have been added with the introduction of the REACT Window in 2010. New REACT Rounds and Windows have subsequently been launched spreading to new geographical regions such as Mozambique and Southern Africa (forthcoming).

AECF projects by region and sector (all projects and total funding committed, 2014)

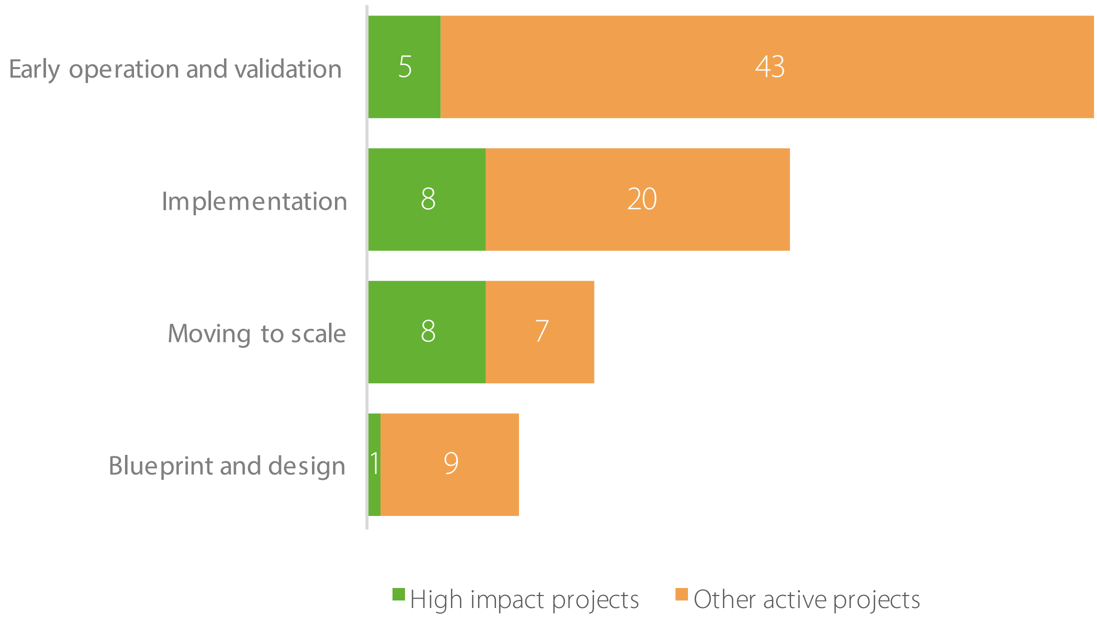
	Agri-business		Financial services		Information services		Climate change adapation		Renewable energy		Total	
Region	No.	'000' US$	No.	'000' US$	No.	'000' US$	No.	'000' US$	No.	'000' US$	**No.**	**'000' US$**
East Africa	50	36,326	3	1,286	4	4,266	6	4,031	25	19,636	**88**	**65,544**
Southern Africa	35	23,461	9	5,783	1	650	7	7,994	5	4,849	**57**	**42,738**
Western Africa	18	15,036	5	5,978	-	-	-	-	-	-	**23**	**21,014**
Horn of Africa	13	8,562	3	2,250	1	430	-	-	-	-	**17**	**11,242**
Central Africa	6	2,726	-	-	-	-	-	-	-	-	**6**	**2,726**
Total	122	2,726	20	15,297	6	5,346	13	12,025	30	24,485	191	143,264

1.6. Project maturity

57% of AECF projects categorised are at the early stages of start-up and implementation (the 'blueprint and design' and 'early operation and validation' phases). This is to be expected as 54% of projects are two years old or younger. The age of the AECF portfolio of projects is heavily skewed by the number of projects selected in competitions held between 2010 and 2012, the winners of which were contracted in 2011 to 2013.

It will be another three to four years before sufficient projects in the AECF portfolio reach a level of maturity that allows for a meaningful assessment of commercial viability. With regard to development impact, a greater proportion of the AECF's high impact projects are in the 'implementation' and 'moving to scale' phases as a whole. This is to be expected, but also indicates that the Fund's development impact has the potential to grow significantly if a sufficient percentage of younger projects successfully reach the 'implementation' and 'moving to scale' phases.

Project maturity (sample of 101 projects, 2014)



1.7. Innovation across the portfolio

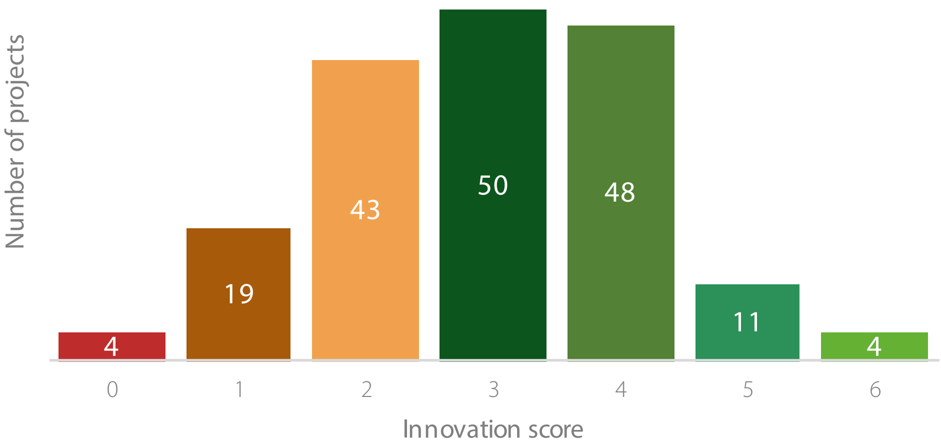
Measuring innovation is critical to the AECF, as its focus is on funding innovative and inclusive business ideas that commercial financiers and investors frequently consider too risky. During the competition phase, the Fund Manager categorises each project using the AECF innovation scale in the table below. During the project selection phase, the Fund Manager carefully reviews the innovations proposed by applicants. More innovative projects are expected to have a greater potential for market systems impact.

AECF innovation scale

Rating	Definition
0	Project not considered innovative
1	Project is new for the company in the country of implementation
2	Project is new for the company in Africa
3	Project is new for the company globally
4	Project is new for the country in which it will take place
5	Project is new for the sector in Africa
6	Project is new globally (a world first)

The graph below shows that 35% of projects categorised according to the AECF innovation scale have, at a minimum, been new in the country in which they will take place.

Level of innovation demonstrated by AECF projects (all projects except for those in REACT Mozambique and Tanzania round three competitions)



2. Commercial performance

2.1. Funding to projects: grants versus loans

YEARS	Total grants approved		Total loans approved		Total funding approved
	US$	%	US$	%	US$
2008	3,491,982	89%	450,000	11%	3,941,982
2009	9,410,524	46%	11,028,293	54%	20,438,817
2010	4,050,140	44%	5,211,050	56%	9,261,190
2011	9,004,197	42%	12,692,485	58%	21,696,682
2012	5,038,941	39%	7,754,029	61%	12,792,970
2013*	30,215,917	51%	29,372,523	49%	59,588,440
2014	7,748,066	48%	8,425,358	52%	16,173,424
Total	**68,959,767**	**48%**	**74,933,738**	**52%**	**143,893,505**

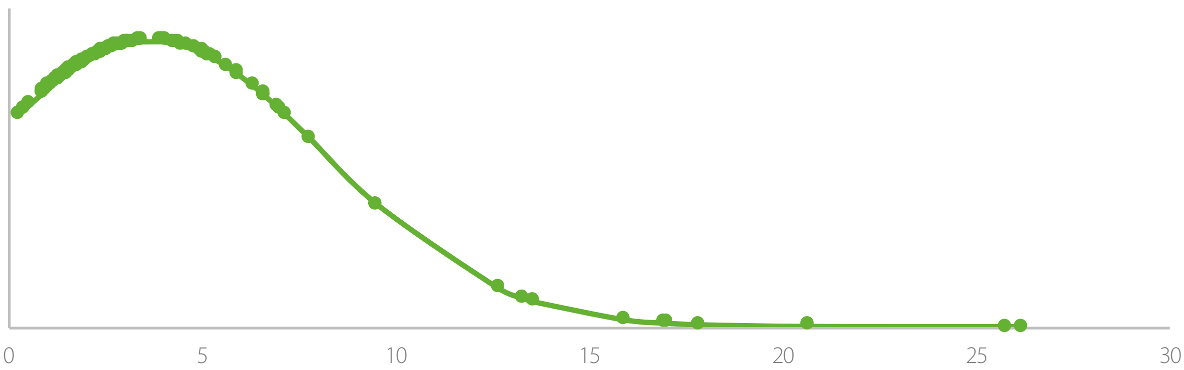
* The PCW (awarded in 2013) does not have a loans component since access to private capital in the eligible countries is more difficult to secure. As a result, the proportion of total loans for 2013 is lower than it would have otherwise been, obscuring a broader trend in recent years for the AECF to provide a higher proportion of non-recourse loans than grants.

2.2. Level of matched and third party funding

The AECF requires businesses to share the risk of undertaking new projects. As at the end of 2014, the AECF had committed US$144m to businesses. These businesses, in turn, had committed to contribute a further US$401m in various forms of matching funds (cash, in-kind, loans and contributions from other funders). This represents a leverage ratio of 2.79 on committed matched funding.

As at the end of 2014, the businesses had co-invested substantially more than the AECF – a total of US$324m compared to US$77m respectively. This represents a leverage ratio of 4.21 on disbursements. The graph below shows the distribution of leverage ratios across the AECF portfolio. The majority of projects matched up to five times the AECF's investment, with several providing over 10 times the amount of AECF funds disbursed.

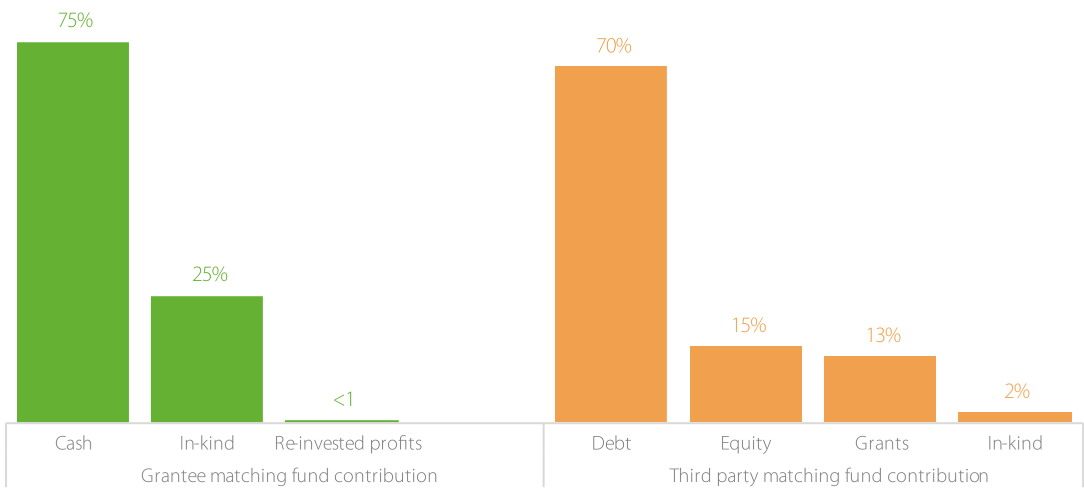
Distribution of matched funding leverage ratio across AECF portfolio (all projects[22], 2014)



The graph below shows a breakdown of actual matching funds contributed by the AECF grantees. This contribution is split into two main categories – grantee matched funds and third party matched funding. Grantee matched funding was mainly in form of cash (74%), in-kind contributions (25%), and re-invested profits (<1%).

Third party funding was mainly constituted of debt (71%). This can be broken down into loans from third parties (38%), bank loans (24%), supplier credit (6%) and bank overdrafts (3%). Other forms of funding received from third parties are in the form of equity (15%), grants from other funders (13%), and in-kind contributions from third parties (2%).

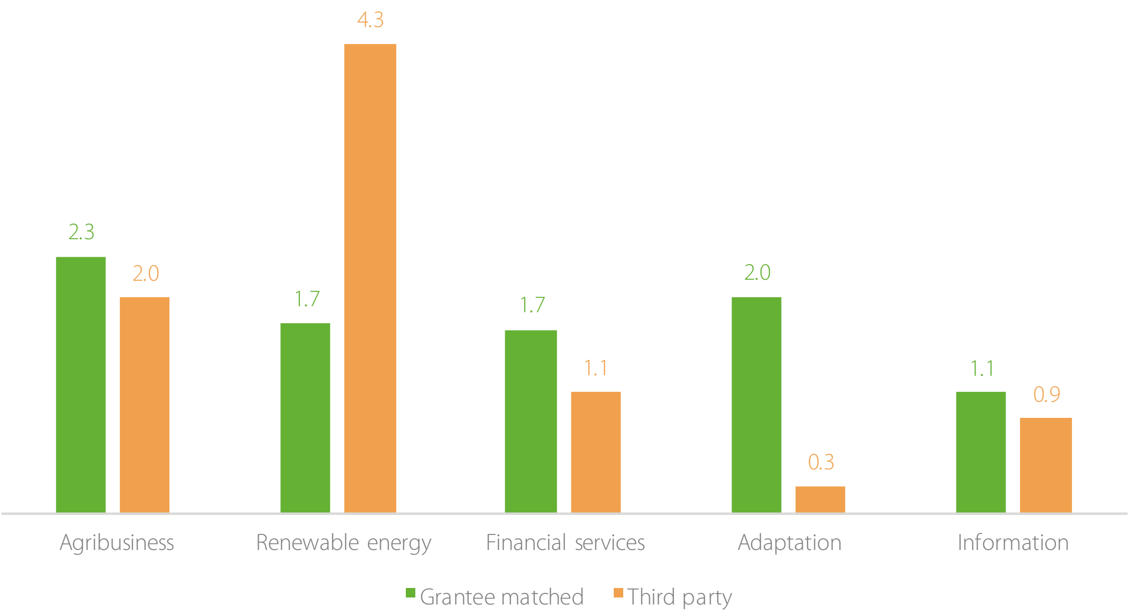
Breakdown of actual matching funds provided (all projects, 2014)



The graph and table below show that agribusiness, financial services, information and adaptation projects preferred to leverage the AECF's funding by contributing their own resources in the form of cash, in-kind and re-invested profits. The greatest contribution came from adaptation projects which put in US$7.3m against US$930,000 of third party funding. However, there are insufficient mature adaptation projects in the portfolio to draw concrete conclusions about the sector.

In contrast, non-AECF funding of renewable energy projects was dominated by third party funding, with US$51m provided compared to US$21m of grantee matched funds. Most of the renewable projects in the AECF portfolio have capital intensive business models and so need to raise capital frequently to strengthen their distribution channels. Projects in this category include PAYGO solar, briquettes, stoves and pellets. Power generation projects, though less capital intensive in comparison, require heavy upfront capital investment in infrastructure and technology and are therefore highly dependent on third party financing.

Matched funding leverage ratios by sector (all projects, 2014)



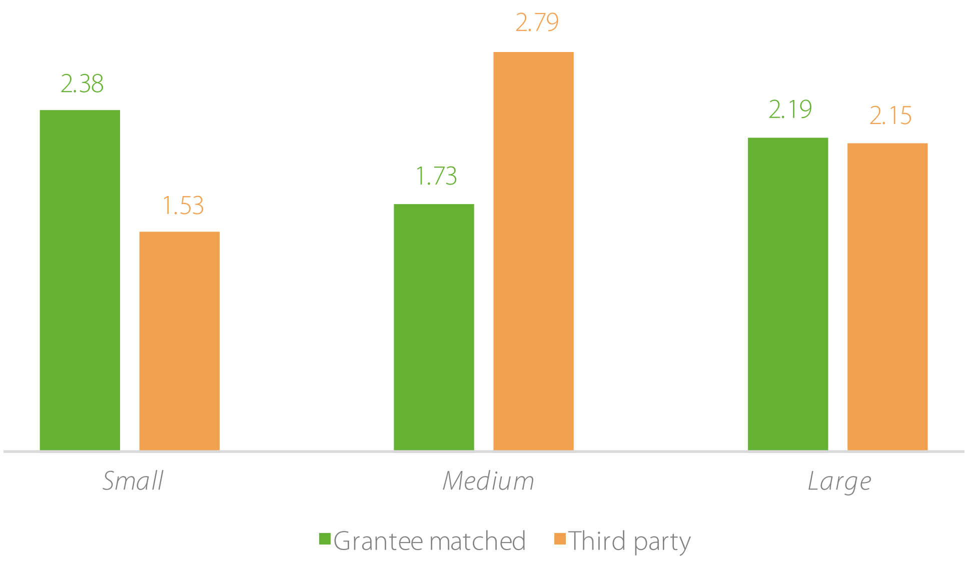
Matching funds provided vs. funds disbursed by sector (all projects, 2014)

Sector	Grantee matched	Third party matched	AECF funds disbursed
Agribusiness	117,123,574	98,316,187	49,937,135
Renewable energy	20,653,716	50,906,858	11,917,358
Financial services	13,495,949	8,896,221	8,023,956
Adaptation	7,269,561	930,513	3,675,088
Information	3,931,548	3,091,656	3,559,338

The graph below highlights that small businesses borrow less from third parties in order to raise the matching funds required to trigger AECF disbursements, compared to medium and large businesses. One possible explanation could be that businesses at this stage are relatively new and risky for investors and commercial lenders.

Conversely, medium sized companies matched funding contributions are dominated by third party funds. In most cases, businesses of this size are in the implementation phase or preparing to scale up, and are therefore fundraising to do so. Businesses at this stage can demonstrate that their business models are commercially viable, generating investor confidence and interest. Large businesses are able to put in just as much money as investors from their revenues and profits.

Leverage ratios by business size (all projects, 2014)



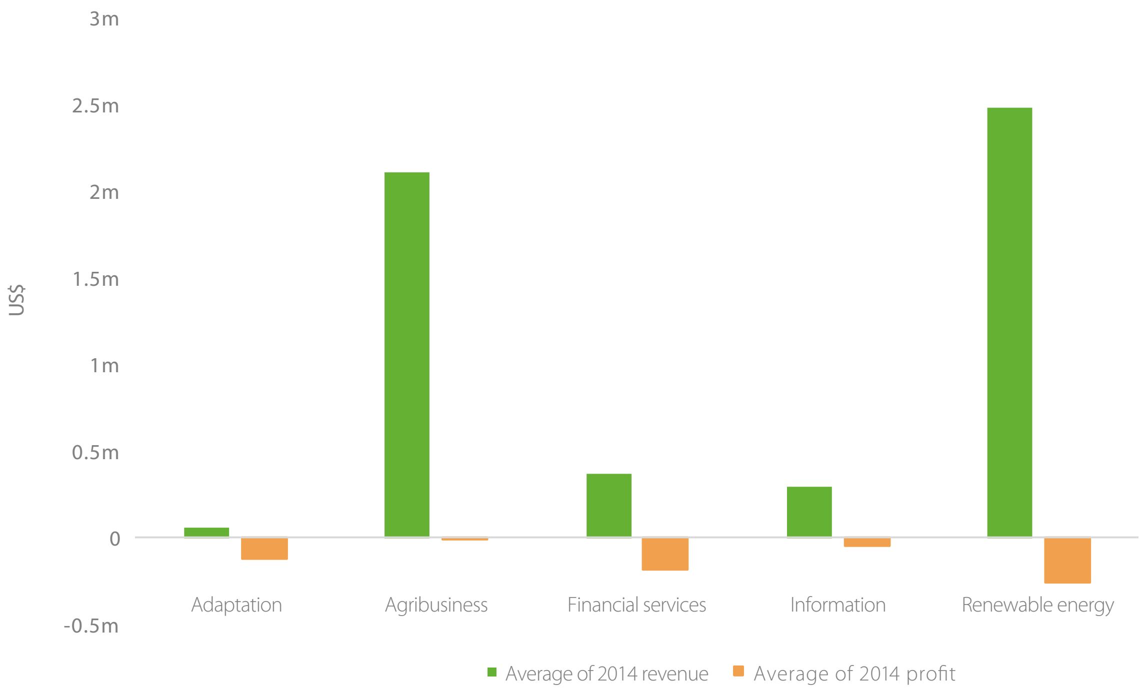
Matching funds provided vs AECF funds disbursed by business size (all projects, 2014)

Business size	Grantee matched	Third party matched	AECF funds disbursed
Small	84,271,878	54,175,697	35,441,310
Medium	49,602,659	79,925,588	28,603,835
Large	28,599,811	28,040,151	13,067,730

2.3. Project revenue and profit

The Fund Manager expects that the majority of AECF projects will only become profitable (using EBITDA as a measure) once they move to scale. At the end of 2014, only 15% of the active projects in the Fund's Portfolio are estimated to be moving to scale. This explains why projects in all sectors posted negative profits on average, as shown below.

Average revenue and profit per project by sector (all active projects, 2014)



Projects in the agribusiness sector were closest to breakeven in 2014, with an average EBITDA of –US$2,800. They also posted revenues of over US$2m per project, second only to those in the renewable energy sector. This can be explained by the fact the projects in the portfolio that are moving to scale are heavily weighted towards the agribusiness sector. Furthermore, the agribusiness sector is significantly more mature compared to other AECF sectors of operation which may make it easier for projects to turn a profit.

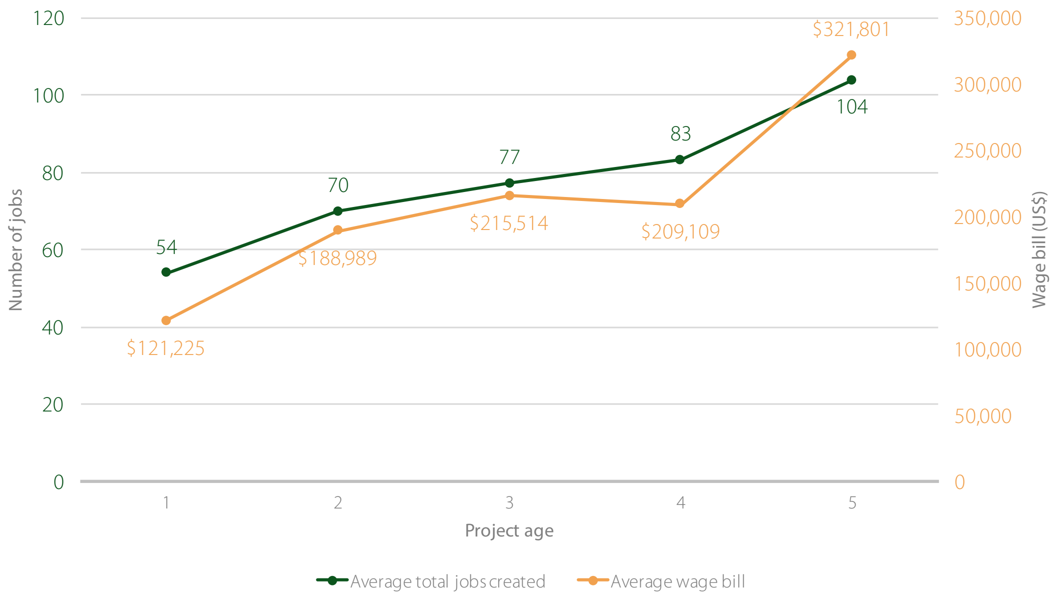
Renewable energy projects had mean revenues of close to US$2.5m in 2014. Despite this, they were the least profitable on average, with a mean EBITDA of approximately -US$250,000. The strong revenue performance of renewable energy projects was driven primarily by the success of PAYGO solar projects. However, these projects have business models which require high initial outlays to purchase and distribute solar sets, whereas revenue is realised in the form of small incremental payments. As such, these projects will only become profitable once a significant proportion of solar sets have been paid off by the end users.

Financial services and information projects have struggled commercially, with low revenues and negative profits. Financial services projects in particular have struggled to be profitable while extending services into rural areas without the support and backing of larger institutions. Adaptation projects are generally too new for any meaningful analysis on their revenue streams or profitability.

2.4. Number of jobs and wage bill

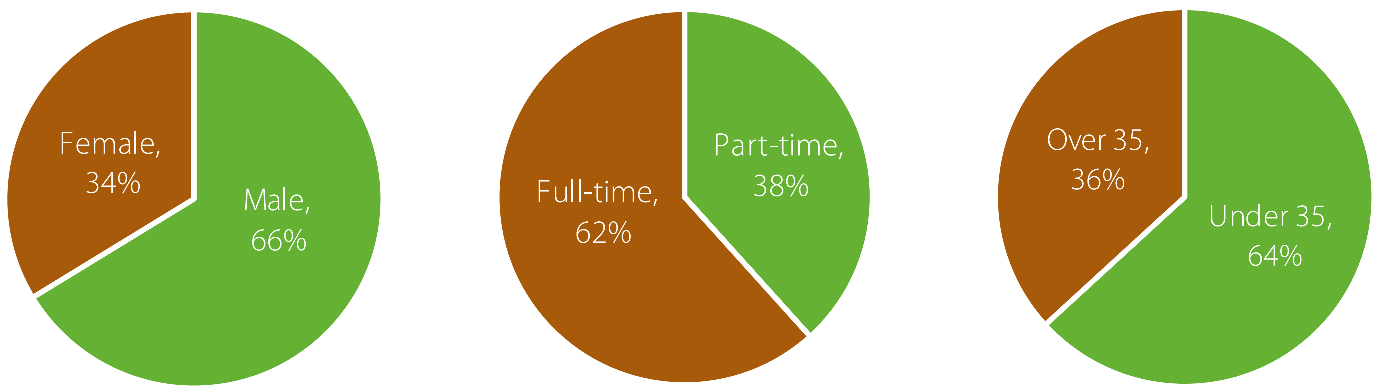
The graph below shows the average number of additional jobs created in businesses undertaking AECF funded projects and total wage bill per project by project age.

Average number of jobs created and wage bill by project age (all active projects, 2014)



A total of 5,153 jobs have been created by AECF funded projects since 2008. The pie charts below break down these jobs by type, gender and by age range. It is important to note that most jobs are factory, farm labour, or extension worker positions, rather than management positions (although these are also included). The Fund Manager estimates that less than 20% of positions are in management.

Breakdown of full time employees by type, gender, and age range (all projects, 2014)

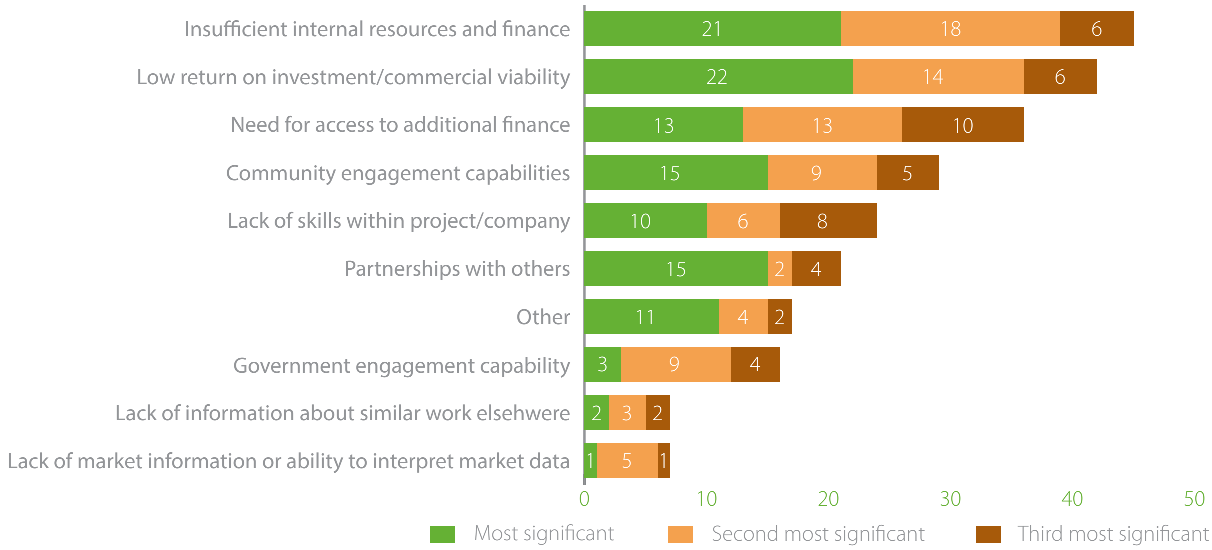


62% of the jobs reported as at the end of 2014 were full time jobs. Fewer women than men benefited from jobs created by AECF projects, as the majority of formal jobs in rural regions are predominantly taken by men. The proportion of jobs filled by youth (less than 35 years old) is considerably more than those taken by those over 35, indicating that the AECF is playing a role, albeit small, in combating youth unemployment in the countries of operation.

2.5. Internal constraints and risks

AECF grantees report the issues, risks and challenges affecting the performance of their projects. Problems are usually common to several grantees and fall into the eight groups highlighted below.

Internal constraints and risks faced by AECF projects in 2014 (sample of 101 projects)

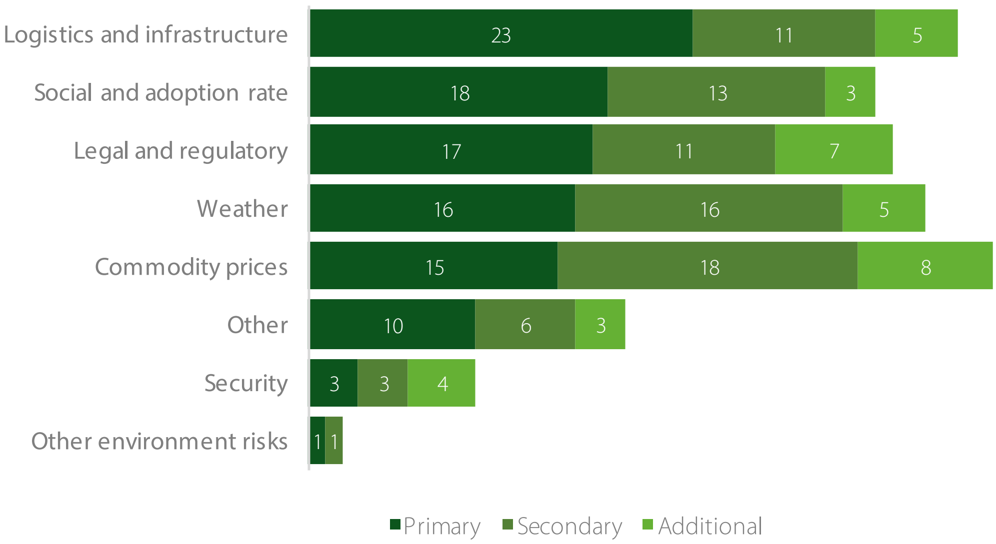


As shown in the figure above, insufficient resources and finance was cited as the most prevalent internal constraint by AECF funded projects. The need to access additional financing is also rated highly amongst the inhibiting factors. This is to be expected as 84% of projects in the portfolio have revenues of under US$10m and may therefore find it difficult to access commercial sources of finance and investment. In many instances, these two constraints increase the cost of doing business in the long run, consequently reducing the rate of return on investment.

2.6. External constraints and risks

AECF projects are often faced with challenges beyond their control or influence. The frequency by which projects face these challenges is presented in the graph below.

External constraints and risks facing AECF funded projects (sample of 101 projects)



Logistics and infrastructure issues were the most significant primary external constraint faced by AECF funded projects. Poor road networks have made it challenging for business and smallholders to connect, leading to damaged vehicles and spoilt produce. In some instances, AECF funded projects have faced problems in trying to get smallholder farmers to engage with their proposed models. This is usually caused by farmers being risk averse, often for good reason, and thus resistant to change until a new technology is fully proven, as demonstrated in banana farming where farmers continue to plant suckers from their own or their neighbour's farms as opposed to virus free plantlets. Smallholder farmers can be reluctant to adopt simple technologies which would help them to increase their cultivated area and productivity. This impacts projects whose business models are based around smallholder input as raw materials for processing or trading.

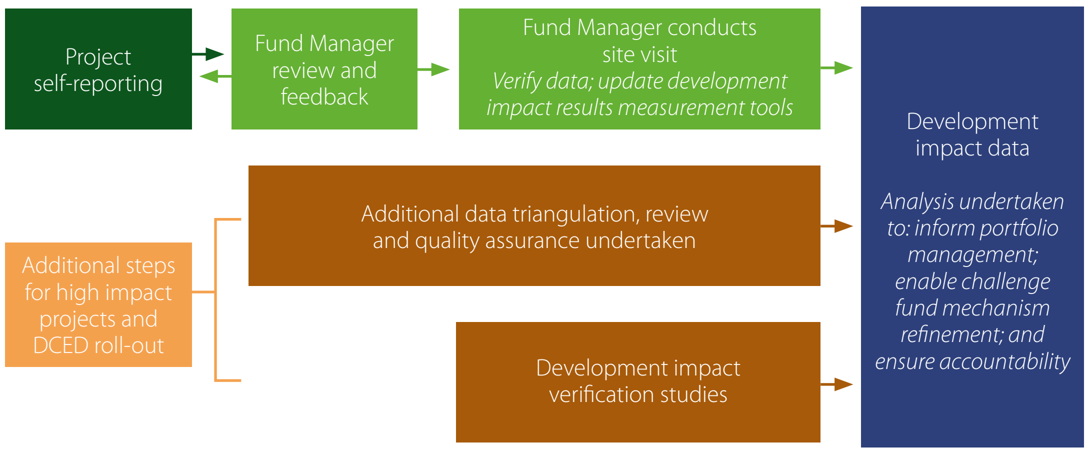
Excessive regulations imposed by central and local governments can slow down operations, increase the cost of doing business, and limit returns to farmers. Erratic weather patterns have greatly affected projects whose products are heavily reliant on rain fed agriculture, suppressing sales during dry seasons and negatively impacting development. Furthermore, climate change is fast becoming a leading risk, with farmers facing weather fluctuations resulting in lower crop yields.

Fluctuating global commodity prices can have substantial adverse impacts on the commercial viability of AECF projects and the livelihoods of smallholder farmers. Volatility in prices drives uncertainty, which hinders both farmers and business in planning for the future. Given the heavy weighting of the AECF portfolio towards agribusiness projects, it is unsurprising that this was the most frequently noted overall external constraint.

3. Development impact

3.1. AECF's approach to monitoring and results measurement

Overview of monitoring and results measurement approach



The diagram presents an overview of the Fund Manager's approach to tracking the development impact of the AECF's portfolio of funded projects. This shows that the process begins with self-reported data submitted by each project, most importantly in the form of an annual report which captures achievements, challenges encountered and progress against the key performance indicators originally set out in the project's business plan. The Fund Manager reviews the reports received from each project and uses this to provide feedback to grantees, and to inform the focus of the site visits conducted at least annually. The purpose of each site visit is to sit with the business to review progress, check on compliance and financial issues, validate the impacts reported (including speaking to beneficiaries), and to ensure results measurement tools are updated as necessary. A site visit report captures findings, action points, and records validated development impact data for the current year. The Fund Manager's monitoring and results measurement team quality assures impact data for each project before approving the data for inclusion in the dataset for aggregation at portfolio level. Additional data verification steps are undertaken for AECF's high impact projects and projects working towards DCED compliance.

High impact projects

Projects which are identified as being 'high impact' are subject to an additional level of interrogation and verification of the data they report, with their results measurement tools updated more regularly and reviewed more closely. In addition, provided funding is available, the intention is to commission independent verification studies to strengthen the evidence underlying the impact of the project.

Donor Committee for Enterprise Development (DCED) Standard

The DCED Standard provides a framework and the tools necessary to enable systematic and credible results measurement of private sector development programmes.[23] Applying the Standard is recognised as good practice by donors and implementing organisations and as a result it has become increasingly used since its launch in 2008. The benefits of applying the Standard include enhanced clarity of an intervention's logic and results chains, enhanced quality and value of performance management data, and improved credibility of reported impact including systemic change.

The AECF's donors initially made funding available to introduce the DCED Standard across several windows, beginning with Tanzania and Zimbabwe, and more recently RIB R2. This roll-out is ongoing and the work undertaken to introduce the DCED Standard in the 'pilot' windows has resulted in improvements in monitoring and results measurement being applied across AECF's entire portfolio, driving particular improvements in the areas of results chains and beneficiary models.

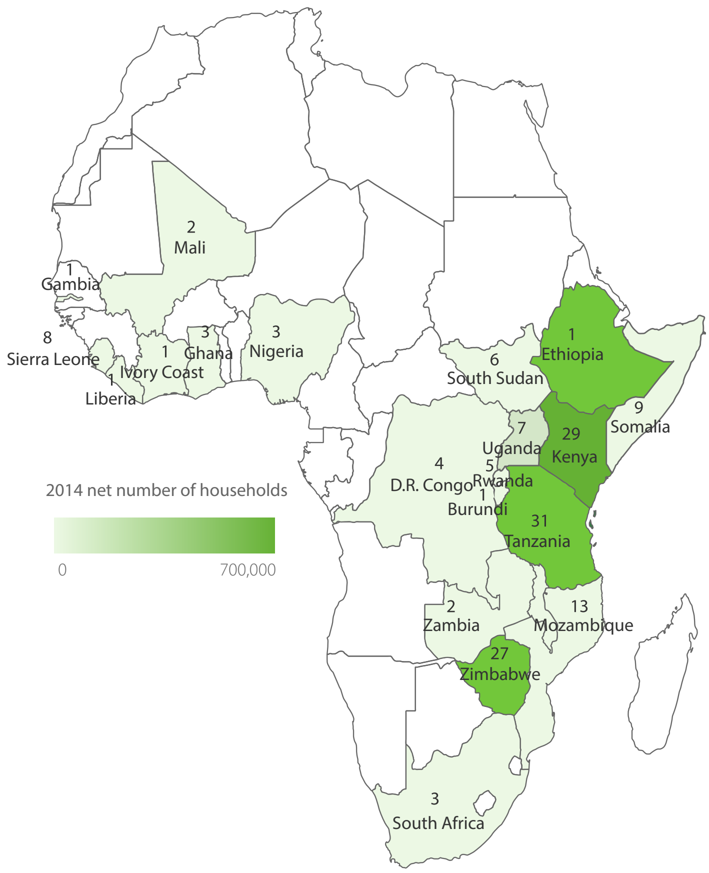
Monitoring and results measurement challenges

The AECF portfolio covers a wide variety of projects, many of which have particular methodological challenges regarding assessment of impact. For example, to assess the impact of an out-grower project the Fund Manager quantifies the benefits accruing to the smallholder farmer (from increased sales), the costs incurred (such as increased inputs or labour) and the counterfactual (what the farmer would have received in the absence of the project.) The counterfactual relies heavily on assumptions, as there is typically no control group for comparison purposes, and for the most part only relatively limited resources are available for data collection. The assessment of more complex projects – such as input suppliers or financial service providers – is even more challenging, often because there is no direct link or information on the primary beneficiary. A seed producer for example will know how much seed has been sold but is unlikely to know the identity of all the end users or how the seed performed on the farmers' fields.

3.2. Impact by country

The heat map below shows the distribution of households benefiting from AECF projects by country, as well as the number of projects in each country. Tanzania, Kenya and Zimbabwe have by far the greatest concentration of AECF funded projects. However, the number of households benefiting in Kenya is significantly higher than in Tanzania and Zimbabwe. This is primarily driven by two high impact projects – Mediae Shamba Shape-Up and M-Kopa – which combined benefited over 650,000 households in 2014. In Ethiopia, over 200,000 households benefited from a single high-impact input supply project.

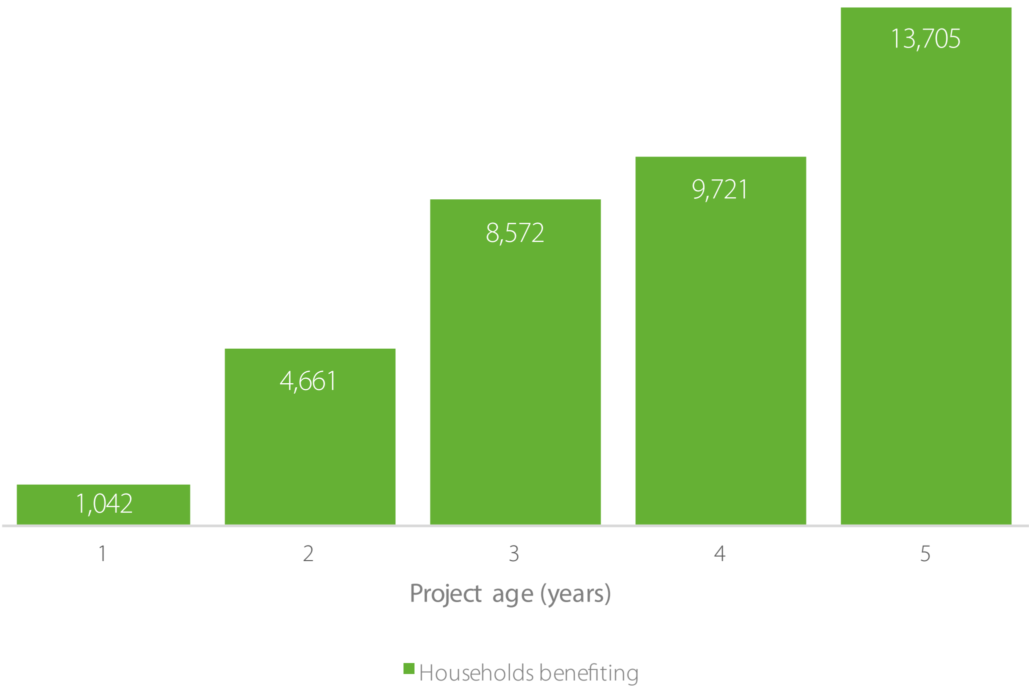
Number of households and projects by country (all active projects, 2014)



3.3. Impact by project age

The AECF's contracted relationship with each project it funds typically lasts six years, after which their contract with the AECF comes to an end. The AECF aims to support sustainable projects that will continue operating once their contract ends. The graph below demonstrates that there is a positive relationship between project age and development impact. As projects mature, they are able to work with more and more rural households as they scale up.

Development impact by project age*



**All projects excluding three outliers and projects over five years in age.*

3.4. Project failures

At the heart of the AECF are the concepts of innovation, testing new ideas and sharing risk in working with the private sector to reduce poverty in rural Africa. In supporting innovation, there is a risk that not every project will be successful. Many will be slow starters and encounter unforeseen challenges and there is a probability of project failure as well as success. Overall, the AECF has supported mainly viable projects evidenced by development and market impact. However, since inception 12 projects (or 6% of the portfolio) have not run until completion and were closed. Learning from failure is as important as learning from success and the Fund Manager examined what factors cause AECF projects to fall short of their potential. To date, the most common reasons have included:

- Production issues: Including poor quality and/or expensive input materials, high costs involved in the transport of production materials due to poor infrastructure, lack of agreements with vital suppliers

- Marketing and selling issues: Including, slower-than-expected market uptake, negative product image and limited distribution channels

- Lack of accountability and transparency: Grantees do not file the required reports detailing fund expenditure and project progress, creating reputational risk for the Fund and the Fund Manager if the funds have been misappropriated

- Changes in regulatory environment and market system: Grantees have encountered unexpected changes which have eroded the viability of their business plan (e.g. the government deciding to provide a highly subsidised product to a community in which the business had been marketing the same product; inconsistent government tariffs affecting product prices)

- Matching funds not secured by the grantee as agreed

- Additionality of the AECF support no longer clear or applicable

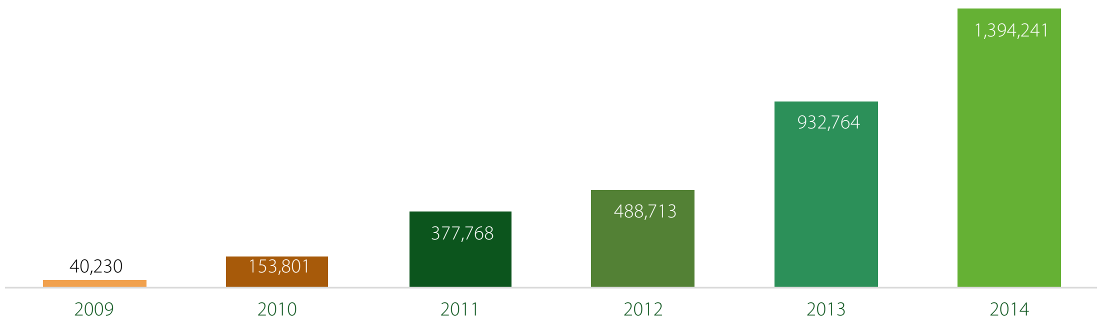
- Other reasons: Divergence from the grant agreement; theft of the product; breaches of agreements with customers (e.g. business could not recover loans given to customers); product distribution issues; weak management capacity and internal grantee-board of directors relationship issues

Projects rarely fail for a single reason – failure is often attributable to a combination of the above factors. These issues are sometimes resolvable when caught early. However, without technical assistance funds, there is little the Fund Manager can do to prevent project failure. A better understanding of the reasons why projects are not successful ensures that the Fund Manager can improve project selection processes with future project screening based on evidence of what businesses and approaches work best.

3.5. Year-on-year impact

The graph shows how the total number of households reached by the AECF's portfolio of projects has grown. As some of the projects in the portfolio have started to mature and move to scale, this growth has accelerated.

Number of households (year-on-year, all projects)



4. Definitions

4.1. Definitions relating to commercial performance

Number of households

An assessment of the number of rural households reached by each AECF project is made and revised on an annual basis. The number of households is used to calculate the total number of primary beneficiaries who benefit in some way from an AECF funded project. This is done by assuming that the average rural household consists of five people, while recognising that household sizes across Africa vary to some extent around this average, for instance: 7.4 in Sierra Leone, 5.0 in Uganda, and 4.9 in Tanzania.

Net benefit per household (US$)

The net benefit per household figure is an estimation of the average monetary benefit, expressed in US$, which accrues to each poor household reached by each AECF funded project over the course of a year. It is derived from an explicit calculation captured in the form of a beneficiary model that is prepared for each project.

Each beneficiary model sets out the financial benefits the household gains from participating in an AECF project; accounts for any direct financial costs households incurred as a result; and assesses the baseline/opportunity cost associated with a household's participation.

Total net benefit (US$)

The total net benefit per project figure is calculated by multiplying the total number of households benefiting from a project by the average net benefit per household.

Total development impact (US$)

The total development impact is the combined development impact of the primary beneficiaries and the additional wage bill for that year.

Development Rate of Return (DRR) calculation

This ratio provides a simplistic indication of the development returns for the donors' inputs to the AECF. A caveat is that the calculation is based on the cumulative development impact over the life of the AECF and that the data collected for projects in older windows (notably the General Window) is of a lower quality and therefore may be less reliable.

Calculation of DRR of the porfolio	
A	Number of households benefiting in each year less the baseline figure = net number of HH per year. However, where baseline beneficiaries begin to enjoy additional benefits as a result of the project they are then included as 'new' beneficiaries, but at a lower net benefit.
B	Value of benefit per household each year less the baseline figure = net benefit (US$) per household, per year.
C	Total value of benefit received by household = total of A x B for each year of the project to date (US$).
D	Total value of employment generated (total wages paid per year) less baseline for each year (i.e. the total wage bill for the previous year) for each year to date (US$).
E	Development Rate of Return (DRR) = C+D divided by amount of AECF money disbursed to date (US$)

End notes

[1] World Bank: http://www.worldbank.org/en/topic/poverty/overview

[2] IFAD: http://www.ruralpovertyportal.org/region/home/tags/africa

[3] Jobs are reported as full-time equivalent (FTE).

[4] Systemic change statistics are taken from a random sample of 82 active projects.

[5] A crude measure of the overall value for money delivered by the AECF (cost effectiveness), calculated by dividing the total net benefit plus wages for the period by the total AECF funds disbursed for the same period.

[6] Statement of the Director-General Twenty-fifth FAO Regional Conference for Africa Nairobi, Kenya, 16-20 June 2008.

[7] Kamu, Oluwole Salmi, and Numasawa, (2014) 'Inclusive Growth: An Imperative for African Agriculture', published by the African Development Bank Group.

[8] Ligon and Sadoulet (2007) 'Estimating the Effects of Aggregate Agricultural Growth on the Distribution of Expenditures', Background paper for the World Development Report 2008, World Bank

[9] Beck, Demirgüç-Kunt and Levine (2007) as cited by Guièze (2014) 'Financial inclusion in Sub-Saharan Africa'

[10] IMF (2015) 'Financial Services Access Vital to Central Africa Growth'

[11] Guièze (2014) 'Financial inclusion in Sub-Saharan Africa'

[12] World Bank (2015) 'Commercial bank branches (per 100,000 adults)'

[13] Guièze (2014) 'Financial inclusion in Sub-Saharan Africa'

[14] Demirguc-Kunt et al. (2013) 'The Global Findex Database Financial Inclusion in Fragile and Conflict-Affected States'

[15] Mehdi Hamam and Schwank (2011) 'Microfinance: What role in Africa's development?'

[16] Meyer (2015) 'Financing agriculture and rural areas in sub-Saharan Africa: Progress, challenges and the way forward'

[17] McKinsey Insights (2014) 'Sub-Saharan Africa: A major potential revenue opportunity for digital payments'.

[18] ibid.

[19] World Bank (2014) 'Fostering Private Sector Development in Fragile States: A Piece of Cake': http://blogs.worldbank.org/psd/fostering-private-sector-development-fragile-states-piece-cake

[20] Tschumi and Hagan (2008) The operational guide for the making markets work for the poor (M4P) approach.

[21] This is the year the window went live and opened for submissions.

[22] This analysis excludes a single outlier with a matched funding leverage ratio of 178.

[23] DCED Secretariat: http://www.enterprise-development.org/