



Women farmers in Africa are at the front line of dealing with the impact of climate change, but are not getting the support they need from international climate finance. Photo: Abbie Trayler-Smith/Oxfam

AFRICA'S SMALLHOLDERS ADAPTING TO CLIMATE CHANGE

The need for national governments and international climate finance to support women producers

Climate change is undermining the ability of African nations to feed themselves. Women smallholder producers are on the front line of dealing with the impacts, but are not first in line for international climate finance. Wealthy countries have committed to helping countries in Africa to adapt to climate change, but few women producers are feeling the benefit. National governments are stepping up in spite of limited resources and multiple development priorities. New analysis shows that whilst international climate finance overall is on the rise, wealthy countries are still failing to deliver public finance for adaptation in Africa.



WOMEN, FOOD AND CLIMATE CHANGE

Across the continent of Africa producing food is getting harder. Seasons are shifting, rainfall is becoming less reliable, temperatures are rising, weather is becoming more extreme, and, as a result the fight against hunger is becoming much harder. Smallholder producers,¹ especially women, are on the front line of the consequences of climate change because of how dependent on the weather food production is, and how dependent on that food their families and communities are. The pressures that food producers in Africa now face are unprecedented.

Considerable progress has been achieved by governments across Africa to manage the risks of current climate variability and short-term climatic changes on food production. The Intergovernmental Panel on Climate Change (IPCC) warns, however, that in spite of this progress actions to date will be insufficient to ensure adaptation to the long-term impacts of climate change on agriculture, nutrition, and food security across Africa.²

Over the last 50 years the African continent has experienced a strong warming trend, which is continuing. Whilst the whole world is experiencing global warming, temperatures over Africa will rise faster than the global average, particularly in the more arid regions where food shortages and nutritional challenges are already a reality.³ On current trends, average warming across Africa will have exceeded a 2°C rise in the coming decades, an increase that will severely disrupt food production.⁴

Climate change is putting food production under threat. It is amplifying existing stressors and undermining vulnerable agricultural systems. Nowhere will that be felt more than in the semi-arid areas of Africa where changing rainfall patterns and rising temperatures are already reducing, and will continue to reduce, the productivity of vital cereal crops. Production of high-value perennial crops such as tea, coffee and cocoa are also set to be negatively impacted,⁵ as well as livestock and fisheries.⁶

The progress that national governments have made to respond to climate change and establish governance systems for adaptation has been praised by the IPCC. However, the Panel remains concerned that these institutional frameworks are not yet able to effectively coordinate across the range of adaptation initiatives already being implemented, let alone the broad-reaching package of initiatives much needed for adaptation. Oxfam analysis found major gaps in the preparedness of the global food system to cope with climate change, with developing countries the least prepared of all.⁷

Whilst climate change has to some extent been mainstreamed into national planning, the IPCC notes *'incomplete, under-resourced, and fragmented institutional frameworks and overall low levels of adaptive*

'Some 20 years ago we could harvest a lot, but things have changed. There are no more rains and we are now struggling to harvest. The rains are not coming on time and the times we used to grow and harvest crops have changed.'

Ipaishe Masvingise (widow, 49 years), Ward 13, Gutu, Zimbabwe. 2014

By 2100, climate change could cause an additional 45 million to 70 million people in sub-Saharan Africa to fall below the \$2-a-day poverty line due to income losses alone.

N. Stern (2007) 'Stern Review: The economics of climate change'

High levels of background poverty and vulnerability create conditions under which a reversal in human development could accompany climate change.

ODI (2014) 'Fair Share: Climate finance to vulnerable countries'

capacity, especially competency at local government levels' which have led to a largely ad hoc and donor-driven, project-level approach.⁸ In conclusion, adaptive capacity is considered to be low.

Box 1: Dorothy Musoke, smallholder producer, Rwenzori, Uganda

'The seasons keep changing, the rains don't come when I expect them, so then we have drought and it is so hard to grow anything. My maize is just about coping, but my beans won't grow.'

Dorothy used to rely on the constant rain during the rainy seasons to grow her crops, but then they stopped coming and her plants began to fail. When the rains did come, they were so heavy that the parched soil could not absorb the inundation, and her soil and crops got washed down the slope. Even when her crops failed again and again, she felt she had no other option than to continue with them and hope that things improved, but they did not.

But Dorothy became a 'Model Farmer' in the Foundation for Urban and Rural Advancement (FURA) livelihood programme, supported by Oxfam. The programme helped communities in the area to adapt to the changing rainfall patterns. Dorothy received training and advice on agricultural techniques, visited another district to see techniques in action by other smallholders like her, and learnt about different crops she might be able to grow in spite of the changeable conditions. She also received seedlings from a new community nursery established by the project to replace crops lost to floods and drought and trial new crops, and tools to dig trenches to protect her field from flooding.

Pettengell (2010) 'Climate Change Adaptation: Enabling people living in poverty to adapt'

Women make up a significant proportion of smallholder producers, estimated to be 48.7 percent of the agriculture labour force across sub-Saharan Africa,⁹ and it is estimated that 60 percent of economically active women in Africa depend on agriculture for their livelihoods.¹⁰ Women are therefore on the front line of the impacts of climate change, trying to feed their families, their communities, and their countries. They are often the most vulnerable to climate change impacts because they are generally more heavily dependent on climate-sensitive livelihoods (such as rain fed agriculture, and collecting water for household use), and because they often have the least to fall back on in harsh times or to help them escape a downward spiral in productivity (through limited access to ways to invest in improvements, such as agricultural training, loans, or technologies). Women are food producers and providers, guardians of health and care givers, and economic actors. Droughts, deforestation, and erratic rainfall force women to work even harder just to meet their household needs for food, water, and fuel, and to keep their families healthy and safe. This leaves even less time to improve their economic activities or invest in their future.

Only 5 percent of all extension resources are directed at women. Moreover, only 15 percent of extension personnel are female.

FAO (2011) 'Women in Agriculture: Closing the gender gap for development'

AGRICULTURE UNDER THREAT

As a sector, agriculture is the most vulnerable to climate change. In sub-Saharan Africa 70 percent of food is produced from subsistence agriculture¹² and therefore smallholder producers need to play a central role in decision making around agricultural investment and adaptation planning. Despite the high numbers of women smallholder producers across Africa, and their significant contribution to food production, they are frequently overlooked by policies and processes that invest in agriculture. This is for a variety of reasons, from lacking basic rights over the land they work, through to receiving little support from agricultural services – only 5 percent of all extension resources globally are directed towards women.¹³ Women's contribution to food production is therefore largely unsupported.

In 2003 at the African Union (AU) Head of State Summit in Maputo, governments agreed to invest more than 10 percent of their total national budget in the agricultural sector – an agreement which was reiterated at the Malabo summit in June 2014. Over a decade on from the original commitment, and only nine of the 54 AU member states met the Maputo Declaration target in 2013, and only seven have regularly met the yearly target.¹⁵ This year Nigeria has allocated only 0.89 percent of its national budget to agriculture.¹⁶

Not only does this investment fall short of the target, but the limited investments that are made are often focused on major commodity crops like maize and sugar, whereas women more commonly produce the food that is grown for consumption and tree-based commodities that do not rely on land ownership. Women are also more often involved in local markets, whereas government and large private sector investments prioritise regional and global markets.

Generally speaking – through both quantity and quality – agricultural investment has not delivered what smallholders in Africa, and in particular women producers, need. Adaptation planning and investment must learn lessons from the under investment in the agricultural sector and put the focus back onto the majority of food producers.

Four out of five people in Uganda depend on agriculture for income and food security. Therefore, any threat to agricultural production degrades Uganda's socio-economic status and puts 80 percent of the population at risk of poverty and hunger.

ACCRA (2014) 'The Climate Forecast Model'¹¹

Agriculture generates 32 percent of GDP across the continent of Africa.

AGRA (2013) 'Africa Agriculture Status Report: Focus on staple crops'¹⁴

More than two-thirds of African citizens depend on agriculture for their incomes. The potential for agriculture-led economic growth to reduce both the breadth and depth of poverty in Africa is therefore enormous.

The Maputo Commitments and the 2014 African Union Year of Agriculture¹⁷

Box 2: Missed opportunities not investing in women in agriculture

- In Ghana, if women and men had equal land rights and tenure security, women's use of fertiliser and profits per hectare would nearly double.
- In South Africa and Zambia, studies found that involving women in the design and field testing of new technologies, such as new crop varieties, small machinery and farm tools, speeds up the adoption of innovations, increasing productivity and incomes.
- In Tanzania, providing women entrepreneurs with the same inputs and education as men could increase business income by between 10 and 20 percent.
- In Tanzania and Zambia, allocating land, labour, capital and fertiliser equally could increase production by between 10 and 20 percent.

J. Ashby *et al.* 'Investing in Women as Drivers of Agricultural Growth',
<http://www.ifad.org/gender/pub/sourcebook/flyer.pdf>

Rural poverty is deeply rooted in the imbalance between what women do and what they have.

The International Fund for Agricultural Development¹⁸

PROMISES OF INTERNATIONAL SUPPORT

In 2005 the urgent need for adaptation in vulnerable countries was internationally recognised, and Least Developed Countries (LDCs) were invited to develop National Adaptation Programmes of Action (NAPAs) to identify and fund their most urgent and immediate adaptation needs. NAPAs were submitted by 47 LDCs, including 33 in Africa, yet these still remain largely unfunded both nationally and internationally. Whilst all but two African LDCs have had at least one project funded from the LDC Fund, funding falls far short of what was required then, and devastatingly short of what is required now.

At COP15 in Copenhagen in 2009 the commitment was made to mobilise \$100bn per year for climate finance by 2020. This month the Organisation for Economic Co-operation and Development (OECD) published a preliminary estimate of combined public and private climate finance of \$61.8bn²⁰ in 2014, up from \$52.2bn in 2013.²¹ This suggests significant progress towards the goal, but the headline figures deserve a closer look.

The vast majority of climate finance is flowing to mitigation (77 percent), with only 16 percent to adaptation, and seven percent to activities jointly supporting mitigation and adaptation.²³ This follows a consistent trend in which adaptation, and the countries and communities that must prioritise it, are overlooked in the allocation of international climate finance. Oxfam and others estimated adaptation received just 21 percent of funds from the so-called Fast Start Finance, where \$30bn was pledged over 2010–12 as a down-payment on the \$100bn goal. This is in spite of an agreement to achieve a ‘balance’ between funding for adaptation and mitigation activities.²⁴

Fast Start Finance delivered less than \$1 per person in the developing world for adaptation.

ODI (2014) ‘Fair Share: Climate finance to vulnerable countries’

Only 21 percent of Fast Start Finance was spent on adaptation.

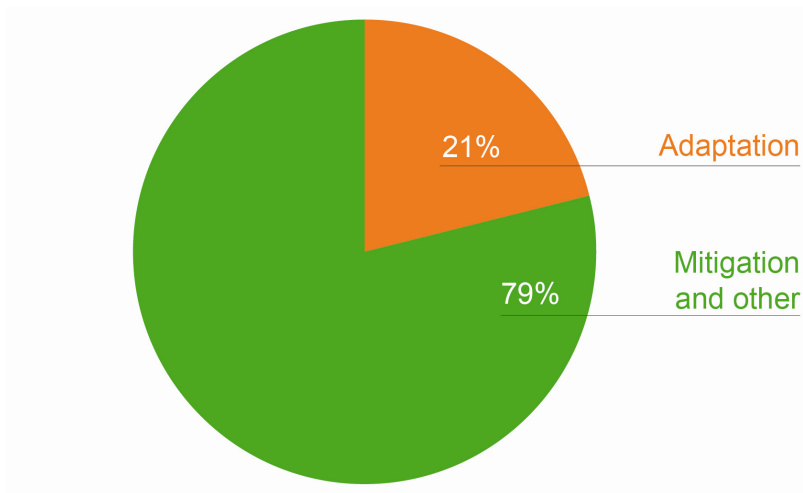
Oxfam 2012¹⁹

Only 16 percent of climate finance went to adaptation in 2013-14, with an additional 7 percent to activities that supported both mitigation and adaptation.

OECD (2015) ‘Climate Finance in 2013–14 and the USD 100 Billion Goal’²²

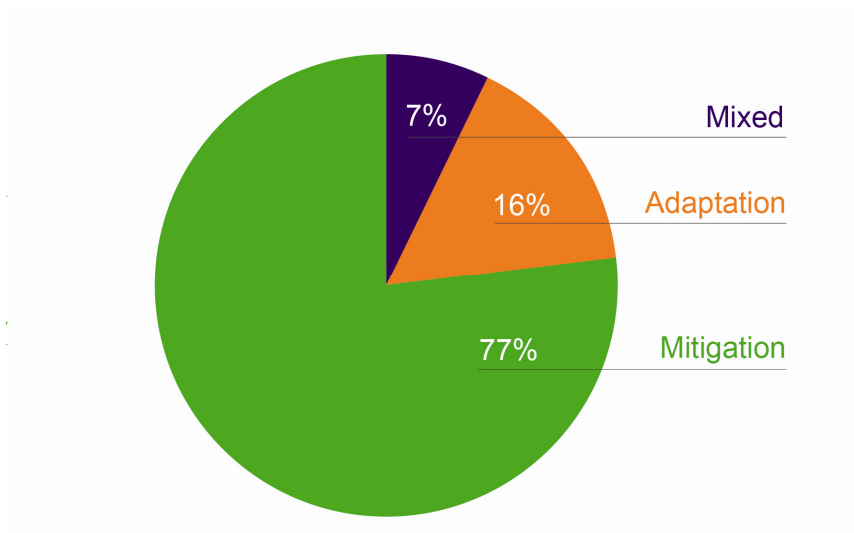
Figure 1: The imbalance of adaptation finance

a) Fast Start Finance (2010–2012)



Source: Oxfam (2012) 'The Climate Fiscal Cliff'

b) The \$100bn goal



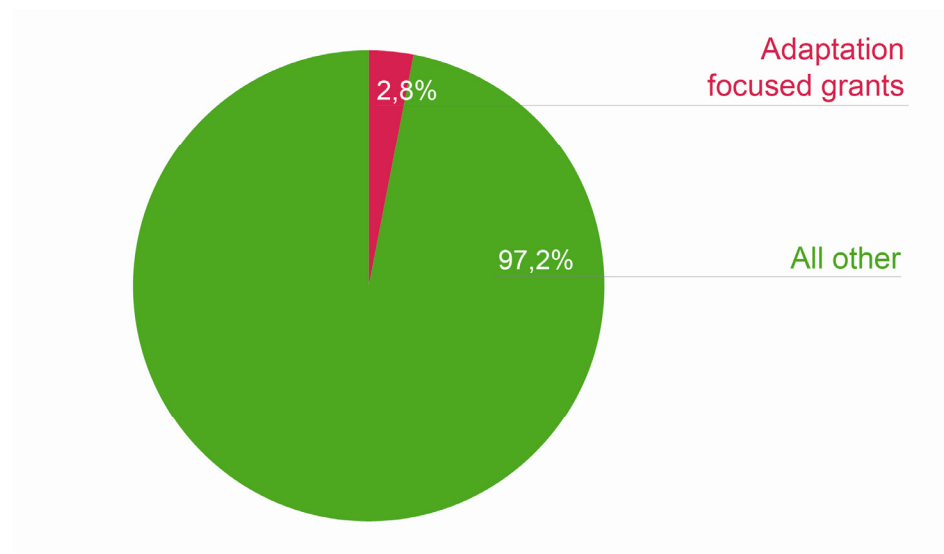
Source: OECD (2015) 'Climate Finance in 2013–14 and the USD100 Billion Goal'

Furthermore, the majority of these flows are in the form of loans – both concessional and non-concessional – and private finance. While the new OECD report does not provide this level of breakdown, the picture is clear from looking at the publically-available OECD-DAC project database for 2013.²⁵

According to this database, only \$13bn of climate-related ODA in 2013 was provided as grants – which is equivalent to just 25 percent of the \$52.2bn the OECD suggested was mobilised towards the \$100bn goal in 2013. What is more, only \$1.5bn of these grants were allocated explicitly and primarily to climate change adaptation.²⁶ A further \$3.1bn in grants for adaptation is counted in the overall OECD progress report, but these flows do not address climate change adaptation as their primary objective. Indeed, there is limited evidence to suggest that these projects,

where climate change is just one of many objectives have actually taken climate change into consideration at all.²⁷

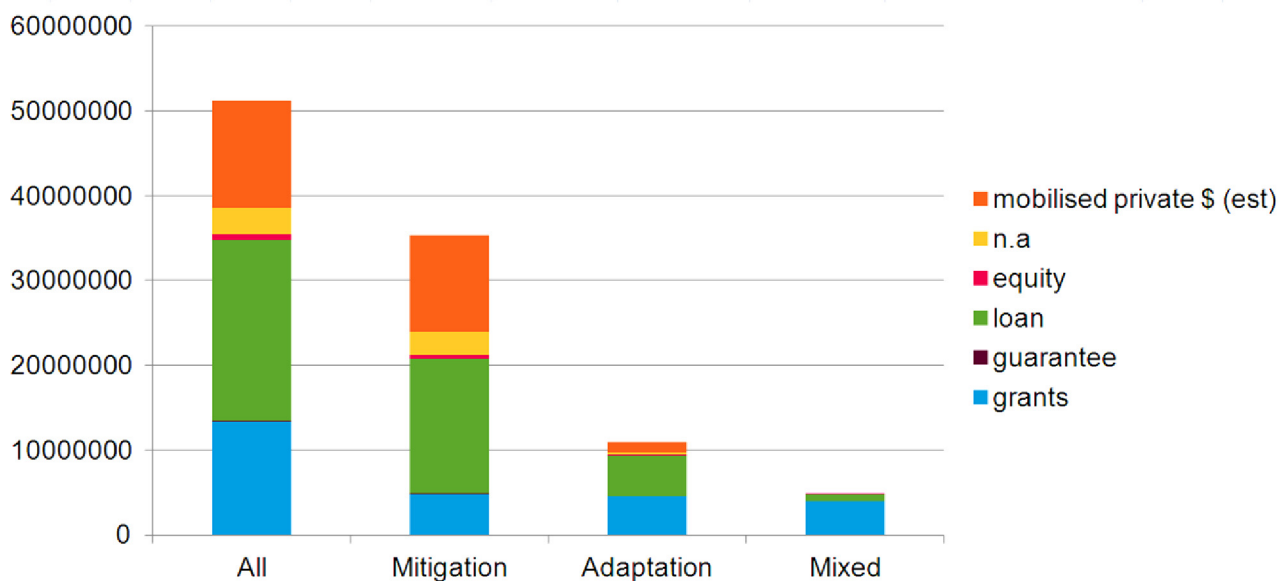
Figure 2: Grants dedicated to adaptation as a share of total climate finance in 2013



Source: Oxfam analysis of OECD-DAC (2013) 'Project-level database'; and OECD (2015) 'Climate Finance in 2013–14 and the USD100 Billion Goal'

This means that only a tiny fraction of the promised \$100bn per year by 2020 is flowing as grants dedicated to climate change adaptation. The overwhelming reliance instead is on loans and private finance – both of which are unlikely to be suitable for meeting the adaptation needs of the poorest and most vulnerable communities.

Figure 3: 2013 climate-related public and private finance²⁸



Source: Oxfam analysis of OECD-DAC (2013) 'Project-level database'; and OECD (2015) 'Climate Finance in 2013–14 and the USD100 Billion Goal'

That is not to say private finance does not have a vital role to play in the global response to climate change, it does; we need to see a shift in global investment flows. However, building vulnerable people's resilience to climate change relies on basic essential services and public goods which require large-scale public finance much more so than mitigation, because there are fewer profitable opportunities in building the resilience of the poorest and most marginalised. While the private sector is investing in adaptation to protect their supply chains, the private sector cannot be expected to deliver on the large scale broader public interest and needs of vulnerable communities; this has to come from public sources with government leadership. The reliance on private finance has also tended to exclude the poorest countries, where capital markets and investment opportunities are less developed.

This emphasis on mitigation and loans, rather than adaptation and grants, has significant implications for the geographic distribution of resources mobilised towards the \$100bn goal. In 2013 Africa received approximately 27 percent of the public finance, with the largest share (39 percent) allocated to countries in the Asia region. Of the approximately \$10.6bn allocated to Africa in 2013, only around \$600m was in the form of grants for adaptation.

This all adds up to a significant funding gap between what international climate finance is delivering and the estimated \$7–15bn needed every year by 2020,²⁹ and upwards of \$35bn every year by 2050 for adaptation in Africa.³⁰ Therefore despite the promising headlines this month from the OECD, the track record on international public finance for adaptation remains bleak, whilst the costs of adaptation continue to rise. International climate finance is not yet prioritising those who are suffering the worst consequences of climate change, and an enormous funding gap remains to deliver the new and additional public finance needed to enable adaptation at the scale required for vulnerable women and men across Africa.

'Life was difficult. I did not grow any maize but only groundnuts, pearl millet and sorghum. Few of these crops matured, they were hit hard by droughts. I used to travel far to buy food. I used to go to new resettlement areas (minda mirefu) in Gutu in search of maize. Sometimes I did not find the maize I was looking for and my children would sleep without eating anything.'

Eugenia Munguma (widow, 49 years), Ward 13, Gutu, Zimbabwe, 2014

NATIONAL ACTION TO PLUG THE GAP

In spite of the failure of the international community to deliver resources at the scale and type needed, African countries have started to step up. Right now, their people are suffering the effects of poor harvests; shifting seasons, temperatures and rainfall patterns; and weather-related disasters. Comprehensive and integrated national adaptation is the goal, and the IPCC makes clear that *'adaptation is shown to be successful and sustainable when linked to effective governance systems, civil and political rights and literacy'*.³¹ Many countries have developed national policies and strategies for addressing the impacts of climate change on their people and economies, and some have set up units or institutions responsible for adaptation planning and coordination across ministries and alignment with development priorities (e.g. Ethiopia's Climate Resilient Green Economy Strategy and Mozambique's national adaptation monitoring system – see boxes 4 and 5).

With the failure to get NAPAs funded, Fast Start Finance not even delivering one dollar for every person in the developing world, and only a tiny fraction of the \$100bn goal flowing in the form needed, African governments are increasingly forced to take action through their own domestic budgets to protect their people and their hard-fought development gains from the devastating impacts of climate change.

Oxfam estimates that sub-Saharan African countries are already spending around \$5bn of their own resources on adaptation, which for many countries is far more than the amount they have received in international climate finance.³² For example, Tanzania spends approximately three times more on adaptation each year from its own budget than it received from international climate finance during the Fast Start Finance period 2010–12, and Ethiopia spent approximately double each year what it received in the same period.³³ Significant public expenditure on adapting to climate change is happening in some of the world's poorest countries, often exceeding international support for adaptation.³⁴

Ethiopia's domestic climate change related spending is equivalent to almost half the national spend on primary education.

Tanzania's domestic climate change related spending represents almost two-thirds of the national spend on health.

Spending on climate change runs the risk of crowding out urgently needed spending in other priority areas

ODI (2014) 'Fair Share: Climate finance to vulnerable countries'

Table 1: National snapshots – Domestic allocations and the climate finance gap

Country	National climate change costs ³⁵	Annual domestic budget allocation ³⁶		Adaptation finance approved ³⁷
	USD	USD	Budget	USD
Ghana	\$1.3bn per year	\$210m	2.0%	\$4.22m
Uganda	1.6% GDP	\$25m	0.9% (0.2% GDP)	\$15.39m
Ethiopia	\$7.5bn per year	\$440m	14.5%	\$11.41m
Tanzania	\$650m per year	\$383m	5.5%	\$13.31m
Malawi	n/a	\$23m	1.5%	\$22.48m

Figures are approximate and based on available published studies covering different time periods and using different methodologies. Please see Box 5 and footnotes for more details.

Box 3: Ethiopia Climate Resilient Green Economy Strategy

Ethiopia is one of a number of low-income countries to have formally integrated climate and development through its Climate Resilient Green Economy (CRGE) Strategy which was developed in 2011. The CRGE aims to better coordinate key sectors of the economy to pursue a sustainable growth path. The vision is to improve resilience to climate change, secure the abatement of greenhouse gas emissions, enhance the avoidance of future emissions and foster economic development alongside reduced carbon-dependent growth (FDRE, 2011).

It is hoped that the CRGE Facility will receive \$200bn from national, international, public and private sources over the next two decades. The goal of the Facility is to make the administration of such funds easier to direct and coordinate, and it has begun the process of accreditation to become a National Implementing Entity for the Adaptation Fund. Bilateral funders, including the UK government and others, have played a substantial role in supporting these efforts, as have other international organisations such as the Global Green Growth Institute, the African Development Bank and others with additional resources.

However, the majority of climate change related actions are domestically funded through an estimated **\$440m every year** – accounting for 14.5 percent of the national budget.³⁸ This amount for one year is more than Ethiopia has received in total from international climate finance.

ODI (2014) 'Climate Finance: Is it making a difference?'

PRIORITISING ADAPTATION

With so much growing awareness and emphasis on climate change at the national level, these domestic investments indicate positive steps forward, but things need to move faster and go much further. In addition to financing considerations, governments need to grapple with how to deliver effective adaptation that prioritises the needs of the most vulnerable women, men, girls, and boys across the continent of Africa, particularly the smallholder producers on the front line. Meanwhile, the international community needs to urgently grapple with how to source, allocate and deliver public finance at scale to enable adaptation that works for those who need it most.

Adaptation for those who need it most

There is no one-size-fits-all approach to adaptation. Climate change impacts, vulnerability, adaptive capacity and barriers to adaptation are all location specific and change over time, but the *processes* needed for adaptation that supports the most vulnerable will be similar. Bottom-up as well as top-down processes are key for adaptation.

Participatory and inclusive formulation, implementation and monitoring of adaptation (national and local) for women and men.³⁹

Participation by those most affected by climate change, including women smallholder producers, is crucial for adapting and achieving long-term food security of households, communities, and nations. African governments must ensure effective and meaningful participation by civil society, sub-national government, research institutions, private sector, indigenous peoples, women and men, and marginalised groups in defining options and priorities so that adaptation planning is rooted in the realities that people face in their lives and livelihoods.

Efficient, accountable and transparently managed public funds.

At present it is difficult to determine and monitor how much domestic and international finance is available for adaptation at the national level, let alone how effectively this is being used or if the most vulnerable women and men are benefiting. African governments must use a climate finance marker in their budget processes and record 'off-budget' international finance to build trust with vulnerable communities about what actions are being taken against national and local priorities and to build the evidence base for international climate finance requirements.

Defined responsibilities, and resources to fulfil them, across all government sectors and levels of administration.

Consistent integration of climate change considerations across government policies and sectors is poor. For example, in spite of

Local, regional and national governments should also incorporate the principles of inclusiveness, community leadership and environmental sustainability into all of their plans for adaptation and development.

Declaration of the 9th Community-Based Adaptation Conference in Nairobi⁴⁰

recognising climate change as a key priority for the health sector in its climate change plan, none of the Shs.142.3bn spent on adaptation in Uganda 2008/9-2011/12 has been spent by the Ministry of Health. Whilst agriculture is an important and immediate area where adaptation investment is needed urgently, the challenges of adapting to climate change for transport, infrastructure, health services, tourism and economic development cannot be understated or ignored.

With no one-size-fits-all approach, sub-national levels of government are vital partners in national adaptation efforts, yet are largely unfunded and unsupported in this area. In Uganda, 90 percent of local government budgets are derived from central government and are conditional financial transfers with inflexible conditions.⁴¹ Although there are positive national efforts to mainstream climate change into local development planning and delivery, without specific funding for adaptation or flexibility to be responsive to local priorities, local government has limited ability to meet the needs of the most vulnerable people in their jurisdictions who are frequently not reached by national-led efforts.

Increased effort and investments are needed to connect different levels of power and decision making, for example local government planners and national officials responsible for planning and development; continental development actors and sub-regional climate centres. Stronger communication, coordination, and interconnection between these decision making entities create a stronger infrastructure for adaptation.

Prioritised local adaptation plans that build the resilience of communities and ecosystems.

Resources are lacking at the local level to raise awareness of the challenges of climate change and to engage affected communities to define their adaptation options and priorities. Significant resourcing is required at this level as it is the lives and livelihoods of local people who are bearing the heaviest brunt of climate change impacts. Developing local plans that prioritise local resources, knowledge, and skills, and that protect and strengthen the local ecosystems that protect people from the harshest impacts of climate change, are key to local adaptation. Local adaptation plans must be developed with communities and then formalised and integrated into the development priorities of local administrations. This is the only way to ensure coherence of policies and investments that work for, and not inadvertently against, local people's resilience.

I appreciate the NAPA program which has given me knowledge, tools and enabled me to participate in the exchange visit to Kabale where I learnt a lot of lessons and applied them thus the improvement in my crop yields. I would request the District to implement this project in all the sub counties to help fellow farmers improve productivity and innovation.

Biira Annet, Bundibugyo NAPA project participant⁴²

To cope with the negative effects of climate change, we have learned about the importance of planting trees, constructing trenches for the running water, building a veranda for the house to flood-proof it and to grow climate resistant and fast growing crops.

Sylvia, Ogur Sub-county, Otuke District, Uganda

Box 4: Tracking local adaptation plans in Mozambique

Mozambique is one of the first countries in the world to design a national system to track and evaluate the impact of climate change adaptation policy and practice. The goal is to measure the social and development impacts of efforts to adapt to climate change, because unless there are ways of tracking these investments in terms of their impact on development, governments and development actors run the risk of implementing interventions that may hinder development or produce maladaptation.

The Government of Mozambique, through the Secretariat of the Sustainable Development Council (S-CONDES) within the Ministry for Coordination and Environment Affairs (MICOA), is developing a national system to monitor and evaluate policies, programmes, and projects that respond to the impacts of climate change. This initiative is part of the policy package to put into practice the National Climate Change Mitigation and Adaptation Strategy (NCCMAS) approved in November 2012.

A Theory of Change (ToC) has been developed for adaptation in Mozambique, with identified indicators and assumptions to be monitored and tested. Crucially, the ToC is linked to the development of local adaptation plans for the districts where this approach is being piloted – meaning that adaptation is looked at in relation to its contribution to local development priorities, local level risk and vulnerability, as well as factors enabling community adaptive capacity. These local adaptation plans at district level form the basis for integrating climate risk and vulnerability into national development planning processes in Mozambique.

ACCRA 'Programme Update: Monitoring and tracking adaptation in Mozambique'
http://community.eldis.org/.5bd3419f/txFileDownload/f.5bd3419f/n.Moz_TAMD_website.doc

Identification and prioritisation of the needs of women and men most vulnerable to climate change.

Vulnerable populations and subgroups within them have specific adaptation needs. Without local leadership both understanding and engaging with the local drivers of vulnerability and barriers to adaptation, effective solutions will not be possible. Plans and policies must recognise the different issues affecting different groups of women, men, boys and girls, and be tailored to their different needs, capacities and constraints. Adaptation at all levels must be understood within the local context of social, cultural, economic, and environmental conditions, and initiatives to promote greater social equity and cohesion.

Investment for building skills and capacities, not just physical infrastructure.

Adaptation is knowledge intensive and often the capacity constraints are largest in this area. In order to fulfil the other key requirements of participation, inclusivity, local actions and effective use of funds, new knowledge, skills and capacities are needed across government at all levels, and for citizens too. Building skills and capacities is a long-term project, and one that needs to be resourced and supported as the realities of climate change continue to unfold.

Agricultural investments have suffered from underinvestment in this vital area, with technical and input solutions frequently prioritised over increasing knowledge and skills. For smallholder producers to be effective in a changing climate they need to combine knowledge and understanding from seasonal forecasts, climate change scenarios, differences between crop varieties, agricultural technologies and techniques and their own personal experience, and in any given season make the right choices for them for both the harvest ahead and the long-term sustainability of their farming.

Adequate resources must be made available to improve the effectiveness of institutions responsible for managing climate change adaptation, and for raising public awareness and educating all sectors of society about climate change, including information services such as climate information services that meet the needs of, and reach, women and men smallholder producers.

Evidence-based plans and policies.

Adaptation plans need to consider how women and men are vulnerable now, but also how that will change over time. Investments are needed in meteorological expertise at national and local levels to meet the information needs of smallholders trying to adapt to climate change, as well as the capacities of policy makers and planners to be able to use climate information in their decision making. Flexible, forward-looking decision making, long-term monitoring and iterative planning processes - to incorporate new information as it becomes available - are all needed.

CONCLUSIONS AND RECOMMENDATIONS

It is clear that international finance commitments for adaptation are woefully inadequate to meet the challenges that vulnerable women, men, girls and boys across the continent of Africa now face – and which are only set to worsen. Whilst national governments are recognising the mounting challenge and supporting what actions they can through their national budgets, the multiple pressures on these limited resources remain a constraining factor. The injustice of those least responsible for causing climate change having to face stark choices between funding their schools and hospitals, and funding their ability to produce food to eat in a changed and changing climate is inescapable. To prevent the backsliding of hard-fought development gains by climate change, urgent scale up of resourcing to – and effective use of – adaptation finance is required, and nowhere more so than for the food producers of Africa.

National governments must:

- Facilitate inclusive adaptation planning and monitoring, ensuring that the voices of women and men most vulnerable to the impacts of climate change are listened to, and that plans prioritise their adaptation needs.
- Develop a holistic and costed National Adaptation Plan (NAP) that fulfils the principles and criteria of the Southern Voices Joint Principles for Adaptation, is gender sensitive and mainstreams climate change adaptation throughout government at all levels and in all sectors, including provision for action across administrative boundaries.
- Use a climate finance marker against both budget allocations and actual spend for adaptation and mitigation actions, and increase transparency and accountability of budgeting and spending processes to allow for effective tracking of climate finance and climate-related activities. Internationally financed ‘off-budget’ climate change adaptation projects implemented by government agencies, non-government organisations (NGOs), or other project implementers should also be recorded publically.
- Build the capacity of national and subnational agencies accredited, or seeking accreditation, to climate financing entities to ensure the development and submission of robust, high quality proposals, to ensure international standards of financial oversight are met and to ensure they operate inclusively and transparently, engaging with civil society and the communities they serve.
- Devolve funding and decision making to local government levels to support locally prioritised adaptation actions. Harness local knowledge and involve civil society to develop effective local solutions that support the most vulnerable women and men.

The international community must:

- Recognise the continuing imbalance between adaptation and mitigation in the allocation of international climate finance and the small share of grants dedicated to adaptation currently mobilised towards the \$100bn goal.
- Urge further pledges of increased public finance from contributing countries before 2020 – especially as grants dedicated for adaptation – to be announced in the run-up to COP21 in Paris.
- Agree a climate finance package at COP21 in Paris that raises the confidence of African nations on the provision of predictable, sustainable, adequate and additional climate finance post-2020, in a form that is appropriate to meet the escalating adaptation needs of the poorest and most vulnerable communities, and that is responsive to the level of mitigation ambition of the Paris Agreement.
- Ensure the climate finance package agreed at COP21 includes a commitment to a 50 percent floor for the adaptation allocation from public funds in the \$100bn goal by 2020 and thereafter, and a new separate collective finance target for adaptation embedded as part of the post-2020 Paris Agreement, prioritising the needs of the most vulnerable women and men in developing countries.
- Ensure funding entities such as the Green Climate Fund (GCF) are set up to support the types of programmatic – rather than project-by-project – approaches needed to scale up adaptation actions that support the most vulnerable women and men at the local level. Under the GCF, this is through its Enhanced Direct Access modality, and this modality should be prioritised. Without this approach, community-level actions will fail to receive adequate funding and remain limited by administrative costs and capacity constraints of applying individually.

Box 5: Climate finance and planning – National snapshots

Ghana

- Considerable progress made over a relatively short time frame to develop a National Climate Change Policy (NCCP).
- NCCP costed at GH¢ 35bn (approximately \$9.3bn) for 2014–2020.
- Government budget allocation in 2014 was GH¢ 637m (approximately **\$210m**), representing 2 percent of government expenditure, and about 0.5 percent of GDP.
- Only **\$4.22m** approved from multilateral climate finance sources for adaptation for the period 2004–2014.
- Overall low funding starting point to accomplish the objectives of the NCCP over the next 5 years.
- Projected budget for the NCCP would transform ministries, particularly the Ministry of Gender, Children, and Social Protection which would require almost a ten-fold budget increase.
- Local government is lacking awareness of the NCCP and the capacity to implement it.

Uganda

- The 2010 National Development Plan includes a chapter on climate change and impacts on national development. The 2012 Draft Climate Change Policy emphasises the importance of adaptation, especially in vulnerable sectors such as agriculture.
- Estimated domestic annual climate change relevant expenditure from 2008–2011 is **\$25m**, representing 0.9 percent of government expenditure, and approximately 0.2 percent of GDP.
- The Draft Implementation Strategy of the Climate Change Policy is costed at 1.6 percent of GDP.
- Only **\$15.39m** approved from multilateral climate finance sources for adaptation for the period 2004–2014.
- Government actions needed to strengthen management of public finance if effective climate finance delivery is to occur.

Ethiopia

- National Climate Resilient Green Economy Strategy is costed at **\$7.5bn** per year.
- National budget for climate change relevant actions is estimated at **\$440m** per year, representing about 14.5 percent of total government expenditure (2008–2011).
- Only **\$11.41m** approved from multilateral climate finance sources for adaptation for the period 2004–2014.
- Financing gap of tens of millions of dollars per year.

Tanzania

- Estimated cost of immediate adaptation needs is at **\$650m** per year.
- Estimated domestic annual climate change relevant expenditure 2009–2012 is **\$383m**, representing 5.5 percent of total government expenditure.
- Only **\$13.31m** approved from multilateral climate finance sources for adaptation for the period 2004–2014.

Malawi

- Government budget has allocated MK 13bn (approximately **\$23.32m**⁴³) this year alone from its national budget to climate change management, disaster risk management, conservation agriculture, small-scale livestock, small-scale irrigation and agro-forestry and forestry, representing about 1.5 percent of the national budget.
- Only **\$22.48m** approved from multilateral climate finance sources for adaptation for the period 2004–2014.⁴⁴

Nigeria

- In 2010 the National Assembly passed a bill to create a national Climate Change Commission.
- In 2011 National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN) was developed under the national Climate Change Policy and Response Strategy.
- Nigeria Vision 20:2020 Economic Transformation Blueprint recognises a changing climate as a threat to sustainable growth in the next decade.

Sources: ODI (2015) 'Climate Change Finance in Ghana'; ODI (2013) 'Uganda Climate Change Finance Analysis'; ODI (2014) 'Fair Share: Climate finance to vulnerable countries'; ODI (2014) 'Climate Finance: Is it making a difference?'; CEPA (2015) '2015/16 National Budget Analysis' with focus on Climate Change, Disaster Risk Management, Environmental and Natural Resources Management; Nigeria (2011) 'National Adaptation Strategy and Plan of Action on Climate Change for Nigeria'.

NOTES

- 1 The term 'agriculture' is used in this paper in the wider sense, including all aspects of terrestrial food production using crops, trees, and livestock. The term 'smallholders' is used in this paper as a shorthand to refer to farmers, pastoralists and forest dwellers relying on their land to feed their families as well as to earn an income.
- 2 IPCC (2014) Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros, V.R., C.B. Field, D.J. Dokken, M.D. Mastrandrea, K.J. Mach, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- 3 IPCC (2014)
- 4 Mann, M. (2014) Earth Will Cross The Danger Threshold By 2036 <http://www.scientificamerican.com/article/earth-will-cross-the-climate-danger-threshold-by-2036/> ; Climate Analytics study for the Guardian (2015) Paris climate pledges 'will only delay dangerous warming by 2 years' <http://www.theguardian.com/environment/2015/jun/03/paris-climate-pledges-will-only-delay-dangerous-warming-by-two-years>
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- 8 IPCC (2014) pp1203.
- 9 FAO (2011) The State of Food and Agriculture. Women in Agriculture: Closing the Gender Gap for Development. Estimated figure for 2010.
- 10 FAOSTAT <http://faostat.fao.org/site/550/DesktopDefault.aspx?PageID=550#ancor> (Female economically active population in agriculture in Africa as a percentage of Total female economically active population in Africa)
- 11 ACCRA (2014) The Climate Forecast Model <http://community.eldis.org/.5c3edc47/ml-climate-forecast-model-100914-en.pdf>
- 12 IAASTD (2009) Agriculture at a Crossroads http://www.unep.org/dewa/agassessment/reports/subglobal/Agriculture_at_a_Crossroads_Volume%20V_Sub-Saharan%20Africa_Subglobal_Report.pdf
- 13 FAO (2011) The State of Food and Agriculture. Women in Agriculture: Closing the Gender Gap for Development.
- 14 AGRA (2013) Africa Agriculture Status Report: Focus on staple crops agra-alliance.org/download/533977a50dbc7
- 15 One (2013) The Maputo Commitments and the 2014 African Union Year of Agriculture.
- 16 Various sources put the 2015 Agriculture Budget at approximately 39.15bn Naira of the approximately 4454bn Naira total government budget including Budget (2015) 2015 Budget: A Review of Proposed 2015 budget, Vol 2, Issue 1; <http://www.nants.org/wp-content/uploads/2015/04/Nigerias-2015-Agric-Budget-proposal-A-Review-of-its-Efficiency.pdf>; and <http://www.dailytrust.com.ng/daily/business/49938-2015-budget-0-9-agric-allocation-worrisome>
- 17 The Maputo Commitments and the 2014 African Union Year of Agriculture https://s3.amazonaws.com/one.org/images/131008_ONE_Maputo_FINAL.pdf
- 18 <http://www.ifad.org/gender/pub/sourcebook/flyer.pdf>; <http://www.ifad.org/gender/>
- 19 Oxfam (2012) The Climate Fiscal Cliff <https://www.oxfam.org/sites/www.oxfam.org/files/oxfam-media-advisory-climate-fiscal-cliff-doha-25nov2012.pdf>
- 20 All US \$ amounts quoted in this paper are taken directly from the publication cited, and therefore use the conversation rate at time of their publication not at the time of this publication.
- 21 OECD (2015), Climate finance in 2013–14 and the USD 100 billion goal; a report by the Organisation for Economic Co-operation and Development (OECD) in collaboration with Climate Policy Initiative (CPI). The estimated figures are aggregates of provisional estimates of bilateral public climate finance based on Parties' expected reporting to the UNFCCC; multilateral public climate finance from MDBs and key climate funds that can be attributed to developed countries; climate-related officially supported export credits (predominately to renewable energy together with supplementary Party reporting; and a preliminary and partial estimate of private finance mobilised by bilateral and multilateral channels attributed to developed countries. The report recognises both progress made on reporting and tracking climate finance across various institutions, as well as the on-going methodological challenges that remain. These figures therefore are not necessarily directly comparable to other figures cited in this paper, due to methodological differences in both what is included as climate finance and how it is calculated by different studies.

- 22 <http://www.oecd.org/environment/cc/oecd-cpi-climate-finance-report.htm>
- 23 Ibid.
- 24 Oxfam (2012) The Climate Fiscal Cliff: An evaluation of Fast Start Finance and lessons for the future <https://www.oxfam.org/sites/www.oxfam.org/files/oxfam-media-advisory-climate-fiscal-cliff-doha-25nov2012.pdf>
- 25 OECD Statistics (2015) Climate-related development finance activity level database http://www.oecd.org/dac/stats/documentupload/Climate%20related%20development%20finance%20OECD_July2015.xlsx
- 26 This means they were projects coded with Rio Marker 2, indicating climate change was the 'primary' objective. Projects coded with Rio Marker 1 indicate climate change was only a 'significant' objective.
- 27 <http://policy-practice.oxfamamerica.org/work/climate-change/adaptation-finance-accountability-initiative-afai/>
- 28 The graph was generated using the data for public finance from the 2013 OECD project level database available online at: <http://www.oecd.org/dac/stats/climate-change.htm>. Private finance for 2013 was generated using the estimated figures from the recent OECD (2015) report. The OECD total figure for mobilised private finance in 2013 was \$12.7bn, and the text states that 10 percent of private finance went to adaptation, so the remaining 90 percent of \$12.7bn was assigned to mitigation. However, the OECD DAC figures for adaptation uses the Rio Marker system, and includes bilateral ODA in which climate change is considered either the 'principal' objective or a 'significant' objective. Oxfam believes that whilst mainstreaming climate change into aid spending should be the new standard for good development practice, only climate finance labelled as 'principal' under OECD-DAC rules should be counted against UNFCCC climate finance commitments, therefore the figures are artificially inflated by inclusion of spending not principally related to climate change adaptation.
- 29 Schaeffer M. et al. Africa's Adaptation Gap <http://www.unep.org/pdf/AfricaAdapatationGapreport.pdf>
- 30 Ibid.
- 31 IPCC (2007) Climate Change Fourth Assessment Report, Working Group 2: Impacts, Adaptation and Vulnerability.
- 32 Oxfam (2015) The Right to Resilience https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/right_to_resilience_-_adaptation_finance_in_the_post-2020_paris_agreement.pdf
- 33 Oxfam (2015) The Right to Resilience https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/right_to_resilience_-_adaptation_finance_in_the_post-2020_paris_agreement.pdf Tanzania and Ethiopia national adaptation spending estimates based on national budget analysis by Bird (2014), as described in Oxfam (2014) 'Breaking the Standoff: Post-2020 Climate Finance in the Paris Agreement', and data on international adaptation finance received under Fast Start Finance from www.climatefundsupdate.org, as presented in Oxfam (2014) 'Hot and Hungry: How to stop climate change derailing the fight against hunger'.
- 34 ODI (2014) Fair Share: Climate Finance to Vulnerable Countries.
- 35 For Ghana this was calculated as a per year proportion of the US \$9.3bn estimation of costs for the period 2014-2020, from ODI (2015) Climate Change Finance in Ghana. For Tanzania, Ethiopia, and Uganda, the information was taken from ODI (2014) Fair Shares.
- 36 Figures for Uganda, Ethiopia, and Tanzania are from ODI (2014) Fair Shares and are averages over 2008-2011 for Ethiopia and Uganda, and 2009-2012 for Tanzania. The 2015 Government of Malawi budget allocated MK 13bn (approximately US \$23.32m) to climate change management, disaster risk management, conservation agriculture, small scale livestock, small scale irrigation, and agro-forestry and forestry according to CEPA (2015) 2015/16 National Budget Analysis with focus on Climate Change, Disaster Risk Management, Environmental and Natural Resources Management. Ghana figures come from ODI (2015) Climate Change Finance in Ghana.
- 37 Adaptation finance figures taken from ODI (2014) Climate Finance: It is making a difference? Annex 1: Global Ranking of Climate Finance for 2004-2014. Note that the figure here for Malawi is US \$22.48m, but a more recent figure from The Government of the Republic of Malawi (2015) is US \$24.8m.
- 38 From the ODI figures averaging 2008-2011 on budget expenditure.
- 39 These principles are drawn from Southern Voices Joint Principles for Adaptation 2.0, available at <http://www.southernvoices.net/en/home/sv-on-adaptation/669-joint-principles-for-adaptation.html>
- 40 Nairobi Declaration on Community-Based Adaptation to Climate Change <http://pubs.iied.org/G03919.html>
- 41 ODI (2013) Uganda National Climate change Finance Analysis.
- 42 <http://community.eldis.org/.59d669a8/Bundibugyo%20Flier%20-%20ACCRA.pdf>
- 43 Using exchange rate US \$1 = 557.395MWK 11 October 2015
- 44 Note this is the ODI 2004–2014, noting the most recent figure from The Government of the Republic of Malawi from 2015 is US \$24.8m

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