



Good Practice

climate change adaptation and mitigation

www.africanclimate.net



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AfriCAN Climate

The AfriCAN climate portal is an innovative web-based knowledge platform for the sharing of climate change research and good practices.

The platform employs innovative and creative web functionalities to harmonise multilingual, interdisciplinary and pan-continental climate change knowledge, with the aim to encourage project developers and stakeholders to learn and benefit from Africa's challenges and success stories.

AfriCAN Climate was set up by a team of 5 African and 5 European organisations, including research institutes and dissemination networks. The portal targets a wide variety of climate change stakeholders, including researchers, field practitioners, project developers, NGOs, local/national governments and farmers' organisations.

What is 'good practice'?

'Good practice' can mean many things depending on the context.

AfriCAN Climate is a platform that aims to bring together experiences from across the continent of Africa. Therefore, it is useful to talk about practices

Our working definition of 'good practice':

"actions that are effective in meeting established goals and deemed to be appropriate and acceptable by a broad range of stakeholders"

defined or considered as 'good' by the governments, academics and civil society organisations from within those countries, taking the view that good practice must refer to "something that works", as well as being widely approved by local stakeholders.

In order to feature on the AfriCAN Climate portal, projects must aim to mitigate and/or adapt to climate change. Secondly, projects are evaluated against eight good practice 'principles' to assess their financial, economic, social and environmental sustainability.

Our good practice principles are intended to encourage critical reflection and help project developers draw out relevant lessons of interest to a broader audience of African stakeholders.



A livestock farmer brings his animals to a drying river in the Maasai Mara, Kenya ©Practical Action/Karen Robinson

What are the good practices the AfriCAN Climate platform aims to communicate?

Our focus is on the implementation of projects that help African communities adapt to the impacts of climate change, or specific investment or infrastructure projects that aim to achieve measurable greenhouse gas reductions while enabling wider social and economic development. Good practice projects also include methods for predicting future climate events and scenarios in the short and long term.

Assessment of whether a particular practice is 'good' will be based on qualitative data and therefore does not pretend to be objective. It is important to note that in terms of facilitating

learning, examples of practices that proved to be 'bad' can also sometimes be very useful. However, on the AfriCAN Climate portal the main emphasis is on good practice.

To ensure that this information is useful to practitioners aiming to replicate good practice and avoid bad practice, each example focuses on one or more of the eight principles described below.

The eight good practice principles represent critical cross cutting issues shared by the majority of climate change projects, regardless of mitigation/adaptation focus, scope and scale.



Irrigation scheme in an arid region of Manicaland, Zimbabwe © Practical Action Zimbabwe

Other information available at www.africanclimate.net

- **Country fact sheets and glossaries of climate change terminology**
Fact sheets provide information in the most widely spoken languages on the current and projected conditions of climate, natural resources and agriculture, and also state key climate vulnerabilities for each African country.
- **People and groups**
AfriCAN Climate hosts an online community where professionals working in the field of climate change in Africa can share experiences, contacts and resources with peers around the world.

How do we gather good practice cases?

The knowledge base of good practice cases is compiled by experts and professionals who are implementing climate change projects on the ground in Africa, or by editors very familiar with the projects they are describing.

Good practice cases should be far more than a summary of the project documents. We are looking for good practice reviews that offer a critical analysis of the extent to which each project has complied with, or achieved the aims of the 'principles' listed on the AfriCAN Climate portal. As such, good practice cases are best provided by individuals able to reflect upon the projects with an honest and critical eye.

Why communicate good practice?

It is widely recognised that successful project examples are one of the best ways to explain and communicate complex information. In the context of adapting to the effects of climate change or reducing greenhouse gas emissions, the complexities lie in the challenge of enabling viable, realistic and sustainable reforms to markets and practices that are responsible both for the creation of emissions, and the level of vulnerability of a given community to the effects of climate change.

The AfriCAN Climate portal provides examples of specific practices and projects that aim to have a measurable and verifiable mitigation and/or adaptation impact. This is done by documenting individual projects and initiatives including information about how they were initiated, financed and organised and then assessed against a set of principles.



Spice market in Morocco

Examples of good practice

In the case studies, project interventions are evaluated in terms of their financial, economic, social and environmental sustainability.

The following pages contain example case studies - one illustrating each of AfriCAN Climate's eight principles of good practice.

AfriCAN Climate's eight principles of good practice

1. Knowledge building
2. Community participation and inclusiveness
3. Political ownership, collaboration and approval
4. Financial sustainability
5. Achieving co-benefits and balancing trade-offs
6. Building local capacity
7. Transferability
8. Monitoring and evaluation

1. Knowledge building

How have projects designed to mitigate or adapt to climate change in Africa built upon or applied the findings of specific research projects and/or vulnerability studies? Also, how have projects actively contributed to international understanding on a specific topic or area of research?

Under this principle, examples are provided of how particular projects have actively engaged and benefited from collaboration with universities and research organisations, in Africa and beyond.

Community based adaptation in Darfur, Sudan

This project contributed to developing knowledge about the regeneration of natural resources and management of systems for sustainable human and livestock use, building social capital through civil society networks and a natural resource management approach. Project implementers focused on developing and improving the skills and knowledge of local people and strengthening existing networks to act as development catalysts.

However, the approach taken by Practical Action went beyond natural resource management and sustainable livelihoods. It included making a great effort to understand the dynamics of the different communities and their existing networks, their interests and the approaches used to meet their different needs and demands.

Practical skills were developed among community members, such as how to recognise and select seeds that require a short cultivation period to avoid or decrease the need for water for irrigation. Other interventions included the design and implementation of small infrastructure systems such as terrace construction, water harvesting and storage systems. Local knowledge was strengthened or enriched in areas such as community forest management, shelter belts, and rangeland and vegetation regeneration.

Practical Action hosted several environmental awareness sessions and trained 63 community members on tree seedling production and transplantation. The project promoters and funders considered the implementation of this project as a

Implemented by: Practical Action
Funded by: Christian Aid
Location: Darfur, Sudan



Seedlings for the community forest
© Practical Action/Awadalla Hamid

source of information and lesson learning, which contributed to knowledge and information sharing.

This project has contributed to the production of a number of documents, books, papers and case studies published by Practical Action and other organizations such as DFID (Department for International Development, UK) and IIED (International Institute for Environment and Development) about climate change adaptation, participatory work and consensus building among communities.

2. Community participation and inclusiveness

How have projects designed to mitigate or adapt to climate change in Africa consulted with local communities in the formulation, implementation and decision making process? How have gender issues been incorporated?

Under this principle, examples are provided of how particular projects have mobilised local interest and ownership in order to ensure its activities responded to the needs of local beneficiaries.

Govuro Coastal Zone project, Mozambique

The objective of this project was to promote the integration of climate change adaptation and disaster risk reduction measures in development planning and local practices. The participatory planning approach was successful because it was performed within the context of a close dialogue between the villagers and the project. The villagers contributed knowledge and experience of the environment and this body of information constituted

Implemented and funded by: CCDare, a joint initiative of UNDP & UNEP
Location: Mozambique

the basis for a joint analysis of the main problems and identification of the ways to get them under control. This approach has stimulated positive changes in attitudes and behaviours in the villages.

The population is gaining a new perspective, which is encouraging them to strive more strongly to conserve their natural resources. The willingness of the technicians and the population to undertake their own resource conservation measures grew with the progress of the project. Village management nuclei were established to coordinate and implement resource conservation and disaster management measures at village level.

Disaster committees were established in many villages by the National Institute for Disaster Management (INGC). In the coastal area of Nova Mambone, located in the Inhambane Province of Mozambique, natural resource management committees were established in many villages. Where these were already in place, the project worked with them and provided training on climate change, natural resource management and implementation of the land use plan. The existence of organizations at village level in the Govuro District has been highly advantageous for the project because they have facilitated communication and data gathering.



Women walk long distances to collect water from a borehole in Gwanda, Zimbabwe
© Practical Action/Rob Cartridge

3. Political ownership, collaboration and approval

How have projects designed to mitigate or adapt to climate change in Africa secured high-level political support for their activities?

Under this principle, examples are provided of how particular projects secured the support and active participation of political-level stakeholders and how the project's aims and activities were aligned with wider development agendas.

Adaptation to climate change through Landcare in East Africa

This case study shares Landcare's experiences of adaptation to climate change in communities in the highlands of East Africa. It illustrates the capacity of communities to adapt to the changing weather patterns by working together to take control of their resources. Landcare activities in East Africa contributed towards awareness creation, capacity building, input provision, policy, lobbying and networking and also the application of local knowledge in building communities' adaptive capacity to climate change.

Landcare facilitated the mainstreaming of their approach at a high policy level by building the capacity of stakeholders at both local and district level. Policy, by-laws and institutional barriers that limit the uptake of improved integrated natural resource management technologies were identified and advocated for reform.

In Uganda the programme facilitated a workshop with policy makers and exchange visits at local and

Implemented by: African Landcare Network

Location: East Africa – Kenya, Rwanda, Tanzania and Uganda

international level. The head of Kapchorwa District council was enabled to attend various workshops in Kenya, Australia and South Africa to learn how local governments in other countries support Landcare programmes. In Tanzania a sensitization workshop for national level government officials and partners was held in Dar-es-Salaam. Support of local leaders to the extent of participating in reviewing, monitoring and implementation was undertaken in Uganda. In 2011 high level policy and decision makers from the governments of Tanzania and Rwanda were taken to visit Landcare farmers in Australia, to reinforce support of the Landcare initiative in their respective countries.

Today there is a high level of buy-in to Landcare from district council officials in Masaka, Kapchorwa Bukwo and Kween districts in Uganda and Korogwe district in Tanzania. Also, the World Agroforestry Centre in Rwanda is working with various partners to mainstream the Landcare approach.



Pastoralists with their livestock in Mandera, Kenya © Practical Action/Ella Jolly

4. Financial sustainability

How have projects designed to mitigate or adapt to climate change in Africa secured financing for sustaining and/or expanding the project's impacts beyond the initial project lifetime?

Under this principle, examples are provided of how particular projects secured national (e.g. government) and international (e.g. international donors) support for sustaining their impacts, replicating or scaling up their activities.

Drought mitigation in Kenya

This initiative adopted a coordinated, multi-sectorial and long term approach throughout the project. It was planned to be self-sufficient and for the communities involved to have the best chance of creating income so as to be sustainable. It had two main components – water and livestock.

The first focused on strengthening resilience to drought by improving access to reliable water and thereby mitigating the impacts of water stress in targeted locations. The second sought to reduce vulnerability to drought and mitigate the impacts of climatic shocks for those who depend on livestock for their livelihood.



An animal health worker inoculating a donkey in Mandera, Kenya © Practical Action Kenya

Implemented by: Practical Action
Partners: Oxfam, VSF and Acted
Funded by: European Union
Location: Turkana and Pokot, Kenya

Additional finance from The Intergovernmental Authority on Development helped to ensure the long-term sustainability of the early warning system and provide a source of income for the local community members involved. The regional governments of Turkana and Pokot agreed to help fund the Pastoral Field Schools, whilst the UN Food and Agriculture Organisation funded a training course on camel husbandry. Grassroots monitors, primarily local community members, receive a small salary from the African Intergovernmental Authority on Development's conflict and early warning arm for providing early warning information each week to district and regional bodies.

A community based animal health worker programme was also set up. These are local people trained in animal health to provide local advisory services. The project has also linked the animal health workers to credit facilities in order to help strengthen their businesses by buying medicines on credit. They charge a small fee for their services and so can afford to dispense drugs such as antibiotics and non-prescription drugs. Through access to information and services, animal health workers are able to expand their businesses and ensure sustainability of an efficient community based animal health service.

5. Achieving co-benefits and balancing trade-offs

How have projects designed to mitigate or adapt to climate change in Africa taken into consideration the costs and benefits external to the project, such as employment, environment, health, poverty levels and food security?

Under this principle, concrete examples are provided of how particular projects aimed to maximise external co-benefits from project activities and minimise external costs and damages.

Cabeólica Wind Farm, Cape Verde

The Cabeólica wind farm in Cape Verde is of great significance for this small island republic off the coast of West Africa. The project aimed to maximise co-benefits such as economic growth and employment for the islands and minimise the environmental impact of the wind farm.

The project benefits 95% of the population and makes savings to the economy of €12 million from a reduction in the importing of up to 20,000 tonnes of oil each year. The Cape Verde islands have also

Implemented by: Cabeólica

Location: Cape Verde

benefited from more stable energy prices and a more reliable power supply with fewer blackouts, thanks to the wind farm. In turn, this is likely to have a positive impact on the country's economic growth. The project also generated employment, including during the construction phase by favouring a local workforce whenever possible. Further economic benefits are expected from the generation of carbon credits. Keith Palmer, Chairman of InfraCo says 'projects like Cabeólica are key to meeting Africa's energy needs, securing economic growth and reducing poverty.'

This project promotes a cleaner environment by displacing thermal generation and reducing emissions of sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and carbon dioxide (CO₂). The average annual emission reduction has been estimated at 95,000 tCO₂eq/year.

The wind farm was designed so as to minimise alterations to the habitat of Cape Verdean fauna and to protect local wildlife. Preventive and mitigating measures were also implemented to contain waste, soil contamination, visual alteration and further physical disturbances caused by the project. Measures taken to protect birds included locating turbines according to the results of a bird collision assessment and increasing light intensity on the turbines to avoid attracting birds. Transmission lines were buried underground and during the construction period reptiles were collected and relocated.



Cabeólica wind turbines © Cabeólica 2011-2013

6. Building local capacity

How have projects designed to mitigate or adapt to climate change in Africa ensured that local capacity was built during the implementation of the project?

Under this principle, examples are provided of how training programmes have been integrated into core project activities and of what measures were taken to assure that built human capacity is maintained and replicated beyond the project's lifetime.

Women Accessing Realigned Markets (WARM), Malawi and Mozambique

The WARM project (2008-2012) focused on building the capacity of women farmers, research universities and development NGOs. Women farmers at selected sites in Malawi and Mozambique were equipped with information, evidence-based messages and training in using community theatre as a platform to advocate for policies and institutional arrangements to facilitate their access to input markets.

Community-owned theatrical performances were followed by facilitated dialogues to discover and document community-based solutions to the challenges expressed by women farmers. Policy advocacy training workshops were arranged for women farmers and other community advocates. The community advocates were encouraged to communicate the solutions coming out of these dialogues to decision-makers and service providers.



Women in Malawi show the produce from their farms
© Practical Action Zimbabwe

Implemented by: FARNPAN
Location: Malawi and Mozambique

The training enabled community champions to negotiate with service providers and buyers on behalf of other women. They are now playing more active roles in farmer organisations and community forums.

The WARM project aimed to develop the capacity of researchers and development agencies to collect more practical information from the field to ensure that policies and actions are more responsive to actual needs. Policy makers do not always have access to relevant, up-to-date information on the real challenges faced by women farmers. The project thus aimed to build the capacity of researchers to conduct more people-centred research, which would make their inputs to decision makers more sensitive to the needs of the women farmers.

Collaboration on the project built the capacity of the universities to collect community-level data and to link it with national statistics and policy analysis and drew extensively on the experience of local stakeholders. FANRPAN liaised closely with national farmer unions in Mozambique and Malawi to elevate women's voices and collaborated with existing rural development programmes working to improve the livelihoods of women farmers. They also partnered with local organizations working on theatre for development as a tool to support development of the poor.

7. Transferability

How have projects designed to mitigate or adapt to climate change in Africa ensured that their activities can be transferred beyond the specific contexts in which they were implemented?

Under this principle, examples are provided of how particular project measures, activities or concepts could be/have been applied in other contexts or regions and how successful these efforts have been to include transfer in their design and practice.

Ethanol stoves for refugee homes, Ethiopia

Since 2006, the Gaia Association has been working in refugee camps in Eastern Ethiopia to provide Somali refugees with a source of clean energy. They have provided clean, safe, efficient ethanol stoves and fuel to displace the demand for wood for cooking, which was a primary cause of extreme deforestation in the region. The Gaia Association generated valuable experience from this project that can be transferred to other camps around the world.

First, it demonstrated that a clean fuel and stove program can be successful in even the most rugged environments, challenging the conventional idea that cheap, poor quality stoves are the solution for such conditions. Gaia's success in Ethiopia indicates that this project can be replicated in areas with a demand for clean household energy and feed stocks that are suitable for ethanol production.

In Ethiopia the ethanol is produced from molasses, a



Asha Abdi cooking on her ethanol stove in the refugee camp in Kebribeyah, Ethiopia

© Gaia Association/Desalegn Getaneh

Implemented by: Gaia Association

Location: Ethiopia

waste product of sugar production. Gaia adapted the Ethiopian project in Brazil, Madagascar, Nigeria and Haiti, where energy poverty and deforestation are similarly urgent issues. The approach is also being piloted in Dadaab refugee camp in Kenya.

Gaia Association aims to learn from the difficulties of dependence on a government-owned, centralized ethanol fuel supply, which delayed expansion of the project. The Government's commitment to household energy was gradual, which stunted the growth of their projects in the camps as well as in Addis Ababa. In order to strengthen its projects in Ethiopia, Gaia Association initiated two projects involving ethanol production with efficient micro-distilleries (EMD). The EMD approach will decentralize ethanol production and engage communities in achieving energy security.

Gaia Association is currently working to determine the feasibility of integrating food and fuel production to create maximum value for small-scale farmers and to assure the sustainability of ethanol fuel. They are also working to address the relatively high cost of the Clean Cookstove and pursuing carbon finance to make it more affordable to the end user. The adoption of the Clean Cookstove in more than 3,500 refugee households has eliminated smoke from kitchens and transformed indoor air quality.

8. Monitoring and evaluation

How have projects designed to mitigate or adapt to climate change in Africa demonstrated their impacts in terms of achieving the project objectives, outcomes and outputs?

Under this principle, examples are provided of how particular projects developed indicators, and how effective they have been in applying them.

Limpopo Basin Development Challenge (LBDC)

The LBDC consists of five projects with different lead and participating institutions and a different research focus. The monitoring and evaluation aspects were designed to ensure that the five projects complement each other and form a coherent whole. Each of the five participants assists the other four in conducting quality, coherent, and problem oriented research. The overall goal of this approach is to ensure that science based evidence is included in, or informing, basin decision-making, which, in turn, should lead to improved smallholder productivity and reduced risk in rainfed production systems. This is accomplished through research coordination, engagement with external stakeholders, and innovative research.

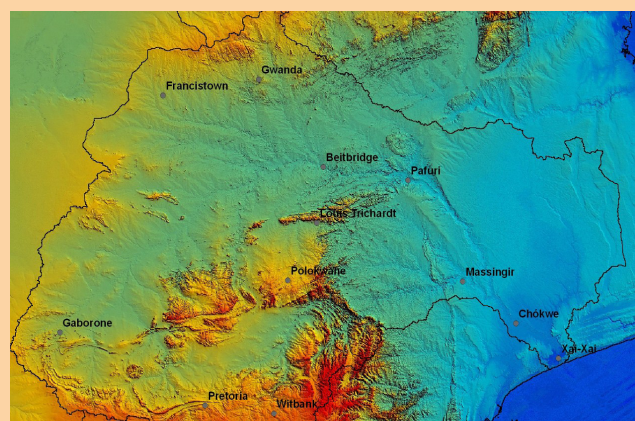
The project is part of a global research-for-development programme operating at river basin scale to improve the integrated management of rainwater within the basin and to reduce the risks associated with a changing climate. It aims to improve smallholder productivity and livelihoods, which will contribute towards greater food security. The majority of rural smallholder farmers in the Limpopo Basin live in poverty. Low and variable rainfall coupled with low investment in improved crop and livestock technologies, undermines poverty reduction efforts.

A communication and knowledge management strategy was designed to facilitate integration of the major activities; capture, store and distribute relevant data; and identify and address capacity building needs within the LBDC teams and key external stakeholders. Impact pathways and stakeholder

Implemented by: SEI, ARC, ICRISAT, WaterNet, FANRPAN

Funded by: CGIAR - Challenge Programme on Water and Food (CPWF)

Location: Botswana, Mozambique, South Africa and Zimbabwe



Outline of the Limpopo basin © FANRPAN

maps were consolidated into a basin-wide process map of expected outcomes, actors and pathways, which are monitored throughout the project cycle, while acknowledging that many of the expected changes are longer term in nature. A calendar of events, activities, outputs and milestones ensures linkages and synchronisation within the LBDC. The basin map and calendar of activities are key elements of the monitoring and evaluation system and are regularly re-examined and updated. A mutual accountability framework based on risk assessment and mitigation is developed and regular reflection workshops address issues, flag potential problems and deal with conflict and misunderstandings. Cross site and team visits are encouraged as is knowledge sharing within and across projects.

AfriCAN Climate consortium

The European-African project consortium brings in high profile expertise to cover all thematic climate change research and action areas: adaption and mitigation research, policy, future climate scenarios, project financing, networking and dissemination.

Partner organisations

WIP Renewable Energies (coordinator)

Munich, Germany
www.wip-munich.de

ENDA Energie

Dakar, Senegal
www.enda.sn

Food, Agriculture and Natural Resources Policy Analysis Network

Pretoria, South Africa
www.fanrpan.org

IGAD Climate Prediction and Application Centre

Nairobi, Kenya
www.icpac.net

Imperial College

London, United Kingdom
www.imperial.ac.uk

P.A.U. Education

Barcelona, Spain
www.paueducation.com/en

Practical Action

Rugby, United Kingdom
www.practicalaction.org

Technical University of Denmark / UNEP Risoe Centre

Roskilde, Denmark
www.uneprisoe.org

University of the Witwatersrand

Johannesburg, South Africa
www.wits.ac.za

World Agroforestry Centre

Nairobi, Kenya
www.worldagroforestrycentre.org



www.africanclimate.net