

Adaptation

Climate Change Adaptation in Africa (CCAA)
research and capacity development program

Program Strategy Overview



The program strategy of the International Development Research Centre's Climate Change Adaptation in Africa (CCAA) research and capacity development program was developed in 2006-07 and will be periodically updated over the course of the program's life. This condensed version was published in June 2007.

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EXECUTIVE SUMMARY	1
INTRODUCTION	5
#1 CONTEXT	7
#2 VISION, AIMS AND GUIDING PRINCIPLES	11
#3 OUTCOME AREAS AND ACTIVITIES	15
#4 PROGRAM STRUCTURE	19
#5 MONITORING AND EVALUATION	21
#6 CONCLUSION	23
FIGURES AND TABLES	
Figure 1: Temperature change (IPCC, 2007)	8
Figure 2: CCAA structure	20
Figure 3: The transfer of M&E information	24
Table 1: Desired outcomes	16





Photo: Peter Bennett / IDRC

EXECUTIVE SUMMARY

The Climate Change Adaptation in Africa (CCAA) research and capacity development program was launched in 2006 and is jointly funded by Canada's International Development Research Centre (IDRC) and the United Kingdom's Department for International Development (DFID). It is hosted and managed by IDRC from headquarters in Ottawa and three regional offices in Africa. Its original mandate is for five years of programming activity, gradually devolving to African institutions, with initial funding of approximately CA \$65 million.

The CCAA program **aims to improve the capacity of African countries to adapt to climate change in ways that benefit the most vulnerable.** The program works to establish a self-sustained African body of expertise on adaptation that responds to needs defined by African communities, decision makers, and institutions.

Four objectives are at the heart of CCAA's goal of reducing climate change vulnerability in Africa:

- To strengthen the capacity of African scientists, organizations, decision makers and others to contribute to adaptation to climate change.
- To support adaptation by rural and urban people, particularly the most vulnerable, through action research.
- To generate a better shared understanding of the findings of scientists and research institutes on climate variability and change.
- To inform policy processes with good quality science-based knowledge.

The program achieves these objectives by supporting **three core activity areas**:

- Participatory action research
- Communications and networking
- Education and training

These activity areas are mutually reinforcing, yet each has dedicated funding. Each supported research project has capacity development and knowledge sharing components; however, CCAA funds additional support in these two areas to ensure wider sharing of knowledge on adaptation among and beyond CCAA's partners.

The **participatory action research** supported by the CCAA must be of practical application, serving the needs of African communities by contributing to policies that reduce vulnerability. Action research on adaptation brings representatives of affected communities and decision makers together with scientists in a shared process of “learning by doing.” It weds scientific and local knowledge to test and validate adaptation strategies. The linkages between researchers, policymakers and communities, which are at the core of this approach, help to ensure supported research is driven by the demands of research users, rather than the available supply of research institutions.

The program also encourages **multidisciplinary approaches** that bring together expertise from a range of fields that are applicable to adaptation issues.

Communication and networking activities will support **knowledge sharing on adaptation**, providing wider access to research findings and enhancing linkages between researchers and research users on the continent.

Education and training activities will consist of capacity development workshops on core topics for African research institutions and stakeholders; curriculum development support; and support for scholarships, fellowships, and internships in support of climate change adaptation.

The program's commitment to **building African capacity and supporting African leadership** on climate change adaptation is reflected in the CCAA's programming and governance structure, the location of program staff, and in the funding criteria that favour initiatives led by or that gradually devolve to African institutions.

The majority of CCAA staff members are located in IDRC's regional offices in Africa - in Dakar, Cairo, and Nairobi - ensuring on the ground connection with stakeholders. From these regional bases, the program strives to ensure geographic and thematic balance in addressing the continent's greatest areas of climate vulnerability.

To enhance African input into programming directions, while respecting the need for donor accountability, the CCAA is guided by an advisory board. The majority of the board members are citizens of African countries, preferably working for an African institution and active in the field of adaptation to climate change.

The CCAA monitors its progress using an approach called **outcome mapping**. Outcome mapping, an innovation of IDRC's Evaluation Unit, focuses on behavioural changes in the program's "boundary partners," those organizations with which a program directly interacts. In the CCAA program, observations on these changes are correlated against a logical framework established by DFID and IDRC, the program's founding donors.

More on the core attributes of the CCAA program strategy can be found in this booklet. For further information, consult the program's website at **www.idrc.ca/ccaa** or IDRC's regional offices through the contacts provided on the inside front cover.

INTRODUCTION

This document provides a brief overview of the programming strategy of the Climate Change Adaptation in Africa (CCAA) research and capacity development program. The strategy document provides a road map of the CCAA program's aims and approaches. This condensed overview is intended to inform donor agencies, organizations representing at-risk groups, research institutions, policy bodies, development agencies, and recipients of CCAA funding. It may identify possible synergies or opportunities for collaboration with others concerned with climate change adaptation and with Africa's future development.

What will you find in this document?

Section 1 briefly explains the rationale and background for the program. Section 2 describes the vision, mission, goal, objectives, anticipated partners, priority themes and guiding principles. Section 3 describes the program's expected outcomes related to the program objectives, and the activities that will be conducted to support them. Section 4 focuses on the operational modalities, the program structure and work plan. Section 5 outlines CCAA's monitoring and evaluation plan.



Photo : Peter Bennett / IDRC

#1 CONTEXT

While observational records show that Africa has been warming through the 20st century at the rate of between 0.26 and 0.50°C per century, there is evidence that this warming trend will significantly accelerate. For a medium-high emission scenario, annual mean surface air temperatures are expected to increase between 3°C and 4°C at the end of the 21st century (IPCC, 2007).

In the last half of the century, the global sea level has risen at an average rate of 1.8 mm per year. Projections regarding the rise in the 21st century range between 18 cm and 59 cm (IPCC, 2007). Changes in precipitation patterns will continue and the frequency and severity of extreme weather events are likely to increase. This increased climate variability will heighten the continent's development challenges and pose a significant threat to gained achievements in human development.

The imperative of adaptation

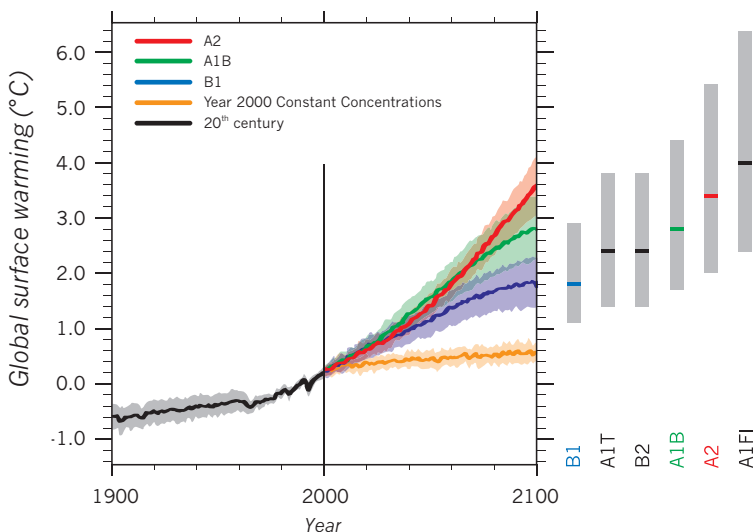
Given the existing levels of greenhouse gasses in the atmosphere, African countries must adapt to the impacts of climate change.

The tragic floods that occurred in Ethiopia in 2006, Senegal in 2003, Mozambique in 2000 and the recurrent dryness in Sahelian countries since the 1970s underline the imperative of adaptation strategies that may mitigate or prevent the most disastrous consequences of climate variability and change.

Historically, African communities have developed local adaptation strategies to cope with climate variability and extreme weather events. To serve as a valuable input to adaptation policies, however, this local knowledge must be strengthened through research.

Figure 1: IPCC illustration showing predicted global temperature change scenarios

Multi-model Averages and Assessed Ranges for Surface Warming



Overcoming the complex challenges that climate change poses to development requires expertise and functioning institutions capable of bridging the numerous gaps between communities and the policy and scientific spheres in Africa. These gaps result from a lack of information and technical capacity, and from weak institutional and legal frameworks lacking

capability to contend with environmental disasters and to establish relevant risk management strategies (Denton et al., 2001).

What adaptation looks like

Africans have developed local adaptation strategies to cope with historical climate change and extreme weather events. Examples of adaptation include:

- Selecting crop varieties that are tolerant to drought or that have a shorter growth cycle, to adapt to a shorter growing season in some regions.
- Planning urban growth in such a way that new housing is not developed on floodplains.
- Developing strategies such as forage resource conservation, and conflict resolution measures to deal with increased competition between farmers and pastoralists, where climate changes affect the movements of nomadic herders.
- Adapting fishing practices to changes in marine ecosystems caused by climate change, over-fishing, and other environmental drivers.
- Adjusting health infrastructure and preventative practice to protect populations in areas where Malaria is increasingly prevalent because of rising temperatures.

CCAA's added value

CCAA aims to significantly improve the pro-poor adaptive capacity of African societies through research that addresses the needs of vulnerable groups and the goals of policymakers. Therefore, it is necessary to strengthen the capacities of all stakeholders and to encourage researchers to orient their agendas toward the needs of vulnerable groups and policymakers. CCAA will also act as a facilitator by creating opportunities for knowledge to be shared, conveyed, utilized and implemented. Successful achievement of the program's objectives will contribute to realizing the following outcomes:

- Research institutions are better able to assess climate-related vulnerabilities and to evaluate and develop adaptation options.
- At risk groups, policy makers, and researchers share learning and expertise on climate vulnerability and poverty.
- The poor in rural and urban environments apply their experience of adaptation with the knowledge and technologies generated by research to implement improved and effective adaptation strategies.
- Policy processes are informed by good quality science-based work on vulnerability and adaptation, and by the experiences of the rural and urban poor.

#2 VISION, AIMS AND GUIDING PRINCIPLES

Vision

CCAA envisions a future for Africa in which communities proactively adapt to climate change. Researchers, policymakers, capacity developers and community-based organizations collaboratively work for the benefit of all, including the poorest and most vulnerable groups. They jointly plan their actions and, in the process, anticipate changes and test relevant adaptation strategies. Research provides a base of sound knowledge for these actions and serves to increase the adaptive capacity of the poor.

Mission

The program supports adaptation by the most vulnerable in Africa, informed by action research that brings researchers, policymakers, capacity developers and community-based organizations together with vulnerable groups and individuals.

Goal

The goal of CCAA is to significantly improve the capacity of African people and organizations to adapt to climate change in ways that benefit the most vulnerable.



Photo : Photo: A. Alt L'itaj / IDRC

Objectives

The objectives of the CCAA are:

1. To strengthen the capacity of African scientists, organizations, decision-makers and others to contribute to adaptation to climate change.
2. To support adaptation by rural and urban people, particularly the most vulnerable, through action research.
3. To generate a better shared understanding of the findings of scientists and research institutes on climate variability and change.
4. To inform policy processes with good quality science-based knowledge.

Program partners

The CCAA will, through different modalities, engage with partners ranging from national and sub-national government bodies; think-tanks and policy forums; research institutions; universities; non-governmental, private sector, and community-based organizations; multinational and international institutions; and donor agencies. A great challenge for CCAA is to support and nurture new processes between these partners that functionally link adaptation research, implementation and policymaking to meet the needs of the people and organizations of Africa.

For program monitoring purposes, the CCAA recognizes four distinct categories of “boundary partner” - those institutions and groups with which it interacts directly (Earl et al, 2001) and that typically make up participatory action research teams supported by the program. These are researchers, policymakers, capacity developers and at-risk groups. These four boundary partner types in turn work directly with the poorest and most vulnerable members of African society.

More on these boundary partners can be found in Section 5.

Priority themes

CCAA intends to focus on the following priority themes:

- Rural livelihoods (agriculture and livestock)
- Health
- Water management
- Disaster prevention and management in urban areas
- Coastal zone management (in relation to coastal erosion, salinization, rising sea levels, and fisheries resources)
- Energy, with a natural resources management focus.

Guiding principles

CCAA's guiding principles include:

- Building on community knowledge as a foundation
- Promoting homegrown solutions and African leadership
- Strengthening capacity, using a gradual approach
- Building on existing capacity development initiatives
- Using research as a development tool
- Seeing adaptation as a process
- Creating equity
- Using a pro-poor approach
- Searching for sustainable solutions
- Devolving programming to African organizations

#3 OUTCOME AREAS AND ACTIVITIES

Outcome areas

CCAA activities contribute to four projected outcome areas, each relating to a specific program objective. By clearly laying out the assumptions, risks, and expected outcomes in each outcome area, this structure prepares the program framework for monitoring, evaluation, organizational learning, and adaptive management. Most activities contribute to all four of the outcome areas. CCAA will be monitoring the program outcomes separately from the activities.

Activity types

The CCAA will support three types of activities to achieve the outcome areas outlined above:

- Participatory action research (PAR) projects
- Communications and networking in support of knowledge sharing on adaptation
- Education and training.

The research teams supported by the program will conduct PAR activities. Communications and networking activities will be carried out by the Program Management Unit, by partners, and by commissioned organization. The education and training activities will be conducted by education and training organizations supported by the program.

Table 1 : Desired outcomes

Outcome area	Objective	Desired outcome
1. Improved research capacity	To strengthen the capacity of African researchers, policymakers, capacity-developers and vulnerable groups to contribute to adaptation to climate change	African researchers, policymakers, capacity developers and vulnerable groups are better able to assess climate-related vulnerabilities, and to evaluate and develop adaptation options.
2. Knowledge and experience applied by the poor	To support adaptation by rural and urban people, particularly the most vulnerable, through action research	The poor in rural and urban environments apply their experience of adaptation with the knowledge and technologies generated by research to implement improved and effective adaptation strategies.
3. Shared learning and expertise	To generate a better shared understanding of the findings of scientists and research institutes on climate variability and change	At-risk groups, policymakers, capacity-developers and researchers share learning and expertise on climate vulnerability and poverty.
4. Policy processes informed and influenced	To inform policy processes with good quality science-based knowledge	Policy processes are informed by good quality, science-based work on vulnerability and adaptation, and by the experiences of the rural and urban poor.

Participatory action research (PAR) projects

CCAA sees participatory action research as bringing together diverse stakeholders as co-learners or co-researchers, bringing the knowledge and skills of each player to bear on the problem (Christie et al., 2000).

PAR projects will be funded by the program and executed, in partnership, with research organizations, organizations representing at-risk groups, capacity developers, and policymakers. They will be carried out in a participatory manner, from the planning to the monitoring and evaluation phases, in ways that are accessible to all stakeholders. The aim is to see research integrated into policy planning mechanisms to ensure its sustainability.

Communication and networking

Knowledge-sharing is an integral part of participatory action research, and CCAA-supported research will generate considerable new knowledge on adaptation. By supporting communication and networking activities, the program will facilitate knowledge sharing among projects as well as with the wider body of stakeholders concerned with climate change adaptation in Africa. Notably, the CCAA will support a knowledge-sharing network on climate change adaptation, linking partners and key stakeholders. Information technologies and resources, together with knowledge-sharing events, will contribute to knowledge exchange on adaptation. CCAA will also help strengthen the capacity of partners to share knowledge and effectively engage those who stand to benefit most from research on adaptation. A strong North-South consortium of institutions will coordinate and implement knowledge-sharing activities, with leadership in this area devolving to African institutions.

Education and training

The CCAA program sees capacity development as an ongoing process that should continue beyond the life of projects funded by CCAA. The program will build on existing capacity strengths to further develop African resources and capacity, contributing to the gradual devolution of programming areas to African organisations.

Formal education and training activities for researchers, policy makers, capacity-developers and at-risk groups complement the learning-by-doing which takes place within action research projects, and the peer learning supported through knowledge sharing activities. Education and training organisations on the continent, including universities, research centres, NGOs and training centres, will carry out these activities. They will consist of capacity strengthening workshops, the integration of climate change adaptation in the curriculum of educational organisations and the offer of funding support (scholarships, fellowships, etc.) to allow individuals to participate in adaptation research. The program will also support the development of basic training materials on adaptation to climate change that can be used by partners to strengthen local capacity to experiment and innovate.

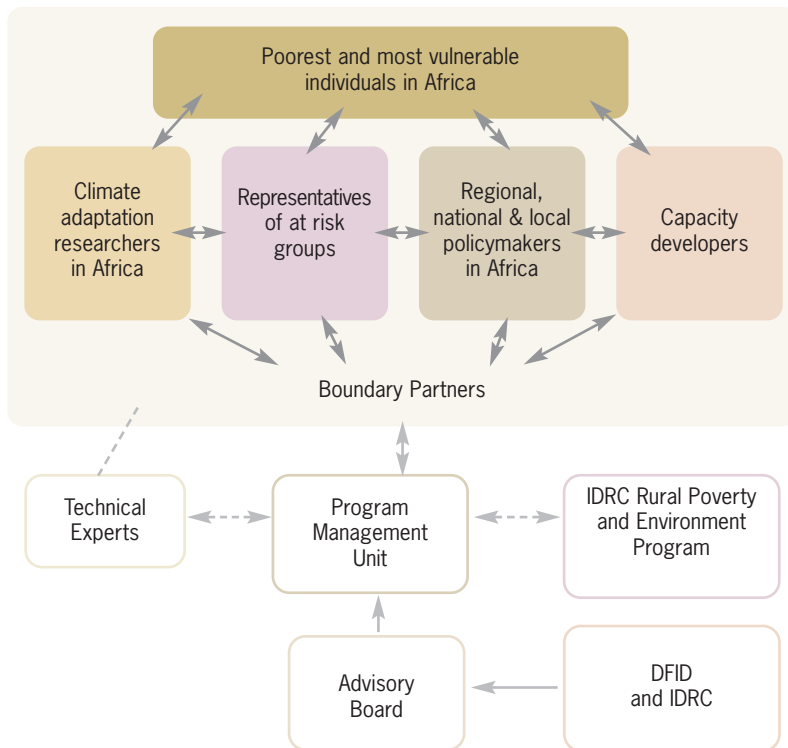
#4 PROGRAM STRUCTURE

The governance structure of the program consists of an Advisory Board, a Program Management Unit (PMU) and technical experts. The Advisory Board is comprised of donor representatives (presently two seats), African members (initially five seats) and the Team Leader. The Advisory Board provides guidance on overall direction, strategy and main priorities and assists with specific issues such as involving other donors, program devolution, and identifying broad evaluation topics, as needed by the program management unit and other stakeholder groups

As of 2007, the PMU consists of the Team Leader, four Senior Program Specialists/Officers, three Research Officers, a Communication Officer and three Program Assistants located in the three IDRC Regional Offices in Africa (Dakar, Nairobi and Cairo) and head office in Ottawa.

The program is housed within IDRC's Rural Poverty and Environment (RPE) program initiative, which provides guidance and technical advice to the PMU. Figure 2 presents the program structure.

Figure 2 : CCAA structure



#5 MONITORING AND EVALUATION

The CCAA program will closely link its monitoring and evaluation (M&E) strategy to the planned objectives, outcome areas and activities described earlier in this document. It will use M&E for three purposes: accountability, learning, and strengthening the capacities of its partners.

CCAA will apply an outcome mapping approach to follow progress at three levels: the program level, the project level and the level of projects' own boundary partners, which will be called the “beneficiaries level.” Outcome mapping, an innovation of IDRC's evaluation unit (Earl et al., 2001), is not based on an assumption of linear causality between a given program intervention and a set of corresponding development results. It focuses instead on the multiple linkages between interventions and behavioural changes.

CCAA recognizes four different categories of boundary partners, which typically play an interrelated role in the participatory action research supported by the program: researchers, policymakers, capacity developers, and representatives of at-risk groups. “Researchers” refers to those whose main function is to carry out research. The “policymakers” refers to international, national, municipal or local authorities, agents of government agencies who make decisions on rules and regulations, either formal or informal. The “capacity developers” refers to those whose primary function is to strengthen others through training, education, organizational development or other means. “Representatives of at-risk groups” refers to those who represent the poorest and most vulnerable groups, such as community-based organizations, farmers' associations, or associations of slum dwellers, and that typically advocate on their behalf.

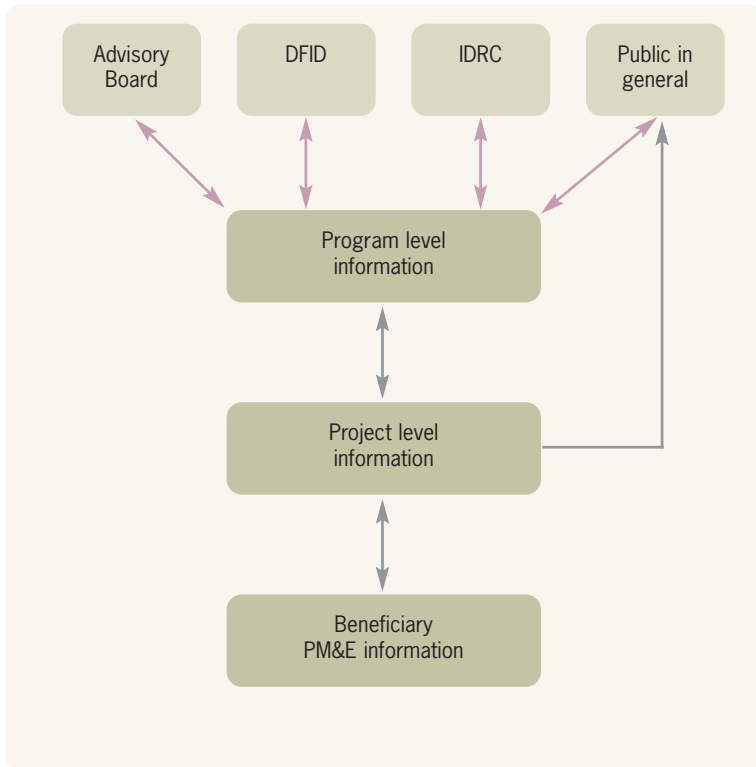


Photo : Peter Bennett / IDRC

Progress documented through outcome mapping is linked to the achievement of the four core objectives that lie at the heart of the CCAA's foundational "logical framework". A set of measurable indicators corresponds to each objective. Progress markers at the project and project beneficiary level will be documented for each of these indicators. Markers related to the program's strategies have been defined for each of the three activity types (action research, communication and networking, education and training) as well as for organizational performance. In addition to progress markers that relate to strategies, accomplishments and changes in behaviours, biophysical measurements and quantitative socio economic data will be gathered to indicate increased adaptive capacity. Each team at the outset of their project will develop a set of baseline data.

Project teams will help their partners implement participatory M&E (PM&E) as a core component of participatory action research. The resulting information will be used by IDRC to inform donors, advisers, and the general public, and to facilitate peer learning among partners. This is illustrated in Figure 3.

Figure 3: The transfer of M&E information from one level to the next



#6 CONCLUSION

The CCAA program is an international effort to contribute to climate change adaptation in Africa. The program supports research and capacity building to help vulnerable and marginalized groups develop effective strategies to address the negative impacts of climate change.

CCAA recognizes the need to work with existing initiatives and to build on existing practices of adaptation through participatory action research; communication and networking; and education and training. Research supported by the program will generate considerable new knowledge on adaptation that will be of practical use to policymakers and at-risk groups.

Partnerships with other donors, other international programs, and with African researchers, policy-makers, community representatives, and capacity developers will be instrumental in bringing significant benefits to the poorest and most vulnerable people in Africa. These partnerships will lay the groundwork for gradual devolution of CCAA-supported activities to African institutions.

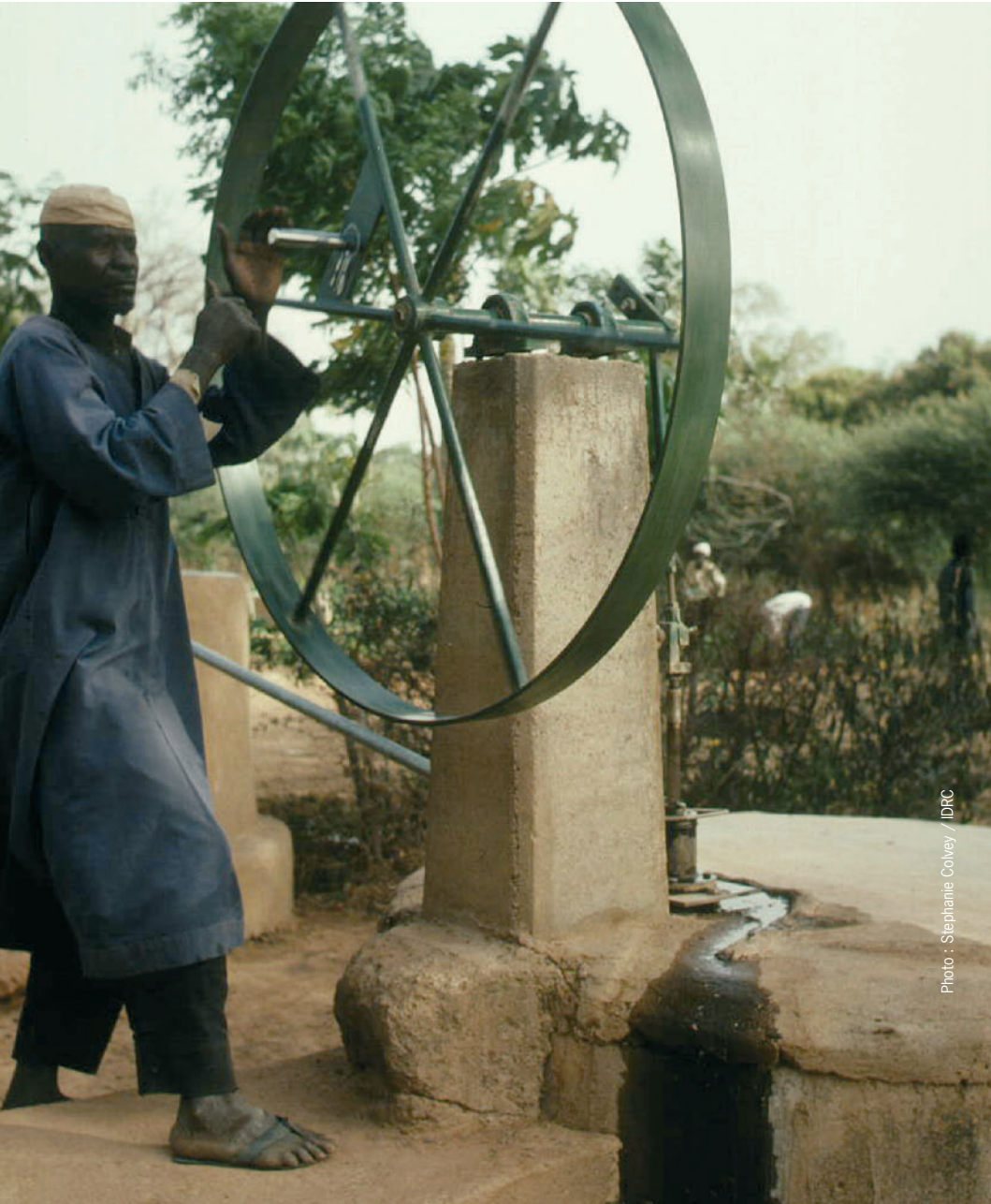


Photo : Stephanie Colvey / IDRC

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