Water and the Rural Poor

Interventions for Improving Livelihoods in sub-Saharan Africa

IFAD
Enabling poor rural people
to overcome poverty

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Interventions for improving livelihoods in sub-Saharan Africa

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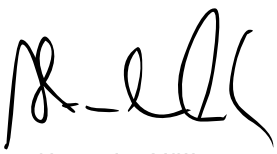
Foreword

Sub-Saharan Africa is lagging behind in its bid to attain the Millennium Development Goals of eradicating hunger and reducing poverty. Water represents a major constraint on agricultural productivity and rural poverty reduction in the region. The vulnerability of rural people remains considerable owing to a combination of: highly variable and erratic precipitation; poor development of hydraulic infrastructure, management and markets; non-conducive land and water governance; and a lack of access to water for domestic and productive uses.

This publication is the result of a joint effort by the Food and Agriculture Organization of the United Nations (FAO) and the International Fund for Agricultural Development (IFAD) to address the linkage between water and rural poverty in sub-Saharan Africa. It takes stock of past experiences and demonstrates that there are many opportunities to invest in water in support of rural livelihoods. Its aim is to help decision-makers make informed choices on where and how to invest. It emphasizes the need for an approach where investments in infrastructure are matched with interventions in institutions, knowledge and finance in ways that yield optimal returns in terms of poverty reduction. It highlights the extreme heterogeneity of situations facing rural people across the region and the diversity of challenges and opportunities facing different categories of rural operators, stressing the need to adapt responses to these realities. It recognizes the multiple dimensions of the rural water challenge, and shows how people's livelihoods depend on reliable water sources for a wide variety of uses.

Our hope is that similar approaches can be implemented at national and local levels in order to enhance the effectiveness of future water-related interventions in support of poverty reduction in sub-Saharan Africa.



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List of acronyms

CIESIN	Center for International Earth Science Information Network
DFID	Department for International Development (UK)
DHS	Demographic and Health Survey
FGGD	Food Insecurity, Poverty and Environment Global GIS Database
GAEZ	Global Agro-Ecological Zone
GDP	Gross domestic product
GNP	Gross national product
HDI	Human Development Index
IFAD	International Fund for Agricultural Development
IIA	Integrated irrigation aquaculture
IIASA	International Institute for Applied Systems Analysis
IPCC	Intergovernmental Panel on Climate Change
LDC	Least-developed country
SSA	Sub-Saharan Africa
UNDP	United Nations Development Programme
WARDA	West Africa Rice Development Association
WHO	World Health Organization
WUA	Water users association

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Executive summary

Insecure access to water for consumption and productive uses is a major constraint on poverty reduction in rural areas of sub-Saharan Africa (SSA). For millions of smallholder farmers, fishers and herders in SSA, water is one of the most important production assets, and securing access to and control and management of water is key to enhancing their livelihoods. This report argues that the potential exists for well-targeted, local interventions in water that contribute to rapid improvement in the livelihoods of the rural poor in SSA and help attain the Millennium Development Goal of eradicating extreme poverty and hunger. It discusses conditions for success and proposes water-based, context-specific, and livelihood-centred approaches to poverty reduction in rural areas.

Given the predominance of rural poverty in SSA, and given that agriculture will remain the main source of livelihood, poverty reduction strategies need to focus on improving productivity in this sector. This report focuses on agricultural water because: (i) it plays a central role in agriculture-based rural livelihoods; (ii) adequate availability and reliable access to water is frequently a constraint on production; and (iii) water provides a focal point around which other interventions can be organized.

Examples of successful water projects in SSA exist, and there are important opportunities for new investments in water. Their success will depend on the development of new models of interventions, centred on enhancing the diversity of livelihood conditions of rural populations. A large part of the success of future investments in water control will depend on a more comprehensive analysis of dynamic opportunities and needs, which are closely linked to the shifting biophysical and socio-economic contexts.

However, there is no "one size fits all" approach for improving livelihoods. Different contexts and needs will require different types of investments, in which market or household food security, prevailing agroclimatic conditions and associated farming systems, and the overall socio-economic and institutional environment will guide the choice from a non-prescriptive menu of appropriate interventions at different scales.

This report identifies and maps 13 major "livelihood zones" in SSA. Each zone offers distinct opportunities for livelihood sustenance and development, has different agro-ecological conditions, and shows different angles for water-related investments for poverty reduction. The predominant scales emerging from this analysis correspond to the household, farm and community watershed levels.

Any rural water strategy will have to deal with the reality of multilocal diversified livelihood systems in which farming, while remaining important, is no longer the sole or even the main source of living. The "new rurality" has serious implications for any water intervention strategy.

In particular, a careful analysis of social groups and target beneficiaries needs to be performed. With regard to farming, this report identifies four main categories of rural people and analyses their specific water-related requirements. The four groups are: (i) the extremely vulnerable; (ii) traditional smallholders, livestock keepers and nomads; (iii) emerging market-oriented smallholders; and (iv) large commercial farmers. The report also stresses the need to analyse off-farm water needs, the needs of women and the elderly, and the implications of HIV/AIDS in crafting water interventions.

The report analyses the prevalence of poverty in rural areas in SSA and reveals substantial differences across the livelihood zones, with a higher prevalence of relative poverty in highland temperate, pastoral and agropastoral zones.

This report also assesses the biophysical potential for further water development in each of the zones. On average, the current level of pressure from agricultural-based livelihoods on water resources is low in SSA, with agricultural water withdrawal representing only 3 percent of renewable freshwater resources. Thus, the potential exists for a substantial increase in harnessing water resources for agriculture, but with major differences between zones. In other zones, water is much scarcer, and interventions will need to focus on substantial increases in water productivity. Environmental degradation requires careful attention in future development plans in these zones.

Looking at the prevalence of poverty, the relative importance of water in productive activities, and the potential for future water development, the report organizes the zones according to three levels of potential for poverty reduction through water-related interventions. In particular, water-related interventions are expected to play a major poverty-reducing role in the cereal–based, cereal–root crop, highland temperate and agropastoral zones. However, the analysis is valid for a regional overview only. At national and district level (or lower), a detailed agro-economic analysis (including market opportunities, stakeholder analysis and preferences) and institutional mapping, together with an analysis of sectoral policies, would allow for much more refined and policy-relevant findings.

The types of interventions that are appropriate rarely involve large-scale irrigation schemes. The focus is on schemes that are easy to operate and maintain locally and that target female and male smallholders. Such interventions will mostly be based in areas of rainfed agriculture. Six categories of possible interventions have been identified in view of their poverty-reduction potential:

- better management of soil moisture in rainfed areas;
- investment in water harvesting and small storage;
- small-scale community-based irrigation schemes;
- improved water access and control for peri-urban agriculture;
- development of water supply to meet multiple water uses;
- an environmentally-aware system of improved water access for livestock in arid and semi-arid areas.

In addition, there is a need to improve existing smallholder-based irrigation systems, which are often used below capacity and in a state of poor maintenance. New market developments, such as contract farming around commercial private irrigation schemes, may also offer options for the more entrepreneurially-gifted rural population. However, clear policies need to be put in place to ensure equitable access to water for smallholder farmers, who also require favourable market linkages and governance conditions.

Investments in water infrastructure alone cannot suffice to improve agricultural productivity in SSA. Farmers need secure access to inputs including fertilizer, better seeds, and credit. They need to be better educated and informed on the use of inputs and the latest techniques. Investments in water control need to be planned and implemented in the much broader framework of agricultural and rural development, where production, markets, finance and infrastructure are conceived in an integrated way and are mutually supporting. In this framework, the multiple use of water in rural areas also requires careful attention. Furthermore, the policy and institutional framework has to ensure fair and equitable access to water resources and effective access to markets for agricultural products. In particular, conflict resolution and settlement of claims need to be part of governance – be it traditional, customary or modern.

Climate change represents an additional challenge to rural people in SSA, and a further reason for investment in water control. In view of their limited adaptive capacity, smallholder farmers, pastoralists and artisanal fishers in SSA are among the most vulnerable to the impact of climate change. While projections on possible changes in annual rainfall vary across Africa, these populations will experience the negative effects of increased temperature on yields, combined with a high vulnerability to extreme events. For them, enhanced control of water will become critical in building resilience to increased climate variability.