

## **CAPRI Research Grants 1999**

### **ILRI: Integrated Resource Management: The role of institutional, technology and policy interventions promoting sustainable livelihoods in drought-prone regions of sub-Saharan Africa**

Significant populations of pastoralists and agropastoralists occupy the arid environs of the Sahel. Environmental dynamics, changing markets, policy interventions and rising demographic pressures have all played a role in intensifying competition for natural resources in this dryland region, particularly between mobile livestock keepers and crop/livestock farmers. The selected study areas, located in northeastern Burkina Faso is characterized by a high degree of climatic uncertainty, which has necessitated the creation of complex risk-coping and natural resource management strategies. The study specifically examines 'hot spot' areas, which are characterized by land and resource use conflicts frequently arising from increased competition and insecure claims to resources.

In an effort to improve the welfare of those inhabiting these regions, governments and donor agencies have sponsored numerous technological interventions and drought relief efforts, which have yielded diverse impacts. While providing critical short-term relief to pastoralists, they have also bred dependency on these programs, encouraged sedentarization, and potentially weakened local resource management and risk coping institutions. More recently, governments have also been engaged in a process of devolving property rights and authority over natural resources to local government bodies and user groups in combination with imposing market liberalization and structural adjustment policies.

The research being undertaken by this project is a continuation of the ILRI/IFPRI project, **Property Rights and Risk Research Project**. This project produced an extensive literature review and developed an analytical framework and methodological tools for examining the impact of risk, varying property rights regimes, and policies on pastoral and agropastoral livelihood strategies and outcomes. The current research applies the framework, theories and tools produced by the previous phase to case study and empirical analysis in order to examine the validity of the framework and test the methodological tools. The study aims at gaining a firmer understanding of how property rights and collective action shape community and household-level outcomes in addition to illuminating the effects of government and donor interventions on human welfare and resource management institutions within different contexts.

Household and community level surveys, as well as GIS-based information, will provide data for an institutional and statistical analysis of community management of common pool resources, plus provide the data with which to test the methodological framework for policy evaluation. A policy workshop will be held in Burkina Faso in August 2002 to disseminate the results.

**Project Leaders:** Nancy McCarthy

**Project Period:** August 1999 – August 2002

**Collaborating Partners:** International Food Policy Research Institute (IFPRI), University of Marburg, Germany; University of Ouagadougou, Burkina Faso; Programme Sahelian Burkinabe and GTZ.

**Grant from CAPRI:** \$125,000

**Other Funding:** Ford Foundation through ILRI; USAID

## **ICRAF: The Many Faces of Collective Action: How people come together for innovation, marketing and management of natural resources**

A wealth of research and case study material has demonstrated that collective action among farmers can yield substantial benefits in terms of technology development, accessing and supplying markets, spreading information, and generally contributing to enhanced agricultural productivity. In order to better understand the varying functions of collective action among farmer groups and the many ways it contributes to agricultural intensification and development, ICRAF launched a study in the central highlands of Kenya and northern highlands of Tanzania that particularly focuses on collective action's role in the spread of innovations, in the marketing of agricultural inputs and outputs, and in the management of natural resources.

This research seeks to develop and apply a conceptual framework and methodologies for evaluating farmers' objectives in undertaking collective action. Specifically, it aims to characterize the different types of collective action, understand their motivation, learn how collective action impacts on disadvantaged groups and individuals, and examine factors affecting their performance. Through seminars and meetings with policy makers, government extension personnel, researchers and farmer groups, ICRAF also works to foster increased collaboration between these interest groups. A deeper appreciation of the impact farmer groups can have along the technology research-development continuum as well as opportunities to work together face to face are likely to contribute to more effective policies and programs, with the objective of augmenting farmer income and improving natural resource management.

Principal research methodologies include rapid appraisal using focus groups, informant interviews and reviews of official district level information. These will be complemented by quantitative surveys to collect data on organization types, spatial patterns of collective action, and benefits and costs. Policy level research will be undertaken via seminars seeking to promote researcher-government-farmer cooperation and disseminate research results, including a final policy workshop.

**Project Leaders:** Frank Place

**Project Period:** October 1999 – December 2001

**Collaborating Partners:** Selian Agricultural Research Institute, Tanzania (SARI), Kenya Agricultural Research Institute (KARI), International Livestock Research Institute (ILRI)

**Grant from CAPRI:** \$125,000

**Other Funding:** Government of France, DANIDA

## **ICARDA: Community and House-hold Level Impacts of Institutional Options for Managing and Improving Rangeland Management in the Low Rainfall Areas of Jordan, Morocco, and Tunisia**

The rangelands of West Asia and North Africa (also known as Mashreq and Maghreb, respectively) face an abundance of challenges. Human and animal populations continue to grow at unprecedented rates in response to domestic and international demands for livestock products, ruminant feed resources have substantially declined both in per capita and absolute terms, while rangeland resources are being depleted by overgrazing which accounts for the absolute decline in rangeland vegetation. Feed shortages have spurred a need for supplemental feed resources, namely barley, which has been increasingly cultivated on a continuous basis in marginal areas that cannot sustainably support it. Depleted soil fertility and rising incidence of pests and diseases accompany ever-decreasing barley yields.

At the same time, countries in the Mashreq and Maghreb region are undertaking structural adjustment and market liberalization reforms. Measures like subsidy removals and price liberalizations have led to adverse incentives for farmers and herders occupying marginal areas, whose survival relies on pursuing aggressive production with inadequate regard for long-term resource sustainability.

The research being undertaken by this project is a continuation of the ICARDA/IFPRI project: **Mashreq and Maghreb (M&M) Property Rights Research Project**. Phase I of the project made substantial progress in enabling technology transfers (e.g. feedblocks for improving sheep nutrition), developing useful models for examining property rights and technology adoption (e.g. one study documented the correlation between private ownership rights and long term investment versus the preponderance of resource degradation on state-owned land), analyzing policy impacts, and generating substantial collaboration among policymakers, herders/farmers, and national and international researchers both within and between WANA countries.

The second phase is designed to go beyond the technical and interactive accomplishments achieved in the first phase to one of integration of research results and outputs. Greater emphasis is being given to a participatory and community-level approach to resource management and the testing of packages of technologies. Using the inter-country network established in Phase I, efforts are being devoted to promoting technology transfer among the group of nations, thereby demonstrating the potential of collective action at an international level. Research on property rights and policy issues is being extended to those regions that were not previously studied, particularly rangeland areas with a high incidence of overlapping community claims. The involvement of policymakers in the project continues to be a priority, with considerable emphasis assigned to promoting property rights policies that strengthen rangeland production and resource management through their support of local institutions.

The component of the project funded by CAPRI (**Community and House-hold Level Impacts of Institutional Options for Managing and Improving Rangeland**

**Management in the Low Rainfall Areas of Jordan, Morocco, and Tunisia)**

specifically examines the institutional, market and policy environment of low-rainfall communities in Jordan, Morocco and Tunisia and assesses various options for improving livelihoods and rangeland management. As governments increasingly begin to devolve property rights to rangeland resources to local communities, the likely equity and poverty impacts of various measures are being evaluated in hopes of fostering policies that will lead to welfare improvements for more marginalized groups. By involving national and international researchers, policy makers, community members in the planning, implementation and dissemination phases of the research process, the project aims to create a dynamic of continuous collaboration. Both rural appraisal techniques and household survey techniques will be applied in the study.

**Project Leaders:** Tidiane Ngaido

**Project Period:** January 1998 – December 2001

**Collaborating Partners:** International Food Policy Research Institute (IFPRI); IPA Agricultural Research Center, Iraq; National Center for Agricultural Research and Technology Transfer, Jordan; Lebanese Agricultural Research Institute, Institut Technique des Grandes Cultures, Algeria; Agricultural Research Center, Libya; Institut National de la Recherche Agronomique, Morocco; Institut National de Recherche Agronomique de Tunisie, Tunisia

**Grant from CAPRI:** \$125,000

**Other Funding:** Arab Fund for Economic and Social Development (AFESD), International Fund for Agricultural Development (IFAD)