

EPTD WORKSHOP SUMMARY PAPER NO. 8

INTERNATIONAL SYMPOSIUM ON PROPERTY RIGHTS, RISK, AND LIVESTOCK DEVELOPMENT

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1. PROJECT BACKGROUND

Livestock production is one of few options available to millions of impoverished people who live in arid and semi-arid areas of sub-Saharan Africa (SSA). Livestock are flexible and fungible: they can be moved in response to variable rainfall conditions and can be purchased or sold in response to variable market conditions. Livestock can supply animal traction and play key roles in the transfer and cycling of nutrients for crop production. At the same time, livestock production is often associated with low productivity and low offtake, with land degradation, and with resource conflicts among pastoral groups and between pastoralists and farmers.

One of the key characteristics of extensive and semi-extensive livestock production in the semi-arid regions is the high variability of rainfall both spatially and temporally, and the consequent high degree of drought vulnerability. Equally important is the fact that forage from common rangelands provides the vast majority of feed inputs in these systems. Early attempts at improving livestock productivity in these regions attempted to address the perceived problems with common property rangelands without considering the impact of high rainfall variability on different production strategies. Instead, low productivity and land degradation were assumed to be a function of the inability of the community to manage their resources. Typical policies undertaken in the 1970s and 1980s included the appropriation of rangeland by the state and the creation of

ranching schemes. The former policy often led to encroachment by cultivators into pastoral areas or to open access situations where both non-traditional and traditional herders competed for the resource. Projects modeled on the ranch approach frequently generated negative rates of return, and have often been criticized on grounds of resulting inequitable distribution of access and use, usually favoring wealthier households.

Many of the problems associated with such policies are due to the lack of properly accounting for the role of mobility in sustaining livestock production in highly variable environments. In contrast with the traditional economics paradigm, which stresses the efficiency losses and environmental degradation that are likely to result under non-private tenure, many range ecologists and animal scientists instead focused on the resilience of rangeland ecosystems and the adaptability of pastoral societies. This led to the development of a school of thought now known as the “new range ecology,” which maintains that forage productivity is driven by climatic variables rather than stocking density, that semi-arid rangelands are in fact resilient and not fragile, that forage composition is patchy rather than evenly distributed spatially, and thus that an opportunistic, mobile grazing strategy is better suited to these environments than conservative, sedentary strategies.

And yet, though there is convincing evidence that the expansion of the Sahel during the 1980s was due more to rainfall than to overstocking, there is also evidence that high stocking densities can have a negative impact on forage productivity through changes in forage species composition, and that they also have a negative impact on within-period animal productivity. Therefore, there is a need to reconsider the incentives of individuals to use or misuse resources held in common in an expanded framework that

accounts for risk aversion and the options for ex-post mobility. Finally, given the need for flexible community (and intra-community) management of resources, there is a need to understand the role of the state in devising and implementing comprehensive legal and institutional frameworks to effectively devolve authority and responsibility of resource management to the relevant level, as well as to clarify the role of non-governmental organizations in enhancing the capabilities of local communities to manage those resources.

2. PROJECT DESCRIPTION

In 1996, The International Livestock Research Institute (ILRI), the International Food Policy Research Institute (IFPRI), and the Institute for Rural Development at the University of Goettingen began a research project aimed at providing information to improve the efficiency, equity, and environmental sustainability of livestock production and land use in SSA. The project focuses on semi-arid areas where mobile livestock production and mixed crop-livestock farming are competing land uses. Financial support for the first phase of the project is provided by the German Federal Ministry for Economic Cooperation and Development (BMZ), through the *Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)* (German Agency for Technical Cooperation).

The specific objectives of the project are to a) better understand grazing management under different property rights regimes facing different environmental and production risks; b) identify the conditions under which different development pathways are followed; and c) identify how policy and other external interventions can assist communities to achieve preferred development pathways. Although several policy-

relevant results obtain from Module A, it is important to emphasize that the focus of this module is not to undertake to contribute to the policy debate. Rather the focus is to develop a conceptual framework for future empirical research. On the other hand, Module B is expected to contribute more directly to policy. In the project proposal, the following outputs were specified for Module A:

- i) An annotated bibliography of research on the functions of common property rangelands, and the pathways of African livestock development.
- ii) The collection of documents referenced in the annotated bibliography deposited with the IFPRI library in Washington and the ILRI library in Addis Ababa or Nairobi.
- iii) An informal “network” of researchers in Africa and advanced countries studying issues relevant to the objectives of this project.
- iv) A book including chapters on concepts, models, and case studies cast in a similar mode.
- v) The development of appropriate concepts and models of common property published in international journals.
- vi) A limited number of supplementary field studies.
- vii) An international symposium to be held in 1998 to review project results.

3. THE SYMPOSIUM

The objectives of the symposium were threefold: a) to obtain a review of the work undertaken thus far from a broad spectrum of researchers, b) to fill in apparent gaps in the project with invited papers from a number of other contributors, and c) to obtain guidance

from the invited participants on directions for future phases of the project. The symposium was organized as follows. Papers were presented during the first two days and on the morning of the third day. Two roundtable discussions were held, each at the end of the first two days. The afternoon of the third day and the morning of the fourth day were spent in working groups. The focus of the first set of working groups was to critically review progress made during Module A; the focus of the second set was to suggest guidelines for the research to be undertaken in Module B. The next section is comprised of summaries of the papers presented at the symposium. Section 4 presents a summary of discussions from the roundtables, section 5 describes the results obtained from the working groups, and concluding remarks are given in section 6.

4. THE SYMPOSIUM PAPERS

Besides the introductory paper given by Brent Swallow, which forms the basis of the project background and description given above, there were fifteen papers presented at the Symposium. The first group of papers were concerned with the broader issues involved in pastoral and agro-pastoral systems. The second set of papers were concerned with developing a conceptual framework for understanding pastoral and agro-pastoral systems, and included both theoretical and simulation models. The final set of papers was case studies undertaken in various regions of sub-Saharan Africa.

GROUP 1: BROADER CONTEXT OF PASTORAL AND AGRO-PASTORAL SYSTEMS IN SUB-SAHARAN AFRICA

Kirk, M. (Marburg University, Germany)

The evolving role of the state in influencing property rights over grazing resources in sub-Saharan Africa

Discussant: W. Kisamba-Mugerwa (Makerere University, Uganda)

This paper analyzes the changing role of the state in influencing property rights over grazing resources in sub-Saharan Africa from pre-colonial times to the present. It reflects on colonial models of resource tenure and the effects of European-inspired colonial tenure policy on pastoral systems. Post-independence tenure “reforms” aiming at the nationalization of resources, the reallocation of property rights through agrarian reform and privatization of rangelands led to institutional erosion and resource conflicts with regard to pastoralists’ tenure regimes. In redefining the role of the state and rethinking the strengths and weaknesses of common property systems in the last decade, drafts for a comprehensive legal and institutional framework, decentralization and conflict management have begun. A critical assessment reveals that these objectives are met only in part.

Grell, H. (GTZ, Burkina Faso) and Kirk, M. (Marburg University, Germany)

The role of the donors in influencing property rights over pastoral resources in sub-Saharan Africa

Discussant: N. Chisholm (Irish Aid)

The role of donors in pastoral development in general, and in influencing property rights over pastoral resources in particular, is multifaceted and has changed considerably in the last decades. In this paper, the authors review different theories that have been developed during the 1980s in light of past failures in pastoral development (institutions, devolution and decentralization, property rights theory). The authors emphasize how the

“new range ecology” or opportunistic grazing strategy approach has influenced and continues to influence donor thinking. The debates of the early 1990s have led to a number of programs by donors to promote research, public policy discourse and public education on tenure and decentralization issues. The paper also outlines how the new paradigm has helped define the role of donors in the highly sensitive area of land tenure in terms of policy formulation and adoption, applied research, and facilitating adaptive approaches to managing common property resources. Case studies of a number of countries illustrate the process of establishing new pastoral tenure legislation and establish the factors that hinder the process and those that promote an enabling environment for flexible and fair management systems. However, the paper ends by noting that while evidence supporting flexible land tenure systems at the local scale is mounting, there has been very little effect on national level land tenure policies.

Hazell, P. (IFPRI, USA)

Public policy and drought management in agro-pastoral systems

Discussant: S. Ehui (ILRI, Ethiopia)

Agro-pastoral farming systems are well suited to low rainfall, drought prone areas, where despite harsh conditions, they have provided reasonable sustenance to pastoral societies for generations. Unfortunately, the level of wealth accumulated in these societies is inadequate to provide full protection from severe droughts, and the economic and human losses in drought periods can be severe. The problem has worsened with population growth, as more and more people seek to earn a livelihood from the meagre resources available in these areas. It may also have been aggravated by more frequent and prolonged droughts associated with global warming. The high cost and the

increasing vulnerability of agro-pastoral societies have led many governments and donors to intervene with various forms of drought assistance. Types and levels of intervention that were unheard of until recently are now common, and seem to be increasing. Many of these interventions are encouraging farming practices that increase both the extent of future drought losses and the dependence of local people on government assistance. They are also costly to governments and donors, and use resources that could otherwise be spent for development purposes. It is important to know if the net benefits from existing types of drought relief programs justify their costs, particularly when their longer-term impacts on poverty and the environment are assessed. It is also important to know if drought relief programs can be designed better to achieve their immediate objectives but without distorting economic incentives in inappropriate ways. After examining traditional drought management strategies and the economic aspects of public interventions for drought management, the paper examines past experiences with drought relief measures, including feed subsidies and restocking policies. It concludes by offering a new alternative for drought management—insurance based on rainfall.

Niamir-Fuller, M. (UNSO, Brazil)
Managing mobility in African drylands
Discussant: P. Hiernaux (ILRI, Niger)

Notions normally attributed to pastoralism, such as mismanagement and land degradation, are regarded through the viewpoint of the “new” mobility paradigm, which argues that mobile pastoral production can be both sustainable and environmentally friendly, if the social, economic, and political constraints to its full development are lifted. The paper reviews the social, economic, and ecological benefits attributed to

transhumance and extensive livestock production, and documents what happens when mobility declines. It traces the evolution of the different development paradigms to the present day, and provides a brief evaluation of the impact projects in pastoral areas have had since the 1970s. Institutional change, in terms of administrative, legal, and policy reform, and several design principles are singled out as important elements for the legitimization of pastoral transhumance. The paper concludes by briefly discussing the worldwide resurgence of transhumance, and recommending priority areas for action research.

Williams, T. (ILRI, Niger)

Crop-livestock systems in sub-Saharan Africa: Determinants and intensification pathways

Discussant: S. Sandford (Farm Africa, UK)

Crop-livestock systems are growing in importance in sub-Saharan Africa. This paper examines the ways in which environmental, institutional, and economic factors influence the development of these systems. Based on theoretical perspectives from the micro- and institutional-economics literature, a conceptual framework is proposed to explain the evolution of crop-livestock systems. The different patterns of intensification currently seen across the subcontinent are reviewed. Policy and institutional options as well as research needs are identified to promote sustainable intensification of crop-livestock systems.

GROUP 2: DEVELOPMENT OF A CONCEPTUAL FRAMEWORK

McCarthy, N. (ILRI, Kenya and IFPRI, USA)

An economic analysis of the effects of production risk on the use and management of common-pool rangelands

Discussant: J.-P. Chavas (University of Wisconsin-Madison, USA)

Across much of sub-Saharan Africa, extensive and semi-extensive livestock systems are based on the use of common-pool rangelands for the essential input of forage into livestock production. While much research has been devoted to the study of common-pool resources and their attendant management institutions, less has been done to explore the effects of production risk on the decisions of producers who share a common pool resource. The objectives of this paper are twofold. First, to examine the effects of risk on production decisions under the two extreme assumptions of either perfect cooperation or no cooperation over the use of the common-pool rangelands. Second, to explicitly examine the effects risk has on the incentives of individuals to cooperate as well as to deviate from cooperative agreements. The theoretical models are then used to investigate issues such as:

- 1) Is there a differential effect of risk on producer behaviour depending on the level of cooperation reached to manage the commons?
- 2) How does risk affect producers' supply responsiveness with respect to changes in exogenous variables (i.e., output price, forage productivity, costs)?
- 3) How does risk affect incentives for a group to make and enforce use-rules over the common property rangeland?

- 4) How will heterogeneity in terms of risk preference across producers affect both supply response and the ability of the group to cooperate over the management of the commons?

Goodhue, R. (University of California at Davis, USA) and McCarthy, N. (ILRI, Kenya and IFPRI, USA)

Fuzzy access: Modeling grazing rights in sub-Saharan Africa
Discussant: J.-P. Chavas (University of Wisconsin at Madison, USA)

Increasing populations and agricultural encroachments upon rangelands are stressing traditional land management institutions in sub-Saharan Africa. In this paper, the authors use fuzzy set theory to model key features of the traditional grazing rights system: the incomplete nature of grazing access (sometimes referred to as partial access or secondary rights of access) as well as the flexibility of these rights (i.e., reciprocal nature of access rights). In contrast to findings of the existing common property literature, which has stressed the need for closed boundaries for effective access, the authors find that under some conditions the imprecision that characterizes access rights and use can result in higher social returns than a conventional common-property regime characterized by well-defined user groups and well-defined user rights.

Scandizzo, P. (Universitat di Roma)

Ownership, appropriation and risk
Discussant: K. Otsuka (Tokyo Metropolitan University)

Appropriation and choice between common and private property are modelled as outcomes of contract formulation under uncertainty. In this paper, the author argues that the basic social contract contemplates the granting of both common and private property rights. Their respective extension, however, depends on residual rights and the degree of

underlying uncertainty. In most contracts, the private party appropriating the rights to exploit and manage the resources will leave room for usage rights and other provisions for the needy if the environment is sufficiently risky. This provision will depend on a social standard that is an inherent part of the contract. The standard will be more generous the higher is uncertainty and the lower, *ceteris paribus*, are technical progress and other incentives for full appropriation.

Swallow, B. (ILRI, Kenya) and Kamara, A. (Goettingen University, Germany / ILRI, Ethiopia)

*Induced changes in property rights and land use in semi-arid East Africa
Discussant: R. Birner (Goettingen University, Germany)*

The first section of this paper reviews the development of the theory of property rights and land use change. Initially, most researchers focused on the demand-side factors affecting property rights change, including changing relative prices, changes in technology, and population growth. More recently, supply-driven factors have been incorporated into the analyses, particularly in the work by Douglas North who focuses on the transactions costs associated with institutional change and the bargaining power of different interest groups and organizations. The second section of the paper reviews existing empirical evidence on property rights and land-use change in East Africa. After reviewing both theoretical and empirical literature, the authors then develop an expanded model of property rights change that better accounts for supply-side factors that are particularly important in pastoral East Africa, namely: a) plural legal and social institutions and forum shopping by different interest groups, b) the influence of international development assistance agencies and NGOs, and c) the effects of transportation and communication infrastructure on both producer incentives and

transactions costs associated with different forms of government. This model is then applied to the case study of land use and property rights change on the Borana Plateau located in the southern Ethiopia.

GROUP 3: CASE STUDIES

Vanderlinden, J.-P. (York University, Canada / ILRI, Niger)

Conflicts and co-operation over the commons: A conceptual and methodological framework to assess the role of local institutions

Discussant: R. Meinzen-Dick (IFPRI, USA)

The purpose of this paper is to propose a conceptual framework for the assessment of local institutions in terms of their potential to foster cooperation for the management of common pool natural resources. The author begins with an analysis of the current theories on conflict situations across several disciplines, and then develops a conceptual framework for analyzing the factors, which determine the outcome of conflict, as well as the impact of these outcomes on the institutional environment. Finally, the author considers how this framework might be applied to property rights institutions and livestock mobility in the agro-pastoral zone of Niger. Such a framework would consider conflicts during rainy and wet seasons with respect to four types of rights — access, withdrawal, management and alienation.

Ngaido, T. (ICARDA and IFPRI, Syria)

Can pastoral institutions perform without access options?

Discussant: S. Lawry (Ford Foundation, Egypt)

The failure of state ownership and statutory legislation to achieve better resource management has fostered new interest favoring community control and management and customary tenure systems. However, such initiatives are often frustrated because they are

solely based on community resources and do not adequately account for community and individual production strategies and access options, which were the mainstay of pastoral production systems. In addition, legal approaches to pastoral systems have hampered the capacity and strength of pastoral institutions to manage their common resources and support community members' livelihoods. The loss of performance has induced the multiplication of disputes, continuous encroachment on pastoral resources, and degradation of common pastoral resources. States should promote flexible resource-management frameworks that provide more options to community members because it is unlikely that traditional access options can be recreated and made functional solely through legal interventions. Furthermore, given the individualization of production strategies, the role of the state should be to promote institutions that are likely to win pastoral communities' acceptance and foster better interaction between communities, members, and users. This study draws on experiences from pastoral communities in Morocco and Niger. It begins by describing the different approaches to resource management found in the two countries, and then goes on to describe how these approaches have led to institutional inefficiencies.

*Rhode, R, Hoffman, T. and, Cousins, B. (University of Western Cape, South Africa)
Southern African case study
Discussant: I. Scoones (Sussex University, UK)*

This paper compares two communal areas in southern Africa in order to analyse the effect of expanding or contracting the commons on pastoral livelihoods, property relations, risk reduction and environmental impacts. This comparative history of land policy provides lessons, which are relevant to the goals of sustainable development and

land reform in South Africa and Namibia today. The authors conclude that expanding the commons in order to increase ecosystem complexity is a more effective and sustainable policy option than attempting to impose regulatory control systems based on de-contextualized models of ecosystem dynamics.

Vanderlinden, J.P. and colleagues (ILRI, Niger)

Niger case study

Discussant: B. Hassan (President, National Federation of Livestock Producers in Niger)

In Niger, land tenure consists of a mix of quasi-private and common property, allowing for both fixed agricultural production and mobile cattle raising. Nevertheless, the combination of population increase, low and variable rainfall, and a changing institutional environment creates stress on land tenure systems. Since 1993, the Niger government has begun implementing a new rural code, which should redefine the access, use and management of natural resources in Niger. This calls for a clear understanding of the interaction between environmental variability and the use of land for agricultural and pastoral activities, so that the (re-)definition of land tenure in Niger is sustainable in both economic and environmental terms. The purpose of the paper and the proposed modeling work contained herein is therefore to contribute to the debate on management of common property rangelands by incorporating, both conceptually and quantitatively, the importance of mobility in these systems. A review of the literature relevant to Niger follows the introduction. In the third section, the community-level survey methodology is explained, followed by a description of land use patterns, property rights structure and livestock mobility—both of insiders going out, outsiders coming in—for the forty

communities in the study area. A preliminary model of stocking levels, land use patterns and the degree of mobility is then developed.

Barbier, B. (CIAT, Columbia) and Hazell, P. (IFPRI, USA)

Implications of population growth and declining access to transhumant grazing areas for the sustainability of agro-pastoral systems in the semi-arid areas of Niger: A bio-economic modelling approach

Discussant: A. Kuyvenhoven (Wageningen Agricultural University, Netherlands)

The objective of this study is to better understand the linkages between pastoralism and crop expansion in the Sahel and the role of risk in these linkages. The continuing expansion of crop production at the expense of communal and open access pastures is making pastoralism increasingly difficult in the Sahel. Many suggest that the expansion of crop production will lead to a shift from pastoralism to mixed farming systems. However, crop production is low and risky while pastoralism is said to be better adapted to the typical erratic rainfalls of the Sahel. Furthermore, it is not certain that crop production is sustainable in the Sahel because of soil fertility problems. To investigate the future of pastoralism and crop production in the Sahel, the authors develop a dynamic, stochastic mathematical programming model, which simulates these crop-livestock interactions within a typical Sahelian community in Niger. Risk is introduced through use of discrete stochastic programming with recourse and a mean-standard deviation utility formulation. The model is recursive to allow the simulation of long time periods and to introduce external drought shocks. The results provide insights into the value of transhumant grazing arrangements, and show how the community would adapt to loss of access rights to traditional grazing areas. The model is also used to explore the

value of a supplementary feeding program that provides an alternative way of managing drought risks.

*Kamara, A. and colleagues (Goettingen University/ ILRI, Ethiopia
Ethiopia Case Study
Discussant: Jetani Dembella (CARE, Ethiopia)*

The report provides a summary of the fieldwork in Ethiopia. The study assesses the driving forces of privatization of rangelands and, changes in land use and property rights in Borana. Pastoral communities are stratified according to the level and variability of rainfall, as an indicator of production risk, and according to market access.

Preliminary analysis shows that indeed there is increasing privatization of rangelands, both for cultivation and for private grazing. Different trends are observed for different rainfall and market access categories. The driving forces include, among others, both population growth and improving market conditions. Changes in the policy environment appear to have been one of the main factors driving land use and property rights changes observed on the Borana Plateau. These include land reform policies, and increased activity in credit and extension services; both efforts being biased towards crop cultivation.

5. SUMMARY OF ROUNDTABLES

Following full-day presentations on the first and second days of the symposium, roundtable discussions were held to identify key issues to be deliberated further by the working groups.

ROUNDTABLE, SUNDAY SEPTEMBER 27, LED BY BRENT M. SWALLOW

The first roundtable focused on four broad themes: research questions, policy issues, conceptual analysis, and methodology. Some of the research questions raised follow.

- ◆ Are the areas of gender analysis and sustainable livelihoods being adequately addressed?
- ◆ How can a broader range of types of risk be incorporated into the analysis, i.e., the state as a source of risk?
- ◆ Should the range of risk management options be broadened, and how will the project participants gather quantitative measurements of variance and covariance of agro-pastoral activities?
- ◆ Have we adequately addressed the issue of “resilience” of pastoral systems?
- ◆ What types of analyses need to be undertaken to address distributional issues?
- ◆ How do the project scientists conceptualize the gulf between “new” thinking on variability and the actual priorities of policymakers?

Discussions also arose as to how well the various models handled the distinction between risk and uncertainty, as well as the role of informal institutions.

Policy questions that remained at the end of the day included the effects of liberalization policies, the management of “home” or core grazing areas over which a certain well-defined group has primary rights, but other groups have secondary or tertiary rights, and whether or not some of the issues regarding influencing political processes in

local areas was in fact a type of “new social engineering.” Methodological issues centered on the gathering of information to understand both conflict and cooperation, and the quantification of the costs and benefits of different drought management policies, both across space and time.

As the papers on the first day were the “broad” overview presentations, this roundtable discussion was used as the basis of setting up Working Groups 1-3 that met in the afternoon of the third day—after the project-specific conceptual models and the case studies undertaken during Module A were presented. As noted below, Working Groups 1-3 were concerned with determining how well Module A addressed the issues raised during this roundtable; thereby setting the stage for the second round of Working Groups (4-6), on what are the most important issues to address in Module B.

ROUNDTABLE, MONDAY SEPTEMBER 28, LED BY STEPHEN SANDFORD

Two key issues were put forward for further debate. The first concern was the predictive capacity of research models. It was noted that although analytical and statistical models may have good predictive power, there may be a very poor relationship between the variables that are measured and the policy tools that governments actually use. Further, it was pointed out that researchers must focus on the specific variables and instruments that governments can and will use. Essentially, the focus must be on determining what one wants from a model. From this discourse, it was identified that the objectives for building models are to:

- 1) Clarify
- 2) Explain what happened in the past

- 3) Explore scenarios (e.g., “what if...?”)
- 4) Expand predictive power
- 5) Develop predictive models that involve policymakers and other stakeholders in the research process.

It was further noted that the necessary modeling techniques, data requirements, and team building all become more demanding as we move down the list, and thus hard decisions often have to be made regarding resource allocation during the project—how are these decisions made? What are the criteria?

The second concern was on the presentation of the models to policymakers in ways that actually improve their ability to design policies. Simple theoretical models are usually very easy to sell but quite disastrous given the usual lack of empirical evidence to support the hypotheses of the theoretical models. Models of the type presented at this symposium are very difficult to sell, because of complexity as well as the fact that clear/simple/easy policy conclusions have not been drawn. Effort has to be put into determining how the work can be explained and then sold to policymakers.

The general discussion that followed focused on two areas: 1) the process of research and policy change, and 2) dissemination of information from research to policymakers.

The Process of Research and Policy Change

- a) Identify the government’s perception of the problems/issues
- b) Identify the different stages of knowledge at the relevant level (research institutions, government agencies, NGOs). Information sharing at the

beginning of the research process may be necessary, in some cases, so that all parties concerned have the same information/knowledge.

- c) Incorporate the process of iterative learning into the research phase. Iterative/adaptive research and policy design is necessary to avoid both redundant research and policies because exogenous factors do change constantly and our knowledge/information over key factors also improves over time.
- d) Identify the more broad-ranging processes of development and how the particular project fits into this overall process.
- e) Characterize the process of adoption and implementation of policy recommendations. What are the factors driving policy change, who are the actors involved, what shapes their incentives to initiate changes in policy, what are the steps followed between initiating policy changes, enacting policy legislation, and implementing those changes at the national level, and concurrently what is the actual process of policy change for other interested parties such as NGOs and international bodies.
- f) Gather more case studies and undertake more empirical work to test theoretical, conceptual, and simulation model results. It was noted, however, that there is a danger of “butterfly collecting,” which must be avoided especially in case study work (i.e., finding and/or searching for case studies that corroborate a certain model, but that aren’t necessarily representative).

Dissemination of Information from Research to Policymakers

- g) Identify the relevant actors in the policy process (government policy planners, international NGOs, national NGOs, local level NGOs, and village chiefs). Also, identify the other actors involved in undertaking policy research, especially NARSs.
- h) Identify the target beneficiaries, and clarify their role in the research and policy recommendation process. Ensure that the research is relevant to local conditions.
- i) Follow iterative process of designing policies with relevant policymakers.
- j) Understand interests of different groups and the consequent political feasibility of different policy options.
- k) Determine who are the potential losers, and how they might be compensated.

As is seen in the above, much of this roundtable discussion centered on how to get policymakers (including government agencies, NGOs and the target communities themselves) involved in the process of policy research, and how to disseminate information to a wide audience in a way that informs and aids the policymaking process so that information doesn't remain "on the shelf." As with the previous roundtable, many of the participants felt that, in their current form, the results from the papers presented would not be easily transmitted to policymakers, and that in Module B, building interactive relationships across the spectrum of potential beneficiaries will be necessary to create "ownership" via active participation.

6. WORKING GROUPS

WORKING GROUPS 1–3: CRITICAL REVIEW OF MODULE A

The purpose of the first set of three working groups was to undertake a critical review of the work undertaken in Module A. Working Group 1 addressed the questions: “Did Module A have the right research priorities?” and “Are the results relevant for policy and program development?” Working Groups 2 and 3 both addressed the question: “Given the chosen research priorities, was the research designed and carried out well?” Each of these three groups was also given a list of the important issues raised during general discussions of the papers and during the roundtables in order to guide the working group sessions. Topics included: the role of informal institutions and social capital, relevance of research to devolution, and decentralization issues, consideration of a range of different types of risk and the risk management strategies, the broader implications for food security and sustainable livelihoods, distributional issues, gender analysis, and conflict and cooperation.

*Working Group 1¾ Policy and Program
Tuesday September 29, Facilitated by Ben Cousins*

Relevance of module A for policy and program formulation.

Following a prestructuring of important topics as determined from the roundtables and general discussions, the group made the following observations on the project components.

- a) *Conceptual modeling of risk/property rights.* Further development of the quantification of risk and the identification of a range of options depending on different risks is needed.
- b) *Simulation modeling.* The assessment of the effectiveness of options—strategies of (agro-) pastoralists—on a time and space scale and the consideration of the impacts on costs and benefits need to be incorporated. The simulation modeling was thought to be too dependent on restrictive assumptions and the particular community chosen to calibrate the model.
- c) *Conceptual modeling of land use and property rights changes.* Major policy relevant outcomes from this research are the results on the resilience of ecosystems, the power of different interest groups that had been underestimated in the past, and the important functions of secondary rights in this process of change. Lacking was integration with the crop-livestock models.
- d) *Conceptual modeling of crop-livestock interaction.* This model is of particular relevance for the formulation of policies and programs and the evaluation of technological options in this field but, again, a clearer understanding is needed of the interrelationship between different risks and the range of options available to livestock keepers, as well as the already mentioned interaction with the quantitative analysis of risk.
- e) *The Niger cross-sectional case study with in-depth research on conflicts.* The key policy relevant result was the crucial role of the cultural context

of emerging conflicts as well as the strategic functions of communication in the course of conflicts.

- f) *The Ethiopian cross-sectional case study with an in-depth analysis of historical pathways.* Again, the cultural context of conflicts and the key function of communication to solve, or at least to handle, conflicts is regarded as having crucial policy implications. The same is true for the importance of secondary rights on the Borana Plateau.

The group tried to rank the identified issues with regard to their relevance for policy and program formulation and came to the following conclusion: both case studies were regarded as very useful as research results, followed by the conceptual modeling on risk and property rights and the conceptual modeling on land use and property rights changes. Simulation modeling and modeling on crop-livestock evaluation was given lower priority with respect to policy demands.

Identification of so far neglected issues and future research priorities with regard to policy and program formulation.

- a) Applied research on property rights, risks and livestock production systems has to follow objectives or, at least, guiding principles to be transformed into state and/or donor policy and programs. Besides the meta-objectives, such as efficiency, equity, and environmental soundness, these are to assure sustainable livelihoods, to guarantee peace and security for all actors, and above all, to put a strong focus on food security implications of different property rights systems.

- b) To achieve the formulated objectives and to proceed with the postulated research activities below, a more systematic gender-oriented analysis is indispensable in a second module.
- c) Further policy-oriented research is needed on the interrelationship between formal and informal property rights-related institutions. In particular future research needs to consider the importance of traditional values and norms, the involvement of pastoral organizations, and the controversial issue that any external influence on formal or informal institutions may open the way for new activities of social engineering.
- d) A strong emphasis was laid on the need for further analysis of state intervention and the assessment of its impacts in pastoral areas: what are the implications of decentralization and devolution, are National Action Plans an instrument to reach pastoralists, are policy recommendations really politically feasible? A stronger focus is needed on the analysis of political decision making processes concerning land policy, in particular: what are the driving and impeding forces, which interest groups influence them? Is there a trade-off between efficiency and equity and can it be solved? Policy analysis has to be embedded in the broader scope of international development policies, such as liberalization and the opening of international markets.
- e) Related to policy analysis, there are more concrete challenges for applied research, such as the clarification of the concept of home areas for

pastoralists (e.g., in Niger) and the working conditions for cross-country agreements to manage international transhumance.

- f) As there is still a large gap between the new thinking formulated in science and the information disseminated to, and taken up by, policymakers, more needs to be done to disseminate research results.

*Working Group 2^{3/4} Conceptual Framework and Methodology
Tuesday September 29, Facilitated by Maryam Niamir-Fuller*

This group evaluated the strengths and weaknesses of Module A of the project from two perspectives: the importance of the research topics addressed, and the appropriateness of the research methods that were used. It was stressed that the weaknesses should be considered to be suggestions for future research rather than criticisms of the current project.

Research topics emanated from the first Roundtable session; each member of the group also suggested a number of additional research topics. Those were grouped, then members voted for priority topics using green stickers (important: strength of project) and red stickers (important: weakness of project). Topics were grouped as those to be primarily addressed by modeling and those to be primarily addressed by field research. A few topics appeared in both lists. Within each group the topics are listed in order of the priority assessed by the group members. Each topic was further characterized as being a strength or weakness. In some cases opinions differed as to whether the topic was a strength or weakness of the project.

Topics addressed through conceptual modeling:

- ◆ Conflict and cooperation—strength

- ◆ Environmental resilience—strength/weakness
- ◆ Sustainable livelihoods—strength
- ◆ Measurement of risk—strength
- ◆ Informal institutions—strength/weakness
- ◆ Secondary rights—strength/weakness

Topics addressed through field studies:

- ◆ Selection of case studies—strength
- ◆ Conflict and cooperation—strength
- ◆ Evaluation of different options to manage risk—weakness
- ◆ Interdisciplinary approaches—strength/weakness

The research approaches used in the modeling and the field studies were also addressed. The group concurred that the project did a good job at addressing the topics chosen at the outset, namely to concentrate on the relationships between risk management and property rights at the level of the community. Nonetheless, there was a strong feeling that individual-level strategies and behaviour must be addressed during the next phase of research. More specifically regarding modeling, three research approaches were identified as being weaknesses of the current project, basically because the scale and scope of fieldwork did not permit development of quantitative methodologies, nor collecting the requisite data. In order of importance those were a) quantitative methodology for assessing effects on efficiency and equity; b) quantification of the benefits and costs and impacts of different property rights arrangements; and c) assessing efficiency of production systems in time and space. Regarding the field studies, a

strength of the project was its interdisciplinary approach. A major weakness was its lack of consideration of gender.

*Working Group 3^{3/4} Conceptual Framework and Methodology
Tuesday September 29, Facilitated by Ruth Meinzen-Dick*

Identified strengths & areas for improvement.

Theoretical models of conflict and cooperation, of secondary access rights, of risk and the range of available options for managing risk, and drought were all considered to have been strong, because of the policy relevance of issues researched, because of “triangulation” of certain issues via the use of different modeling approaches, and because of appropriate design frameworks, particularly with respect to secondary rights. The Niger and Ethiopian case studies were considered to be good beginnings—recognizing the fact that the case study analyses have not yet been finalized. It was also felt that there was strong conceptual development of distributional issues and of models of risk and property rights—the models were seen as innovative conceptually—though empirical support has yet to be shown. These models also need extensions so as to more adequately capture “real-world” phenomena.

Areas to improve.

Gender analysis, incorporation of the cultural context of conflicts, identification of relevant laws and norms, and the role of informal institutions were recognized as gaps in both the conceptual and empirical analyses to date. It was felt that environmental issues were not adequately addressed, and that household level data was necessary to more fully explore the risk management/mitigation strategies among different types of households within a community. Along with environmental issues, came the criticism

that change processes were not adequately handled, nor the efficiency of alternative livelihood options across both space and time, though some of the case-study analyses will shed some light on these in the future. It was also noted that feedback to the communities has not yet occurred, and there were strong feelings by all participants that this should be considered a necessary task before the end of the project. Finally, a number of comments were addressed to the fact that, at this point, the theoretical, conceptual and simulation models have yet to be well integrated into an overall framework for investigating property rights, risk and livestock development. Given this current lack of integration, it was felt that analysis of different policy interventions could stand improvement.

WORKING GROUPS 4–6: DIRECTIONS FOR MODULE B RESEARCH

Working Groups 4–6 were concerned with developing guidelines for future research to be undertaken in Module B. Drawing from the discussions, roundtables, and the first set of working groups, a list of topics for consideration was drawn up and presented to participants. The group as a whole voted for three topics: a) devolution and decentralization issues as related to issues of different property rights regimes; b) the process of property rights reform in terms of how policies themselves are changed and how they are then implemented; and c) drought management. Each group was asked to consider the relevant research questions, the scale—spatial and temporal—of research, methodologies for undertaking research, and the institutions to be involved at each stage from research to dissemination of results.

*Working Group 4¾ Devolution/Decentralization
Wednesday September 30, Facilitated by Maryam Niamir-Fuller*

The group proceeded in three-steps: a) clustering the main research questions related to devolution/decentralization and property rights regimes, in order to pre-structure a heterogeneous group of ideas; b) re-assigning according to whether the research questions were explanatory, predictive, or prescriptive in nature; and c) deducing a preliminary research design including scale, scope, and sequencing, the institutions to be considered, temporal dimensions, methods used, and the target beneficiaries.

Step One

With regard to devolution/decentralization, the guiding research questions are “What do we want to devolve?” and “Why do we want to devolve?” Questions need to be framed in more concrete terms:

- ◆ Under which production systems is devolution necessary?
- ◆ What does devolution mean for the different agro-pastoral systems?
- ◆ Which institutions have to be addressed in this process
- ◆ What would be the optimal resulting institutional structure, in particular with regard to formal/informal and local/non-local institutions?
- ◆ What will be the impact of devolution in terms of efficiency and sustainability, and in terms of distribution of costs and benefits across different groups and subgroups?

The impact on common/private property has to be addressed in research through a detailed analysis of the processes and causal factors influencing shifts in land use and

property right systems. In particular, the relative importance of common/private property to different interest groups needs to be clarified, such as the access of pastoral households to croplands or the role of different types of property rights systems to strengthen women's rights. Additional research is needed to evaluate the social costs and benefits of these shifts in land use and property right systems and the implications of common/private property on food security.

Step Two

Above all, the diversity of agroecological systems and potential case study sites requires a strong emphasis on “contextualization” of any research design as a first level of analysis: describe the existing property relations and put them into their socioeconomic and agroecological context. For example, if people can settle but livestock should move, what are the different options for common property regimes in mixed systems? How should devolution proceed in different contexts, what does devolution/decentralization mean for the agro-pastoral systems? Target beneficiaries of research are (ranked): agro-pastoral and pastoral communities, policymakers, donors, and the research community.

Research questions with an explanatory character center around the following: the functioning of property right systems and the effects of their change, the appropriate and effective measurement of pastoral territories and the management systems pertaining, the access of pastoral households to cropland in the crop-livestock areas, the relative importance of common and private property for different groups, and the effects of shifts in property rights on the productive role of women.

Predictive research questions include identifying the changes in social costs and benefits of shifts in land use and property right systems, the conditions under which private or common property systems function well, the tradeoff between efficiency and equity associated with changes in institutions from common to private property and the implications of common versus private property for food security.

Prescriptive research questions focus on the optimal institutional structure in different settings (crop-livestock, pastoral systems, differing impact of the state or of donors, etc.), the identification of those institutions that have to be addressed in the process of devolution, the effects of formalizing informal institutions related to property rights on equity, efficiency and environmental preservation, the functioning of systems of local institutions to manage resources, and the role of community based “action plans”.

Step Three

The gradient of research on devolution/decentralization covers mixed crop-livestock systems up to pastoral systems, whereby a nested-scale approach is necessary relating interdistrict, mobile community, sedentary community and intercommunity issues to each other. With regard to sequencing, research at the community level should be followed/accompanied by household and even intrahousehold analysis (e.g., for gender questions).

The identification of institutions to be considered has not been comprehensive; at a minimum, formal and informal institutions (in particular those for product and factor markets), community leaders, and community organizations should be part of the research process.

The temporal dimension gave rise to a longer discussion about the value of the analysis of historical processes: it should be strictly limited to experiences with devolution processes in the past, it should be focused on the hitherto neglected pastoral issues that make more use of existing anthropological research. The seasonal aspect within the year is as important as the longitudinal studies ranging from very bad to very good years to cover intra and interannual variability.

Research should be strictly interdisciplinary making use of a combination of methods. Starting from a concise conceptual framework, Participatory Rural Appraisal (PRA) as well as Participatory Learning and Action (PLA) techniques should be used, as well as household surveys, cross sectional community surveys, further fuzzy and simulation modeling and, last but not least, in-depth case studies at specific sites of interest.

*Working Group 5¾ Process of Reforming Property Rights
Wednesday September 30, Facilitated by Ben Cousins*

The topic for this working group emanated from a perception shared by several participants in the symposium that there is a disconnection between research on property rights and the process of reforming property rights. This working group was convened to provide guidance on how research could be focused and conducted in order to explore the process of reforming property rights. The output from such research should help to make researchers more effective in informing policy formulation and policy implementation.

Two key research questions were identified: “By what processes do property rights policies change?” and “By what processes do property rights policies get implemented?” Participants in the working group then identified a number of research

issues that were then grouped and prioritized in terms of their importance. There was consensus about one or two key research issues in each group, as follows.

- ◆ *Interest groups.* What is the comparative bargaining power of the interest groups within the political/administrative system?
- ◆ *Levels and sectors.* How do local-level demands for property rights change affect or inform national level policies? How do national-level policies get implemented at local levels?
- ◆ *Process of policy change.* How is the political decisionmaking concerning property rights organized?
- ◆ *The role of research in policy change.* If there is a disconnection between normative research results and actual policy change, does this imply wrong process of policy change or wrong research?

The working group rapidly considered two additional topics: a) appropriate partnerships for research on the process of reforming property rights; and b) criteria for selection of case studies. Potential partners—not ranked in terms of priority—were: international and national nongovernmental organizations; universities with expertise in political economy and new institutional economics; the World Bank; local-level organizations; projects being implemented in study areas; pastoral organizations; and government officials and administrators involved in policy reform and policy implementation.

The criteria for selection of case studies—also not ranked in terms in priority—were: emphasis on pastoral households; importance of livestock production and transition within crop-livestock systems; large organized pastoral groups; where national

government has serious commitment to reform at different levels; history of reform in the country; differences in the political system e.g., well-organized state compared to weak state; and high potential benefits to disadvantaged groups.

*Working Group 6¾ Drought Management for Food Security
Wednesday, September 30, Facilitated by Ruth Meinzen-Dick*

The group identified two basic research questions. First, why can't agro-pastoral societies manage drought risks more effectively on their own? There may be important market failures (e.g., the covariate risk problem) that cannot be resolved at the household or community levels. Second, if there are market failures, then are there cost-effective ways to improve drought management? The group identified several types of interventions that should be researched further, namely insurance and banking; diversification into nonfarm activities; improved information on weather forecasts; and the adoption of more appropriate technologies (e.g., dry-season feeding strategies). The group also raised questions about the risk management value of livestock mobility, and the implications for drought management of changing property rights systems.

Research on drought management should be focused primarily at the household and community levels, although some issues were identified as important at the cross-boundary and national levels.

At the household level, the group recommended more research on understanding livelihood strategies and how drought fits into those strategies. There is also a need to examine these issues at the intrahousehold level. Behavioral variations across households are also important, especially between herders and farmers. Migration opportunities and income diversification are important components of household livelihood strategies, and

have important implications for the ability of households to manage and cope with risk, and hence for the welfare and food security impacts of droughts and improved risk management options.

At the community level, the group identified the management of common property grazing areas and maintenance of reciprocal grazing rights with outsiders as an important component of drought management strategies. Access to water is also important. Improved drought management could impact favorably on the condition of common property resources, and this should be studied. However, this need not be so if the common property is poorly managed to begin with.

Drought management has important implications for reciprocity arrangements between communities and the occurrence of conflicts over access to resources. How improved drought-management options would impact on these issues is important to study. The group also thought that national cost/benefit analyses of alternative drought management interventions should be undertaken. Also, analyses of complementary policies to make drought management interventions more effective should also be undertaken.

Research methods at the household and community levels should include surveys (household and community), simulation models, and in-depth historical analysis at selected case studies sites. PRA methods, remote sensing and secondary data sources should also be used. It is important to examine the issues in a dynamic context, and not just to take a static, cross-sectional view. The group was also concerned about the difficulties of quantifying risk, and recognized that reliable time-series data on important climate, market, and animal-health risks are rarely available for the kinds of regions to be

studied. It was thought that greater emphasis on catastrophic risk could simplify the analysis and data needs, with greater reliance on subjective risk assessment and safety-first models rather than use of mean variance approaches.

The target audience for the research should include national and local policymakers, donors, NGOs, NARSs, and representatives of pastoral and farming groups. All should be included as partners in the research, and should be engaged from the beginning through policy research workshops.

7. CLOSING REMARKS AND CONCLUDING OBSERVATIONS

Dr. Kisamba-Mugerwa (Chairman of the Makerere Institute for Social Research, Makerere University) made closing remarks centered around two topics. The first was the importance of undertaking research that is directly beneficial to policymakers and, with respect to pastoralism specifically, this means research that directly addresses issues of mobility and conflict. The second was to be wary of trying to “reconstruct” the traditional/indigenous institutions for managing resources in a simplistic or romantic fashion. Because the world has changed so rapidly—in political, social, and economic terms—it is unlikely that traditional institutions could function in much the same way as they did in the past. Thus, researchers, policy analysts, and development practitioners must look for ways to adapt and integrate traditional institutions with different management options.

In conclusion, participants largely agreed that future research needs to build on the conceptual models and lessons from case studies in order to empirically test hypotheses emanating from Module A. Broadly speaking, this meant that effort must be

made to integrate the separate components of Module A into a unified framework, thereby laying the foundations for research in Module B. Further, the participants identified the following priority areas for research in Module B: determining when, where, and how devolution of authority over natural resources should proceed, as well as determining the process of policy formulation and implementation at the governmental, and where applicable, NGO levels.

Finally, appropriate policies and successful devolution of authority are intimately linked with the production strategies and resource management incentives of livestock producers, both of which are strongly influenced by the nature of risks confronting producers. Continued research on risk and drought management is thus considered to be very important. This is especially important with respect to identifying risk and drought management strategies at the household level that will enable a better understanding of the differences that exist between vulnerable groups within a community, e.g., the poor and female-headed households.

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Annex 2. Conference Agenda

International Symposium

PROPERTY RIGHTS, RISK, AND LIVESTOCK DEVELOPMENT

27-30 September 1999

SYMPOSIUM PROGRAM

Saturday, September 26, 1998

Arrival in Feldafing
Registration
Introductions

Sunday, September 27, 1998

***Opening Session* Chair: P. Hazell**

- 8:30—9:10 Welcome and discussion of symposium agenda and format
- Representative of DSE
 - Simeon Ehui (ILRI, Ethiopia)
 - Michael Kirk (Marburg University, Germany)
 - Peter Hazell (IFPRI, USA)

Session 1: The Context for Livestock and Crop-Livestock Development in Africa

- 9:10—9:40 Property Rights, Risk and Livestock Development—Overview of Issues
- B. Swallow (ILRI, Kenya)
- 9:40—10:40 The Evolving Role of the State in Influencing Property Rights over Grazing Resources in Sub-Saharan Africa
- M. Kirk (Marburg University, Germany)
- Discussant:
- W. Kisamba-Mugerwa (Makerere University, Uganda)
- 10:40—11:00 Coffee Break
- 11:00—12:00 Public Policy and Drought Management in Agro-Pastoral Systems
- P. Hazell
- Discussant:
- S. Ehui (ILRI, Ethiopia)
- 12:00—1:00 The Role of Donors in Influencing Property Rights over Pastoral Resources in Sub-Saharan Africa

- M. Kirk / H. Grell (GTZ, Burkina Faso)

Discussant:

 - N. Chisholm (Irish Aid)
- 1:00—2:00 Lunch Break
- 2:00—3:00 Managing Mobility in African Drylands
 - M. Niamir-Fuller (UNSO, Brazil)

Discussant:

 - P. Hiernaux (ILRI, Niger)
- 3:00—4:00 Crop-Livestock Systems in Sub-Saharan Africa: Determinants and Intensification Pathways
 - T. Williams (ILRI, Niger)

Discussant:

 - S. Sandford (Farm Africa, UK)
- 4:00—4:20 Coffee Break
- 4:20—5:20 Roundtable to Identify Key Issues Emerging from the Day's Presentations

Chair:

 - W. Kisamba-Mugerwa

Rapporteur:

 - N. McCarthy (ILRI, Kenya)

Monday, September 28, 1998

Session 2: Modelling the Effects of Risk on Rangeland Management

- 8:30—9:30 An Economic Analysis of the Effects of Production Risk on the Use and Management of Common-Pool Rangelands
 - N. McCarthy (ILRI, Kenya)

Discussant:

 - J.-P. Chavas (University of Wisconsin, USA)
- 9:30—10:30 Fuzzy Access: Modeling Grazing Rights in Sub-Saharan Africa
 - R. Goodhue (University of California–Davis, USA) and N. McCarthy (ILRI, Kenya)

Discussant:

 - J.-P. Chavas (University of Wisconsin, USA)
- 10:30—10:50 Coffee Break
- 10:50—11:50 Ownership, Appropriation and Risk
 - P. Scandizzo (Universitat di Roma)

Discussant:

 - K. Otsuka (Tokyo Metropolitan University)

Session 3: Policies and Institutions for Risky Environments

- 11:50—12:50 Induced Changes in Property Rights and Land Use in Semi-Arid East Africa
- B. Swallow
- Discussant:
- R. Birner (Gottingen University, Germany)
- 12:50—2:00 Lunch Break
- 2:00—3:00 Conflicts and Co-operation over the Commons: A Conceptual and Methodological Framework to Assess the Role of Local Institutions
- J-P Vanderlinden (York University / ILRI)
- Discussant
- R. Meinzen-Dick (IFPRI, USA)

Session 4: Empirical Studies

- 3:00—4:00 Can Pastoral Institutions Perform without Access Options?
- T. Ngaido (ICARDA/IFPRI, Syria)
- Discussant:
- S. Lawry (Ford Foundation, Egypt)
- 4:00—4:20 Coffee Break
- 4:20—5:20 Roundtable to Identify Key Issues
- Chair:
- T. O. Williams
- Rapporteur:
- B. Swallow

Tuesday, September 29, 1998

- 8:30—9:30 Southern African Case Study
- Rhode, R., Hoffman, T. and B. Cousins (University of Western Cape, South Africa)
- Discussant:
- Scoones (Sussex University, UK)
- 9:30—10:30 Niger Case Study
- J-P Vanderlinden and colleagues (ILRI, Niger)
- Discussant
- B. Hassan (President, National Federation of Livestock Producers in Niger and Consultant to the World Bank on Livestock Development Projects in West and Central Africa)
- 10:30—10:50 Coffee break

10:50—11:50 Implications of Population Growth and Declining Access to Transhumant Grazing Areas for the Sustainability of Agro-pastoral Systems in the Semi-Arid Areas of Niger: A Bio-Economic Modelling Approach
▪ B. Barbier and P. Hazell (IFPRI, USA)
Discussant:
▪ Kuyvenhoven (Wageningen Agricultural University, Netherlands)

11:50—12:50 Ethiopia Case Study
▪ Kamara and colleagues (Goettingen University / ILRI, Ethiopia)
Discussant:
▪ Jetani Dembella (CARE, Ethiopia)

12:50—2:00 Lunch Break

Sessions 5: Issues for Policy, Research and Methodology Arising

2:00—2:30 Outstanding Issues: Policy and Programme
▪ M. Kirk, A. Kamara and B. Cousins

2:30—3:00 Outstanding Issues: Research Priorities
▪ B. Swallow, T. Williams and R. Meinzen-Dick

3:30—4:00 Outstanding Issues: Methodology
▪ P. Hazell, N. McCarthy and M. Niamir-Fuller

4:00—4:20 Coffee Break

Session 6: Working Groups

4:20—5:20 Working Groups (Session 1)

Working Group 1 to Discuss Policy and Program
Facilitator:
▪ B. Cousins

Working group 2 to Discuss Methodology Priorities
Facilitator:
▪ R. Meinzen-Dick

Working Group 3 to Discuss Research Priorities
Facilitator:
▪ M. Niamir-Fuller

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8:30—10:30 Working group G (Session 2)

Working Group 4 to Discuss Devolution/Decentralization

Facilitator:

- M. Niamir-Fuller

Working group 5 to Discuss the Process of Reforming Property Rights

Facilitator:

- B. Cousins

Working group 6 to Discuss Drought Management for Food Security

Facilitator:

- R. Meinzen-Dick

10:30—10:50 Coffee Break

Session 7: Wrap-Up of Symposium

10:50—12:20 Reports from Working Groups

12:20—12:40 Closing Comments
▪ W. Kisamba-Mugerwa

12:40 Closing of Symposium

1:00 Evening Excursion and Oktoberfest in Munich

Time allotments:

Presenters—30 minutes

Discussants—10 minutes

General discussion—20 minutes

Overall facilitation:

Brent Swallow and Peter Hazell

Facilitation of working groups:

B. Cousins, R. Meinzen-Dick and M. Niamir-Fuller.

Session chairs:

To be appointed for each session.

Important note:

All discussants are expected to provide a written critique for the respective authors.

The discussants will also be responsible for opening and facilitating their respective discussions.