

BASIS CRSP II Proposal

INSTITUTIONAL DIMENSIONS OF WATER POLICY REFORM IN SOUTHERN AFRICA: ADDRESSING CRITICAL WATER-LAND INTERSECTIONS IN BROADENING ACCESS TO KEY FACTORS OF PRODUCTION

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ABSTRACT

Water reform has become a global concern and process. Numerous organizations - multilateral, governmental and non-governmental have suggested that all nations shift to water policies that are based upon: decentralization of water management, water as an economic good, the environment as a water user in its own right and greater and fairer to water access by disadvantaged sectors of a population. The proposed research addresses current efforts in two countries in Southern Africa - Malawi and Zimbabwe - to reduce inequality in access to the critical resource of water. The research will examine the constraints posed by current policies of decentralization, increased reliance upon market and gender differentiation linked to increasing access to resources. The broader policy reform and implementation environment do not take sufficient account of how modes of access to water are interlinked with those of land. One important goal of our research will be to identify opportunities in formal and informal institutions for improving coordination of these resources. The aim, as of the resource policy reforms themselves, is to broaden access to water resources and to encourage their sustainable use. Special attention will be given to categories of users hitherto disadvantaged in their rights to water by gender, race, and socio-economic status.

The research will provide valuable data and analysis to feed into the policy reform process on water and land in Southern Africa and will also contribute to understanding the significance of water-land intersections in broadening access to key factors in other countries and regions. The research addresses issues raised in Theme 2 (Institutional Innovations), and in Cross-Cutting Themes 1 and 2 (Gender and Factor Market Integration). BASIS research has established collaborative relationships in Malawi and Zimbabwe. Dissemination will receive particular

attention. Findings will be presented to the full range of stakeholders (representatives of host country governments, donor organizations, non-governmental and private organizations, community groups) in an iterative fashion allowing them to benefit from study findings well before the end of the project, and to have on-going input into the research process itself.

BACKGROUND AND LITERATURE REVIEW:

Water and Land Reform in Historical and Contemporary Perspective:

Access to the key resources of land and water is problematic in both Malawi and Zimbabwe as it is throughout the region. It is well-known that historical inequalities in access to land were particularly marked in the settler society of Zimbabwe, but they also have influenced settlement and land use in Malawi. Far less attended to is that access to water has frequently depended on access to land. In recent years, water's relative invisibility in the policy reform process and in the accompanying political debates, along with the rising pressures on water, have received more consideration. Unfortunately, the close interaction of water and land has not taken as central a place in research and policy reform as is warranted. The proposed research aims to redress this failure.

One of the objects of land and water reform in the two countries is to redress some of the historical inequities in access and rights to resources. Another, though less articulated goal, is to eliminate the legal and administrative contradictions deriving from distinct property regimes governing resources. In Zimbabwe land distribution is unequal. Currently, resettlement schemes occupy 9.1% and communal areas 41.8% of the total land area although it is uncertain and unknown what the outcome will be of the current "fast track" land reform. Much of the remaining cultivable land, including the best land, is occupied by the large-scale commercial farms, most of which are owned by whites, though some are owned by blacks and by multinational corporations. In Zimbabwe, women's access to land has been particularly restricted due to customary laws and the recognition of those discriminatory practices by the state. The matrilineal kinship and matrilineal residential systems in a large part of Malawi

moderate, though do not eliminate, unequal rights between men and women.

The proposed research takes place in the context of water reforms that rewrite laws and policies and develop new management structures for each country's water resources. The two countries are at different points in this process, with Zimbabwe implementing new legislation and Malawi with draft policy and legislation said to be nearing completion. The existing systems of water management vary greatly across the countries. Zimbabwe, as noted, has had excessive concentration in land-holdings, a situation which is mirrored with regard to water rights and access. Malawi has the highest population densities in the region and increasing pressure on land resources, and a far less developed system of water management. Currently, both countries are grappling with a range of problems in water resource management, and they will confront more in the future. Recent estimates of world fresh water resources indicate that these countries face growing water scarcity. Malawi, in particular, is projected to experience severe water scarcity by 2025. Presently, Malawians have less than an estimated 24 liters of water per day per person for domestic consumption compared to 38 liters for Zimbabweans.

Despite somewhat different ecologies and histories, water policy reforms in the two countries share certain features in common: an emphasis on decentralization of authority, a call for greater participation by stakeholders in management, identification of watersheds (catchments) as the most appropriate ecological and administrative management unit, a focus on water as a scarce commodity to be allocated according to market principles, as well as an expressed concern with increasing racial and class equity in distribution. Each of these aims is difficult to achieve, and efforts to combine them raise many challenges for policy and administration. In international and national policy circles, these features reflect a shift in thinking since the mid-1980s from an

emphasis on supply-side features and consideration of water as a common property resource and a public good to viewing it from a demand-side perspective with emphasis on it as a productive and increasingly scarce asset to be managed by market principles.

Underlying these changes in these two countries are efforts to reduce uncertainty, broaden access, stimulate productivity, and promote sustainability. Thus, ground water is now public property subject to regulation and not a privately managed good as it was under earlier legislation. Water rights were previously held in perpetuity by a small number of mostly white commercial farmers in Zimbabwe, and have been more inchoate in Malawi. They are to be replaced by permits covering designated time spans. Granting of these permits is contingent on effective and beneficial use of water defined as excluding speculation and waste, and requiring the end use to be socially acceptable. Also central is recognition of water's multiple environmental functions, a concern that is reflected in many of the new policies and laws in the two countries. In Zimbabwe, these issues are grouped under the principle of "polluter pays", and that the environment must be considered a water user in its own right. Environment is even more centrally placed in Malawi and all environmental elements, including water, are to be considered in national, district and local development policies.

In light of the region's history, it is not surprising that land reform captures the attention of people within and outside Southern Africa far more than water reform. The literature on linkages between land and water is smaller still, focusing mostly on irrigation schemes. Both the current BASIS-funded research and other research on water resource management now show that the interactions of water and land are so multiple and pervasive that appropriate policies cannot be designed and implemented separately for the two resources. Yet, that is precisely

what is happening most of the time. BASIS 1 research in Zimbabwe, Malawi and Mozambique has shown that the lack of coordination across agencies charged with administering water and land use has produced contradictory policies and practices that inhibit the goals of broadening access to resources and of promoting productive and sustainable uses (see next section). While the highly publicized land invasions in Zimbabwe have reinforced the focus on land reform, it cannot be successful without the incorporation of water resources in policy and practice. In the long term the nexus between the land and water reform strategies and processes is likely to be most decisive to human and environmental well being not only in Southern Africa but also in other regions of the world dependent on agricultural production and scarce resources.

Institutional Dimensions of Water Policy Reform

Studies undertaken in Malawi and Zimbabwe as part of the BASIS Phase I program point to the institutional complexity associated with water and land reforms and the need for better coordination and sequencing, if access by marginalized groups is to be broadened. To date, surprisingly little effort has been made by policy makers or program implementors in Zimbabwe, or Malawi, even though changes in one sector will have significant impacts on the other and will ultimately condition the success of both reforms. For example, in Zimbabwe the new Constitutional Amendment on Land (2000) makes no reference to new institutions and policies embedded in the Water Act (1999) and vice-versa. Malawi's proposed land and water reforms also appear to be taking place in a parallel but uncoordinated fashion. The Land Policy Reform Commission was appointed in 1998 to review the land question in Malawi, but without any reference to water issues. Currently, a new Water Policy and Implementation Plan are in final draft but with little reference made to land matters (or to the studies produced under the Land

Commission). This disjunction between water and land has significant ramifications. For example in Zimbabwe the funding to support the Catchment Councils and other new water management institutions is to be generated primarily from payment for the water allocated through the new permit system and from purchase of government owned water stored behind its dams. In this way, the reform is dependent, in part, on the structure and outcomes of the land reform program, particularly on a financially solvent and viable commercial farm sector. Similarly, to be successful, Zimbabwean farmers on newly established land reform resettlement schemes will need greater voice in Catchment Councils and other institutions than they have had to date if they are to gain access to needed water resources and infrastructure. These examples from research carried out during BASIS Phase I document the crucial intersections in modes of access to land and water, but also reveal little evidence that policymakers are looking beyond the purview of their own sectors in planning reforms.

A significant indication of this lack of coordination is that the institutional frameworks proposed to manage water and land reforms are distinct and, to date, unrelated. While land reform will rely on existing or new governmental bodies, the unit proposed for integrated water management in all three countries is the river basin or catchment. International conferences and principles (UNCED Agenda 21, the Dublin Water Principles) as well as the World Bank, European Union, Asian Development Bank and other lending organizations have promoted the creation of decentralized Catchment, Watershed or River Basin Councils to assume many management functions from central government. This idea has been embraced by Southern African planners.

Zimbabwe, for example, has been divided into seven large catchment areas, each managed by

a Catchment Council. These are ecologically-based administrative units with no formal relationship to other existing political and administrative entities, a disjuncture that requires additional steps to insure more effective or equitable resource access and use. While one of the goals of water reform is to institute more coordinated planning across sectors by having representatives of sector-based agencies sit on Catchment Councils, field research to date suggests that the net effect of the reliance on the new administrative institutions may be to reduce coordination between reforms in the land and water sectors. The BASIS research indicates, for example, that there is relatively little participation from Agritex or other government ministries on Catchment Councils, in part because the scale of personnel and financial retrenchment in central government makes it difficult for these representatives to attend meetings.

Furthermore, changes proposed and being implemented in the water sector are proceeding with little heed to local government reforms underway in the region. Beginning in the early to mid-1990s, Malawi, and Zimbabwe have undertaken to reduce the size and costs of central government by decentralizing many management responsibilities to provincial, district and local levels. In Malawi, for instance, the Local Government Act, signed into law in 1999, established 38 local areas governed by District Assemblies. These are to assume many of the roles previously performed by central government which will be significantly reduced in size and functions. Regional offices of Ministries are to be disbanded, and, in order to avoid overlap of effort among sectoral ministries, their District level representatives will be integrated into a single administrative entity. Integrated sectoral planning is to take place in the District Development Committees, while central government and line ministries will retain responsibility

for policy formation, enforcement, standards and training. The proposed research will investigate how these plans are being carried out in practice and with what effects for access to and use of water resources.

Local government reforms of similar magnitude are underway in Zimbabwe but coordination between these institutional changes and those in the water sector are not at all well established. Our studies of three major Catchments in Zimbabwe indicate that little communication or coordination take place between the District Councils, District Development Fund and the Catchment Councils. This is the case even though the District Councils and Funds continue to be a major source or distributor of development funds for small-scale dam construction, boreholes, and other water and sanitation projects. The results, in many instances, are that the water development needs of resettlement and communal area farmers are marginalized by Catchment Councils. In Malawi, in contrast, where efforts are presently focused on strengthening local government and River Basin Councils have not yet been established, opportunities for coordination between land and water sectors in planning may be greater as District Assemblies become the focal planning point for both water and land issues. This is a key research arena for the land/water interface.

To summarize, the policy reform and related political economic changes underway in Southern Africa take as their aim to improve access to income opportunities for people regardless of race, ethnicity or gender; to raise productivity; and to encourage sustainable use of scarce resources. In short, they aim to improve the lives of the region's diverse peoples. The research proposed here is designed to help push this process forward by providing necessary data and analysis on patterns of access to the critical resource of water, particularly as these are

influenced by patterns of access to land. The emerging significance in research of the mutually determining interactions of water and land is a challenge for policy reform that is being undertaken mainly through conventionally separate sector-based agencies.

RESEARCH OBJECTIVES:

The proposed research will focus on particular issues and sites to enable a close investigation and analysis of these interactions in order to identify (a) points at which a lack of coordination in policy initiatives is detrimental to broadening access and encouraging productive use of water resources; (b) ways in which such negative effects can be removed; (c) specific legal, policy and administrative elements that will work with rather than against water-land interactions (d) how increasing markets in the water sector affects poor people's access to water. Throughout, the primary focus will be on the modes of allocation and use of water in the course of water policy reform. Land reform per se is not our focus, but attention to land issues will follow where allocative or tenurial dimensions of land affect access to and use of water. This is flagged below in the indicative research questions by bracketing land. Key issues to be studied are:

Institutional and Policy Harmonization:

- Which institutional forms and arrangements are most conducive to increasing access to water and land? Does Malawi's present reliance on newly formed local government institutions (District Assemblies) for management of water (and land) resources result in better sequencing and integration of the reform processes than the strategy of establishing separate institutions (Catchment Councils) being pursued by Zimbabwe?
- Which elements in the new reform policies appear to be successful in reducing inequities, promoting productivity and sustainability, and which do not? What changes can be proposed to improve their success?
- In what ways can reform policies and implementation strategies be coordinated and sequenced to improve access to, and synergies between, these factors of production? What is the appropriate speed and sequencing of these two reforms?

- How do market liberalization, decentralization and other policy reforms affect policies and the working of water (and land) management institutions? For example, what are the impacts of the reliance on market mechanisms and user pays principles in Zimbabwe's water reform? Given that fees paid by large-scale commercial farmers for water are central to funding the new water reform institutions, what effects will land reform have on the viability of water reform? How will reforms proceed in light of the significant civil service retrenchment and public-sector budget reductions in Malawi and Zimbabwe?

Impacts of Customary Institutions and Social Relations:

- Does the introduction of new formal institutions disturb or strengthen existing customary or institutional arrangements in managing water and land resources? If so, what are the impacts of these changes on access to resources by previously marginalized populations? In particular, how will women's customary use rights to water and land be affected by the reform process?
- In Malawi, access to valuable streambed gardens is governed by local custom, but increasing demand is threatening the access of some people. Are the architects of the reforms aware of these existing rights and practices and how are they affected by new water policies, including new irrigation initiatives? In Zimbabwe, water reform has converted previously formally recognized organizations, such as River Boards run by large-scale commercial farmers, into informal ones. Will these actors continue to exercise power and influence on the Catchment Councils? How will the land reform affect their influence in water reform? In the communal lands will new institutions replace customary practices of water allocation and management?
- In Malawi and Zimbabwe, prevailing gender relations discourage women's participation in formal institutions. Research to date suggests that this is the case in newly formed institutions such as Catchment and Sub-Catchment Councils as well as in older ones. When women are selected to serve, their voices are often muted or marginalized in formal deliberations. While men believe that they can represent women's interests, women themselves often disagree. What can be done to increase women's participation and their voice?

RESEARCH STRATEGY, SITES AND METHODOLOGY:

We will build on the water resource research funded in BASIS Phase I in Malawi and Zimbabwe which has permitted us to gain considerable understanding of the reform process as

well as some initial appreciation of its relationships to wider processes of decentralization, market liberalization and land reform. In order to achieve the objectives as stated above, specific research sites will be selected that enable us to focus on the linkages between water and land and their implications for the policy process.

Using a combination of ethnographic, participatory, survey, key and in-depth interview techniques, we will carry out studies of institutions, scientists, technocrats, policy makers and farmers to determine the impacts of institutional and policy change on broadening access to these increasingly scarce resources. The research foci will be on the following: (1) Institutional, Policy Studies and Legal Studies, (2) Irrigation, (3) Wetlands, (4) Demand Management, and (5) Global Discourses and National Applications of water management and security.

Institutional, Policy Studies and Legal Studies:

We will study local, district/provincial and national government agencies, non-governmental and private organizations, and where appropriate, international donor organizations and institutions with responsibilities for water reform and management. In nations where national law and the accompanying statutory instruments serve to guide change, legal change remains of significant import as well. The actual institutions studied will vary by research site but will include the following range of organizations: Zimbabwe National Water Authority (and other parastatals), Catchment and Sub-Catchment Councils, District Councils and Assemblies, village and group assemblies, government ministries and departments, and NGOs undertaking water, resettlement or irrigation projects. Key policy and legal issues to be investigated were identified in the Research Objectives section, above.

2. Irrigation:

To more carefully examine the nexus between land and water we have chosen to focus upon irrigation and wetlands. The contexts of the two nations for irrigation differ significantly. In Malawi the government is in the process of rehabilitating smaller-scale irrigation schemes with the intent of turning them over to the users or participants. We will examine how and if this can be done successfully. In light of the broader institutional and economic changes in Malawi will irrigation schemes remain viable? In Zimbabwe most irrigation is carried out by large-scale farmers. The water is stored behind either private or government dams. How irrigation is or is not retained under “fast track” land reform is of vital concern for the continued success of Zimbabwean agriculture. Whether or not resettled farmers can sustain irrigation under current high rates of inflation along with increased costs of water, and electricity will be considered. We will consider small-scale dry season irrigation in the discussion of wetlands below.

(3) **Wetlands** (river or stream banks and seasonally wet lowlands). In Malawi and Zimbabwe wetlands are extremely valuable resources, often designated "key" resources in the social ecological literature. Examples include streambed gardens which are used for cultivating out-of-season foods for consumption and vegetables for sale, and, increasingly in Malawi, for tobacco nurseries and sites of seed multiplication of important food crops such as legumes; and seasonally flooded wetlands which are widely used for grazing but increasingly for cultivation. These wetlands and the plots in irrigation and resettlement schemes, have become an important source of produce for urban and rural markets and have survived with little or no input from agricultural research or extension agencies. For example, in Zimbabwe Robinson estimated in 1998 that there were approximately 9,450 hectares in the smallholder irrigation sector, but that there were a further 20,000 hectares of crops planted in wetland areas which receive little

attention from extension services. Robinson reports that 16%-48% of communal area households are engaged in this type of cultivation (Robinson 1998:34-35). In our results for the three catchments in Zimbabwe we have found over 90% of communal and resettlement farmers have gardens. We also found that legislation against stream bank and stream bed cultivation remains in force but sporadically enforced. In Malawi this legislation is never enforced. In the three Zimbabwean catchments access to these wetlands has been growing in importance. Water and land reform processes may undermine existing rights unless women gain more voice in the new and existing institutions and in policy circles. These settings have different salience for decentralization and resettlement prospects and women's tenurial security.

While equivalent estimates for Malawi are not available, in southern Malawi where land scarcity is compounded by inequalities in water distribution, streambed gardens remain one of the most productive and profitable areas for small producers, including large numbers of women. (Streambed gardens are rarer in Zimbabwe and actions are often taken against those who cultivate them.) The streambeds have become not only major areas for out of season food crops and horticultural crops for sale, but are in increasing demand for tobacco nurseries and for mining sand and gravel by local and urban people. The increasing competition over these valuable resources in which land and water combine productively in a situation of unclear and/or overlapping rights is resulting in a danger of increasing inequity of access for local groups. In particular, women's rights of access may be undermined unless they achieve greater ability to be heard in the new institutional arenas governing water policy. wetlands remain one of the best and surest productive areas for women and men farmers.

(4) Demand Management

In both Malawi and Zimbabwe there are efforts to institute demand management of water. By demand management is meant the reduction of water demand through the implementation of strategies of pricing, increasing efficiency of water use and shifts in allocative priorities. We will examine the new policy documents and conduct key informant interviews with officials in government and the private sector to see what policies and procedures will be or have been put in place to use water more efficiently. In Zimbabwe we will examine water pricing and subsidy policies within the broader economic context to see if and how demand management is working.

(5) Global Discourses and National Applications of Water Management Policies

Since water reform largely originates in international discourses and policies including the Dublin Principles, Agenda 21, etc. we will address how these international policy changes are being understood and adopted for Malawi and Zimbabwe national water policies. Since the water reforms have been funded by a range of donors, donors pay a great deal of attention to these international discourses and policies (often having played an important role in the formulation of these). In turn, these national policies and directives may be changed again when implemented at the local level. We will examine the changing international policies (see for example FAO 2000, DFID 2000, Global Water Partnership 2000 et al) and how these are translated and acted upon at the national and local levels in Zimbabwe and Malawi.

Field Research Sites:

In Malawi the research team will continue to study the Likangala River from Basis I and will add the Domasi River. The Domasi has significant wetlands and irrigation schemes. Both rivers are part of the Lake Chilwa basin a site of much environmental concern. The researchers and field staff will also attend District Assembly meetings, District Development Committee

meetings, and Catchment Management Authority meetings.

In Zimbabwe we will continue following the three Catchment Councils (Manyame, Mazowe and Sanyati) and selected subcatchment councils by attending the relevant meetings. We will shift attention toward significant irrigation and wetlands activities in the selected subcatchments.

We will choose at least one site where newly resettled farmers are occupying farm(s) with irrigation systems to explore if and how they are kept running. As land reform moves ahead in Zimbabwe, the number of redistribution and resettlement schemes will grow rapidly in number, and these schemes also are expected to be sites of increased agricultural productivity as recipients gain access to water permits and infrastructure. Women farmers will be a focus of attention in all settings because of their growing market involvement and their long-standing dependence on informal or customary rights to land. We will pay particular attention to women's tenurial issues and whether or not they feel secure on their land and if not, what policy recommendations might be made to enhance their land security. We will include Dr. Jeffrey Reidinger at Michigan State University as part of our focus on the intersection of water with land reform.

The settings also are critical for raising the productivity of agriculture and resource use and for ensuring sustainable use of resources which are significant goals in other countries in the region as well (as, indeed, elsewhere). Several countries are engaged in promoting irrigation, especially relatively small-scale irrigation, as a key to raising agricultural productivity and incomes; and the increasing use of key wetlands for subsistence and income purposes has both positive and negative elements. In Malawi, we will also examine if the process of changing freehold land to customary and communal tenure takes places.

In addition to the significance of these research settings themselves in agricultural and rural development policies, they reveal the intersection of water and land which we are arguing is a neglected part of the policy process. In selecting them as the main focus for field-based research, therefore, we expect to provide (a) specific information on how allocative mechanisms influence access to and use of these valuable resources, (b) documentation of the inter-linkages between water and land as these affect access and use, and (c) analysis of ways in which new policies and institutions of water and land reform interact to affect users' access to resources.

The studies will take place in areas where the research teams have established good relations with local people and have a good basic knowledge of resource use. This will allow a more rapid and more intensive investigation of the issues listed above. The areas are already undergoing or are targeted for land reform as well as water policy reform.

In Zimbabwe, the research will focus on a resettlement area established in the 1980s (Hoyuyu in the Mazowe Catchment), on a scheme established in the 1990s in the Sanyati Catchment near the small city of Chegutu, and in the Manyame Catchment on recently designated land with relatively large privately owned dams with substantial water rights. These sites will permit us to explore how water development proceeded in the early phases of the resettlement program, in its second period during the 1990s and the latest period of large-scale occupations and designations. It also permits us to focus on water and land deliberations in three different Catchment Councils to track how resettlement authorities and water management institutions cope with these major changes.

In Malawi, field-based research will concentrate on the Chilwa Basin, expanding from the small area covered in the BASIS Phase I research. The new focus will be on (a) the use of

wetlands which include the extremely important streambed gardens and also an increasing trend to converting seasonally flooded land from grazing use to cultivation; and (b) a sample of irrigation schemes, including some that have become moribund over the past decade for reasons that have not been documented, some that continue to be well managed, and new or rehabilitated schemes established as part of the current agenda of the Ministry of Agriculture and Irrigation.

GLOBAL IMPLICATIONS AND APPLICABILITY:

The significance for the study countries is clear in light of the major policy reformulation and implementation in each of them. All face the challenges of improving the management of key resources like water as part of their need to improve economic growth, to reduce poverty and raise incomes, and to do so in sustainable ways. Hence, close analysis of key institutional elements in the policy reforms underway is necessary. The proposed research will also involve key stakeholders from government and public realms from the very beginning of the activity in order to achieve more sustained and effective communication, as discussed below.

The significance for the southern region is that the two study countries are major players in the region. The current events in Zimbabwe have produced regional effects on the economies as well as on raising land reform to the highest policy levels in Namibia and South Africa. Zimbabwe has had a long history of inequitable and contentious distribution of land and resource rights. Malawi's being the most densely populated country and with the potentially most acute water situation lends itself to examining one of the grimmer policy scenarios for the region. Malawi has undergone a significant political transition in the past decade toward a more open, democratic systems. Zimbabwe's transition is currently in doubt. Both face constant challenges to their political and economic well-being.

In addition to the specific analytic findings from the research, which are intended to help assure positive outcomes from the policy reform process (as defined in the BASIS agenda of broadening access of disadvantaged groups to key factors), the research will contribute to understanding the institutional elements of factor market policy reform. In this, the research analysis will reach beyond the region to general propositions about the institutional processes involved in fundamental change in resource management. In particular, it will contribute to understanding the ways in which formal institutions intersect with the wide range of social organizations glossed as "informal institutions" in economic terminology and customary ones in anthropological ones. These intersections are highly significant in the Southern African countries selected for the research, and by analyzing the inter-linkages across modes of access to key factors, and across resources divided bureaucratically into "sectors", the research will contribute not only to the policy process in the countries themselves but also to the broader understanding of "interlinked markets". In turn, such understanding will be directed towards identifying how different modes of access to key factors, including markets, influence the livelihoods of different social groups and the ability to develop sustainable management of resources.

DISSEMINATION OF FINDINGS:

In communicating results to stakeholders during BASIS Phase I, we have been guided by the principle that dissemination is most effective if it is a continuous process, and if it is carefully directed to target audiences. Undue emphasis is often placed on the production of a single lengthy report in academic language at the end of the research period. The Phase II research will produce findings of relevance to a wide range of stakeholders, including policy makers and program implementors in government, non-governmental and donor organizations, women's

lobby and other activist groups as well as academic audiences.

The model of water reform being implemented in Southern Africa is stakeholder driven. Representatives from various water user categories (communal area and resettlement farmers, large-scale commercial farmers, urban residents, mining interests, etc.) sit on Catchment Councils. In BASIS Phase I research, project researchers have been attending Catchment and Sub-Catchment Council meetings on a regular basis in Zimbabwe. They have contributed to discussions by sharing research findings, and also have prepared brief reports on issues related to broadening access to water and water permits. For example, C. Chikhozo, a CASS graduate student supported by BASIS, prepared a pamphlet on “How to Get a Water Right” written for communal area farmers at the request of one of the Catchment Councils. A second BASIS supported graduate student, J. Latham, is studying the impact of the new proportional allocation system for distributing water on reducing conflicts in Water Boards. Derman, Ferguson and Gonese (2000) have prepared a report summarizing results of research to date which will be circulated to Catchment Councillors and discussed at two Catchment Council meetings in September 2001. Articles and reports on women’s experiences in water reform in Africa and other regions of the world were shared with the gender specialist on the Water Resources Management Strategy group, a key donor-funded organization planning Zimbabwe’s water reform. Lastly for Zimbabwe a two day stakeholder workshop was held in Harare in July of 2001. Representatives from all the Catchment Councils, Subcatchment Councils, Catchment Managers and other technical personnel attended. In addition, three members of the Malawi team presented their results as well. The stakeholders at the conclusion of the workshop made concrete suggestions for CASS’s further research.

Chavula and Ferguson have under preparation a policy brief for drafters of the new water policy in Malawi calling their attention to disjunctures between local government and water reform policies. Chavula wrote the chapter on water resources in Malawi's State of the Environment Report (1998) and most recently he authored the chapter on Water Resources in the Lake Chilwa Basin State of the Environment Report (2000), a key planning document for the three District Assemblies in the Chilwa Basin where the BASIS project is centered. D. Ng'ong'ola, affiliated with the BASIS Phase I project, was one of the original drafters of Malawi's new water reform policy.

RESEARCH COLLABORATION AND CAPACITY BUILDING:

Establishing international, collaborative research relationships poses numerous challenges. Developing communication channels and procedures for inter-institutional transfer of funds and reporting responsibilities can be cumbersome and can significantly delay research. Our previous history of collaboration in BASIS Phase I will permit us to move ahead quickly with the proposed research, as many of these issues have been resolved.

Capacity Building:

Capacity building is an important element of the project. While Zimbabwe and Malawi have personnel trained in hydrology, engineering and other technical fields, there are relatively few social scientists with backgrounds in the social, economic and political dimensions of water management. Malawi, in particular, has a shortage of social scientists in all fields, and an acute shortage of those with backgrounds in natural resource management. In Zimbabwe, while there is considerable expertise in community-based natural resource management, to date this interest has not included a focus on water issues. One goal of the project is to build such expertise by

identifying a graduate student for training in each of the countries. Capacity building will also be carried out through workshops and short-term training as discussed below. A second goal is to help build capacity in the region by promoting a network of field-based researchers focusing on institutional and policy analysis of water reform and management in the region.

In BASIS Phase II, we would anticipate playing an active role in planning the proposed BASIS Conference Series. To facilitate access to the results of our research, we plan to prepare or conduct the following activities:

- 1) Produce brief, concise summaries of the key research findings which communicate the range and importance of the conclusions to different targeted stakeholder groups using appropriate dissemination pathways and media.
- 2) Publish and present research findings in scholarly venues such as conferences, workshops, working paper series, and journals.
- 3) Post the materials produced from activities 1 & 2 above on key internet sites such as the BASIS Policy Briefs, African Water Page (<http://www.africanwater.org>) and Waternet (waternet@africaonline.co.zw).
- 4) Invite key policy makers and other actors to attend sessions at annual BASIS planning workshops.
- 5) Present findings at workshops sponsored by other organizations associated with the land and water reforms in the three countries, and in the region.

PHASE II Year 1: 1 October 2001-September 30, 2002
October 2001 - September 2002

- Select graduate students for each country, select research sites. We will identify the specific wetland and irrigation sites. Design research instruments.
- Communicate intensively with Dr. Doug Merrey at IWMI on the design of our irrigation studies.
- Attend and present papers at the Annual Waternet Meeting. This year to be held in Capetown in October. The papers will be based primarily upon Basis 1 and WARFSA research.

- Attend and participate in the appropriate meetings of water reform institutions. Attend informal institutional meetings where water is being discussed.
- January - June. Select households in chosen sites for interviews on water use, water issues, engagement in the water reform process. Pretest interview schedules. Administer interviews. Enter data and analyze.
- Draw up terms of reference and hire an economic consultant either in Malawi or Zimbabwe or both to explore implications of increased water prices for access to water for poorer people.
- Prepare a panel on access to water at the International Association Study for Common Property Bi-annual Meeting to be held at Victoria Falls, Zimbabwe, June 2002.
- Hold workshops in the two countries in which we report back to the appropriate water management units where we are conducting research on preliminary results.
- Hold discussions with water reform officials on preliminary results and how we can make them useful.
- Preparation of new work plans for October 1, 2002-September 30, 2003
- Write 2 BASIS Policy Briefs - one for each country - on status of water reform and obstacles. Prepare one Basis Policy Report developing the ideas in the Policy Brief with fuller discussion for comparative purposes.
- Disseminate policy briefs to stakeholders in the two countries and to others involved in water reform.

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BUDGET: SEE ATTACHED DOCUMENT

Collaborative Relationships:

The proposed study will be carried out by a multi-disciplinary team from four universities (Michigan State University, Harvard University, University of Zimbabwe and University of Malawi). Disciplines represented include anthropology, history, ground water

engineering, political science and resource economics. Bio-sketches follow; complete vitae are found in the Appendices.

Principal Investigators:

Bill Derman - Bill Derman's research concentrates on processes of rural transformation, the anthropology of development, water reform, water use and rural development projects, including the Mid-Zambezi Resettlement Project in the eastern Zambezi Valley in Zimbabwe. He has conducted research in Southern Africa since 1987 in collaboration with the Centre for Applied Social Sciences (CASS), University of Zimbabwe. Derman was a Fulbright scholar affiliated with CASS in 1990-91 and 1999-2000. Simultaneous with the research in Zimbabwe, he carried out research with Michigan State University's project "Fragile Lakes, Fragile Lands, a study of Lake Victoria and Lake Malawi" funded by the MacArthur Foundation. Prior to his research in Southern Africa, he was the socio-economic team leader for the University of Michigan's Gambia River Basin Studies, working on the economic and social consequences of development and potential dams in Guinea, The Gambia and Senegal. He has written two books, edited another and has numerous articles and book chapters on his research. He is Professor of Anthropology and African Studies at Michigan State University where he has also served as Acting Director of the African Studies Center, Associate Director for Research of the African Studies Center and Graduate Curriculum Coordinator for the Center for the Advanced Study of International Development.

Francis T. Gonese - Frances Gonese's research interests focus on the relationship between natural resource management and rural development. He served as the Chief Resettlement Officer for what earlier was the Department of Rural and Urban Development (DERUDE) in the Ministry of Local Government, Rural and Urban Development in Zimbabwe. In that capacity his responsibilities included supervision and coordination of training programs for provincial and national level staff; formulation of the Department's operational policy to guide field staff in servicing resettlement and land reform beneficiaries and the appraisal of resettlement, small-scale irrigation and general rural development project proposals. He became Assistant Director for Operations in DERUDE from 1987-1990. In that capacity, his primary responsibilities were supervision of Departmental Heads and coordination of the Department's field operations throughout the country; compilation of, and negotiation for, the Department's capital development and recurrent budgets; supervision of program budget accounting; and participation at conferences and other forums dealing with national development policy. He then attended North Carolina State University in Forest Economics. He received his Master's degree in Economics from North Caroline State in 1993 and an MBA from the

University of Zimbabwe in 1990. He is to defend his Ph.D. dissertation in Forest Economics at North Carolina State University in Fall 2000. Currently he is a lecturer in the Centre for Applied Social Sciences, University of Zimbabwe.

Wapulumuka O. Mulwafu - Mulwafu received his Ph.D. in History from the University of Minnesota in 1999. The title of his dissertation is "The State, Conservation and Sustainability in a Peasant Economy in Malawi, 1860-1964", which focuses on the Southern Region. His M.A. thesis from Queen's University, Canada is "The Impact of Capitalist Development on the African Peasantry in Malawi and Kenya." Mulwafu served as Principal Investigator on a collaborative research project "The Social and Environmental History of the Cabora Bassa Dam and the Lower Zambezi Valley Basin" from March-June 2000 with Allen Isaacman (University of Minnesota) and Arlindo Chilundo (Eduardo Mondlane University, Mozambique). In August 2000, he made a presentation at the International Conference on Culture and Environment and Development, held in Malawi, on "Conflicts over Water Use Along the Likangala River in the Zomba District of Southern Malawi." He has presented other papers at professional conferences and workshops on his dissertation research, and is presently preparing articles for publication based on this research and the study of Cabora Bassa and the Lower Zambezi Valley. Mulwafu is a Lecturer in the History Department, Chancellor College, University of Malawi.

Co- Principal Investigators:

Geoffrey M.S. Chavula - Geoffrey Chavula has an M.Sc. in Ground Water Engineering from the University of Newcastle upon Tyne (1989). Chavula has nine years experience as Senior Hydrologist with the Water Department and has carried out numerous research projects and consultancies on water resources and water resource management in Malawi. Most recently as a member of a World Bank funded team, he is responsible for planning the implementation of the Demand Responsive Approach to managing rural water supply and sanitation in Malawi. Chavula is the author of the chapters on "Water Resources" in Malawi's State of the Environment Report (1998) and in the Lake Chilwa Basin State of the Environment Report. He also has published articles on how climate change is likely to affect Malawi's water resources; the application of remote sensing techniques in ground water exploration; and the potential for using community-based small earth dams for irrigation development in Malawi. Chavula has played a lead role in formulating ground water resource policy in Malawi. He is currently a Lecturer in Water Engineering at the Polytechnic, University of Malawi.

Anne E. Ferguson - Anne Ferguson's research interests include environment and development, gender studies, and agrarian systems. Her research has been carried out in Southern and Eastern Africa and in Central America and includes studies of the role of social factors in promoting the maintenance of crop bio-diversity; socioeconomic characteristics of fishing communities in Malawi; effects of the democratic transition on women's access to, and experiences in, political office in Zambia; and, most recently, the gender dimensions of water reform in Malawi and Zimbabwe. She received her Ph.D. in Anthropology from Michigan State University in 1987, and is the recipient of grants from the Social Science Research Council, the Rockefeller Foundation, the MacArthur Foundation, Fulbright Hays and USAID. Ferguson is the author of numerous articles and edited volumes. She is past editor of the *Culture & Agriculture Bulletin* and the *Women and International Development Annual Review*. She is currently Director of the Women and International Development Program and is an Associate Professor in the Department of Anthropology at Michigan State University.

Pauline E. Peters - Pauline Peters is a social anthropologist whose research concentrates on the processes of agrarian transformation, particularly agricultural commercialization, land tenure, property systems, natural resource management, family organization, gender relations, poverty and social differentiation. She has a Ph.D. in anthropology (1983) from Boston University and earlier degrees from the University of Wales and the London School of Economics. Peters has extensive field research experience in Southern and East-Central Africa, including research on waterpoints (boreholes) in Botswana, and a longitudinal study of agricultural commercialization in Malawi which was funded by USAID grants. She was at Harvard Institute for International Development, where she became a Fellow, from 1982 until its closure in 2000, when she joined the faculty of the Kennedy School of Government. Peters is also a lecturer on anthropology at Harvard. Publications include books- *Dividing the Commons: Politics, Policy and Culture in Botswana* (University of Virginia, 1994) and *Development Encounters: Sites of Participation and Knowledge* (Harvard University Press, 2000) and numerous articles and book chapters on the topics of her research.

Jeffrey Riedinger - Jeff Riedinger applies theories of political economy and state-society relations to problems of international development. He is particularly interested in the way that political liberalization and democratization reforms affect the distribution of economic assets and in the role of non-governmental organizations (NGOs) in the formulation of development policies. Riedinger's work focuses on redistributive agrarian

reform, the role of NGOs in shaping agricultural and environmental policy, sustainable agriculture and natural resource management, and the legal rights of indigenous populations. His research is intended not merely to document these issues, but to guide policymaking through applied policy analysis. Riedinger holds a doctorate in Public Affairs from Princeton University, with emphasis on rural development policy, and a law degree from the University of Washington, with emphasis on environmental and natural resources law and the rights of indigenous populations. Riedinger has over 20 years experience conducting field research on issues of land tenure, agricultural policy, and natural resource management in Asia, the Middle East and Latin America. Riedinger's research is informed by a program of empirical fieldwork and intra- and cross-national analysis, combining the research methods of legal analysis, political science, probability sampling, econometrics, case studies and social science surveys. Riedinger is Associate Dean of International Studies and Programs and Director of the Center for Advanced Study of International Development at Michigan State University.