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Project Title: Transboundary water governance for agricultural and economic growth and improved livelihoods in the Limpopo and Volta Basins: Towards African indigenous models of governance

Brief Title: African Models of Transboundary Governance

Executive Summary

There are over 60 international river basins in Africa, and virtually every African country shares at least one of them. Implementation of basin-level integrated water resources management in Africa therefore requires international cooperation among riparian countries. While some basins have international agreements in place or under discussion, there are in fact few effective basin organizations. Nevertheless, there is strong political will among African leaders as articulated through the New Partnership for Africa's Development, African Ministerial Council on Water, the Southern African Development Community and other institutions, supported by the African Development Bank, European Union and the World Bank, to invest in improved water governance and the development of water infrastructure.

The question is thus not whether transboundary water management in Africa should be strengthened, but rather how. In part, the needed knowledge can be derived from experiences in developed countries and Asia. However, there are at least three reasons why Africa must be cautious in copying the transboundary experience of others. First, in general water scarcity in Sub-Saharan Africa is primarily 'economic' water scarcity; i.e., it is not lack of water but the lack of financial and human resources and poor governance that are the key issues. This implies that the win-win option of capacity building for new resource development should receive higher priority than the division of scarce resources among competing users, as is often the case elsewhere. Second, Sub-Saharan Africa is overwhelmingly poor, and there is an extreme dependence upon access to water for rural livelihoods, particularly for the poor and women, groups that tend not to be strongly represented in decision-making bodies at the international scale. Third, indigenous arrangements in the management of natural resources, in particular land and water, continue to be very important in Africa, a point invariably neglected in international agreements.

So how can transboundary institutions be built which address sub-Saharan Africa's unique conditions? We *hypothesize* that through an indigenous African "bottom-up" approach, starting from local traditions and social arrangements, it will be possible to create more resilient and successful transboundary water institutions than would otherwise be possible, while also giving greater voice to the poor, women and men alike, in the process.

It is a methodology for developing such an indigenous approach to transboundary water institutions, applied to Sub-Saharan Africa that forms the basis of this project. In particular, the project will: 1) support project partners in constructing networks of researchers and implementers to increase awareness of African indigenous structures and disseminate project results, 2) create both "top-down" and "bottom-up" profiles of transboundary governance issues in two case study basins, the Volta and Limpopo, and 3) develop specific recommendations for including indigenous principles in the

two case study basins by integrating the top-down and bottom-up approaches and develop a generic framework for incorporating indigenous principles throughout Sub-Saharan Africa.

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Budget requested from Challenge Program

USD 1,027,416

Budget offered as matching funds

USD 262,535

Total budget

USD 1,289,951

Duration of project

3 years

Coverage of basin

Limpopo, Volta (50% each)

Coverage of themes

Theme 1: 10%

Theme 2: 10%

Theme 3: 5%

Theme 4: 40%

Theme 5: 40%

1. BACKGROUND AND JUSTIFICATION

Effective transboundary water governance is critical to development, especially water development, in Africa. The continent has over 60 international basins, and virtually every African country shares at least one of them (UNECA 2000). For some downstream countries, such as Mozambique, Egypt, and Ghana, very high percentages of total flows originate from outside their boundaries. Implementation of integrated water resources management at the basin level in Africa therefore requires hydro-economic cooperation among riparian countries. For some basins there are already international agreements either in place or under discussion; but there are currently few effective basin organizations. Nevertheless, there is strong political will among African leaders as articulated through the New Partnership for Africa's Development (NEPAD), African Ministerial Council on Water (AMCOW), the Southern African Development Community (SADC), and other institutions, supported by the African Development Bank, European Union and the World Bank, to improve transboundary governance and facilitate the development of water infrastructure. In fact, improved governance at local, national and transboundary levels is a pre-requisite for good water management and infrastructure development (GWP 2000; HRH Prince of Orange 2002); and making more productive use of water is essential to increase agricultural production and reduce poverty.

The question is thus not whether transboundary water management in Africa should be strengthened, but rather how. Many questions related to process and approach are still open, and science-based recommendations are urgently needed to inform the ongoing debates on the range of institutional design options. In part, the needed knowledge can be derived from experiences in developed countries and Asia as studied and compiled by IWMI, the University Partnership for Transboundary Waters, and many others. However, simple replication is risky; a recent IWMI paper warns of the "limits to leapfrogging," i.e., replicating experiences from other locations (Shah et al. 2001). In the context of Sub-Saharan Africa, there are at least three reasons why copying the experience of others in creating transboundary water institutions may be problematic.

First, water scarcity in Sub-Saharan Africa is primarily 'economic' water scarcity (Seckler et al. 1998); i.e., it is not lack of water but the lack of financial and human resources and poor governance that are the key issues. This implies that for Sub-Saharan Africa, the creation of institutions that facilitate the shared development of new water resources should receive highest priority, in contrast with the developed world and Asia, where transboundary institutions focus largely on allocation of scarce water among competing uses. In other words, the central question is less about how to divide a limited pie, but rather how to facilitate win-win options by increasing the pie through investments in new development in water resources, including groundwater, while conserving the environment.

A second feature of Sub-Saharan Africa, which separates it from the developed world experience, is the overwhelming level of poverty and the strong dependence upon water for the livelihoods of the poor. The majority of Africa's poor live in the rural areas where agriculture and livestock production, both water dependent, form the mainstay of livelihoods. For smallholders in particular, basic wellbeing depends intrinsically on water availability, reliability and the risks of flooding and drought.

Within this group, women and their dependents are especially reliant on water resources outcomes. For example, poor women bear a disproportionate share of the unpaid domestic chores of household water supply. Further, while a relatively high proportion of African women are the primary farm decision-makers, their access to water resources and to water related decision-making forums at all levels and in particular the transboundary level, is limited. Given its high proportion of waters crossing international borders, it is clear that the poverty-transboundary water connection is especially strong in Sub-Saharan Africa.

A third feature unique to Sub-Saharan Africa is the continued importance of indigenous arrangements in the management of natural resources, in particular land and water, within and among rural communities. “Indigenous” here refers to local-level customary social and cultural values, perspectives, and organizational arrangements, as opposed to those often imposed from outside by the modern state, such as national policy and law and international arrangements. Indigenous principles can include mechanisms for consensus building and conflict resolution, priorities and equity considerations in resource allocation, normative frameworks for pollution prevention, notions of social and economic resource values, coping mechanisms for natural disasters, communication and information flows, and community-based processes for technical and institutional innovation. Often, though not always, indigenous arrangements cater well to high numbers of relatively small water users, unlike many formal water laws. While land legislation in most of Sub-Saharan Africa clearly recognizes indigenous arrangements, indigenous governance structures and practices for water development, use, and management are still largely ignored in higher level, in particularly transboundary, institutions (Mohamed-Katerere and Van der Zaag 2003, Van Koppen et al. 2002).

So how can transboundary institutions be built which address sub-Saharan Africa’s unique conditions? While pure top-down approaches to transboundary water agreements, steered by government, may be appropriate in some circumstances, it is likely that such approaches could be enhanced by considering local conditions and local, that is indigenous, institutions. Thus we *hypothesize* that by combining an indigenous or “bottom-up” approach starting from local traditions and social arrangements and combining this with a top-down approach, and recognizing the issue of economic water scarcity, especially for poor smallholders, it will be possible to create more resilient and successful transboundary water institutions than would otherwise be possible, while also giving greater voice to the poor, women and men alike, in the process. Within the context of this hypothesis we will attempt to answer the key practical question: Which indigenous policies, legal frameworks and institutions are most conducive to the identification, financing, and implementation of equitable win-win and pro-poor investments within Sub-Saharan African transboundary basins?

It is a methodology for developing such an “indigenous” or “bottom-up” approach to transboundary water law and institutions, applied to Sub-Saharan Africa that forms the basis of this project. While the present proposal focuses on the Volta (Ghana and Burkina Faso) and Limpopo basins (Botswana, Zimbabwe, South Africa, and Mozambique), where discussions on transboundary management are ongoing, the study is designed to learn broader lessons applicable to other Sub-Saharan African basins.

2. GOAL

The project goal is to improve the livelihoods of rural poor women and men through more productive and equitable water use by facilitating hydro-economic cooperation between nations sharing transboundary water resources in sub-Saharan Africa and beyond. The Challenge Program Proposal states, “effective governance is a pre-requisite to achieve integrated water resources management” (CPWF 2002:23). This project will contribute to achieving this pre-requisite of success.

3. SPECIFIC OBJECTIVES

The project’s main objective is to develop a generic methodological model for building local indigenous institutional principles into international/transboundary river basin institutional arrangements. More specifically the project will improve our limited knowledge of transboundary governance of African river basins, especially at its lowest tiers, build capacity for more effective basin management in the Volta and Limpopo basins from the local to the basin scale, and provide meaningful guidelines for improving the management of other African river basins so as to ensure that the wellbeing of poor women and men is enhanced. The project will also strengthen regional research capacity to address socio-institutional and gender aspects of water governance.

4. ACTIVITIES AND METHODOLOGY

Activity 1. Network Establishment and Background Assessment

From the outset, the project will contribute to ongoing dialogue and implementation of transboundary cooperation in the Limpopo and Volta basins and other Sub-Saharan African basins. Key stakeholders in vertical and horizontal networks, including the about-to-be established Limpopo Basin Commission, will be approached to help finalize the research priorities, design and site selection. They will continuously be updated on research progress and asked for their feedback. Implementation capacity to apply the models based on the ultimate research findings will be built.

The aims of creating such synergy through networking during all project phases are to collect existing information and to ensure that cutting-edge issues will be addressed building upon research already done and avoiding duplication. An additional aim is to ensure buy-in by the agencies with the mandates for transboundary water governance. We will cooperate with local NGOs (Annex 3) to learn from them and foster their capacities as well. These networks will be the primary means to ‘scale up’ the adoption of recommendations on integrating local and sub-catchment level principles into the international transboundary level.

An important feature of this networking process will be to explore with the proponents of related CP projects how we can cooperate effectively to achieve intellectual synergy and efficiencies in implementation. Some of the proposed projects listed in the original proposal unfortunately have not been funded; but IWMI is a partner in one successful CP proposal 71 (IWRM for Rural Livelihoods--Waternet-Limpopo); and leads three successful projects with which we will create synergy: CP

Project 30 [Limpopo wetlands], 46 [Multipurpose reservoirs-Volta & Limpopo], and 28 [Multiple use systems-Limpopo]. Through the partnership with IFPRI in this project we also propose to cooperate with Project 40 [Multi-stakeholder governance], which will have sites on the Volta.

At the start of the project, Activity 1 will also identify key characteristics of poverty in each basin, potential innovative approaches, knowledge gaps, and to formulate a sharper and more locally-relevant research hypothesis and focus, which will inform the selection of the studies in Activities 2 and 3, both at basin and at local level. Specific activities are as follows:

Activity 1.1 Inception meeting of the project team [revised]

In early March 2004, the project team, led by IWMI, met to finalize exact work plans. The project team now consists of the project leader, the international Principal Investigators from IWMI, IFPRI, and GLOWA-Volta, and the national Principal Investigators in Limpopo basin (AWIRU, and University of Zimbabwe) and in the Volta basin (Water Research Institute Ghana, and INERA, Burkina Faso). The outcome of this meeting is a revised budget and work plan (gant chart) including milestones, and agreement on how the project will be implemented and allocation of responsibilities. This revised version of the proposal reflects the changes made in the project activities and outputs. We also have a report on the meeting. Please note that there are now additional activities and outputs as reflected below.

Activity 1.2 Set up and maintain partner e-list [new]

IWMI will take the lead in setting up and maintaining an email list to facilitate communication among the partners.

Activity 1.3 Create a project brochure [new]

As soon as the project is approved for funding, IWMI will prepare a brochure and distribute it widely in Africa and among potential partners to inform them of the project and its potential outputs and impacts.

Activity 1.4 Create and Maintain Partner Networks

AWIRU has already prepared a matrix for organizing the wide range of partners and stakeholders among whom we will try to create an effective network. The project team with leadership from IWMI will consolidate collaboration with stakeholders who have a direct interest in project activities and outputs. On the one hand, a network of research institutions and universities in the basins and Africa but also globally through the CG System-wide Initiative Collective Action and Property Rights (CAPRI), will be formed to ensure complementarity, peer-review, and sharing of information. As noted above, the research network will include other Challenge Program projects in the Limpopo and Volta basins.

On the other hand, horizontal and vertical networks of implementing partners will be formed from the local to the transboundary and global levels for research design, information sharing and uptake of ultimate results (see Annex three for partners informed about the present proposal). Implementing partners will include the governments in each involved country; selected communities and civil society organizations, such as TRAC and World Vision in the Volta basin and the Water for Food Movement (South Africa) and Council of Churches (Mozambique) in the

Limpopo basin; and transboundary institutions such as the new Limpopo Basin Commission and the ZEF GLOWA project. On the continent, the project will involve Africa's key policy forums, such as the Africa Water Task Force (of which IWMI is a member), AMCOW, and NEPAD, and also donors and financing agencies (Africa Development Bank and Africa Water Utility, developed countries aid agencies, EU, World Bank). The Global Water Partnership will be involved at various levels. WaterNet is a partner in the project. Further, basin-level dialogue will be fostered through GWP West Africa, IUCN-Burkina Faso and the Southern Africa Regional Water Partnership. Internationally, the project will inform the GWP Dialogue on Water Governance, INBO, and the Gender and Water Alliance.

In consultation with the research and implementing partners' networks, the project will identify strategic opportunities to either organize separate symposiums, workshops, e-conferences, briefs, and reports for this particular project or to 'piggy-back' on already ongoing events. It is expected that considerable costs and time can be saved by putting the project on the agendas of ongoing events or by organizing back-to-back meetings.

Activity 1.5 Compilation of basic basin level governance and poverty profiles

Using the networks and other contacts, members of the project team will collect available information (publications, key resource persons) of each involved country riparian to the Limpopo and Volta on water resources and uses, socio-economics and gender, demographics, poverty processes and strategies, and current water governance arrangements from the local to the transboundary basin level. In particular, the studies will compare and evaluate various existing and potential technologies and institutions for water harnessing, flood protection and water quality control, and their impacts on rural poor women's and men's livelihoods. To the extent possible information will be obtained from and shared with other Challenge Program initiatives. The basic basin profiles are intended not as new research but as a compilation of existing information. The profiles will also serve as a base line assessment for future impact assessment. Lastly, they will highlight critical knowledge gaps. We will coordinate closely with the Basin Coordinators in order to add value to, not duplicate, their work.

Activity 1.6 Comprehensive planning workshops

Activity 1 will culminate with two separate basin workshops in the Limpopo and Volta basins with the project team and key stakeholders from the research and implementing partners' networks. The aim is to present and discuss the basic basin governance and poverty profiles and to design the next research activities 2 and 3. At these workshops we will also identify the main criteria for monitoring and evaluation and agree on the baseline data.

Activity 1.7 Finalize work plan at meeting of project team [new]

Immediately after the second basin workshop, the management team will meet and finalize the overall work plan for the project.

Activity 1.8 Create project M&E system [new]

This was previously part of Activity 6; we will operationalize the M&E criteria and system agreed at the planning workshops.

Activity 2. Historical Hydro-political Studies at National and Transboundary Basin-level Analysis, from the Top Down

To understand how indigenous approaches can be integrated into higher-scale regimes and ultimately transboundary water law, it is important to consider the drivers of current water management institutions and their historical background. In addition to original analysis of existing formal treaties and protocols, their histories, and their connections to ongoing national water reform and legislation, a second unique contribution of this exercise will be the special attention placed on the regional gendered economic, political, and social drivers of water development, legal frameworks and institutions. Such drivers encompass ethnicity, traditional (gendered) authority, and territorial autonomy as developed before and after the setting of current state boundaries; agrarian processes such as pastoralist transhumance or food and cash crops markets; urbanization and industrialization-dependent, gender-segregated labor movements; or international hydropower, transport, or transboundary wilderness parks development. The results of the exercise will be framed in an historical perspective that will help to define further what was and is meant by ‘indigenous’ institutions and how those institutions relate to the modern African state. Further, the analysis will address the question: which ‘top-down’ policies, legal frameworks and institutions are most conducive to the identification, financing, and implementation of win-win, pro-poor and gender-equitable investments in water use and developments across the basin? These hydro-political and hydro-institutional assessments will be guided by AWIRU, GLOWA-Volta, and IWMI, which have considerable experience in this arena. Specific activities are as follows:

Activity 2.1 Design and implementation of basin-relevant country studies

National research partners will produce one study of each riparian country, with special attention to relevant historical transboundary rural poverty processes and water development. This will be based on extensive literature review and interviews with key senior professionals, from an historical, socio-economic and political science perspective.

Activity 2.2 Compilation of synthesis and dissemination

The national reports will be compiled into full synthesis reports for the Limpopo and Volta basins, also linking with African and global literature on ‘indigenous’ principles, especially in water institutions. At least two internationally peer-reviewed journal articles will be produced. All results will be disseminated through the project network.

Activity 2.3 Understand frequently asked treaty questions [new]

IWMI will take the lead in this activity, which is intended to guide the design of field research in Activity 3. The idea is that most transboundary river basin treaties cover a generic set of issues, and we will carry out an analysis to identify these and in a sense create a ‘generic treaty.’ During the field research in Activity 3, we will try to cover these issues to find out if there are other principles for addressing these issues than those usually found in international treaties.

Activity 3. Case Studies of Local Institutional Experience and Innovation - from the Bottom Up

Parallel to Activity 2, research will be initiated on local institutional experience and innovation from the bottom up (Stimie et al. 2001, Wolf 2000). Based on the governance and poverty profiles, two to three rural localities in various agro-ecological, institutional and technical conditions will be selected in each country (15-18 rural communities or clusters of communities in total). The communities will highlight or exemplify particular issues that are (potentially) also relevant elsewhere, such as groundwater management or implementation of successful water governance, financing and technological innovations, for example in collaboration with NGOs.

The primary goal of the activity will be to compile profiles at the different scales, from the level of rural communities to that of the entire transboundary basin, around the question: which “bottom up” policies, legal frameworks and institutions are most conducive to the identification, financing, and implementation of win-win, pro-poor and equitable investments across the basin? Focus will be on local-level ‘indigenous’ principles and practices, mapping local institutions to hydronomic zones, and on the structural relations between indigenous and modern state authorities at each higher scale. The assessment at community-level will be conducted in a participatory way in order to empower villagers, including the poor and women, to make their own resource and governance assessments and enrich the analysis. M.Sc, postgraduate students and Ph.D. students and their supervisors will be trained on the job in conducting these assessments.

An indicative list of issues to be explored in the studies includes:

- Participatory community-based water resources use and governance assessments, including the multiple use of water for domestic and productive purposes from multiple water sources (in conjunction with CN41).
- Village-level institutional incentives and mechanisms for poor smallholders to mobilize cash and labor for innovative technology development in domestic uses, agriculture, livestock, and off-farm employment, and sustainable support systems, according to identified priorities (e.g., water storage by smallholders, appropriate wells and pumping technologies, small village dams, productive uses of water at the household level, etc.)
- Indigenous notions of water rights and obligations, as compared to newly introduced administrative water rights and fee payment systems, and potentials for transboundary exchange and reconciliation of laws where required.
- Local solutions to transboundary aquifer issues (in conjunction with CN 34)
- Indigenous arrangements to cope with pollution, floods, and droughts.
- Involvement and representation of indigenous authorities in local state institutions and in new basin-level institutions, e.g., in the future Olifants Catchment Management Agency (South Africa), Catchment Councils (Zimbabwe) and Southern Water Authority (ARASUL) of Mozambique, and analogous institutions in Burkina Faso and Ghana.
- District-level participation in designing regulatory rules and guidelines for the monitoring and enforcement of such rules (Ghana, Burkina Faso).

In all cases attention will be paid to understanding the views and experiences of poor women and men, small land holders, fisherfolk, livestock keepers including transhumants crossing international borders, landless people and different ethnic groups, as we anticipate that views will vary along these lines. Also, in all cases, people's perceptions and interpretations of upstream and downstream water use and impacts on their livelihoods will be studied.

IWMI with advice from IFPRI will lead Activity 3 by supporting the NARS partners and students. Specific activities are as follows:

Activity 3.1 Identification of case study locations and study design

From Activity 1, a number of significant innovative initiatives will be identified for further study. Sites will be selected in consultation with implementing agencies and with managers of other CP proposals where synergy may be possible.

Activity 3.2 Develop research methodologies course [new]

During the planning meeting we realized that training of the field researchers in field research methodologies is essential, and that if we develop a training course this could itself be a valuable output. IFPRI will take the lead. If we can find additional resources we will video-tape the course implementation and disseminate the module (see Activity 5.2). We propose to link this activity with the IFPRI-led CP project on multi-stakeholder governance.

Activity 3.3 Training in local water governance research methodologies [new]

This will involve implementing the course designed in Activity 3.2.

Activity 3.4 Conduct case studies

Studies will be implemented using a combination of social science methodologies including participant observation, interviews of key informants, focus group discussions, participatory rural appraisal, and sample surveys.

Activity 3.5 Write up case studies [new]

This was previously part of Activity 3.4.

Activity 3.6 Synthesis of case studies, publication of results (journal articles)

The case studies in both basins will be analyzed, compared, and synthesized so that generic conclusions can be drawn about the nature and effectiveness of indigenous practices and principles and the factors that either block or foster their inclusion at each higher-level governance scale.

Activity 3.7 Compilation and dissemination of results through the network [new]

Recognizing the crucial importance of dissemination, we have separated it from Activity 3.6; we will use a variety of media and opportunities to begin disseminating the results of the research.

Activity 4. Synthesis and Dissemination: Construction of a Generic Model for Building ‘Indigenous’ Institutional Principles into Transboundary Water Agreements and Development of Specific Recommendations for the Inclusion of Indigenous Approaches in the Volta and Limpopo Basins

Building on the outputs of Activities 2 and 3, all the partners with IWMI leadership will develop a generic framework for integrating the indigenous bottom up approaches and the top-down transboundary arrangements. In particular, the framework will be designed to identify and assess the factors that strengthen or block cooperation among riparian countries and to include those indigenous governance principles that foster sustainable investments to enhance poor women’s and men’s water security across the rural areas in the Limpopo and Volta basins, and other African basins. Specific activities are as follows:

Activity 4.1 Development of specific options for the Limpopo and Volta basins

In both the Limpopo and Volta basins, the outcomes of Activities 2 and 3 will be integrated by identifying factors blocking the inclusion of indigenous principles and past successes and best practices and analyzing how solutions can be scaled up and how to tap the new opportunities that transboundary arrangements (potentially) offer. Solutions will be sought for factors blocking the inclusion of indigenous principles for equitable pro-poor and gender-inclusive investments in water development and governance. The outcomes and future options will be discussed in workshops (Activity 4.3).

Activity 4.2 Construction of a generic model to integrate indigenous approaches into transboundary water management

A generic methodological model will be derived by distinguishing location-specific and generic aspects of the empirical findings in the two basins during the top-down analysis (Activity 2), bottom-up analysis (Activity 3) and the comparison and integration of the two approaches (Activity 4.1). The generic model for Sub-Saharan Africa will entail methodological guidelines on how to identify viable pro-poor and gender-inclusive indigenous principles to be included in transboundary arrangements and how to identify the factors stimulating or blocking such inclusion, by adopting the combined top-down and bottom-up assessment tested in the project. Moreover, the model will assemble the range of factors in policies, legal frameworks, and institutions that appeared of particular relevance in catalysing investments in water development. Special attention will be paid to the (potential) roles of donor and financing institutions at transboundary levels.

Activity 4.3 Workshops in the Limpopo and Volta Basins

In each of the basins, we will organize a workshop with key stakeholders to share, get comments on, and validate the relevance and usefulness of the generic model. To the extent possible we will link up with other CP workshops to minimize costs.

Activity 4.4 Publication of basin-specific and generic findings

For each of the two basins, a report and two papers for peer-reviewed international journals will be prepared. Further, the project team will co-author a book, synthesizing the generic approach across the Limpopo and Volta basins and illustrated with selected findings of the top-down and bottom-up studies.

Activity 5. Build Capacity to Include Indigenous Principles in Transboundary Governance in CP and other initiatives

The capacity in the region to do field research on indigenous water governance, including its gender dimensions, and on policy adoption processes in transboundary water management arrangements is low. This also bears on the awareness and skills among implementing professionals. Led by IWMI, the project aims to fill this gap. Specific activities are as follows:

Activity 5.1. Capacity building of NARES through student support [revised]

The Principal Investigators will organize training for field workers of national collaborators (Activity 3.2, 3.3). Originally we anticipated specific support to postgraduate students, but at the planning workshop realized that the project period is too short to guarantee students completing their postgraduate degrees as an output. Therefore, we will implement a program whereby we recruit students as interns for carrying out the field research and analysis in Activity 3, and require as a condition of the internship that they be registered in a social science department of a recognized university for either a masters (M.Phil.) or Ph.D. degree. The research data they collect can be used for their thesis, and we will do our best even beyond the project to help the students complete their degrees. First preference will be given to employees of the NARS partner institutions.

Activity 5.2 Disseminate local water governance research course [new]

Following from Activity 3.2, we will work to disseminate the course more widely including encouraging its incorporation in the Waternet IWRM M.Sc. degree program. We may need additional resources to do this effectively.

Activity 5.3 Provide input on ‘indigenous’ models to CP-related projects

Most of the projects mentioned in the original proposal were not funded; nevertheless we believe we can add value to a number of other CP projects led by IWMI or in which IWMI is a partner, and therefore have retained this activity.

Activity 5.4. Create course module on integrating indigenous principles in transboundary institutions [new]

As stated in the original proposal the ultimate basin-specific options and the generic methodological model will be translated into user-friendly policy briefs, newsletters, and other tools and guidelines. Application of the tools will be tested to prepare for broad-based capacity building among implementing partners and wider networks. We now propose to go beyond this, to create a course module on this subject and encourage its incorporation into postgraduate programs such as Waternet, and its use in special training workshops for policy makers designing and implementing transboundary river basin institution-building.

Activity 6. Future Studies: Scaling-Up

Note: Funding for this activity is not requested under the current proposal. The activity is included to indicate the long term direction of the project.

4. ROLES OF PROJECT RESEARCHERS AND INSTITUTIONS

| Major Institutional Partners | Roles |
|------------------------------|--|
| IWMI-lead institution | Project design, guidance, implementation including reporting and financial responsibility Network management Synthesis and integration Lead construction of generic model Monitor quality of work and outputs Support capacity building of students, partners Dissemination of results |
| IFPRI | Advise on field methodologies for local institutional analysis Integrate with work in other regions on legal pluralism, collective action, property rights, etc. Design of research methodologies course Participate in implementing research methodologies course and in design of course module on integration of indigenous principles into transboundary institutions Co-author and/or inputs to research papers |
| GLOWA-Volta | Co-supervise student research Contribute to construction of generic model Support dissemination and integration of results in Volta basin Co-author and/or inputs to research papers |
| Waternet | Co-supervise student research Support incorporation into university curricula Identification of appropriate students in southern Africa |
| AWIRU (U of Pretoria)-NARS | Advise and participate in analysis of transboundary institutions, law, and government policies Contribute to construction of generic model Supervise student research Co-author research papers Organize basin workshops |
| U of Zimbabwe-NARS | Analysis of legal frameworks, poverty profiles, policy, institutions Participate in identification of case study sites Field research at local levels Contribute to construction of generic model Co-supervise students Co-author research papers |
| WRI-Ghana-NARS | Analysis of institutions, poverty profiles, policies in Volta Participate in identification of case study sites Implement at least one of the case studies Participate in construction of generic model Co-supervise students Co-author research papers Organize basin workshops |
| WRC-Ghana-NARS | Advise on institutional analysis, policy analysis, etc in Ghana Assist in integration of research outputs into policies and dissemination of findings in Africa |
| INERA-Burkina-NARS | Institutional analysis, poverty profiles, policy analysis etc in Burkina Faso Field research at local levels Participate in construction of generic model Co-supervise students Co-author research papers |

5. OUTPUTS

5.1 New and strengthened research and implementing partner networks established

Networks with other CP projects and other researchers and with implementing agencies in the riparian countries of the Limpopo and Volta basins, in Sub-Saharan Africa and elsewhere established.

5.2 Basic basin level governance and poverty profiles created

Basin-level governance profiles created, in which local institutions and rural poverty and gender dimensions are clearly articulated.

5.3 Historical hydro-political studies at national and transboundary basin-level analysis created

Scientific national reports of riparian countries; two basin-level synthesis reports for the Limpopo and Volta basins; two internationally peer-reviewed journal articles produced and disseminated.

5.4 Case studies of local institutional experience and innovation produced and disseminated

10-12 case studies reports produced and disseminated.

5.5 Synthesis of case studies compiled and disseminated

Synthesis of bottom-up case studies and policy implications in both basins compiled and disseminated.

5.6 Specific recommendations for the inclusion of indigenous approaches in the Volta and Limpopo Basins created and disseminated

For each of the two basins, a report and two papers for peer-reviewed international journals.

5.7 Generic model for building 'indigenous' institutional principles into transboundary water agreements produced and disseminated

A book on the generic model, co-authored by the project team based on the journal articles produced under this project.

5.8 NARES and student research and policy capacity built

Interns registered for postgraduate degrees in social sciences, supervisors, and researchers trained. IWMI will also recruit a postdoc from a developing country.

5.9 Two training courses developed and disseminated

One course on field research methodologies, the other course module on integrating indigenous principles into transboundary institutions.

5.10 'Indigenous' principles integrated in CP-related projects

Recommendations emerging from other CP projects will incorporate key findings of this project.

5.11 Awareness of implementing partners increased and wider networks built

Awareness of ‘indigenous’ models spread in the two basins and elsewhere in Sub-Saharan Africa as well as among donors and financing agencies. Improved capacity and skills for transboundary cooperation in studying, designing, and implementing hydro-economic cooperation within and across riparian states.

6. BENEFICIARIES AND IMPACT

Within the context of the Challenge Program “Pathways to Impact” typology, this project focuses on scale one (proof of concept) and scale two (evaluation by stakeholders at key sites). Guidelines to reach scale three (adoption and adaptation) will be developed and capacity building will start. In order to reach scale three throughout the Limpopo and Volta basins and elsewhere, additional work will be necessary.

The major anticipated impact of this project will therefore be to provide research support for establishing effective, realistic transboundary river basin institutional arrangements that promote win-win investments in water development for the rural poor and that are built on local principles and values in the Limpopo and Volta basins, initially, and throughout Sub-Saharan Africa in the longer run. Success in achieving this impact will in turn lead to more effective investments in water development projects that address the real needs of poor women and men living in the basins and more equitable demand-driven and effective management of the water resources in transboundary river basins. Through its support of postgraduate students and partnerships with national research institutions, the project will also build capacity for social science research on water resources, currently a major weakness in Africa.

The intermediate beneficiaries are those responsible for development and management of water resources in the two basins (and in other African basins), such as policy makers, water managers, district and local institutions, and researchers. The ultimate beneficiaries are the rural poor residing in the basins, and indeed other citizens of the riparian countries living outside the basin, as water development and management will lead to poverty reduction, reversal of environmental degradation, and economic growth. If this development is governed by institutions with real roots in local communities, and based on locally understood principles, the likelihood of poor women and men sharing in the benefits will be greatly enhanced.

7. ASSUMPTIONS AND RISKS

An important risk for adoption of project outputs is that national legislation in most African countries hardly recognizes indigenous water governance principles. Policy makers and technicians engaged in international negotiations may be less willing or able to adopt principles that seem inconsistent with national law. On the other hand, innovative international propositions on viable governance firmly rooted in a bottom-up approach in each of the respective countries, may also support formulating or adapting national law. Donors and financing agencies for rural development that channel funds via transboundary institutions are also likely to support in-depth and innovative reflection on “African” models of governance rooted in local cultures and local history.

In terms of implementation of the project, we anticipate the major risk to be delays in implementation as a result of insufficient local level social science capacity. We believe we can overcome this risk but recognize its reality.

8. MONITORING AND EVALUATION PLAN

IWMI as the lead institution will be responsible for project monitoring and evaluation. IWMI has recently adopted a Quality Management System (QMS). This is an Institute-wide mechanism for efficient management of all IWMI projects. It includes a structure for planning, monitoring, documentation, and evaluation of projects through a system of standardized reporting, internal audit and review procedures. IWMI is also implementing project management training for its staff, and key partners can be invited to participate in this training as well. IWMI in consultation with the partners will agree on a set of indicators for each partner linked to the activities and outputs, and baseline information; ISNAR will support this activity. These will be described in the Inception Report to be produced after the inception meeting. All partners will be required to provide quarterly reports on progress and issues that have arisen; these will be actively used by the Project Manager to make any adjustments needed to keep the project on target and within budget.

The workshops will provide another mechanism for monitoring and evaluating outputs, especially to learn whether stakeholders find the results useful and interesting. In addition, all reports destined to be published will be reviewed both internally (among the partners), and externally by peer reviewers. Publications proposed for publication by IWMI in its Research Report series are required to go through a rigorous internal and external review, a process that is also used by good international peer-reviewed journals.

As part of its new Strategic Plan (2004-2009) IWMI will implement a formal broad-based framework and set of procedures for formal evaluation of outputs and impacts of projects, with special reference to impacts. This new framework for evaluating outcomes and impacts will be adopted by this project, and commits IWMI to future *ex post* assessments of major projects. The responses of the policy makers, NGOs, community organizations, etc. will provide an important indication of the intermediate impacts and potential long term impacts.

Every attempt will be made to internalise the M&E and impact assessment as an integral part of project implementation. During the implementation, baseline data for assessment will be established. The variables to be monitored and the stakeholders responsible for such tasks will also be identified.

A final external evaluation will be useful at the end of the project; we have budgeted 6,000 US\$ for this (Budget Input Summary line 4.3).

9. DISSEMINATION STRATEGY

There are multiple clients for this research. Therefore, the dissemination strategy must include different media to reach the different clients. The clients include the following: other researchers; politicians, policy makers, water managers, NGOs, private firms, community leaders, and the general public in the two river basins; and

outside the two basins, politicians, policy makers and water managers in other African transboundary basins; investors and donors; and NGOs and private firms active in Africa.

For researchers the main media will be scientific journal articles, an edited refereed book containing the major findings of the research project, and contributions to college and university curricula. We also plan to use the CAPRI network for feedback and peer review as well as dissemination, encourage incorporating results into modules of the IWRM course supported by Waternet, and offer materials for the GWP Toolbox.

For politicians, policy makers and senior water managers the key media will be policy briefs, workshops, and brief descriptions of the decision support systems. For all other clients, in addition to the policy briefs and workshops, dissemination will include audio-visual presentations, contributions to stakeholder newsletters, radio broadcasts, and contributions to school curricula (including programs for school children in the basins). Results will also be disseminated through international networks such as GWP and INBO and the CP website.

IWMI will use its website, large mailing list and its normal communication media such as newsletters and policy briefs to disseminate the results widely. IWMI has created information channels aimed at informing and influence key groups of decision-makers (for example www.iwmi.org/waterpolicybriefing). Some 200,000 copies of research publications are downloaded from IWMI's website each year. We will also use the CAPRI network for linking to other researchers globally as a mechanism for wider dissemination as well as quality control through peer reviews.

Finally, as discussed above we will design and disseminate (if sufficient funds are available) two course modules.

10. RESOURCES NEEDED

The major cost to implement this project is for staff time. There is a serious shortage of social scientists in Africa, necessitating the use of considerable international staff resources, an expensive commodity. It is our intention to make good use of this expertise to contribute to building social science capacity. On the other hand, we have leveraged international inputs from GLOWA-Volta, Waternet, and IFPRI that are contributed from other sources; and IWMI itself is making a substantial matching contribution of staff time and to the evaluation and monitoring and dissemination activities. We have communicated with proponents of other CP proposals regarding holding workshops jointly, and carrying out dissemination and capacity building activities jointly. We are confident that considerable synergies will be possible through this strategy and that the effective matching funds component of this project will thereby be increased substantially.

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ANNEX THREE: IMPLEMENTING PARTNERS INFORMED ABOUT THE PROPOSAL

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ANNEX FIVE: CHECKLIST OF POSSIBLE ENVIRONMENTAL EFFECTS POTENTIAL ENVIRONMENTAL IMPACTS

This project addresses institutions, or lack thereof, for the management and development of transboundary water resources in sub-Saharan Africa. It can in a sense be seen to be a priori environmentally neutral in that its objective is to provide people with better ways, defined by basin residents themselves, to manage their transboundary water resources and does not pretend to suggest which particular ways they should use. With new tools and institutions available, basin residents could choose either environmentally “friendly” changes in basin water use or, conversely, environmentally “unfriendly” methods. That said, we hypothesize that the current track of transboundary water management in Africa is less environmentally sound than that which may be possible as a result of this project. This is for three reasons. First, many basins in sub-Saharan Africa are now de facto unmanaged at the transboundary level, almost guaranteeing that the environment is given little consideration when decisions are made. Second, for basins in which transboundary agreements are in place, there is considerable evidence to suggest that those most dependent on the environment, the rural poor, were not part of the decision making process. Yet, there is evidence of indigenous norms that effectively prevent pollution of local water resources. Finally, this project focuses primarily on smallscale uses in agriculture, which is often low-input. Large-scale polluters, especially in the Limpopo, are large mines and industry. Poor people’s stronger voice in basin management is likely to enforce pollution prevention.