Institution: University of Worcester

Unit of Assessment: 17 Geography, Environmental Studies and Archaeology

Title of case study: Wetland Management and Sustainable Livelihoods in Africa

1. Summary of the impact

Dr Alan Dixon's research, undertaken in East and Southern Africa, has examined how local people develop wetland management knowledge, and how local institutional arrangements facilitate wetland management that balances livelihood needs with the maintenance of ecosystem services. In Ethiopia, research findings have been applied by the Ethio-Wetlands and Natural Resources Association, enhancing the livelihoods of 2000+ households. In Malawi and Zambia, the 'Striking a Balance' project implemented wetland-catchment management initiatives with 300+ households, alleviating poverty amongst local communities. On-going research and field implementation activities continue to inform the wetland-livelihoods policy-making agenda of governments and local and international NGOs.

2. Underpinning research

Context

This case study is based on the work of Dr Alan Dixon (2007-present). Dixon is a research consultant for Wetland Action, a not-for-profit European Economic Interest Grouping established to facilitate knowledge exchange between academic research and field implementation capacity within the arena of sustainable wetland management. It engages in applied research and implementation projects that seek to disseminate, integrate and apply the lessons emerging from academic research. Some fieldwork underpinning the research highlighted below was conducted by Dr Dixon prior to this REF period at different academic institutions. However, it is the continuation and extension of that research and investigation after 2007, drawing upon empirical data, that continues to generate new insights to incorporate and apply in Wetland Action consultancy and implementation projects up to the present day.

Research insights and findings

This area of research originated as a response to concerns about wetland over-exploitation in Ethiopia identified by the EU-funded Ethiopian Wetlands Research Programme (1997-2000), where wetlands play a critical role in the development needs of local people. It explored whether these concerns were justified by examining local peoples' understanding of wetland management, highlighting the ways in which detailed wetland knowledge informs sustainable management practices that balance livelihood needs with the maintenance of ecosystem services. Subsequent research funded by the British Academy (2001-2002) examined how wetland knowledge evolves over time amongst local communities, and how different mechanisms of knowledge acquisition contribute to adaptive capacity and help build resilience within wetland socio-ecological systems. In 2003, ESRC funded research focused specifically on the role of community-based local wetland management institutions (a proxy for social capital) in sustaining environmental and development benefits from wetlands. Preliminary analysis identified the characteristics of both strong and weak local institutions, where the former were found to be an essential prerequisite to effective and sustainable wetland management.

Analysis of the extensive qualitative dataset provided by the original fieldwork has continued at the University of Worcester since 2007 (**References 1-4**), providing new interpretations of the people-wetlands management nexus. The ideas generated have been published widely, but have also informed and driven a range of applied research, consultancy and field implementation projects that have influenced wetland management policy-making and led to improvements in the livelihoods of wetland-using communities in Africa. In particular:

- Wetland Action's 'Striking a Balance' (SAB) project in Malawi (2005 – 2008) incorporated lessons emerging from research in building local institutional capacity for wetland management within communities (further field research in 2008 drew out more lessons from this practical implementation experience) (**Reference 1**);
- The FAO's Guidelines for Agriculture-Wetland Interactions (GAWI) project (2008), led by

Wetland Action, included a meta-analysis of the wetland management / livelihoods literature (**Reference 4, Grant a**);

- Between 2008-2009, research examined the adaptive capacity of local wetland management institutions to increasing pressure on wetland-based livelihoods in Ethiopia caused by wild vertebrate crop raiding (**Reference 2**);
- University of Worcester funded research (2012) examined the longer-term efficacy of SAB and identified local wetland institutional capacity building initiatives which have subsequently informed DFID DISCOVER activities in Malawi (**Grant b**).

3. References to the research

1. Wood, AP, **Dixon, AB** & McCartney, M (eds.) (2013) *Wetland Management and Sustainable Livelihoods in Africa*. Earthscan, London.
2. **Dixon, AB**, Hailu, A, Semu, T & Taffa, L (2009) Local responses to marginalisation: human-wildlife conflicts in Ethiopia's wetlands. *Geography* 94, 1, p38-47. [http://www.geography.org.uk/Journals/Journals.asp?articleID=566]
3. Maconachie, R, **Dixon, AB** & Wood, AP (2009) Decentralization and local institutional arrangements for wetland management in Ethiopia and Sierra Leone. *Applied Geography*, 29, 2, p269-279. DOI: 10.1016/j.apgeog.2008.08.003.
4. **Dixon, AB**, Wood, AP, Finlayson, M & van Halsema, GE (2008) Exploring agriculture–wetland interactions: a framework for analysis. In: Wood, A P and van Halsema, GE (Eds.) *Scoping Agriculture-Wetland Interactions: towards a sustainable multiple response strategy*. FAO, Rome. p5-28. [ftp://ftp.fao.org/docrep/fao/011/i0314e/i0314e.pdf]

Grants

a) Local institutional arrangements for wetland management in Zambia and Malawi, 2008-2009 Wetland Action, £4421.

b) Institutional arrangements for wetland management in Malawi, 2012, University of Worcester Project Leave Scheme, £1900.

c) Training on Principles and Practices around the Wetland Functional Landscape Approach, 2012, Self Help Africa / Wetland Action, £4560.

The University is confident that the research meets the 2* quality threshold. Reference 3 is returned to UoA17 in REF2014 as "Dixon1". All references have been subject to a university review process to ascertain their quality.

4. Details of the impact

Understanding the relationship between local people and wetlands throughout Africa is a critical pre-requisite to the implementation of effective wetland management strategies that sustain peoples' livelihood needs alongside ecosystem services. The applied nature of the research (in terms of identifying lessons for sustainable wetland management) has meant that it has been conducted in consultation and collaboration with a range of end-use stakeholders, including local and international NGOs (see below), who have subsequently incorporated the findings and lessons learned into their own field projects. The impact is threefold. The research has:

- informed field project design and subsequent policy-making amongst NGOs and government;
- had a direct impact on the livelihoods of project beneficiaries, where applied;
- informed the broader wetlands-livelihoods policy agenda.

Three specific examples follow.

A. Community-based wetland management capacity building in Ethiopia

Dixon and Wetland Action have a long-standing collaborative relationship with the Ethio-Wetlands and Natural Association (EWNRA). The research on local wetland management institutions was

undertaken collaboratively with EWNRA and the findings of this research subsequently informed a range of successive field implementation projects (**Sources 1-4**). In particular, a core aim of the Wichi Integrated Wetland and Watershed Natural Resources Management Project implemented in western Ethiopia (SIDA funded, 2005 – 2008) was to empower community-based local institutions for natural resource management (**Sources 1, 2**). The research has had considerable significance and reach. In addition to direct livelihood development and water security interventions that benefited over 2000 households in the area, over 50 local institution members were trained in watershed-wetland management. An impact study report from 2009 suggested that people have experienced a significant improvement in livelihood security and wetland environmental conditions since the start of the project (**Source 1**). Further collaborative analysis of the project experiences (2011-2012) have recently been published in an Earthscan book (**Source 3**).

B. Striking a Balance

The Striking a Balance (SAB) project was funded by Wetlands International and implemented by Wetland Action (with local partners) between 2006-2008 in Zambia and Malawi (**Source 5**). The project sought to incorporate many of the lessons and findings from the Ethiopian wetlands work relating to local knowledge and community-based local institutions in seeking to sustain the ecosystem and livelihood benefits from seasonal wetlands through the implementation of a Functional Landscape Approach (FLA). Key research impacts here include the participatory development of wetland and catchment conservation measures, and local institutional arrangements for managing wetlands and catchments (Village Natural Resource Management Committees). The SAB final project report (2009: **Source 6**) estimates that these have led to a significant reduction in poverty (30-60% increase in crop yields from wetlands) among the 312 households involved, a development which has been facilitated by the project's investment in building social, institutional and natural capital at the community level – a direct consequence of Wetland Action's long-term research expertise in these areas. A one year extension to the SAB project in Malawi, which developed the FLA further, was funded by Wetlands International (2009-2010) and continues to be promoted as part of their Wetlands and Poverty Reduction Project (**Sources 7, 8**).

In an example of the cyclical nature of research-implementation linkages, the SAB project itself has subsequently stimulated further academic research; in 2012 Dr Dixon received funding to explore the legacy of the SAB intervention and, in particular, the lessons learned from the local institutional capacity building component of the project (**Source 7**).

C. Wetlands-Livelihoods Policy Agenda

There is evidence of an impact of this research on the wider wetlands policy-making agenda. For example:

- In 2012, the 11th meeting of the Conference of the Contracting Parties to the Ramsar Convention on Wetlands of International importance formally recognized the relevance of the GAWI project in supporting the implementation of Resolution VIII.3. This urges contracting parties to acknowledge the need for appropriate implementation of agricultural practices and policies that are compatible with wetland conservation and sustainable use goals (Resolution XI.15) (**Source 9**).
- Both the Ramsar Handbook (2010) (http://www.ramsar.org/pdf/lib/hbk4-01.pdf) and the Netherlands based NGO Wetlands International continue to cite the SAB project as an example of how wetlands can contribute to poverty reduction (**Source 8**).
- The findings and field experiences of the SAB project have been recognised as good practice in wetland-catchment management and are being incorporated into the work of two consortia in Malawi funded by DFID: the Enhancing Community Resilience Programme (ECRP) led by Christian Aid and the Developing Innovative Solutions with Communities to Overcome Vulnerability through Enhanced Resilience (DISCOVER) led by Concern Universal. In 2012, Dr Dixon provided consultancy services to the latter, running a training workshop for field staff and providing an assessment of the application of the SAB approach to field sites in northern Malawi (**Source 7, 10**).

5. Sources to corroborate the impact

1. EWNRA (2009) An Impact Study of Wichi Integrated Wetland-Watershed Management Project, Metu Woreda, Illubabor Zone of Oromia Regional State. Unpublished Report, EWNRA, Addis Ababa. http://www.wetlandaction.org/wp-content/uploads/EWNRA-2009-An-Impact-study-of-Wichi-integrated-wetland-watershed-management-project.pdf
2. PHE Ethiopia (2012) Integrated Practical Success Stories and Challenges from the Field: Ethio Wetlands and Natural Resources Association. PHE Ethiopia Consortium, Addis Ababa. http://phe-ethiopia.org/pdf/Ethio_wetlands_spotlight.pdf
3. Wood, AP, **Dixon, AB** and McCartney, M (2013) Wetland Management and Sustainable Livelihoods in Africa. Earthscan, London (Chapter 3: Malawi; Chapter 4: Ethiopia) http://www.routledge.com/books/details/9781849714129/
4. Statement on research collaboration between Dr Alan Dixon and Afework Hailu, Director of Ethio-Wetlands and Natural Resources Association, Ethiopia.
5. Dixon, AB, Thawe, P and Sampa, J (2008) Wetland institutions and sustainable management of natural resources in Zambia and Malawi. Unpublished Report, Wetland Action [https://eprints.worc.ac.uk/733/1/SAB_Institutions_Guide_FINAL.pdf
6. Wood, AP (2009) Striking a Balance: Maintaining Seasonal Wetlands & their Livelihood Contributions in Central Southern Africa, Final Technical Report (Unpublished). Wetland Action: Huddersfield and Amsterdam. http://www.wetlandaction.org/striking-a-balance-maintaining-seasonal-wetlands-in-central-southern-africa/
7. Wood, AP and Dixon, AB (2013) Functional Landscape Approach: Report of a Training Workshop and Field Review of Sites in Karonga. Unpublished Report, Wetland Action / University of Huddersfield / University of Worcester. https://eprints.worc.ac.uk/2303/
8. Wetlands International – Sustainable Dambo Management in Malawi http://wetlands.org/Whatwedo/Ouractions/SustainabledambomanagementinMalawi/tabid/2371/Default.aspx
9. Ramsar Convention Resolution XI.15 http://www.ramsar.org/pdf/cop11/dr/cop11-dr15-e-rice.pdf
10. Statement on research collaboration between Dr Alan Dixon and Wetland Action, from Professor Adrian Wood, Director of Wetland Action EEIG, University of Huddersfield.