AfroMaison

Africa at a meso-scale: adaptive and integrated tools and strategies for natural resource management

Natural resources in Africa are under increasing pressure to sustain the continent's growing economies and populations, as well as competition for access to Africa's resources from global economies. Management of these resources has become imperative, to prevent over-utilisation and ensure that the local custodians of the resources are able to benefit in the long-term. Natural resource management (NRM) in Africa is a complex problem, needing to balance demands across different stakeholders, sectors and scales, in a context where governance is often uncoordinated and under-resourced.

Although the concepts of INRM have been in play in Africa since the late 1980s and the principles are widely accepted, implementation in operational planning and management has been limited.

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The AfroMaison project was instituted under the European Union's 7th Framework Program (7FP) to address these challenges of making INRM in Africa operational. The project worked with five geographically and culturally diverse case studies, namely: Tunisia (Oum Zessar Watershed), Mali, (Inner Niger Delta), Ethiopia (headwaters of the Blue Nile), Uganda (Rwenzori Mountains) and South Africa (uThukela District). AfroMaison set out to provide an operational framework and toolbox for INRM that can be applied in a variety of environmental and socio-economic conditions in Africa. The aim was to develop strategies for operational INRM, which are both embedded in local traditions and culture, and scientifically sound.

'Our seeming inability to translate the approaches into practical achievements on the ground is leading to widespread disillusionment. …. What is surprising is not the improvement of approaches over the past 40 years – rather it is their fundamental similarity.'

Campbell et al (2004)

INTEGRATED NATURAL RESOURCES MANAGEMENT IN PRACTICE

SHARING INSIGHTS

15th May 2014, Brussels – Belgium
Policy event: TAKING INNOVATIVE TOOLS AND APPROACHES FOR IMPROVED INRM FORWARD

16th May 2014, Delft – The Netherlands
International symposium and workshops: "TOOLS FOR INTEGRATED NATURAL RESOURCES MANAGEMENT IN AFRICA"

THE OBJECTIVE:

- **Motivate a change from sectoral focus and technology & infrastructure driven approaches towards INRM by raising awareness and disseminating INRM success stories.**
- **Share insights on INRM and successful approaches for putting INRM in practice at meso-scale in Africa & discuss how INRM can be further promoted and implemented within Africa.**
- **Identify what needs to be done to address some of the challenges raised regarding implementation of INRM strategies**

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Based on a set of highly diverse case studies spread across Africa, AfroMaison has explored challenges and barriers for putting INRM into practice and proposes adequate approaches and tools to address these. The lessons learnt are summarizes in 10 key insights.

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Challenges & responses for INRM in Africa

Integration: integration in INRM has multiple dimensions. In addition to the need to integrate planning across sectors, scales and levels of management, INRM requires integration of human (socio-political) and natural (biophysical) systems, and of differing knowledge systems. Integration is in part about sharing information; but also about finding mechanisms to allow genuinely joint decision making in highly complex, inter-dependent systems.

AfroMaison has used a number of approaches to address integration: spatial planning tools for integration across landscapes and scales; an ecosystem services approach to planning and management to promote integration across sectors and between human and natural systems; and complex systems framework and concepts, using social simulation tools (including participatory role play games) to promote understanding between different stakeholder groups, and to explore socio-ecosystem dynamics.

Working across scales: a central challenge of INRM is working across scales: coordinating multiple local actions to provide cumulative benefits across a broader landscape. This includes both ensuring widespread adoption of suitable interventions (scaling out) and moving from individual to collective actions (scaling up). A critical barrier to working across scales is finding appropriate institutions, capable of working with individual resource managers.

AfroMaison has addressed this issue by explicitly focusing on the meso-scale, defined in terms of institutions, rather than physical size, as the scale which bridges between farm-scale management and national policy: that is, the scale of local (district) administration.

Stakeholder participation: INRM requires commitment and cooperation from a diverse range of stakeholders, and from entire communities, not just individuals. A critical element in forging cooperation, ownership and a common agenda for development is a shared understanding of priorities, issues, inter-dependencies and impacts of management decisions.

A key aspect of the AfroMaison approach was the use of the participatory role play game (Wat-A-Game) as a forum to explore the priorities and perspectives of different stakeholder groups, and the opportunities and consequences of management at landscape scale.

Planning in rapidly changing contexts: Planning in an uncertain, dynamic context is one of the key challenges for INRM in Africa. Many parts of Africa are characterized by a cycle of rapid economic, demographic and political changes that drive similarly rapid shifts in patterns of use of land and other natural resources (exacerbated by climate change), which in turn feed back into further social change. Since natural resources underpin both semi-subsistence livelihoods and formal economies, management strategies must be flexible and robust, contributing to the resilience of communities, rather than locking them into specific paths.

Our approach in AfroMaison has been to incorporate analysis of vulnerability to change into planning, using a scenario-based approach to explore the potential impacts of a range of externally imposed changes.

Evidence-based management: INRM is underpinned by an evolving understanding of the complex interactions within the human – natural resource system. Information on the status and trends of the natural resource base, and the social and economic factors driving resource use, is thus critical for decision making. Access to information has been limiting in many African contexts, particularly at local to regional scales. However, geo-spatial data on natural systems are becoming increasingly available through international and national programs.

AfroMaison has addressed the challenge of access to information for evidence-based decision-making through initiatives to improve exchange of information, and contribute to filling information gaps.

Incentives for change and financing mechanisms: an on-going conundrum in NRM is the problem that the benefits of improved management are often separated in both space and time from the point of implementation: for example, downstream water users benefit from erosion control implemented by upstream farmers, and the global community benefits from carbon sequestration resulting from forest conservation. Even when coordinated at higher levels, day to day land management is usually in the hands of smallholder farmers and local communities, who bear both the cost and responsibility for changes in management, but may not benefit directly. Finding incentives for land managers to implement and maintain interventions over the long term is one of the primary barriers to scaling up NRM initiatives.

AfroMaison has addressed this issue by explicitly including incentives and financing mechanisms as part of management strategies, working with communities to identify sustainable incentives matched to proposed interventions

TEN KEY INSIGHTS:

1. ***Integration in INRM seems obvious, but the practicalities are difficult. Be ambitious, but be pragmatic and start simple.***
2. ***Meso-scale is the natural scale for implementing INRM.***
3. ***Successful implementation of INRM strategies requires simplification, prioritisation, a clear spatial and temporal specification… and the right incentives.***
4. ***Institutional arrangements are key to coordinating participatory INRM planning and implementation.***
5. ***Vulnerability to climate change is an important issue for INRM – but it must be clear who is responsible for the implementation and costs of adaptation and mitigation measures at various scales.***
6. ***Choose your tools wisely. Certain tools can be helpful for supporting integrated approaches, while others will only deal with specific subsystems.***
7. ***Role-Playing Games (RPG) based social simulation is a powerful tool to mobilize stakeholders and engage them with the complexity of social and ecological systems.***
8. ***Focusing on Ecosystem Services helps to integrate across sectors, stakeholders and landscapes.***
9. ***Complex modelling and simulation are useful for specific issues within INRM.***
10. ***Data is essential but comes at a cost: in many cases readily available data will be enough to get started.***