

Sustainable solutions

Now reaching the end of its first year, **Tom D'Haeyer** explains the impetus behind the creation of the project he coordinates to improve natural resource management in African countries



Could you begin by detailing the background and inspiration for the AFROMAISON project?

The first ideas for AFROMAISON have grown out of another FP7 project, WETwin, a project studying tools for better wetland management and for fostering the integration of wetland management and river basin management. Several partners involved in AFROMAISON have also been participating in WETwin. The focus, however, has shifted from wetlands to more diverse landscapes.

In addition, we have introduced the aspect of meso-scale – which we define as an intermediate level between local and national scales. In many cases, this may be equivalent to a river basin or a landscape, but also to an administrative level, such as a province, district or region. This choice was motivated by observing the decentralisation processes which have been occurring in many African countries over the last decade. Often competencies or responsibilities in the area of Natural Resource Management (NRM) have been delegated to lower levels of governance, but resources and capacity at these levels are often lacking. That is why we want to work on this level in particular.

For the benefit of those unfamiliar, could you explain what integrated natural resource management (INRM) is?

NRM evolved over many decades. Several concepts have been explored throughout the years. Whereas natural resource issues have been, and still are addressed on a sectorial basis (water, land, forest, agriculture, mining), experts have been stressing the need for a more holistic approach. Components in INRM are the understanding of the ecosystems, recognising that humans are part of the ecosystem, and being aware of the complex interactions within the system.

These interactions are influenced by the natural environment itself, but are also strongly influenced by cultural variables or human behaviour. Therefore, INRM must be approached from various angles and multiple spatial and temporal scales. Integration in INRM – ie. related concepts, such as Integrated Water Resources Management (IWRM) – involves integration of various disciplines, resources and sectors, as well as integration of various levels, institutions, policies, knowledge, uses etc. It should strongly emphasise the fact that different people have diverse views, beliefs and needs. Sound participation from all areas is therefore essential.

Finally, it should be seen as a process rather than an outcome: a process that should allow for continuous adaptation to the changing environment we live in.

Why has the concept of INRM not been put into practice in Africa previously?

As can be seen from the complexity of the socio-ecological system, putting INRM into practice has involved many challenges.

Scientific theories and concepts for putting INRM into practice are under constant change, influenced by a continuous, newly

gained understanding of the functioning of the system and continuous social and ecological changes within the system.

Bringing INRM into practice requires thorough understanding of these complexities. It also involves changing the way we look at governance systems, how we organise our institutions, policies, laws and participation mechanisms. Not only does it require a change in the way we look at the environment and the interactions in the socio-ecological system, it also requires skilled human resources, financial resources and data for effective management.

Many countries have failed, so far, to mobilise these resources in sufficient quantities, or to adapt the management systems to the available resources. This is an important challenge for the project: developing tools and methods that are adapted to the specific context in which they will be applied and have them accepted by the stakeholders.

What have been the most considerable obstacles the project has faced to date?

As we anticipated, the high diversity in the case studies is challenging. Not only do we face very different conditions in the case studies with respect to the natural environment or socioeconomic systems in all of our study sites, we also see many differences in terms of how far countries have already advanced in policies and understanding of integrated approaches and in implementation. Each country is following its own course, which is something we constantly need to be aware of. There is no 'one fits all' solution, yet we have the ambition to propose tools and strategies that will facilitate the implementation of INRM in all of our case studies, while respecting their own specific complexities. This is, and will remain, a challenge for the duration of the project.



Continental integration

As a continent susceptible to the effects of climate change and poverty, a new African-based project seeks to tackle both by developing adaptive and integrated tools and strategies for natural resources management

AFRICA IS HIGHLY vulnerable to climate change, resulting in widespread water shortages and extensive damage from natural disasters. It is now felt that such influences outpace the efforts currently being made to eradicate poverty on the continent. Threats to the environment and natural resources, coupled with mismanagement, have serious implications for both poverty reduction and sustainable economic development. Degrading natural resources in Africa, therefore, results in increased vulnerability of the poor, due to ecosystem stress, competition for space, soaring food and energy prices, climate change and demographic growth.

At present, it is widely accepted that reversing these trends requires integrated management frameworks. Despite the availability of many tools, expertise, strategies, local practices and indigenous knowledge, the concept of Integrated Natural Resource Management (INRM) has limited application and, in many cases, does not exist at all. Following on from a successful FP7 project devoted to the creation of tools for better management, specifically of wetlands and river basins, the EU has funded a further project entitled AFROMAISON. This new directive casts the net wider and seeks to develop concrete strategies for INRM in Africa, to provide sustainable solutions for communities and authorities in their operational management and strategic policy for natural resources in general, and thus assist in the fight against climate change.

ENDGAME

The ultimate end goal of AFROMAISON is to provide a holistic toolbox and operational framework for INRM that can be applied in a variety of environmental and socioeconomic conditions in Africa. Concurrently, following

a participatory analysis of opportunities and challenges, it will provide participatory management options for operational INRM that are embedded in local traditions and culture, whilst also being scientifically sound. In order to achieve a tangible outcome, AFROMAISON will focus on the following three groups of tools:

- Strategies for restoration and adaptation; covering improved water retention and storage, greater erosion prevention, land degradation prevention and desertification, soil carbon build-up and reducing deforestation and forest degradation
- Economic tools and incentives; covering payments for ecosystem services, generation of employment and alternative income sources, testing operational rules for climate change adaptation funds and promoting environmental stewardship
- Tools for spatial planning; covering tools for discussion and negotiation on alternative land uses (trade-off analysis, multi-criteria) and spatially-explicit impact assessment

The project will assess how the resilience of the most susceptible groups can be increased, and their vulnerability reduced, through INRM. In order to do so, concrete adaptation measures will be formulated and their impact on ecosystem goods and services, and livelihood, will be validated at the meso-scale.

CASE STUDIES

Five case study sites representing the geographic coverage and diversity of the systems – deserts, highlands, wetlands, grasslands, tropical humid forests and mountain forests – have been

selected to assist the project. Each case study has a defined focus as a response to specific pressures, policies and other local conditions. However, tasks will not merely be limited to this focus area, as different aspects of integrated responses will be considered in all areas. Fundamental in all cases is access to land, water and wood. Inter-comparison and transferability between case studies, given the very different conditions in each case study, is essential, as Tom D'Haeyer, coordinator of the project, ascertains: "If we want to develop a framework and tools for INRM at the meso-scale level in Africa, it is an absolute must to take this kind of diversity into account".

FINDING THE FIT

There is a strong sense within the consortium that the success of the project will depend on focussing responses to fit the local context in each study area, thus creating a tool that is adaptable and applicable for all users. To this end, the project has linked with local 'champions' in each case study. Moreover, to discover effective solutions for improving NRM, several instruments will be deployed. D'Haeyer asserts the importance of identifying those that are truly adapted to the African context and its diversity: "We will not only pay attention to promoting those tools and theories that have been dominating the research and policy agenda over recent years. For example, we want to show that Payments for Ecosystem may be a solution in certain cases, but not in all circumstances". AFROMAISON will attempt to increase awareness of the wide range of instruments available and then assist practitioners in matching their specific requirements to the best suited instrument. The decision support matrix will help in the selection of the most useful instrument from an economic standpoint.



Enabling African researchers to develop African solutions to African problems

INTELLIGENCE

AFROMAISON

AFRICA AT A MESO-SCALE: ADAPTIVE AND INTEGRATED TOOLS AND STRATEGIES FOR NATURAL RESOURCES MANAGEMENT

OBJECTIVES

To propose concrete strategies for integrated natural resources management in Africa in order to adapt to the consequences of climate change.

PARTNERS

Antea Group, Belgium

ICRAF, Kenya

INR, South Africa

OSS, Tunisia

UNESCO-IHE, The Netherlands

PIK, Germany

WI, The Netherlands

IWMI, Sri Lanka

UNIGE/GRID, Switzerland

ZiE, Burkina Faso

CIRAD / IRSTEA, France

UKZN, South Africa

A&W, The Netherlands

MMU, Uganda

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TOM D’HAEYER has a degree in Rural Engineering and Tropical Agriculture and conducted additional studies in intercultural communication and management. He has been coordinating water projects in Africa and the Caribbean. Recently he has been working on international projects WETwin (wetland management tools), Twin2Go (adaptive governance), and AFROMAISON as Coordinator.

TARGET AUDIENCE

While the focus for development of the holistic tool will lie mainly on the practitioners to improve their management of natural resources, the project is keenly aware of the importance of involving all players in the field, with particular emphasis on stakeholders. The desire is to increase their understanding of ecosystems, raise awareness of the importance of collaboration throughout the landscape, and bring them closer to the management and decision making processes, which D’Haeyer believes will have a significant impact: “The framework that we are putting in place needs to be embraced by stakeholders so that the process of monitoring, making choices and designing actions can be repeated at all times. To achieve this uptake of the strategies and tools, we are involving these stakeholders from the start of the project in the design which should improve the implementation of the tools”. In addition to involvement of the stakeholders themselves, the decision to include scenario development and vulnerability assessment as part of the framework will allow for identification of hotspots and special measures to adapt to changes. Allowing time for natural resource managers and stakeholders to feel at ease with the tool being developed will, in turn, increase their own confidence and capacity, thus enabling them to be more adaptive.

SOLID GROUNDWORK

AFROMAISON is now at the end of the first year and D’Haeyer feels the project has made solid progress: “In this single year we have gained a good understanding of the case studies and we have developed the operational framework for bringing INRM into practice”.

The next step is to implement the framework, and turn it into a toolbox. This will involve the development of participatory approaches for the selection of actions, integrating these into strategies and testing these strategies. In doing so, the project will give a more prominent role to ecosystems or natural resources in existing regional development planning framework. AFROMAISON, being selected in the Coordinated Call for Africa (FP7-AFRICA-2010), aims to enable stronger interaction between European and African researchers. To achieve this, synergies are being built with other FP7 projects and international initiatives such as the Global Earth Observation System of Systems (GEOSS) to foster data sharing. However, the most crucial focus in terms of collaboration will be to encourage vital connections and facilitate the exchange of knowledge between participating researchers within Africa itself: “Enabling African researchers to develop African solutions in response to African problems,” as D’Haeyer succinctly summarises.

