Monitoring and evaluation of a participative planning process for the integrated management of natural resources in the uThukela District Municipality (South Africa)

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This publication was organised in collaboration with:

Postgraduate School of Agriculture and Rural Development
&
Human Economy Programme

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List of abbreviations and acronyms

DWA   Department of Water Affairs
INR   Institute of Natural Resources
(I)NRM   (Integrated) Natural Resource Management
KZN W   Ezemvelo KZN Wildlife
OLM   Okhahlamba Local Municipality
UDM   uThukela District Municipality
UKZN   University of KwaZulu-Natal

Foreword

This research is based on an internship undertaken by Mélanie Pommerieux under the co-supervision of Magalie Bourblanc and Raphaëlle Ducrot. The authors would like to thank all the members of the INR who welcomed the intern warmly into their team and who provided her with all the support she needed to realise this evaluation. They would also like to thank all the people interviewed for their time and kindness, as well as all the participants who agreed to fill in the questionnaires. Thanks go as well to the community and ACT members who helped organising and made her stay enjoyable in the Mwneni cultural centre.

The authors

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Abstract

This paper intends to monitor the changes in perceptions and behaviour of stakeholders induced by the Afromaison participatory process, which is aimed particularly at helping to integrate natural resource management in the uThukela District Municipality, South Africa.

To do so, an evaluation protocol has been designed, combining social sciences as well as evaluation techniques. This protocol has been applied to both the initial assessment and the monitoring of the first workshop involving various local stakeholders held under the Afromaison project. The initial assessment showed that it was possible to regroup stakeholders' perceptions into categories according to the functions those actors occupy. Most of those interviewees lacked a holistic understanding of the state of natural resources in the area, and had issues collaborating well with other stakeholders. By monitoring the first workshop, we found that almost half of the participants did not contribute their opinion because they expected getting information rather than actively participating in order to reach a common vision. This monitoring revealed however changes in the normative and cognitive functions of participants. Two interviews conducted few weeks after this workshop tend to indicate that those changes might be long-term. A final evaluation conducted at the end of Afromaison should help us verifying this finding.

Monitoring and evaluation of a participative planning process for the integrated management of natural resources in the uThukela District Municipality (South Africa)

I. Context – The Afromaison project and the South African Case Study

Afromaison was officially launched on the 22nd of March 2011 by a kick-off meeting in South Africa. Fifteen partners, European, African and international are involved in this European Union funded collaborative project, which targets five case studies across Africa: in Ethiopia, Mali, South Africa, Tunisia and Uganda. Afromaison is the acronym for "*Africa at a meso-scale: Adaptative and integrated tools and strategies for natural resources management*". Taking into account the threats posed to the environmental resources in Africa, as well as poor management practices, the goal of Afromaison is indeed to integrate the management of natural resources in order to help poverty reduction and to set the path for sustainable economic development. This project thus intends to provide "*a toolbox, short-term to long-term strategies, quick wins and operational strategies for adaptation to global change*" (Afromaison, 2012). The meso-scale, understood as a unit making the link between national and local levels, is thought to be the relevant scale to integrate those tools, make stakeholders come together and disseminate the results at a national scale. The consolidation of the meso-scale will thus be critical for the success of the project, and in return, this consolidation is expected to promote sustainable development.

Eight work packages (WPs) have been defined to help providing those tools, and each of them is led by an international partner. Those WPs include, for instance, strategies for restoration and adaptation, economic tools and incentives, as well as tools for spatial planning. However, providing expert knowledge for the different case studies will not be sufficient to achieve Afromaison objectives. WP7 helps ensuring that the tools answer stakeholders' expectations and helps facilitating the uptake of those tools by the stakeholders.

Stakeholder consultation and involvement is thus a key component of this project. Although the planning and the depth of such a consultation is left at the discretion of each case study leader, it is expected that the stakeholders will participate in different steps,

namely the definition of a common vision for the case study area, the choice of tools and economic incentives as well as the overall definition of an integrated strategy for the management of natural resources in each case study.

In order to make sure that this consultation is efficient, WP7 is responsible for the monitoring and evaluation of such participatory processes implemented under the Afromaison project. A standard procedure for evaluation has been written by the UMR-G-EAU, the institution leading WP7.

The South African case study has been identified as having an interesting potential for a complex evaluation, given the complexity of its environmental issues and the diversity of the stakeholders involved.

Two reports have been written for the South African case study as part of WP2, in order to provide a multi-disciplinary rapid assessment of the barriers preventing an effective INRM (integrated natural resources management). The first, "Context of uThukela Watershed, KwaZulu Natal, South Africa" (Matthews & Catacutan, 2012), helps us in understanding the context, as well as the problems, of the environmental threats for this case study, while the second "An analysis of the socio-political context in Okhahlamba Drakensberg Park World Heritage Site buffer zone" (Bourblanc, 2012) provides an insight into the stakeholders relations, notably the past and present tensions between them.

This South African case study focuses on the Drakensberg Mountain grasslands, in the uThukela District municipality, which has the particularity of encompassing a whole catchment, the uThukela catchment. Although looking at the whole uThukela catchment, the Afromaison project especially focuses on two local municipalities within this catchment: Okhahlamba and Imbabazane. This area includes a part of the uKhahlamba Drakensberg Park, protected as a World Heritage Site. The main economic activities in this area, outside the park, include subsistence and commercial farming. Although there is a potential for both agriculture and tourism development, this potential is not fully exploited (Matthews & Catacutan, 2012). A field trip to this area has indeed shown that economic activities, including touristic ones, outside the Park, are very scarce.

The uThukela catchment is of prime importance for watershed services as it provides water to the Gauteng province. Four different types of environmental pressures affect the catchment capacity to deliver such a service: land degradation (four vegetation types in the area are considered as threatened, one as vulnerable), erosion, degradation of the water quality and availability (Matthews & Catacutan, 2012). The same study allows us to distinguish between the direct and indirect drivers which lead to those pressures. Direct drivers include cultivation, plantation, dam building, urban sprawl, overgrazing and disturbance of the water cycle. Both communal and commercial farmers are identified as having inappropriate management practices; practices of the former including inappropriate crop, rangeland and soil management, while those of the latter encompass over-utilisation of the veld, excessive water withdrawal and poor land use and

fire management practices. In order to understand what has led to those poor natural resources management practices, it is important to study the indirect drivers. Infrastructure and political issues, such as lack of long-term planning, are indirect drivers affecting both the communal and commercial farming areas. The former are also affected by socio-economic issues, such as shortage of skilled personnel, poverty, ill-health, by a lack of education and by the tragedy of the commons, meaning the lack of responsibility and accountability, as well as a lack of community-based planning. The latter seem to be mainly affected by internal conflicts and their use of inputs.

The South African governance system has three spheres of government: national, provincial and local, but the latter includes two different types of municipalities: local municipalities and district municipalities. Each district municipality encompasses several local municipalities. It is the district municipality which has been identified as the relevant meso-scale institution for Afromaison. Hence, one goal of this project will be to strengthen the uThukela District Municipality capacity.

To first apprehend the diversity of the actors involved in this catchment, the INR (Institute for Natural Resources), the case study leader, has drawn a matrix of actors and grouped them into five categories:
- Land use/development: planning and authorisation –includes notably the uThukela district municipality, local municipalities and traditional authorities.
- Natural resources: regulation – includes mainly national departments.
- Conservation and Natural Resource Management Programmes – includes notably NGOs, associations (local, international), the University of KwaZulu-Natal and national departments.
- Research and Monitoring – includes the University of KwaZulu-Natal, museums, and associations, as well as provincial and national research organisations.
- Users – includes tourists, commercial farmers, small-scale livestock farmers and industries.

Bourblanc (2012) has identified several problems in the stakeholders' relations that might affect an integrated management of natural resources:
- Local municipalities do not seem to see themselves yet as part of the management of the World Heritage Site, as it was until recently a provincial responsibility. This prevents them from having their say in the park's management and from gathering receipts.
- Although relations between conservation activities and black communities have improved over the last years, politicians are still sceptical concerning eco-development initiatives, as they feel those projects mainly benefit white businesses.
- An internal political battle, combined with a crisis management situation, seems to prevent the uThukela District Municipality from dedicating time to integrated natural resources management issues.

- Local municipalities hardly give any direction on land management practices. There indeed might be too many of those for too few resources.
- If the District Municipality has an environmental management unit, Local Municipalities do not.

The two reports aim at helping the other WPs to have a better understanding of the situation, but obviously local stakeholders will have to be consulted, notably to refine the understanding of the problems and to define a common vision for this area. The planning of the consultation process for this area is not completely defined yet. It is, for instance, not certain yet if the game designed by the CIRAD, "WatAGame", will be played with the stakeholders or not. The South African case study leader, the INR, identified three champions, who would be involved more closely in this project and who are expected to inform other stakeholders about it: a district municipality representative, a representative of ACT (African Conservation Trust, an NGO), and one of KZN Wildlife, the institution notably in charge of the management of the World Heritage Site. A first workshop was held on the 17th of July with various stakeholders to get a common vision. A few weeks later, a technical workshop, regrouping representatives of the different WPs, took place, to refine what those different WPs can offer to this South African case study. In this report, we will present the results of the evaluation done for the first workshop, held with the local stakeholders.

II. Methodology

Objectives

This report intends to evaluate the changes in perceptions and behaviour of the stakeholders.

A standard procedure has been defined for the evaluation of the five case studies where a participatory process took place. The specific objectives for this evaluation will thus be to refine this protocol, add specific questions for the South African case study and to present a way of analysing the results, as this report is the first one on the evaluation of Afromaison. Recommendations will be made on the pursuit of the project in South Africa. The protocol will also be commented on, with recommendations on how to improve the standard protocol.

In order to write this report, the author stayed in Pietermaritzburg and worked at the INR from the 15th of February to the 15th of August 2012. She was contracted for a six-month internship by the CIRAD, as the report is part of WP7. The initial work plan was the following:

15th Feb. – 16th March: Redaction of the working protocol (study of the project, the context); Literature review; Research question; Working questions

19th March – Workshop: Choose the criteria which will be used for the evaluation; Choose the suitable indicators and sources for those criteria; Proceed to an initial assessment; Prepare the instruments which will be used for the evaluation of the 1st workshop

Workshop – 30th June: Gather and analyse the results of the workshop evaluation; Present this analysis to the INR; Design a procedure for the mid-term evaluation and proceed to this evaluation

30th June – 15th August: Analyse the results; Present and discuss the results with the INR and the evaluators; Write the final report; Stay available for any event which might require an evaluation during the redaction period

This work plan had to be flexible as the date and the form of the consultation was not entirely finalised when the intern arrived in Pietermaritzburg. Eventually, we were only able to monitor the first Afromaison workshop.

Literature review

A literature review has first been conducted in order to help refining the evaluation procedure for the South African project by researching participatory processes in general, ways of evaluating those, and by finding the barriers that can hamper participatory processes in general and in South Africa more specifically.

Evaluation of participatory processes

Rosener has identified four main issues in the evaluation of participatory processes: "first, the participation concept is complex and value laden; second, that there are no widely held criteria for judging success and failure of an exercise; third, that there are no agreed-upon evaluation methods; and fourth, that there are few reliable measurement tools" (quoted in Rowe & Frewer, 2004). Although participation has largely become a buzz word in the last twenty years, authors indeed do not seem to reach an agreement on a definition. Parfitt (2004) identified a major issue which he referred as the "means/end ambiguity". As a "means", participation refers to the process of involving stakeholders, while as an "end", participation is defined by its capacity of empowering stakeholders. The ambiguity can become a contradiction when too much effort is put on participation as a means rather than an end (ibid.). For this Afromaison project, we take the view that participation should be understood as both a means and as an end.

To overcome the abovementioned four issues identified by Rosener, Rowe and Frewer (2004) recommend that evaluators follow three steps: 1. Define Effectiveness, 2. Operationalise the definition, and 3. Conduct the evaluation and interpret the results. The

authors insist on the fact that although exploratory methods can provide interesting results, it seems much better to state effectiveness criteria a priori "*not only from a research perspective but also from a practical perspective to prevent dispute with those who disagree with the evaluation result and subsequently take issue with the nonagreed criteria*". They also highlight the debate between outcome versus process effectiveness. In their opinion, it is more informative to combine both: "*evaluation of exercise processes must often serve as surrogate to the outcomes of the exercise. That is, if the exercise process is good ... then it would seem more likely that the outcomes will be good than they would be if the process is bad ....*" The second step consists in finding suitable procedures or instruments for each criterion, which should have three qualities: validity, reliability, and usability. For the last step, authors recommend evaluators to try to generalise the findings.

Barriers to an effective participation in South Africa

Although participation comes with high expectations, very little of what has been expected in diverse fields has been produced so far (Blondiaux & Fourniau, 2011). Problems often quoted in the literature include "*racism, paternalism, and resistance to power redistribution*" as well as "*inadequacies of the poor community's political socioeconomic infrastructure and knowledge-base, plus difficulties of organizing a representative and accountable citizens' group in the face of futility, alienation, and distrust*" (Arnstein, 1969).

For the purpose of this evaluation, we wanted to find if there were specific barriers to a meaningful participation in South Africa, in order to be able to monitor the dimensions which might be the most problematic. Local participation comes with high expectations in South Africa: "*Should citizen participation be neglected, one may yet again, see the abuse and/or misuse of administrative and political power in South Africa. However, if citizen participation is widespread, it will help keep the rulers accountable to the people, and will prevent politicians from making policies which are detrimental to the general welfare of society*" (Hilliard & Kemp, 1999). The South African constitution provides for several ways to involve citizens in local governance.

However, local, as well as international, politicians agree on the fact that those participation mechanisms, no matter how well devised they are, are not well implemented (see in particular Oldfield, 2007 and Cameron, 2010). The main barrier found in the literature to an effective local participation appears to be a lack of capacity from local politicians: lack of information and knowledge (Tadesse, 2006) and the misconception of active community participation as "*mere attendance of conservation meetings by local communities*" (Holmes-Watts & Watts, 2008). Of concern are also the power inequalities between communities and political institutions, their lack of trust, scepticism about the mechanism, and lack of capacity from the communities (Oldfield, 2007). Participatory mechanisms initiated not by politicians but by NGOs also face issues of accountability, transparency of the process (Vollan, 2011), lack of capacity and organisation of the communities (Nel, Binns & Motteux, 2001).

The way forward, as stated by the Public Service Commission (2008), is to empower local politicians, familiarise them with participatory mechanisms and institutionalise participation. Other authors also emphasise the need for the capacitation of all stakeholders, and not only politicians, for building networks with stakeholders and practitioners, for clear communication channels between them, and for a decoupling of participatory structures from party politics (Dumisani, 2006a). Successful stories from processes initiated by NGOs, as well as by local government, have also shown the importance of charismatic leadership, trust and skilled people (Nel *et al*., 2001 and Nel & Binns, 2003).

Design of the evaluation protocol

The author believes that combining evaluation techniques with methods from social sciences would be highly valuable for this kind of project.

The standard protocol

Nils Ferrand (Irstea, UMR G-EAU) described in 2006 a model which defines expected outcomes for this kind of project and criteria to assess those. This E.N.C.O.R.E. model relies notably on two hypotheses, formulated based on the literature related to this topic as: "*Participatory processes are assumed to allow for substantive learning (that is specific learning on the issues dealt with), instrumental learning (on the method, tools and approach) as well as social learning …; social learning [part of most rational for participatory processes] underlines that in such processes, participants develop both cognitive capacity and learning as well as "moral" insights.*" (Ferrand & Ducrot, 2011). It encompasses six criteria:
- External: improvement of the natural resources system studied.
- Normative: changes in the values and preferences of the participants.
- Cognitive: changes in representations and beliefs of the participants.
- Operational: changes in practices and actions of the participants.
- Relational: changes in the social relationships between participants.
- Equity: changes in the social justice regime and distribution of resources between participants.

The standard protocol for the five Afromaison case studies has been defined according to those criteria. This can be understood has an attempt to "define effectiveness": the project will be considered as efficient if it results in changes for those 6 criteria.
As part of WP7, a standard protocol has been sent to the five case study leaders, which described the different steps that they are expecting to follow in order to monitor the progress of the project in their case study. Those steps are the following:
- Completion of an objective table for each case study.
- Initial assessment: interview the main stakeholders (6-15) using the participants' initial cognitive mapping (document available upon demand).

- Monitoring and recording of the key participatory events: for such events, case study leaders have to write a report; they are also expected to distribute short questionnaires at the beginning (questionnaire ex ante) and at the end (questionnaire ex post) of such events (those short questionnaires are also available upon demand).
- Final assessment: interview the main stakeholders (6-15) using the participants' final cognitive mapping (document available upon demand).

Indications on how to analyse the data have not been provided, and although the E.N.C.O.R.E. model has been described in another document sent to the case study leaders, the link between this framework and the different sources has not been made explicit.

The protocol implemented in the South African case study

Even though it has not been explicitly stated, the protocol described above aims at answering the following evaluative question: was the project efficient, meaning (according to the definition made by Nils Ferrand) did the project result in changes in perceptions and behaviour for the participants. The questions asked in both the cognitive mapping and the questionnaires were thus designed to track changes for the six criteria of the E.N.C.O.R.E. model.

However, even though those questions were considered in relation to this model, the standard protocol does not include indicators. Indicators are related to each criterion, and they "*specify the data needed to make a judgment based on those criteria. A qualitative indicator takes the form of a statement that has to be verified during data collection (e.g. parents' opinion is that their children have the possibility of attending a primary school class with a qualified and experienced teacher)*" (EuropeAid, 2012). We believe that it was important to include such indicators, not only to strictly follow evaluation procedures, but also because the six criteria of the E.N.C.O.R.E. model can be very broad and include various dimensions, which might not all be relevant to monitor in this project. We also thought that defining such indicators would help specifying what changes we expect in this evaluation. Hence, we defined different indicators per criterion. In order to do so, we combined the expectations of the CIRAD for this project, which intended to reflect the expectations of the different international partners, with some of the specific objectives of the South African case study leader. For instance, for the normative criterion, the CIRAD expected: "*Reconsideration of values and preferences, including those linked to cooperation, otherness, the common good and the meaning of long term; Perception (cognitive function) of mutual dependencies and complex dependencies with the environment, which could lead to a revision of preferences linked to self, society and the environment*" (Ferrand & Ducrot, 2011), and the INR expected that this project would result in an "*improved understanding and awareness of the state and value of natural resources to all users and stakeholders, by all users and stakeholders*". In an attempt to combine both expectations, we defined three indicators for this normative criterion:

Table 1: Indicators for normative criterion

1. Normative criterion
1.1 Participants understand the importance of INRM for themselves and for others and integrate it in their list of priorities.
1.2. Participants improve their understanding and awareness of the state of natural resources.
1.3. Participants recognize that improved cooperation and long-term thinking are necessary to manage natural resources.

The evaluator did not try to define an indicator for each expectation and to reflect exactly those expectations, but rather try to find the common expectations, and a way to reframe them which would be more straightforward and as such would make the evaluation easier.

Because this evaluation was only done over six months, we felt it was not relevant to assess the External and Equity dimensions, as it seems that changes in those dimensions require a longer time. This procedure was thus repeated and three indicators were defined for each of those three criteria.

In order to better understand those results, we also decided to add a second evaluative question for the South African case study on the process, which can simply be summarised as "did the process go well'. This second question should help us understanding whether the project was efficient or not.

Criteria thus had to be chosen for this second evaluative question, to define what would be a "good" process. The criteria were chosen according to the literature findings on the barriers that can hamper participatory processes in South Africa. The main problems found that could have an impact on Afromaison have thus been selected. They have then been matched with criteria commonly found in the literature. The articles we consulted more specifically to find those common criteria were Halvorsen (2001), Luyet (2005) and Rowe and Frewer (2004). This resulted in the choice of seven process criteria, as shown in the following table:

Table 2: Seven process criteria

Problems	Criteria
All the interests are not represented	Representativeness
Scepticism	Transparency - Confidence
Mistrust	Legitimacy - Confidence
Misconception of participation as attendance	Early involvement – Fairness
Lack of capacity	Competence - Institutional support
Process too time-consuming	Convenience – Institutional support
Logistic problems to attend the workshops	Convenience - Institutional support

After having chosen the criteria which will help us in answering the second evaluative question, indicators were chosen for both questions. This choice was based on both the expectations of the E.N.C.O.R.E. model and the objectives defined by the South African case study leader.

Although we attempted to make those indicators as explicit as possible, because the evaluation framework is based on social research, it was difficult to make those straightforward. We hope that the presentation of the results will be clear and detailed enough to compensate for this issue.

For both the outcomes and the process, we also defined an "exploratory" criterion, which will allow us to note changes we observed which do not fit our expectations.

As for the sources, we used the initial cognitive mapping, the questionnaires ex ante and ex post as defined for the standard protocol, although we added some questions as we refined this protocol. The former was completed with a discussion part, for which the questions put to the interviewee depended on the individual interviewed and his or her answers, in an attempt to better understand his or her perceptions and values notably. A few questions were added to both questionnaires, to help us answering in more detail the first evaluative question, as well as questions on the process in the ex post questionnaire (the questionnaires and the initial cognitive mapping documents are available upon demand). As an additional source, an expert observation was designed for the monitoring of the workshop. It comprises both a list of points to check before, after, and during the workshop, as well as a Bale's Interaction Process Analysis. The resulting framework for the evaluation of the South African case study, presenting the evaluative questions, the criteria used for each question, the indicators for each criterion, and the sources used, were compiled in a document that is available upon demand.

Conduct of the evaluation of the South African case study

The following steps were followed for the evaluation of the South African case study:
- Initial assessment: 14 stakeholders identified as key for this project, as a result of research, contact, and the help of the INR, were interviewed. Each interview was individualised and lasted between 45 minutes and 2 hours, including both the cognitive mapping and the discussion part.
- Monitoring of the 1st Afromaison workshop in South Africa involving stakeholders: ex ante and ex post questionnaires were distributed to all the participants. Out of 29 participants, 21 gave back the ex ante questionnaire, and 17 the ex post. In an attempt to gather more ex post questionnaires, they were sent again by email the week following the forum. One additional ex post questionnaire was gathered this way. In total, 12 participants had filled both questionnaires. The checklist was completed and the Bales (simplified) IPA conducted.
- Because this workshop took place later than initially expected, we did not have time to proceed to a mid-term evaluation. However, two of the three champions were interviewed briefly two weeks after the workshop to gain more detailed answers.

Overall, the evaluation procedure followed for the beginning of Afromaison in the South African case study can be qualified as "complex" because, compared to the "standard" procedure, an evaluative question was added as well as its relevant criteria and indicators, sources were completed and diversified, and indicators were explicated.

The results of the initial assessment will first be presented, followed by the results for the evaluation of the first workshop, and finally a discussion part will include significant recommendations for the pursuit of Afromaison in South Africa, for the pursuit of its evaluation and a reflection on the evaluation procedure itself.

III. Results of the evaluation

Initial assessment

The initial assessment was conducted with two objectives:
- The initial assessment forms the basis of this evaluation. It has to be strong enough for the evaluators who will proceed to the final assessment at the end of the project to be able to draw noteworthy results. If the initial assessment is not detailed enough, the evaluators will not have enough data to compare, which could weaken the whole evaluation.
- In an adaptative management perspective, the results of this initial assessment are to be presented to the INR and the international partners. The knowledge and the relations that stakeholders have developed could indeed modify the implementation of the project. For instance, if stakeholders are found to have little knowledge of the local environmental issues, the presentations to the stakeholders will have to develop more those points than in the case where the stakeholders already have a good understanding of those issues.

The list of interviewees is presented in Table 3 au-dessous. In order to protect the identity of the interviewees, their names and functions within their institutions are not displayed. The first three interviewees are the champions. Interviewees 1 and 2 also participated in the first workshop on the 17th of July.

Table 3: Initial Assessment – List of Interviewees

Number	Institution	Category	Date	Location
1	KZN Wildlife	Conservation	7th May	Pietermaritzburg
2	African Conservation Trust (ACT) - NGO	Conservation	7th May	Pietermaritzburg
3	uThukela District Municipality (UDM)	Land Use	10th May	Ladysmith
4	Department of Agriculture and Environmental Affairs, National (NDA)	Regulation	11th May	Pietermaritzburg
5	Department of Rural Development and Land Affairs, National (DRD&LA)	Regulation	16th May	Pietermaritzburg
6	Ingonyama Trust Board (ITB)	Land Use	17th May	Pietermaritzburg
7	Traditional Authority (TA) - Amazizi	Land Use	28th May	Amazizi
8	Traditional Authority (TA) - Amangwane	Land Use	29th May	Amangwane

Number	Institution	Category	Date	Location
9	Bergville Farmer Association	User	30th May	Bergville
10	Department of Agriculture and Environmental Affairs, Provincial (DAEA)	Land Use	30th May	Ladysmith
11	Farmer Support Group (FSG), UKZN	Research + User	7th June	Pietermaritzburg
12	Department of Economic Development and Tourism, Provincial (DEDT)	Research	29th June	Durban
13	Department of Water Affairs (DWA)	Land Use	29th June	Durban
14	Okhahlamba Local Municipality (OLM)	Land Use	3rd July	Okhahlamba

The results are presented according to the criteria of the first evaluative question. The numbers refer to those of the criteria and indicators.

Box 1: Initial Assessment Results

1. Normative

1.1. Participants understand the importance of integrated natural resource management (INRM) for themselves and for others and integrate it in their list of priorities

The first exercise of the initial cognitive mapping aimed at understanding which principles interviewees evoked to justify their actions, by using the sociological work of Boltanski and Thevenot (1991). Each sentence proposed in this exercise thus refers to one of the six "common worlds" highlighted by those authors. Interviewees were asked to attribute a maximum of five points between those. Table 4 shows the overall ranking of those sentences according to interviewees' answers, while graph 1 represents the choice of world made by each interviewee.

Table 4: Interviewees' aggregated answers to exercise 1-cognitive mapping

Sentences	Points	Chosen by (in nb of interviewees)
Making the most of the services provided by these resources require to better control the related hazard and uncertainties (*Industrial world*)	14	9
It is our collective duty to transfer the environment for the next generations (*Civic world*)	12	9
It preserves resources that bring important economical benefits for the catchment (*Commercial world*)	12	7
By preserving the resources, it is easier for all to have access to them and benefit from them (*Commercial world*)	11	9
It is important to protect the landscape feature that makes of our catchment famous (*Opinion world*)	7	6
The resources are part of the tradition and culture of the people that live there and are necessary for them. It is important to maintain and transfer the traditions (*Domestic world*)	7	5
The nature/the environment have been given to us and we must respect this gift. (*Inspiration world*)	5	4
It is best to avoid a destruction that will give a bad reputation of the area (*Opinion world*)	2	2
In the future, you do not know what resources can have important economical importance (*Industrial world*)	1	1

The two municipality representatives, as well as the two national government representatives and one of the three provincial department representatives, chose the sentence related to the civic world. The two TA leaders and the

representative from ITB also chose this sentence, although the former seemed to be more concerned by the opinion world and the latter by the commercial world. Both representatives from the DEDT and DWA chose the sentences related to the industrial and commercial worlds, and the former also insisted on the opinion world, which is interesting for a tourism representative. While the commercial farmer strongly insisted on the sentences related to the commercial world, and to a lesser extent to the industrial world, the subsistence farmer representative (FSG) chose the sentences related to the opinion and domestic world, and also chose, but with lower points, the commercial world. Apart from their focus on the civic world, official representatives (from municipalities, national department, and the DAEA) also chose sentences related to the commercial and/or industrial worlds. Both interviewees working closely with the environment, one for an NGO, the other for KZN wildlife, were concerned with the commercial world, but the former was also concerned with the domestic world while the other chose two additional sentences related to the industry.

Overall, the commercial, civic and industrial worlds seem to dominate. Boltansky and Thevenot (1991) show that usually, individuals using the industrial world to justify their actions blame those from the civic world for their inefficiency, and commercial world for their lack of long-term vision and excessive consumption; the civic world strongly disagrees with the commercial world, because of the opposition between the common goods and private interests, and blame the "technocrats" from the industrial world; the commercial world blames the civic one for its interference in private affairs, and the industrial one for its rigidity, lack of adaptation.
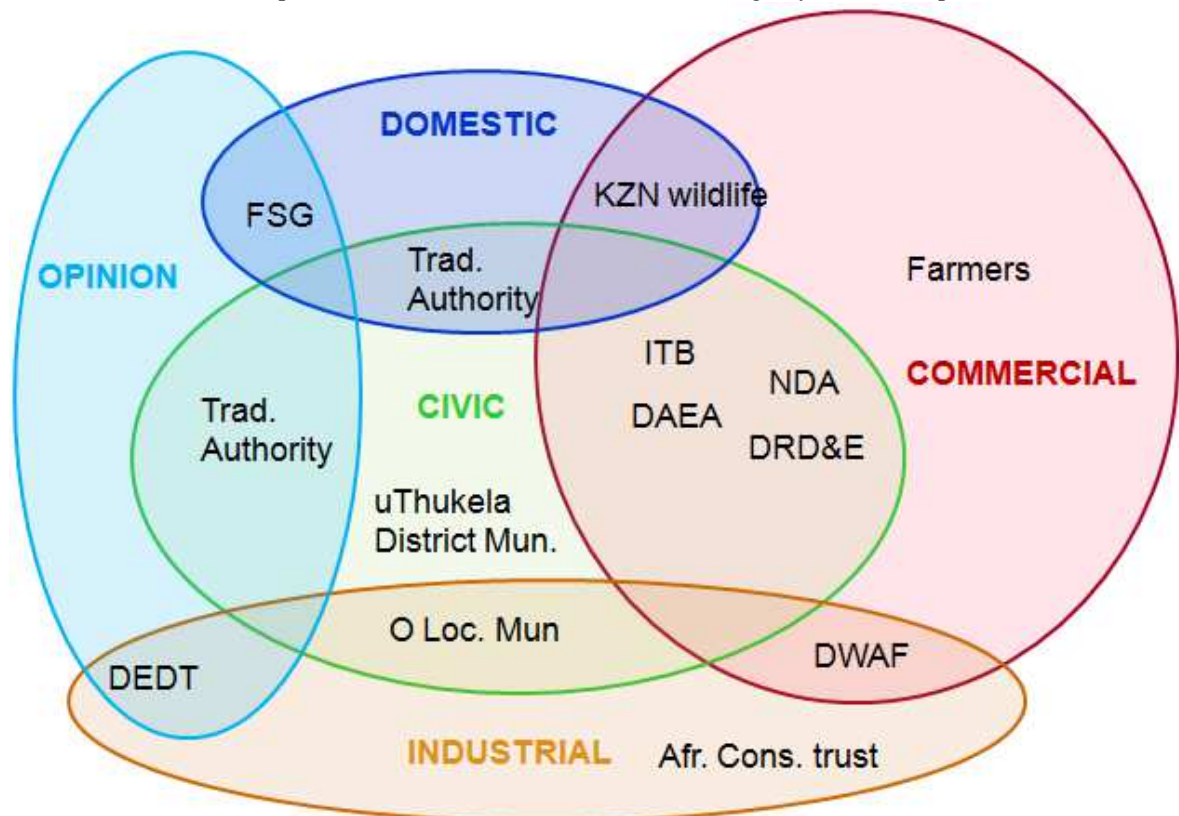
Figure 1 : Interviewees' choice of world

Four interviewees who chose sentences from the civic and commercial worlds (two official representatives and two TA leaders) were asked in the discussion part if their emphasis on service delivery and/or job creation was compatible with the management of natural resources. They all answered positively, but one of them insisted on the fact that "*people were first*" and that the environment came second. The three others answered that INRM would help to create jobs, attract tourists, and as a result alleviate poverty. **This tends to show that although**

those individuals affirm the importance of INRM, they are more concerned by other priorities and do not fully acknowledge the interdependency between INRM and their other priorities. This tendency seemed to be valid for all the official representatives, except for the one from the DEDT. **This person, as well as the NGO representative, who both gave high scores to the sentences related to the industrial world, seemed to understand the crucial importance of the environment for human survival**: "*Biodiversity is incredibly valuable... We need to preserve environmental services, without them we will all be in big troubles*". This tends to indicate that the industrial world is more appropriate for INRM. Both farmer representatives insisted on the importance of managing well and understanding the environment to be able to continue their practices: "*We are governed by nature, by rainfalls, by climate, because we are farmers. And we have to work with those two elements, otherwise we cannot survive.*" but less on the genuine importance of the environment for all humans. **Overall, if all interviewees showed interest in INRM, most of them have other priorities which they seem to consider of higher importance, and their justification for implementing INRM relates to their other priorities, how INRM can help for job creation and service delivery for instance. This did not seem to be the case, however, or to a lower extent, for the interviewees' part of the conservation and research categories.**

1.2. Participants improve their understanding and awareness of the state of natural resources

Thirteen of the fourteen interviewees were asked, "How would you qualify the state of natural resources in the uThukela catchment"?

38 % of the respondents declared being worried about it, 15 % said it was under pressure, 8 % that is was degraded and 8 % that it was not good. Overall, it shows that 69 % of the interviewees are concerned about the state of the environment in uThukela. The remaining 31 % alternatively answered that "it depends", "it is pristine", "it is a strong catchment" and that "it was not that bad". Respectively, those less concerned people were representative for the FSG, ITB, DWA, and NDA. **It tends to confirm the hypothesis that people working far from the area concerned have a poor understanding of this environment**, as those four representatives work either in Pietermaritzburg, or in Durban but are not based in uThukela.

The 9 other interviewees, however, were mainly concerned about the resource they have to work with daily. For example, the UDM representative, responsible for water and sanitation stated: "*Most of our water treatment plants are very old and they are running far beyond designed capacity. I think there is a lot of untreated water that is going back into the rivers and into the water systems. That would be my main reason from the uThukela perspective, why that's quite worrying*". The representative from the DRD&LA stated: "*I would say it's under tremendous pressures (because of) overdevelopment. When we look at development, we've got to realize that it's the carrying capacity of that land, how can it deal with its surge waste, with availability of water. It's impact on that*". The commercial farmer stated: "*...but that's not happening up there, it's being... degraded. So they've got to stop the degrading, and the erosions, and build it up again. And they could actually have a very productive area*".

Overall, even the interviewees who said they were concerned, focused on the resource they know better and lacked a global picture of the degradation process happening in the area.

1.3. Participants recognize that improved cooperation and long-term thinking are necessary to manage natural resources

All interviewees emphasised the importance of working together and improving collaboration to manage natural resources in the discussion part. That might be biased by both the fact that when we introduced the project, and INRM, interviewees clearly understood our emphasis of getting everyone together, and by the fact the one exercise of the questionnaire was designed to ask interviewees who they should improve their collaboration with. Concerning the long-term thinking value, which was contrary to the importance of collaboration and never mentioned in our introduction or in the questionnaire, only 4 out of the 14 interviewees spontaneously mentioned its importance in the discussion part: the representatives from KZN wildlife, DEDT, and the two national departments. For example: "*People are not looking at the long-term, they are looking at the tiny little issues, but*

they are not looking at the cause of all that, at what the result is going to be of their actions".

This highlights the fact that people with commercial values (farmers/users), the official representatives directly concerned with service delivery, as well as the TA leaders (both in the land use category) busy with everyday tasks, might lack a long-term vision. It is confirmed by Bourblanc's findings (2012), showing that municipalities are faced with a crisis delivery situation.

2. Cognitive

2.1. Participants agree on the main problems and their causes

One exercise of the questionnaire consisted in asking interviewees: "What are the main issues to solve or negotiate to achieve integrated natural resources management in the territory studied. What are the causes and possible solutions?" They were given space to write a maximum of six causes, three issues and eight solutions. Twelve of the fourteen interviewees completed this exercise. The remaining two found it too complicated and asked me to come back on those points during the discussion part. To present the overall results, world clouds were made combining the answers of all respondents for each category (Figure 1 au-dessous).

The issue evoked by most respondents was erosion and/or land degradation (four respondents). Two respondents mentioned wetlands degradation. Two mentioned the lack of a firm leadership. Overgrazing was also mentioned twice. Different political and institutional issues were also noted, such as a lack of capacity, lack of a common plan, and lack of a common goal. Socio-economic issues, such as lack of education (twice), poverty, unemployment, urbanisation, the apparent conflict between development of NRM, and the lack of access to land and water were also evoked.

As for the causes of those issues, five respondents mentioned a lack of education and/or knowledge, four poverty and/or unemployment, three political and/or tribal conflicts, three the lack of capacity within government employees (lack of human resources and/or funds) and three the lack of ownership. Other socio-political issues, such as over-population, the apartheid legacy, the lack of political will, the inadequacy of the current policies and different political agendas were also mentioned. Some "technical" issues were evoked, such as overgrazing (twice), harvesting, the felling of indigenous trees, uncontrolled burning and the use of chemicals.

From those results, we can see that the distinction between causes and issues was not clear for all the respondents. It also might have been interesting to differentiate between direct and indirect causes, as respondents mentioned both. **Overall, interviewees seemed to be concerned with poverty and unemployment, which both afflict this area.** Two of them actually only evoked this type of socio-economic, as well as political, issue, and did not mention environmental problems or causes at all. No one mentioned water quality or availability as an issue, yet it is apparently an objective in some sub-catchments of the district (Matthews & Catacutan, 2012).

Individually, interviewees focused on the problems they were directly confronted with in their daily work or activities. For example, the DAEA representative noted these issues: "*Environmental degradation; Development in sensitive environment; Illegal sand mining; River diversion and wetland degradation*"; the FSG representative: "*Access to water; Low Yield; Access to land*"; the OLM representative: "*No integrated environmental management plan; Capacity (lack of people); No proper SDF (Spatial Development Framework)*". As for the causes which interviewees mentioned, they were also related to problems that directly affected them personally in their work.

2.2. Participants agree on some possible solutions

The solution recorded by most of the interviewees was training and/or capacity building (six interviewees). Then came education (five), job creation (sometimes specified green jobs) and/or improvement of the economic situation (four), promotion of sustainable development and/or technique (three), awareness (two) and allocation of funds (two).

Several interviewees also wrote political solutions, such as environmental law enforcement, having a common

goal, writing a district environmental planning, develop a programme to understand people's needs and establish a body to facilitate carbon-trading. More technical solutions were also mentioned, by fewer interviewees however, such as limiting growth inside the park, a soil reclamation project, fire breaks, use of rain harvesting tanks and fencing fields.

Causes

Problems

Solutions

Figure 2: Respondents' understanding of the causes, issues and solutions for the uThukela District Municipality

Similarly to the causes, we can also say for the solutions that they seem to be related to what individuals were personally confronted with and aware of. Overall, we can say that **some solutions seemed rather to be "buzz words", like training and awareness, than solutions specific to the area.** Most interviewees focused on economic and political issues rather than on practical solutions; those which will be implemented on the ground to stop the degradations.

2.3. Participants develop awareness of the tools available for INRM and their value

As mentioned for the previous indicator, **very few interviewees mentioned technical solutions and did not seem to be aware of the range of tools available to rehabilitate the area**.

3. Operational

3.1. Participants understand the interest of and show willingness to change their practices

No interviewee spontaneously mentioned that he was eager to change his practices.

When asked in the discussion part about the problems they were faced with in their everyday work, six interviewees mentioned a lack of resources, financial and/or human. Four noted political issues or conflicts. The ITB representative wished his institution were recognised by other stakeholders. One individual mentioned a lack of reactivity from other departments; another the problems he had in accessing rural communities; and lastly, an interviewee stated that information was not shared properly. **The overall feeling from government representatives was that they did not have enough resources, human and financial, to consider INRM more thoroughly**.

In the discussion part, the commercial farmer was asked to comment on his practices. He said he was happy about the fact that the most commercial farmers were now doing no-till, and that farming required to continuously learn from your ancestors, so that farmers were always trying to do their best. Other meetings with commercial farmers revealed that most of them are using pesticides, chemical fertilizer and GMOs, but are not eager, so far, to change that because they are concerned about productivity, and without subsidy from the government, they feel they need to use those products.

As for the FSG representative, he said that the biggest challenge for subsistence farmers was to adapt to climatic conditions, and that the help they received from the government was not adapted. For instance, the seeds they receive from the government are not always marked, so those farmers do not know which fertilizer to use. He also said that the FSG was starting a programme to implement more sustainable techniques within the district.

3.2. Individuals and institutions in the study area actually change their practices to manage better natural resources - *Not relevant for an initial evaluation.*

3.3. The capacity of the meso-scale institution staff is developed to the point that it can effectively integrate NRM

The UDM representative said that **the water staff lacked training and did not have enough means to implement the appropriate solutions**: *"The water staff is not really trained to be environmentally sensitive. When they get to a place that is overflowing, their solution is to dig a trench to the nearest water course, you know instead of looking at ways to address without neglecting the environment, and I think in their minds they are getting rid of the problem, but they are not thinking of the people downstream, of the environment that is being affected... I think there's also too much pressure on them. There's not a big enough staff component, there's a shortage of vehicles, there's always a complaint about too much overtime, there's poor management of staff, there's financial constraint that impact the service delivery. Most of the time there's not enough people. You can see it with leaks, with normal water leaks. Water would leak from a leaking point sometimes for months before it gets addressed. It tells you that there is not a good management, there's not enough resources to*

address what should be done". During the meeting, this representative also indicated that he was currently trying to fill eight different positions, as the government did not appoint anyone for the vacant posts.

4. Relational

4.1. Participants show desire to improve their collaboration with other stakeholders

In the questionnaire, interviewees were asked "what are the other actors/institutions/organizations/stakeholders group involved in INRM in the territory studied with whom you interact regularly? With whom do you interact on an occasional basis? With whom do you seldom, if ever, interact?"

As shown for the normative criterion, all interviewees stated that improving collaboration was important. Two interviewees, the two TA representatives, stated that they collaborate well with the main stakeholders, and could not think of anyone with whom they interacted occasionally on a seldom basis. Two other interviewees, the KZN wildlife and DWA representatives, stated that they could not think of an important actor they did not (or on a seldom basis) interact with. Overall, all the interviewees had more problems thinking of stakeholders they interacted with occasionally or seldom, if ever, than of stakeholders they interacted with regularly. **This raises concerns about the fact that although interviewees stated to understand the importance of collaboration, they had not think thoroughly so far of people they should improve their collaboration with**.

Three interviewees mentioned that they seldom, if ever, interact with farmers, and two with communities. Other stakeholders, with whom the interviewees seldom, if ever, interact, include land owners, the tourism industry, NGOs and some departments. Five interviewees stressed that they collaborated with municipalities (local and/or district) only on an occasional basis. Two interviewees collaborated on occasional basis with NGOs, two with the DWA, and two with ITB. **Overall, it seems that interviewees mostly had problems in collaborating with municipalities, farmers, rural communities, and NGOs.**

Interestingly, the commercial farmer representative stressed that he never collaborated with subsistence farmers, and the FSG representative that he never collaborated with commercial farmers. The NGO representative never collaborated with municipalities. Both municipality representatives had problems interacting with NGOs. The district representative also had problems with colleagues at work, and the local representative with other municipalities (the other local municipalities within the district and the district municipality itself).

In the discussion part, some interviewees were asked if they had difficulties interacting with the stakeholders they mentioned in the last category, and whether they would like to improve their collaboration with those stakeholders. The NGO representative answered that he did not wish to improve its collaboration with municipalities, because "*my fear in interacting with local and district municipalities, you get into the whole political arena, you get all sorts of stumping blocks that could throw your project off course. So if possible, to be quite frank, (my organization) tries not to deal with municipalities, if we can*". As for the NDA representative, who has problems interacting with the Department of Mineral Resources, he said "*we need those people from the department of mineral resources. And when you try to communicate with them, it is very difficult. Even when you'll get someone, talk to someone, he will promise, but at the end of the day, nothing is done*". The commercial farmer said that his organisation had offered a few times to help the subsistence farmers, but that they never took this offer up.

Overall, for the interviewees who acknowledged that they have difficulties interacting with some other key stakeholders, some of them were not willing to improve their collaboration, and none of them stated that they have a way forward to improve such collaboration.

4.2. Participants develop a better understanding of the role and activities of other participants and their institutions

Ten interviewees were asked in a discussion part how they understood the role of the district and/or local municipalities in INRM, and if they knew whether they were faced with any problems playing this role. The

question was asked for the district because the Afromaison case study has identified this institution as the meso-scale institution that the project has targeted.

All the government representatives seemed to have a good understanding of the role and the problems of the district and/or local municipalities. The OLM representative was well aware of the district municipality's mandate; the representative from the DWA knew that the district was "*under-capacitated*", in terms of the volumes their water treatment plants could treat; the representative from the DAEA knew that local municipalities had problems in dealing with environmental issues; and the representative from the DRD&LA knew that municipalities were busy dealing with service delivery and could not dedicate much time or resources for NRM. **The exception was the representative from the NDA,** dealing with regulation, who admitted having recently learnt that local municipalities did not have someone in charge of NRM, and who was irritated about the fact that in every meeting, municipality representatives just ask for funds but do not want to spend anything.

The FSG representative also seemed to know the role local municipalities were supposed to play, referring to the IDP, and knew that they could not do so because of a lack of funds. The commercial farmer, however, admitted that he did not know what the municipalities could do to improve the situation. The NGO representative said that he thought that municipalities should have a big role to play in Afromaison, but that he "*did not know enough about the district municipality*" to make other comments. One traditional authority leader did not seem to know the role of municipalities; he said that traditional authorities were more appropriate to act on NRM because municipalities were not close enough to people, did not know about environmental issues, and did not really seem to care. As for the representative from ITB, he did not understand why municipalities did not help in NRM because they were supposed to be helped by the province.

4.3. Participants develop new formal and/or informal relationships or forum that involve all key stakeholders
Some meetings involving different categories of stakeholders already exist, notably:
- The municipalities have recently been invited to help in managing the world heritage site with KZN wildlife, by their incorporation in **the Drakensberg Buffer zone technical committee**, which already involved NGOs and some governmental departments.
- **The Synergy meeting** regrouped mainly NGOs, communities, KZN wildlife and private consultants to discuss the implementation of their projects in uThukela, in order to make sure the same project is not implemented twice, by different institutions for instance.
- **Water user associations meetings** involve mainly water users associations, KZN wildlife, the DWA and the DAEA.

In the discussion part, the KZN wildlife representative indicated that his institution had a platform to engage with stakeholders for different issues. He noted, however, that "*as far as I'm aware, the platform is there for us to engage, whether we engage constructively, or efficiently, I think that's a separate method because it depends on what we are discussing*". As for the OLM representative, he indicated going to the buffer zone meetings and being happy about this platform. During one of the synergy meetings we observed, participants complained about the government representatives and politicians, not present at this meeting, who were blamed for their lack of long-term vision.

If different platforms already exist, it seems that they are all focusing so far on specific issues, and involving a particular type of stakeholders.

Overall analysis for the initial assessment

Although all interviewees showed interest in INRM, they seem to lack an overall understanding of its rationale and benefits. They also lack a global vision of the state of natural resources in uThukela. If they seem to understand the importance of cooperation, few of them mentioned the importance of long-term vision. Interviewees also lacked a precise understanding of the main environmental issues, and of the practical solutions that could be implemented.

It was difficult to assess the current practices of the different stakeholders. Ideally, it would have been interesting to spend one full day with each of them to follow them in their work and daily activities. However, we found that interviewees did not appear to see the necessity to change their own practices. And if they understood the value of cooperation, they did not really know how to improve their relations with other key stakeholders.

Overall, it seems that Afromaison could have an important role to play, as there is room for improvement in all the criteria. However, each stakeholder has different perceptions and practices. If we try to gather the needs by category of actors, it seems that:
  - Stakeholders interviewed who are part of the "**Land use/ development: planning and authorisation**" category lack a global understanding of the environmental issues in the District and a long-term vision, but understand better the problems that government officials are faced with;
  - The issues seem somehow similar for the stakeholders interviewed from the "**Natural resources: regulation**" category, although they might have a worse understanding of the local problems, as they work further away from the area;
  - The two interviewees from the "**Conservation and Natural Resource Management Programmes**" category seemed to acknowledge better the importance of INRM, long-term vision and to understand better some of the local issues, but understood less the importance of improving their cooperation with other stakeholders;
  - As for the "**Research and Monitoring**" category, the two people interviewed had very different perceptions, one being closer to the previous category and the other to the users;
  - The two "**Users**" did not appear to fully understand the need to change their practices, nor to understand accurately the role of municipalities and the importance of improving their collaboration with them, but had a better understanding of some environmental issues.

Workshop monitoring

This first workshop held under Afromaison in South Africa involving various stakeholders took place on the 17th of July 2012 in Drakensville. The main objective of this workshop was to make stakeholders agree on a common vision for the uThukela District municipality. It included both plenary and groups sessions.

The morning was dedicated to the presentation of information related to the environmental context in the DM, as well as the explanation of some environmental concepts. Three formal presentations were thus made by members of the organising team, regarding the overview of the context, ecosystem services and possible scenarios. Each was followed by a group discussion, where each participant had the possibility to comment, question, add to and challenge the information presented, as well as to directly react to other participants' comments or questions.

Provided with this information, participants in the afternoon had the task to list and prioritise challenges by area. They formed three groups, one each for the world heritage site, the buffer zone and the outside area. After this activity, each participant ranked individually the activities which in his or her opinion should be prioritised for each of those three areas. A discussion of those results concluded the day.

Contrary to the initial assessment, the goal of this workshop monitoring is not to evaluate the initial state of each indicator, but to check whether this first workshop had already engendered some changes in participants' perceptions. The objective of this monitoring

is also to understand if some elements of the process can help us understand the changes observed.

In order to attempt to observe those changes, sources used to monitor this workshop were the questionnaires ex ante and ex post, distributed to all participants, as well as the expert observation. The initial assessment was not used to compare those perceptions, because only two of the initial interviewees participated in this first workshop. Given the fact that the comparison is made using participants' comments right after this workshop, it was not relevant to assess some indicators, such as actual changes in behaviour.

The list of the institutions represented by the participants, as well as those of the respondents to the questionnaire ex ante and ex post, is presented is Table 5 au-dessous.

Table 5: Afromaison 1st workshop participants and questionnaire respondents

Participants (29)	Ex ante questionnaire (21)	Ex post questionnaire (18)
KZN Wildlife (7)	KZN Wildlife (6)	KZN Wildlife (2, *1b*)
ACT/Community (3)	ACT/Community (1)	ACT/Community (2, *0b*)
Commercial Farmer (1)	Private Institution (2)	Commercial Farmer (1, *0b*)
Private Institution (2)	Local Municipality (1)	Private Institution (2, *2b*)
Local Municipality (2)	District Municipality (1)	District Municipality (1, *1b*)
District Municipality (1)	DWA (2)	DWA (1, *1b*)
Working for Water (1)	DAEA (4)	DAEA (4, *4b*)
DWA (2)	CogTa (2)	CogTa (2, *2b*)
DAEA (5)	UKZN (1)	ITB (1, *0b*)
CogTa (2)	*Confidential (1)*	UKZN (1, *1b*)
ITB (1)		*Confidential (1)*
UKZN (1)		

Note: 1b: number of participants who answered both questionnaires*; CogTa: Department of Cooperative Governance and Traditional Affairs (KZN)*; UKZN: University of KwaZulu-Natal.*

Box 2: Workshop outcomes assessment

1. Normative
1.1. Participants understand the importance of INRM for themselves and for others and integrate it in their list of priorities
Participants were asked in the ex ante questionnaire to rank from 1 to 6 the activities they would like to see prioritised in the uThukela District Municipality. The activities proposed were: "*Deliver services; Create job opportunities; Maintain traditions; Attract tourists; Maintain or upgrade existing infrastructures; and Preserve Biodiversity*". **Overall, biodiversity was ranked first 11 times, services 7 times, infrastructures 6 times, jobs 5, traditions 2 and tourists were never ranked first.** NB: some respondents ranked first two or more activities.
The two representatives from the DWA ranked first biodiversity, second infrastructures, and third services. All the KZN Wildlife representatives also ranked biodiversity first, then jobs, and in third position, services or tradition. The two CogTa representatives put biodiversity first, tradition second, and tourists third. The ACT representative placed biodiversity first, then jobs and infrastructures.
The two municipality representatives, however, ranked first infrastructures, then services or jobs, and biodiversity only came in the 4th and 6th position. As for the two private representatives, they ranked jobs and services first, and biodiversity came in the second and third place. Most of the DAEA representatives ranked infrastructures first.

In the ex post questionnaire, participants were asked "*After this workshop, why do you think it is important to integrate the management of natural resources?*"

Some respondents seem to have understood the crucial importance of INRM in relation to their priorities. For instance, the district municipality representative noted: "1) Will produce cleaner water/cut purification costs; 2) sustainability of the district as a whole depends on it; 3) will affect the livelihood of marginalized communities". One private representative noted "less wastefulness of resources". On the contrary, some respondents were more general in their answers: "for future generations; economic development; to reduce climate change". **Although those answers indeed indicate why INRM is critical, it is not clear that those respondents understood why it has to be applied specifically in the uThukela District Municipality**.

1.2. Participants improve their understanding and awareness of the state of NR

Eight of the eighteen respondents spontaneously mentioned in the ex post questionnaire that, thanks to this workshop, they had developed a better understanding of the state of the natural resources in the uThukela District Municipality and/or of the activities that are undertaken there. Those eight respondents were the two private representatives, three representatives from the DAEA (KZN), the district municipality representative and one community member, the last one being anonymous.

1.3. Participants recognise that improved cooperation and long-term thinking are necessary to manage natural resources

Cooperation was spontaneously mentioned in the ex post questionnaire by two representatives of KZN Wildlife, one private, two DAEA, two community, and one CogTa.
Five out of the six respondents who answered both questionnaires and mentioned cooperation in the ex post questionnaires had already mentioned it in the ex ante questionnaire. Only the representative from a private institution had not mentioned it previously.

Importance of a long-term vision was not explicitly and spontaneously mentioned by any respondent in the ex-post questionnaire.

2. Cognitive

2.1. Participants agree on the main problems and their causes

Participants were asked in both questionnaires "*What aspects seem the most critical for INRM in the territory?*"
Overall, **in the ex ante questionnaire, respondents answered: coordination** (five respondents; communication (five); education (four); awareness (three); funding (three); erosion (two); irrigation (two). Also mentioned were training, waste and conflicts.

Overall, **in the ex post questionnaire, respondents answered to the same question: water supply** (four); water use (two); education (three); cooperation/involvement (three); overgrazing (two); waste (two); capacity building (two).

To check if those changes were due to the fact that respondents to the two questionnaires were not the same, an individual comparison was made for the 13 respondents who answered both questionnaires. Changes in their answers were classified according to four subjective categories:
- no change: same problems evoked, even though formulation might slightly differ.
- slight change: addition of one problem not previously mentioned.
- moderate change: addition of two problems.
- high change: the problems mentioned differ completely.

According to this classification, there was no change in the answers of the UKZN representative and in the answers of one DAEA representative. Two other DAEA representatives' answers showed slight changes, and the last one moderate changes. The answers of the district municipality and of one of the CogTa

representatives demonstrated slight changes. The other CogTa representative and the KZN Wildlife representatives demonstrated moderate changes. The DWA representatives, as well as the two private representatives, showed high changes.

As an example of high changes, the answers of a private representative: ex ante *"Educating industry to use natural resources in a more sustainable way"*; ex post *"Effective water management; Overgrazing; Sustainable farming"*. **It thus seems that there were indeed important individual changes for this cognitive indicator, as the general as well as individual focus moved from general socio-economic issues to specific environmental problems.**

2.2. Participants agree on some possible solutions

Participants were asked in both questionnaires: "*What options would you recommend to deal with those issues?*" Overall, **in the ex ante questionnaire, respondents answered: education** (six); communication (four); cooperation and/or coordination (four); design of plans for INRM in the District (three). Also mentioned were: awareness, economic development, funding and rehabilitation. Overall, **in the ex post questionnaire, respondents answered: education** (five), communication (three), funding (three), legislation and/or enforcement (three) design of plans for INRM in the District (three). Also mentioned were; institution building, reversing degradations, and removal of alien plants.

The same classification as for the previous indicator was used to track individual changes. The district municipality, the UKZN of the two CogTa representatives, demonstrated no change. The KZN Wildlife and a DAEA (KZN) representative's answers showed slight change. Two DAEA (KZN) representatives and the DWA representative showed moderate change. One private and one DAEA (KZN) representative showed high changes.

The changes, both at an individual and common level, for the participants were much lower than for the previous indicator. This finding is very interesting as the purpose of this workshop was indeed to get a common vision, hence to discuss the main issues, but not to discuss the solutions.

2.3. Participants develop awareness of the tools available for INRM and their value *Not assessed – not the purpose of this workshop*

3. Operational

3.1. Participants understand the interest of and show willingness to change their practices

In the ex post questionnaire, participants were asked: "*Do you think this session can modify your daily action or your comportment, your working or procedure? In what way?*"

The farmer, the two community representatives, the two representatives of private institutions, the representative from the UDM, the four from the DAEA (KZN), the one representative from ITB, and one representative from CogTa answered positively. The two representatives of KZN Wildlife, the one representative of UKZN, as well as the one representative from the DWA, answered negatively. **Of the twelve positive answers, three respondents had already noted in the ex ante questionnaire that they had changed they practices in the last six months.** Those who clarified their answers specified that they would change their practices "*because they gained more knowledge*" (three respondents) and "*because they want to share their ideas and/or knowledge*". **Although most respondents affirm being more sensitive to environmental issues and eager to share their recent knowledge, they do not seem to have a precise idea yet of what they individually need to modify in their own behaviour to implement efficiently INRM and to help improving the state of natural resources in the uThukela District Municipality.**

3.2. Individuals and institutions in the study area actually change their practices to manage better natural resources *Not relevant for the evaluation of this workshop*

3.3. The capacity of the meso-scale institution staff is developed to the point that it can effectively integrate NRM *Not relevant for the evaluation of this workshop*

4. Relational

4.1. Participants show desire to improve their collaboration with other stakeholders

In the ex post questionnaire, participants were asked: "*After this workshop, do you think the institution you represent should collaborate more closely with some partners?*"

Of the 18 respondents, 16 answered positively, and the remaining 2 did not answer this question.
6 respondents specified the partners they would like to collaborate more closely with. The comparison of their answers to the ex ante questionnaire, where participants were asked if they were attending any meeting in the area, show that those 6 respondents mentioned partners they indeed do not seem to be regularly in contact with. For instance, the district municipality representative mentioned the farmers and communities, and one DAEA representative mentioned private industries.

However, most of the time, the answers of the respondents remained vague. One respondent representing the DAEA stated that "*we'll understand which institutions we can work with to improve our objectives as a Department and our mandate*". **This lack of understanding of which institutions in particular participants think they should improve their collaboration with seems to be the tendency for most respondents**.

Moreover, in the initial assessment, the UDM representative also mentioned that he wanted to improve its collaboration with farmers and communities, which tends to indicate that **those changes might not be due to the first workshop,** but that participants already thought before this workshop that they should collaborate more closely with some partners.

4.2. Participants develop a better understanding of the role and activities of other participants and their institutions *Not assessed: no specific question was designed to assess this indicator for this workshop.*

4.3. Participants develop new formal and/or informal relationships or forums that involve all key stakeholders *Not relevant for the evaluation of this workshop.*

Exploratory process

Respondents' objectives and satisfaction
Stakeholders were, overall, satisfied with this workshop. Twelve respondents indeed indicated that this workshop answered their expectations, three that it exceeded their expectations, one that it partly answered their expectations and two of the respondents did not answer this question. Of concern for us is the fact that in the ex ante questionnaire, more than half of the respondents indicated that their objective by participating in this workshop was to learn about the concept of INRM. In the ex post questionnaire, most of the respondents also indicated that they were satisfied with this workshop because they learned a lot, while only a couple of people were satisfied because they could see that participants seemed to be really committed to this topic. This tells us that the participants seemed to have slightly different objectives than we do: while the organising team expected them to reach a common vision, which would be the first step in implementing INRM in the area, it seems that participants seemed to want to learn more about INRM, and did not expect to participate themselves in the elaboration of an INRM strategy for the District. This indicates that communication about the project could probably have been improved before the workshop, because most participants did not appear to have clearly understood the reason for their presence at this meeting.

Overall Analysis for the outcomes

It is not easy to try to detect normative changes only with questionnaires. However, almost half of the

respondents admitted themselves that they had gained a better understanding of the environmental situation in this area thanks to this workshop. It appears that the respondents who gained more knowledge and started changing their perceptions were notably stakeholders busy with planning and authorisation, as well as representatives from private industries. The major change we have been able to detect thanks to this monitoring was the better understanding that respondents seemed to have gained after the workshops of the environmental problems in this area, which is related to the cognitive criterion. We did not observe such a change for the understanding of the possible solutions, and possible solutions were not evoked during this workshop. As for the operational and relational criteria, they were of course very difficult to assess in only one day. However, our findings tend to show that if respondents understood the importance of changing their practices and improving their collaboration with other stakeholders, they did not really know what to change, neither did they have an idea of how to do so.

As for the evaluation of the process for this first workshop, the answers of the eighteen respondents to the first exercise of the ex post questionnaire, as well as the expert observation, were used. In this first exercise (cf Figure 3 au-dessous), twenty-two sentences were written, all assuming that the process was very good, and the participants were asked if they strongly agreed, agreed somewhat, neither agreed nor disagreed, disagreed somewhat, or strongly disagreed which each sentence. The expert observation includes the Bale's IPA as well as observations made before, during, and after the forum.

The respondents were, overall, satisfied with the process. We found that there were two categories of respondents: those who only used "I strongly agree" and "I agree somewhat", and those who used the first four answers. Because we do not know if the first category of respondents was really satisfied or if those respondents did not "dare" making negative comments, we thought that it would be more informative to compare the respondents' answers between sentences rather than to try to give a score to each sentence independently according to respondents' answers.
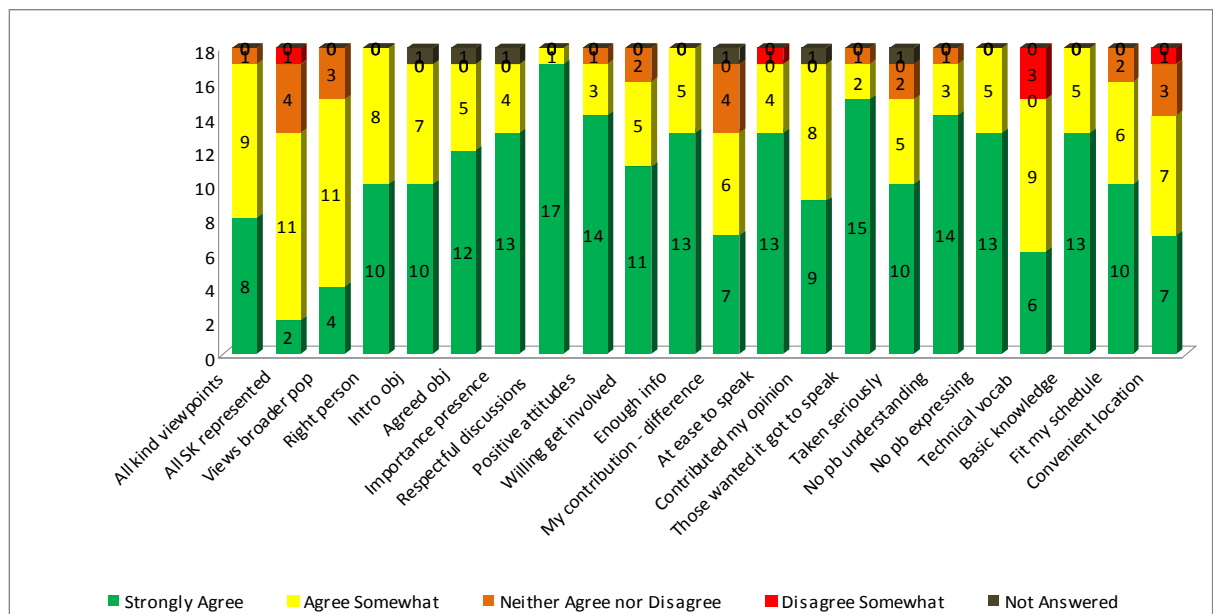

Figure 3: Respondents' answers to process questions – ex post questionnaire

On average, respondents answered per question: 11 "Strongly Agree", 6 "Agree Somewhat" and 1 "Neither Agree Nor Disagree". The comparison will be made regarding the number of "I strongly agree". For example: for the first sentence, respondents answered 8 "Strongly Agree". As the average is 11, we will say that respondents agreed less than the average with this sentence.

Box 3: Workshop process assessment

1. Representativeness

1.1. Enough effort was made to get the right participants
Observations made at the INR prior to the workshop showed that the CS leader was faced with difficulties inviting participants. The workshop was postponed once because of the lack of invited answers to the email invitation. The second time, more people were invited, the invitations were sent earlier and calls were made to make sure that people had received the invitations. Fifty-eight invitations were sent, and eventually twenty-nine people attended the workshop. Representatives from twenty-one institutions were invited, and fourteen institutions were represented at this first workshop. However, institutions were represented very unequally. For example, seven members of KZN Wildlife attended this workshop but only one commercial farmer. Moreover, sixteen out of the twenty-nine participants had not been directed invited but were sent to represent their institution by other people the INR had invited. Overall, it is not clear whether more effort could have been put to inviting the "right" participants, as it was very difficult to contact some people, and as some people invited eventually declined the invitation on the very day of the workshop.

1.2. The participants are representative of the concerned population
"*At this meeting, participants accurately carried views of the broader population concerned*": respondents agreed less with this sentence than in average.

1.3. All the interests are represented
The sentence "*At this meeting all the stakeholders were represented*" was the sentence with which respondents agreed the least out of the twenty-two sentences proposed. Some key stakeholders were indeed missing, such as subsistence farmers. Overall, the sentences related to "representativeness" were those with which respondents agreed the least.

2. Legitimacy

2.1. Associations recognize and validate the discourse of the actor which represent them
Not evaluated for this workshop.

2.2. Every participant recognize themselves and other participants as legitimate
To the sentence "*At this meeting I felt I was the right person to represent my organization/institution*", respondents agreed a bit less than in average.

The Bales' IPA showed that only one of the sixteen participants which had not been directly invited made one or more interventions during this workshop.

3. Transparency

3.1. Objectives are clearly exposed and agreed by the participants
For the sentences "*The objectives of this meeting were clearly introduced*" and "*I agreed upon those objectives*", respondents overall agreed in the average.

3.2. The role of participants is clearly exposed and agreed by the participants
To the sentence "*I understood the importance of my presence at this meeting*", respondents agreed a bit more than in average.

3.3. Relevant feedback is provided throughout the process to the participants and the population concerned *Not relevant for the monitoring of the first workshop.*

The observation of this meeting showed that the respondents who "neither agree nor disagree" to these sentences were those who arrived later and so missed the introduction to the project.

4. Confidence

4.1. Stakeholders are willing to participate
For the sentence "*At this meeting participants seemed willing to get involved in the project*", respondents agreed as they did in average.

4.2. Participants have positive attitudes during the meetings
"*At this meeting participants had positive attitudes*": respondents agreed much more with this sentence than in average. The results of the Bale's IPA conducted during this workshop indeed show that the interventions related to socio-emotional areas were higher than what Bales (1950) found in average for the positive reactions and lower for the negative ones.

4.3. Exchanges are respectful
The sentence "*At this meeting participants discussed issues respectfully*" was the sentence with which respondents agreed the most.

5. Early involvement

5.1. Actors were familiarize early enough with the project to feel their contribution can make a difference
Respondents in average agreed less with the sentence "*At this meeting I felt that my contribution would make a difference for the project*" than with other sentences. Presented with this result, the organising team commented that from their experiences, they observed that participants involved in South African projects tend to have passive attitudes. It is thus not clear if this finding is due to problems with early involvement, lack of confidence, or the force of habit. It is also important to note that, during the plenary sessions of this workshop, only fifteen out of the twenty-nine participants made at least one intervention.

5.2. The first exercise took place early enough so that participants were involved in all the key steps of the projects
This first workshop, with its objective of getting a common vision from the key stakeholders, falls within the logic of the Afromaison project, and corresponds to what is expected from the first workshop. However, during the discussions about the scenarios, some participants disagreed with the methods employed to build those scenarios, which tends to indicate that it might have been profitable to have involved the stakeholders earlier.

6. Fairness

6.1. All the participants can express themselves
Respondents agreed more than in average with the sentence "*At this meeting, those who wanted it got to speak*". The expert observation showed that there were indeed opportunities for everyone to speak during both plenary sessions and group sessions of this workshop. However, the organising team asked few times for the opinion of participants they already knew, and it did not seem that this team knew all the participants attending this workshop, which might have made the other participants less comfortable to speak.

6.2. All the participants have the same speaking time
The Bales' IPA results indicate that, out of about 300 interventions analysed during the plenary sessions of this workshop, 44 % of those interventions were made by the organising team, 41 % by the 4 most active participants, and the remaining 15 % of the interventions by 11 other participants. This indicates that 14 participants did not intervene at all, or made one short intervention, as the evaluator might have missed a few interventions. All those participants who barely intervened during plenary sessions, interestingly, were not invited directly to this workshop. Even though it seems that everyone had an opportunity to speak during this workshop, not everyone seized this opportunity, which resulted in fact in highly differentiated speaking time per participant.

6.3. Everyone's opinion is treated the same way

For the sentence "*At this meeting, things I had to say were taken seriously into account*", respondents agreed a bit less than in average, which has to be related to the fact that fourteen participants did not intervene during this workshop. The respondents who intervened indeed agreed to this sentence more than in average.

7. Competence

7.1. Actors communicate in a relevant way during meeting

For the sentences "*At this meeting I did not have problems understanding the discussions*" and "*At this meeting I did not have problems expressing myself*", respondents agreed more than in average.

7.2. Actors are competent in their field *Not evaluated for this workshop.*

7.3. Actors have access to knowledge on the topic

Respondents also agreed more than in average to the sentence "*At this meeting I had at least basic knowledge of all the topics mentioned*". However, during discussions at tea time with a few participants who did not intervene during this workshop, those participants indicated that they did not understand the discussions because they were not familiar with the concepts evoked. Those participants did not gave back the ex post questionnaire.

8. Convenience

8.1. Every person who wanted to has been able to attend the meeting

Some of the stakeholders who were invited to this workshop, but did not come, indicated that it was in conflict with their professional schedule. However, most of the people who were invited, but did not come, did not indicate the reason why they declined the invitation.

8.2. Participants did not have problems attending the meeting

Respondents agreed a bit less than in average with the sentence "*This meeting fit well with my schedule*".

8.3. Participants can easily fit the meeting into their schedule

Respondents agreed less than in average with the sentence "*This meeting was held in a convenient location*". However, one respondent indicated that he was very glad to have had the opportunity to "*travel to uThukela for the workshop*". The organising team, presented with this result, mentioned that is was difficult to find the ideal location for this workshop as the key stakeholders for the project were working in very different locations.

9. Institutional support

9.1. There are mechanisms to support participation

This project was presented to the uThukela District Municipality, and was approved by its executive committee before the workshop, which was expected to facilitate stakeholders' participation.

9.2. Efforts are made to empower stakeholders willing to participate

No interpreter was hired for this workshop, although most citizens in this area speak Zulu and can have difficulties understanding English. To compensate for this issue, the organising team decided to invite only stakeholders whom they knew did not have problems expressing themselves in English. A description of this workshop, the project and its purpose was sent with the invitation in order to facilitate discussions. It is, however, not clear if participants read this document before the workshop, especially those who had not been invited directly.

9.3. Efforts are made to facilitate stakeholders' access to the venue

The uThukela District municipality offered to provide Afromaison with a venue, but highlighted strongly how inconvenient this venue was. This venue thus was not used. The organising team specified that they would help with transport if needed, and some participants indeed took this opportunity.

Exploratory process

Gender and race
Out of the 29 participants, 11 were female, 18 male, 19 black and 10 white. Out of the 15 participants who intervened during this workshop, 5 were black and 4 were female. The 4 most active participants were all white and included one female. These results tend to indicate than race, more than gender, might have been an issue during this workshop. However, as we have indicated, the participants who did not speak had not been directly invited to the workshop. Hence, it is difficult to know whether this lack of confidence resulted from legitimacy or race issues.

Comments on Bale's IPA
Although it was not the purpose of this report, we felt that the Bale's IPA could be used to check to what extent this process was indeed participatory. This could be an additional evaluative question. Here, we found that the percentage of interventions related to 'giving suggestions' and 'asking for suggestions' was higher than the top limit found by Bales for its different observations. We believe this could be an indication of the fact that the objective of the organising team was indeed to make stakeholders participate, and not only to present them with information.

Overall analysis for the process
Sources could certainly have been added to assess more accurately each of those indicators. However, as the objective of this evaluation is first and foremost to detect changes in perceptions and behaviour in stakeholders, we believe that this evaluation of the process is sufficient enough to detect what could have favoured or hampered those changes.

We found that respondents were more concerned about the representativeness of participants, the fact that their contribution would make a difference, and about the location of this workshop. Thanks to our observation, we were able to confirm those concerns, especially the first ones. We also found that participants who had not been invited directly barely contributed their opinion during this workshop. But, overall, the participants demonstrated positive attitudes and the respondents stated that they were satisfied with the process.

Of concern is the fact the participants who did not fill in the ex post questionnaire might have made more negative comments.

IV. Discussion

In order to better understand the results, the first part of this discussion will focus on analysing them in an attempt to better understand which problems each group of actors are faced with.

This evaluation, then, has two objectives. First, because this evaluation concerns the very beginning of the participatory process of Afromaison in South Africa, and more workshops are still to come, we wanted to draw on the results obtained from this first workshop to make recommendations for the next ones. But because this evaluation is still experimental, meaning that we tested a protocol that we believe is innovative, as it combines evaluation and social research techniques, we also wanted to obtain reflective insights on this protocol. The second part of this discussion will thus be dedicated to what we have called an auto evaluation, which will highlight what we think were the stronger and weaker points of this evaluation, while the last part will be dedicated to making recommendations for the pursuit of this evaluation. We believe that learning from this experience should be valuable for evaluations of participatory processes in

general, which is the reason why in the conclusion we will attempt to make recommendations for such evaluations, drawing from the last parts of this discussion.

Analysis

Web cartography

In an attempt to better understand the links, or absence of links, between actors, a web cartography has been designed (cf Figure 4 au-dessous). The goal of this web cartography was to understand how the websites of our main actors were related. These links, between actors' websites, are thus used as indicators of the "true" actors' relations. In order to design this cartography, a very basic tool, TouchGraph SEO, was used. We started by finding the links to the uThukela District municipality website, and then clicked on other actors to try to find our main stakeholders.

The first striking observation is that we could not connect the website of African Conservation Trust, the NGO, with any other websites of our key stakeholders. This website was indeed mainly related to other international NGOs (blue group).

Strangely, the uThukela website (purple group) is more related to other district municipality websites than to its own local municipality, the only one it is linked to being Imbabazane. Imbabazane itself (pink group) is more also linked with municipalities which are not within the district.

The uThukela website, dedicated to water (light orange group), is mainly linked to advertisement websites, uThukela and the DWA. The DWA website itself (yellow group) is linked with other national departments, but also with those of private companies, such as Rand Water and KZN Wildlife. The latter (dark orange group) is mainly linked with private game reserves and national parks websites.

As for the ACT website, it was not possible to find actors' websites, such as communities, Traditional Authorities, Ingonyama Trust, research foundations or provincial departments, without at least five links from the uThukela website. This is partly related to the fact that the first two actors mentioned do not have websites, but seeing that the last ones do have websites, it also indicates how far apart, on the web at least, those stakeholders are.
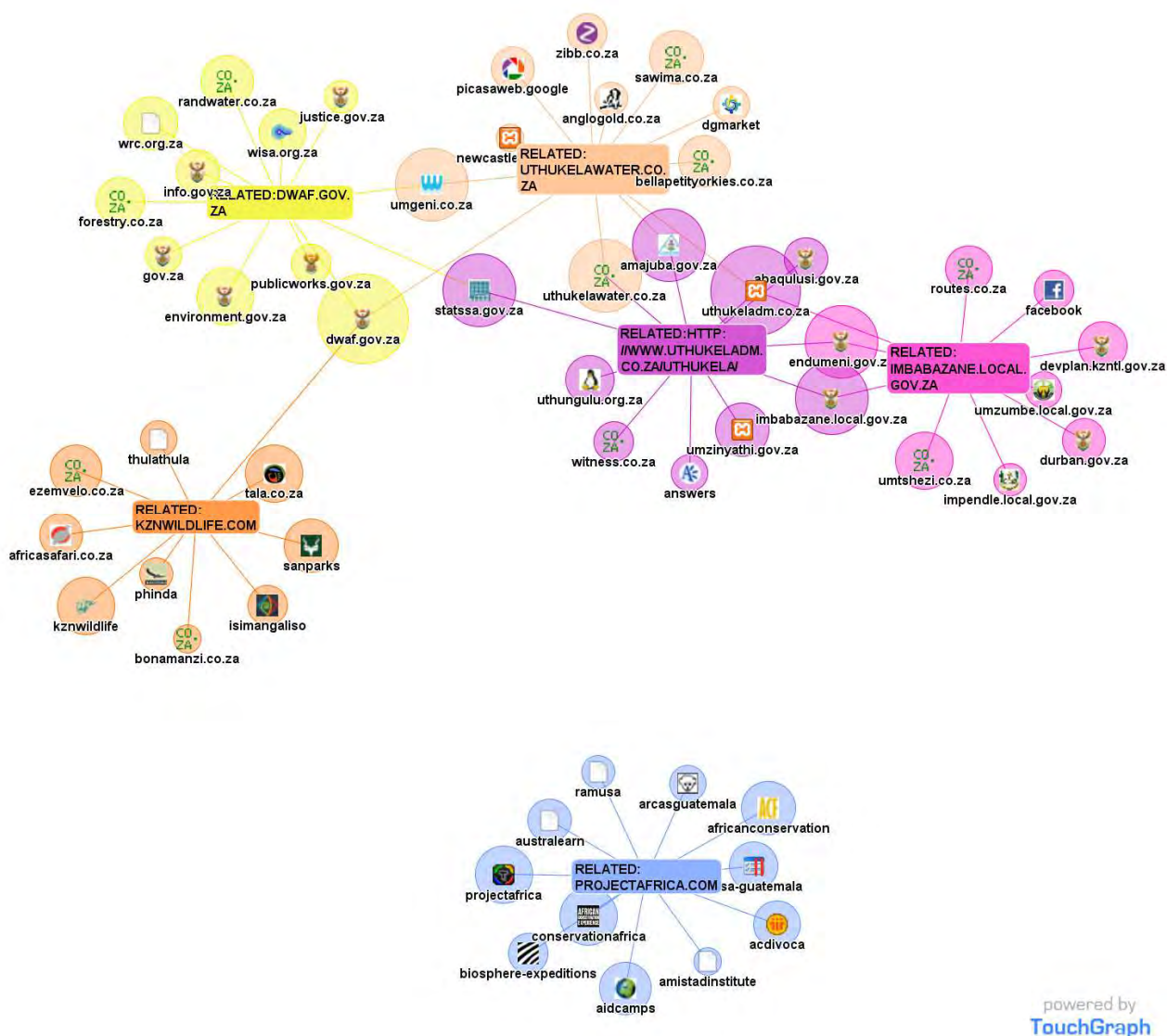
Figure 4: Web cartography – Relations between the key stakeholders

These findings tend to confirm the fact that there are relational issues between the district and its municipality. The fact that there are so few links between these stakeholders also indicates that there is a real division of the actors working for the management of natural resources in uThukela. Municipalities have issues working together, national departments work between themselves, conservation and tourism institutions work together, while local NGOs prefer working with international NGOs, rather than with local institutions. This is, of course, only the analysis of website links, and the tool used oversimplifies those relations. Moreover, not all the key stakeholders have a website. Nevertheless, those findings tend to confirm the relational issues evoked by the 14 stakeholders interviewed.

Comments on the actors' typology

To clarify stakeholders' perceptions and behaviour, the main answers of each interviewee have been summarised by criteria in Table 6 au-dessous. The main objective of this summary was to highlight the common issues, but also the differences between actors within a category.

Throughout this study, we used the five categories defined by the INR:

a) *Conservation and Natural Resource Management Programmes* (see **I)** in Table 6 au-dessous)

Two actors interviewed, the KZN wildlife and the ACT representatives, deal directly with conservation. This category is characterised by the recognition of the importance of both long-term thinking and cooperation, as well as by a good understanding of the current state of local natural resources. However, these represent two different entities: the former an entity instituted by legislation and the latter an NGO. This results in differences in their relations: the former cannot think of any relationship his institution should improve, while the second clearly states that he does not collaborate well with municipalities, and does not wish to improve this collaboration. KZN wildlife works closer with municipalities while ACT works closer with communities.

b) *Natural resources: regulation* (see **II** in Table 6 au-dessous)

Contrary to the previous one, this group seems to be much more homogenous. Indeed, the two interviewees stated that both cooperation and long-term thinking were key values. By making and enforcing the legislation, they indeed need to collaborate closely with other departments, and need to have a long-term vision to make adapted laws or plans. They both justified their actions by the same world, civic and commercial, and advocate job creation, which stems from the fact that the fight against unemployment has been made a national priority. However, their understanding of the local state of natural resources is only partial, and INRM does not seem to be high on their list of priorities.

Table 6: Summary of interviewee's perceptions and behaviour – Initial assessment

Interviewee	Normative	Cognitive	Operational	Relational
1 KZN W I)	a) Commercial/ Domestic b) Worrying c) LG/Cooperation	d) Env and Political e) Education/ Training/ Involvement	Management WHS Protect values	Occas: TA/Dpts Seldom: none
2 ACT I)	a) Industrial b) Degraded c) Cooperation	d) Management/ Conflict e) Education/Planning	Work with communities	Occas: Dpts Seldom: Municipalities
3 UDM III)	a) Civic b) Worrying c) Cooperation	d) Conflict between development/NR e) Training	Urban and regional planners Create Jobs	Occas: KZN W Seldom: NGOs Gvt officials
4 NDA II)	a) Civic Commercial b) Not that bad c) LG/ Cooperation	d) Env issues/Socio-political causes e) Jobs / Training	Explaining and enforcing the legislation	Occas: Farmers Municipalities Seldom: mineral R
5 DRD&LA II)	a) Civic Commercial b) Under pressures c) LG/Cooperation	d) Socio-economic e) Commitment Training / Jobs	Spatial dvpt framework guidelines	Occas : ITB / DM Seldom : TA
6 ITB III)	a) Civic Commercial b) Pristine c) Cooperation	d) Socio-economic e) Job / Capacity building	Custodians Support LM and initiatives	Occas: NGOs Seldom: Tourism
7 TA III)	a) Civic Opinion b) Worrying c) Cooperation	d) Env. issues/ socio-eco causes e) Env. Solutions	Making people aware	Occas: none Seldom: none
8 TA III)	a) Civic Domestic b) Not good c) Cooperation	d) Environmental issues	Give directions to people	Occas: none Seldom: none
9 Farmer V)	a) Commercial b) Under pressures c) Cooperation	d) Env. Issues Social Causes e) Training/Education	Could help subsistence farmers	Occas: Municipalities Seldom: SF, Dpts
10 DAEA III)	a) Civic Commercial b) Worrying c) Cooperation	d) Env. Issues Social Causes e) Jobs Enforcement	Control, make aware	Occas: Dpts Seldom: communities
11 FSG V)	a) Opinion Domestic b) Depends c) Cooperation	d) Env. issues and causes e) env. solutions	Help subsistence farmers	Seldom: Farmers, DRD&LA
12 DEDT IV)	a) Industrial Opinion b) Worrying c) LG/ Cooperation	d) Env. Issues e) political solutions	Research the impact of tourism in KZN	*Not asked*
13 DWA III)	a) Industrial Commercial b) Strong catchment c) Cooperation	d) political issues and causes e) develop plans	Custodian for water use	Seldom: municipalities; national gvt
14 OLM III)	a) Civic Industrial b) Worrying c) Cooperation	d) lack of plans and means e) budget / plans	Planning, service delivery, WHS management	Occas: DM/ITB Other LMs Seldom: NGOs DWA

Note: a) dominant world b) state of natural resources in UDM c) important values d) main causes and issues. e) main solutions; operational: their role; Abbreviations: LG=long-term thinking; Occas. = collaborate occasionally with; seldom: collaborate seldom, if ever, with.

c) *Land use/development: planning and authorisation* (see **III)** in Table 6)

This category encompasses the largest number of people interviewed, as planning, for instance, is done at several levels. Actors dealing with authorisation for land use and development include the municipalities, the traditional authorities, as well as ITB. This complexity, according to one of the persons interviewed, is difficult for the locals to understand and might explain the high number of illegal developments in the area. This problem might not be encountered in other provinces, as ITB is specific to KwaZulu-Natal. This category also includes actors delivering services to the locals, namely the municipalities, both local and district. Eventually, the provincial departments also have their say in the planning and in helping municipalities and their service delivery function. None of those actors mentioned the importance of long-term thinking, and all of them, except one, chose the "civic" world to justify their actions, which has to be related to the importance given to service delivery. While only traditional authority leaders focused on the importance of tradition and tourism, all of them stated that unemployment was a big issue and that job creation had to be a priority. As for the understanding of the state of natural resources, we mentioned in the results that all those actors focused on the natural resources they had to work with directly. Despite this apparent homogeneity in the perceptions of these actors, the relational problem they are faced with might be the most important feature shared by all these stakeholders. In spite of the similarities of their functions, most of them evoked relational issues between themselves. The district municipality representative, for instance, mentioned the fact that he had problems collaborating with the local municipality and with his own colleagues. The government representatives scarcely mentioned traditional authority leaders, and never ITB, which seems to indicate that they strongly underestimate the role of those entities. Overall, it appears that the relational problems within this category might be its most serious issue.

d) *Research and Monitoring* (see **IV)** in Table 6)

One stakeholder in this category was interviewed. This person strongly emphasised the importance of long-term thinking and had a very good understanding of the state of natural resources in uThukela, as well as the issues at stake. Those features are very similar to those of the first group, "*Conservation and Natural Resources Management Programme*". Regarding the relations with other stakeholders, the interviewee remained quite evasive, but it seems that apart from tourism businesses, this actor did not collaborate much with other local stakeholders. It thus tends to indicate that there might be an issue in the communication and diffusion of research results to local partners. This person, however, was doing research for a provincial department. This issue might be different for other research institutes.

e) *Users* (see **V** in Table 6)

As indicated in the results part of this study, the actor interviewed representing the FSG had much more in common with the other user than with the other researcher, which is

the reason why he has been put into this category. Those two users, the commercial farmer and FSG representative, had in common their lack of long-term vision and their tendency to emphasise the fact that not all natural resources within the district were in a bad state. Indeed, they strongly emphasised the fact that they were doing their best, given the means they had. The commercial farmer insisted on the importance of productivity, while the FSG representative stressed the importance of values and traditions within rural communities. Both stated that they did not collaborate well with each other, but both also said that this relational issue did not have a strong impact on their own activities; hence cooperation does not seem to be a strong priority for users.

The different categories of stakeholders thus do not have the same perceptions and problems. What seems to be common to all the categories, however, is the current lack of cooperation between key stakeholders, which is highlighted by the web cartography. In addition to this, there is no actor clearly taking the lead of the management of natural resources. These two issues explain partly why the management of natural resources in uThukela is not fully adequate at the moment.

Coherence of the results

In the previous section, we identified the problems faced by each group category. By monitoring the workshop, we found that some actors modified their perceptions. The goal of this short section is to check whether it is indeed the needs we identified through the initial assessment that have been fulfilled by this workshop.

As noted in the results, the two most important changes detected were for the normative and cognitive criterion.

For the former, the representatives from provincial departments, the district municipality, private industries and community members spontaneously declared that they had gained a better understanding of the state of natural resources within the district. The first two are members of the "Planning and Authorisation" category, for which we identified that actors only had a partial understanding of the state of those resources. Hence, it seems coherent that those actors, and not actors from the "Conservation" and "Research" category, who already had a good understanding of those problems, are those who gained a better understanding.

For the latter, some respondents changed their perceptions of the problems and causes. Apart from a research representative, those changes were detected for actors within the "Regulation and Authorisation", the "Conservation" and the private industry categories. We showed in the results that all the actors tended to focus on the problem they knew of, hence it is more relevant for this criterion that all the actors changed their perceptions of the problems in the area, which is the first step towards getting a common understanding.

All respondents acknowledged that collaboration was an issue, which we indeed find for all categories, and which the web cartography confirmed.

The respondents who did not want to change their practices, even after the workshop, were two members of the "Conservation" category, one researcher, and one member of the "Planning and Authorisation" category. It seems logical that stakeholders already dealing directly with conservation did not see the need for changing their practices, as well as the researcher. However, as we briefly stated in the results, there is still a way ahead for other stakeholders to understand practically what they need to modify, and to get every member of the "Planning and Authorisation" category to understand that there is a need to change their practices.

As for improving their relations, which we identified as the most serious issue for all categories of stakeholders, all respondents understood the need of it, even though their answers still remained vague.

Because the results we found for the workshop monitoring were consistent with what we expected after the initial assessment, they tend to highlight the validity of our protocol. *Reflection on the implication of these findings for the goals of Afromaison in uThukela*

One of the goals of WP7 is to "*consolidate a network of actors around a set of tools, actions, and process. It is through their commitment around strategy development or institutional process that an innovation becomes irreversible.*" (Afromaison, 2012)

The form of the desired cooperation is thus deliberately left large, in order for the issues of the different contexts to be taken into account.

According to our findings, is there a form a cooperation which seems to be more appropriate for uThukela? Although on paper the roles of the different actors mostly seem to complement each other, in practice our initial evaluation showed that those roles are not that clear cut, mainly because the actors do not understand precisely the role of others and do not necessarily value cooperation (cf results for the indicator 1.4 of the initial evaluation).

Is it thus sufficient to say that focusing on establishing more communication and collaboration between those actors via our group of participants led by Champions is enough, or do we need this group to push toward a bigger governance reform? Should every actor converge towards the adoption of the industrial world for the justification of their actions, as it stems from our evaluation that the actors adopting this world are more concerned by environmental issues, or is there another way for each actor to integrate INRM as a priority?

Answering these questions goes beyond the scope of this study. But discussing the results of this evaluation with the different Afromaison participants could be an interesting way for them to start thinking about this question, and would certainly be an interesting participatory exercise which would make Afromaison participants think more deeply about the value and interest of cooperation.

Recommendations for the pursuit of the participatory process for Afromaison in South Africa

In this part, we want to make recommendations for the workshops to come, drawing from our results. Both results from the initial assessment and the monitoring of the workshop will be used.

First, thanks to the initial assessment and the first evaluative question, we would like to make a few recommendations regarding the dimensions on which the organising team might want to focus to achieve the goals of Afromaison.

For the normative dimension, we have seen a lack of emphasis on a long-term vision from both the people interviewed in the initial assessment and the participants, before and after the workshop. A more positive aspect has been the better understanding that some participants seem to have developed at the end of the workshop of the specific benefits they can expect from INRM. We thus strongly advise that emphasis be put on the importance of a long-term vision. This could be done by stressing the fact that both short- and long-term strategies are needed, and that a monitoring process has to be implemented to track improvements or degradations in the natural resources. We also recommend pursuing the explanations of INRM, its rationale and benefits. A specific workshop might be needed to explain what INRM is and how the uThukela District municipality could benefit from it, especially for stakeholders who do not have an environmental background. This could mean inviting more members from rural communities and municipality representatives.

As for the cognitive dimension, it seems that the first workshop resulted in a much better understanding of the environmental issues in the district. This is a very encouraging finding.

We thus advise pursuing the process of getting a common vision, as this could not be entirely finalised during this workshop because of a lack of time. The organising team told participants at the end of this workshop that they would be kept informed of the final results of this common vision. This seems to be a very good idea to pursue. As for the tools that can be used for INRM, we found that interviewees and participants seemed to have quite a poor understanding of those. As it was expected in Afromaison, we thus support the idea of having a specific workshop dedicated to the presentation of such tools to stakeholders.

Stakeholders seemed to have understood the need for changing their practices to better manage their natural resources. However, it appears that both interviewees and participants, even at the end of the workshop, did not have a precise understanding of what they individually need to change in their own way of working. We thus recommend

that the final Afromaison product, in addition to providing a general strategy for INRM in the district, also provides for specific strategies, or objectives, for each institution or organisation identified as key for INRM in the district. This can only be achieved by having in-depth discussions with representatives of those institutions and organisations prior to the end of the project.

Finally, although some stakeholders seem to have understood the importance of collaboration, they do not appear to have developed precise ideas of the institutions or organisations they should collaborate more closely with and how they should do so. We thus believe that trying to pinpoint the most problematic relations and developing strategies to improve those should be part of the Afromaison outcomes. Smaller group sessions with representatives from institutions or organisations who have problems working together might be useful to achieve this goal.

Regarding now the process, our findings for the second evaluative question of the workshop monitoring allow us to provide some ideas on how the organisation of the next workshops could be improved.

The most striking finding is that about half of the participants did not express their opinion during plenary sessions of this first workshop. This seems to be related to the fact that those participants had not been invited directly, but had been sent by someone from their institution or organisation who had. To overcome this issue, it might be profitable to invite less people, but to make sure that those people will actually come themselves to the workshop. This will certainly be facilitated by the fact that a first workshop has already taken place. Smaller group sessions might also make every participant more at ease to speak.

In addition to that, dedicating more means to inviting specific individuals should allow for a better representation of the stakeholders, by making sure that all the key institutions or organisations are represented.

We do also advise to try to invite people who have participated in the first workshop, as the changes Afromaison desires require a long-term perspective as well.

As for the fact that stakeholders are not sure that their contribution will make a difference, we think this could change by communicating efficiently and regularly with stakeholders about the project, what has been achieved, what are the next steps, what is expected from them.

We have been told that the organising team wanted to merge the consultation process of Afromaison with the one planned for in a document under the Environmental Management Framework, which is in the process of being written. This document, to be revised every five years, intends to provide a strategy for the management of natural resources at the district municipality level. Private consultants have been hired to write

this document for the uThukela District municipality, and we understand that they have just started and that it should be finalised by next year.

We understand that merging consultation processes and endeavouring to include Afromaison outcomes in an official document has some undeniable advantages, such as avoiding mobilising stakeholders overly much, and making sure that the document will have a certain importance and should be largely consulted. However, we would like to point out two potential problems related to this proposal:

- drawing a strategy for five years will not help stakeholders in understanding the value of the long-term prospect;
- some stakeholders might feel that, because the EMF plan is a District Municipality document, they will have a smaller role to play than they would have had with Afromaison.

The objectives of the EMF plan and of Afromaison thus differ somewhat. However, better cooperation is a crucial objective of Afromaison, and encouraging every Afromaison participant to be part of the EMF process might help in creating a stronger arena. Some of the Afromaison participants might also find, thanks to this merging, a direct application of what they learnt during the first Afromaison forum, and hence feel more comfortable discussing uThukela environmental issues.

We thus advise the Afromaison organising team to make sure that everyone who will participate in this EMF/Afromaison process, whether having participated or not in the first forum, have the means (knowledge of the local environmental issues and understanding of the importance of tackling those issues especially) to take part efficiently in those EMF discussions, which could be done thanks to additional stakeholders' consultations.

Auto evaluation

Evaluators usually use a grid with different criteria to evaluate their own report. We used a public grid available on the European Commission website (2012). However, as this evaluation was more a social research project than an evaluation, some of those criteria were not relevant. In particular, such grids are usually divided in two parts: the quality of the process, and the quality of the product. We found that the former was less relevant for our evaluation, hence we will focus more on the latter.

As far as the quality of the process is concerned:

    a) Objectives of the evaluation coherent and evaluable

The expectations for this evaluation were initially very high, as it was supposed to cover the whole duration of Afromaison in South Africa. Because of financial constraints especially, only an intern was appointed for the evaluation for six months. And at the

time I was appointed, the organising team did not yet have a precise idea of how they were going to organise the participatory process. As a result, the evaluator had to revise his objectives when it became clear that he would be able to monitor only one stakeholder workshop. This time frame is a serious limitation of this study, as we cannot come to a conclusion, for instance, on how long-term changes in perceptions are affected, or on the effect of this participatory process on stakeholder behaviour and relations.

b) Good communication during the process

The dialogue between the organising team and the evaluator has been hugely facilitated by the fact that this team provided facilities for the evaluator. This allowed us to clearly introduce our project, specify our needs, follow all the first steps of this project, and discuss our first results.

As for the communication between evaluators, we communicated on a weekly basis with the person responsible for the standard protocol, and its communication to the case study leaders. It was very difficult to ascertain the progress of evaluation in other case studies, as none of them had an evaluator specifically appointed. It seems so far that this issue did not allow any of them to follow the standard procedure designed for the evaluation of Afromaison, which makes the expectations for the evaluation of the South African case study even higher.

As for the quality of the product:

a) The report answers the needs

This report clearly does not allow for detecting long-term changes in perceptions and stakeholders' behaviour, because of the time constraint mentioned above. However, given this time constraint, we believe that we have made a strong protocol for the evaluation, started this evaluation with interesting data, and thus laid the basis for an ex post evaluation. Moreover, rather than actually detecting such changes, we think that this report provides interesting insights on how to try to monitor such changes, and as such should be interesting for anyone wishing to evaluate a participatory process.

b) The methodology is explicit and adapted both to the need and the budget

We do believe that the methodology is the strongest point of this evaluation, as the report clearly explicates how the protocol has been constructed, and tries to draw from both evaluation and social research techniques. The technique should thus be replicable.
The combination of sources for the initial assessment, the cognitive mapping and the discussion part, have proven to be very fruitful.
It is obvious that spending one full day with each of the interviewees would have been very interesting, but the time and budget constraint did not allow for it. In addition to that, it would have been interesting to interview people who were going to participate to the first workshop. We did try our best to identify the key stakeholders, and although we

made sure that those people would be invited, we could not know for sure who would actually be able and/or eager to come to this workshop.

As for the monitoring of the workshop, questionnaires proved to be an interesting way of comparing the perceptions of a large amount of people. Yet, it would have been valuable to interview some of those participants right after, or few days after, the workshop to obtain a better understanding of their answers, and to better assess changes in the normative criteria especially.

c)   *The data is reliable and the results credible*

Obtaining reliable data is probably one of the major difficulties for those who wish to understand people's perceptions. We believe that our protocol helped in overcoming this issue.

The interest of the source we used for the workshop monitoring, the questionnaires, is that because they were administered right after the workshop, we should be able to be sure that the changes observed are indeed due to the workshop. However, it seems that one question, asked in both questionnaires, was not explicit enough: "*What aspects seem the most critical for INRM in the territory?*" It indeed appears that respondents answered this question in two different ways: what are the main environmental issues, and what are the causes of those environmental issues. It is possible that some respondents might have answered this question differently in the ex ante and the ex post questionnaire because they answered alternatively the two aspects of this questions. This question will thus have to be reformulated to be more straightforward.

The main issue with simply using questionnaires is that we cannot know how long-term the changes detected are. In an attempt to assess how long-term those changes were, we had a brief interview with one of the champions who attended the first workshop and with one who did not. The problem is that both these champions had by then already participated in the technical workshop, organised by the case study leader for the Afromaison international partners. Only three champions had been invited to this technical workshop, and as experts and not as stakeholders. The champion who attended the first workshop clearly mentioned that his understanding of environmental issues and INRM importance grew throughout both workshops. We asked him to complete the first exercise of the initial cognitive mapping again. Out of three sentences he chose, one differed between the initial assessment and after the technical workshop. It seems that this choice was directly related to the more practical benefits he expected from INRM. He rated the three relevant sentences equally. Interestingly, the champion who did not attend the first workshop give three points out of five to the same sentence in the initial assessment and after the technical workshop, but changed as to one of the sentences, to which he gave one point. It thus seems that we can expect long-term changes, and that this technical workshop also had an impact on the perceptions of those two champions.

To try to understand if people were simply repeating what they had heard during the workshop or if their own perceptions had really changed, the only solution seems to be to pursue the evaluation, and interview those participants at the end of the project.

Another shortfall of the questionnaires was that not every participant completed them, and it seems that those people would have added more negative comments. This questions partly the reliability of our data.

d) The evaluator drew impartial conclusions

We think that the fact the evaluator worked in the offices of the organising team was more of a significant opportunity to follow very closely the process, than an attempt to impact on its judgment. There has never been any attempt to interfere in the evaluator's work, and the organising team assisted the evaluator much by providing him with transport and allowing him to attend any discussion related to the project, as well as by sending him all the related documents. We believe that the precise and explicit protocol we followed also helped us in being as impartial as possible.

e) The recommendations are useful

We do hope that our recommendations will be useful, because we have tried to make them as specific as possible, and because these recommendations come directly from our results. In addition to that, this report should be made available before the organisation of the next workshop. Of course, the fact that this evaluation was only related to the first workshop prevents us from making more general recommendations for such projects. But we do hope that it would be useful for anyone wishing to evaluate participatory processes.

Recommendations for the pursuit of the evaluation of Afromaison

Recommendations for the modification of the standard protocol

Given the experience we gained from the first evaluation conducted in South Africa, some modifications of the initial cognitive mapping and of the questionnaires should be valuable for the Afromaison case studies in which the participatory process has not started yet.

Regarding the initial assessment, some questions might not be clear enough or might be too complex to ask without preliminary questions. This seems to be the case for the following cognitive question: "*What are the main issues to solve or negotiate to achieve integrated natural resources management in the territory studied?*" Participants usually understood it as "*What are the main problems to solve in the uThukela District Municipality*", as they did not necessarily understand what INRM is. We think that asking this as a second question will be more valuable, as it seems to be simpler for interviewees and because it answers directly the following cognitive indicator: "*Participants agree on the main problems…*".

As for the table interviewees were asked to fill in, in order to answer the question "*What are the other actors / institutions / organizations / stakeholders group involved in INRM in the territory studied with whom you interact regularly? With whom do you interact on an occasional basis? With whom do you seldom, if ever, interact?*", some interviewees had trouble thinking of actors important for INRM. Some of them directly asked me to name actors and then they put those actors in one column. We thus recommend asking instead the following questions: "*Which actors do you think are or should be concerned by the management of natural resources in the District? Do you have problems interacting with some of those actors? If yes, which ones and why?*"

Regarding the operational criteria, we strongly believe that spending one day with some key stakeholders, maybe with the champions, should complement interviewees' answers to the question "*What do you think is the role and contribution of the institution/group you represent to achieve INRM in the territory?*" Interviewees should also be asked: "*Do you think the institution/group you represent is able to play this role so far? If not, why?*"

Although this initial cognitive mapping allows for assessing all the criteria, it does not answer all the indicators. Notably, interviewees are never asked if they think natural resources should be better managed in the area. We thus recommend asking: "*How would you qualify the state of natural resources in the area? Would you say it is good, could be improved, or worrying? Why?*"

Adding a discussion part to the initial cognitive mapping also proved to be very fruitful and should be replicated if possible. Not only did it allow us to assess more indicators, but it also enabled us to better understand interviewees' answers. For instance, in the initial cognitive mapping, interviewees mentioned the stakeholders they never collaborated with. However, the discussion revealed that those interviewees were not necessarily eager to improve their collaboration with those stakeholders.

Although the questionnaires used for the monitoring of the different workshops can also be improved, we are concerned about "respondents' fatigue". If the participatory process in other case studies includes only one "big" workshop, held over a few days, we strongly recommend using the questionnaires we used for the South African case study. However, if the participatory process takes the form of several separated workshops, we are concerned about the fact that respondents might be bored answering the same questions, or that they might write the same answers all the time. We thus recommend using the "standard" questionnaire, and adding some of the questions used depending on the goal of the workshop. For instance, after a first workshop, the question "*After this workshop, why do think it is important to integrate the management of natural resources?*" can be added to the "standard" ex post questionnaire, while after the workshop aiming at defining a common strategy, the question "*After this workshop, do you think the institution you represent should collaborate more closely with some partners? If yes, which ones?*" could instead be added.

Recommendations for the pursuit of the evaluation in South Africa

Given our results and auto evaluation, our main recommendation is to pursue the evaluation of this project. Because a strong protocol is in place and we proceeded to a detailed initial assessment, it should indeed be very interesting and fruitful to evaluate this project until its end.

For the monitoring of each participatory event, the questionnaires ex ante and ex post can be used again. Depending on the time which participants would have to answer those, and the means which will be granted for the analysis of the results, the standard or more complex questionnaires can be used. If an evaluator is appointed, an attempt to modify certain questions of those questionnaires could make the exercise more interesting for the respondents, and so avert them from writing "ready-to-write" answers. However, if such an exercise is attempted, the evaluator would have to be careful and make sure that his new questions help in informing the criteria and indicators already defined.

If time and budget allow for it, a mid-term assessment should be very interesting. It could be done by interviewing some key stakeholders with the cognitive mapping.

We strongly recommend proceeding to a final assessment, both a few weeks after the final workshop, and few months, if not years, after the end of the project. The final assessment should be done by using the final cognitive mapping, designed by the CIRAD, to interview the fourteen stakeholders that have already been interviewed for the initial assessment. If possible, it would be fruitful to add a discussion part, as we did for the initial assessment, and to interview in addition those stakeholders' representatives who attended Afromaison workshops regularly, as well as other representatives of institutions targeted by the project, but who have never attended any Afromaison workshop, in an attempt to check how participants communicated about the project.

Although it was not the purpose of this report, it would be possible in a final assessment to also evaluate the external dimension of the E.N.C.O.R.E. framework, as the case study leader, the INR, has much information available on the initial – by initial, we mean before the beginning of this project – state of the environment in the uThukela District municipality. Because it would not make sense to try to evaluate such changes in a short-time period, we recommend that, if someone wishes to evaluate these criteria, a final evaluation be carried out months, if not years, after the end of the project.

Of course, the current evaluator will be more than happy to give the data gathered to future evaluators.

V. Conclusion

In this study, we attempted to design and test a protocol to monitor changes in the perceptions and behaviour of stakeholders involved in a participatory project, which aims

at finding a strategy to integrate the management of natural resources at a meso-scale. This protocol was designed and tested for the South African Afromaison case study regarding the uThukela District Municipality. The standard protocol, defined for the five Afromaison case studies, has been made more complex and strengthened by adding evaluation techniques to social sciences ones. This conclusion highlights first what we learnt regarding stakeholders' perceptions and behaviour, then concerning the organisation of participatory processes, and eventually about the evaluation protocol itself.

The initial evaluation shows that although each stakeholder interviewed had different perceptions about the issues, it was possible to find a pattern aggregating those, by regrouping stakeholders into categories. While the interviewed stakeholders, who deal with conservation and research, understood better the state of natural resources in the District, as well as the importance of long-term thinking, they tended to diminish the role and importance of politicians. The interviewed stakeholders who directly use the resources did not see the need to change their own practices and did not always understand the role of politicians. As for the interviewed stakeholders who are involved with planning, authorisation and regulation, they lacked a long-term thinking, were more concerned with the resources they directly work with, but had a better understanding of the problems their colleagues were faced with. It thus seems that those categories defined by the INR are relevant for regrouping stakeholders' perceptions in South Africa. A feature, however, was common to all the categories: the problems of cooperation they had with other stakeholders. The web cartography corroborated this finding.

The monitoring of this first workshop tended to confirm the validity of those categories, as the respondents who gained a better understanding of the state of natural resources were representatives from private industries and from the planning and authorisation category. We indeed found during the initial assessment that stakeholders within this category were those who had the poorest understanding of the state of natural resources within the district.

Representatives of various institutions also changed their perceptions of the main environmental problems the district was faced with.

This tends to both validate our evaluation protocol and highlight an achievement of this first workshop, as getting a common vision, thus getting an agreement on the main issues to solve in the area, was its main objective.

Thanks to the interviewees' answers and the observation of the process, we also gained some insights into what helps in making such a participatory process successful or not. Through the observation of the process we can infer that the positive attitudes of the participants noted during the workshop, as well as the fact that they were, overall, satisfied with the organisation of this workshop, certainly helped making the changes we observed possible.

Of concern, however, is the fact that the respondents doubted that they were representative of the population concerned and of all the interests at stake, and that their contribution would make a difference. This might stem from the fact that a significant proportion of the stakeholders invited did not attend, but instead sent other representatives from their institutions. This can explain why the stakeholders present were concerned with their legitimacy, and also why they did not participate much, as they might not have been made aware in advance of the purpose and agenda of this workshop. That is the reason why we recommended spending more time targeting the "right" stakeholders for the workshops still to come, and communicating regularly about the project with those stakeholders.

As for the fact that the visioning exercise could not be finalised during this workshop, both the initial and the *ex ante* assessment helped us understand the causes of this issue. The initial assessment of stakeholders' perceptions showed that the different categories of stakeholders did not have the same understanding of the issues at stake. The "Planning and Authorisation" category, for instance, lacked a holistic vision of the environmental issues in the area. In these conditions, it seems difficult to reach a common vision without spending time on giving information about the current situation. This is stressed by respondents' answers to the questionnaires: prior to the workshop, many respondents expected to gain a better knowledge of the situation and to understand what is INRM, but few expected to get a common vision. Most of the respondents who were satisfied at the end of the workshop did not stress the efforts made to get a common vision, but rather the fact that they had gained a better knowledge of the issues at stake. The objective of both providing information and getting a common vision in one workshop might have been too ambitious. As the different groups identified have a different knowledge and understanding of the state and management of the natural resources in the area, it thus should be interesting to work with certain groups separately, before getting them all together to reach a common vision.

Following the evaluation, we were able to make recommendations for the modification of the initial cognitive mapping and questionnaires used for the standard protocol. We also showed that the combination of the initial cognitive mapping and a discussion, apart from the initial assessment, allowed us to assess more indicators, and more precisely. Moreover, the two interviews conducted after the workshop tend to indicate that the changes observed might be long-term.

Designing the protocol with some evaluation techniques, such as the use of evaluative questions, and criteria as well as indicators, allowed us to clarify both what was expected from this participatory process and from this evaluation. Indeed, we combined the expectations of local and international partners to design our indicators. Those indicators also helped us in clarifying what we were going to evaluate. In addition to this, we wanted to draw from previous studies in order to find the barriers that seem to most commonly hamper participatory processes, and to use in our evaluation some criteria that have already been used in other studies. Indeed, it should allow for an interesting

comparison with other researchers dealing with evaluation of participatory process and for those who endeavour to improve the evaluation of such evaluations.

It seems essential to pursue such research, as projects using participatory processes are still flourishing, but not always with the results expected (Blondiaux & Fourniau, 2011). We do believe that following a strong protocol, combining evaluation techniques and social research ones, is the way forward. Especially, as mentioned previously, discussing the expectations between the different partners and using indicators should be very fruitful.

This first evaluation was faced with some challenges, but pursuing the evaluation of this project should help in overcoming some of them. It was difficult to try to evaluate changes in behaviour and stakeholder's relations, as the evaluation only monitored the start of the project. We also found it difficult to evaluate the current practices of stakeholders by only spending between one and two hours with those interviewed for the initial assessment. As for the questionnaires, we are concerned about the fact that participants who did not answer might have had more negative comments than those who did answer. In addition, we cannot know for sure whether the changes detected through the workshop monitoring simply result from the fact that respondents "repeated" what they had heard during the workshop, or if those workshop discussions really did durably modify their perceptions. The two interviews conducted two weeks after the workshop tend to validate the second option.

It would also be interesting to see at the end of the project whether the categories used are still a relevant way of grouping stakeholders' perceptions, namely if each category of stakeholders has demonstrated the same kind of changes in their perceptions, or if a new common category emerges. This would be valuable as well for checking whether a grouping of perceptions is relevant for other case studies, and to what extent they are similar to the ones found in the South African case study.

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