

# ***“Learning amongst ourselves<sup>1</sup>.” Towards adaptiveness by stakeholders in forest management through social learning, in Mafungautsi.***

By

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## **Abstract**

Based on a study<sup>2</sup> conducted in Mafungautsi Forest, in the Midlands province in Zimbabwe, this paper focuses on investigating the extent to which the promotion of social learning among stakeholders facilitates adaptiveness in forest management strategies. Social learning, in this case is defined as a dynamic process of reflection and action by groups of stakeholders who continuously interact, communicate, reflect on their experiences and draw out lessons that influence future decision-making in forest management. The main problem addressed by the paper emanates from a lack of conscious effort by stakeholders in the Mafungautsi Forest pilot project to share experiences, individual lessons and learn together in managing their forest resource. Lack of social learning therefore has resulted in poor collective action amongst stakeholders and consequently lack of adaptiveness in management strategies that has caused the forest status and human well being to be at stake.

The paper addresses three broad research questions, which are: (a) can social learning lead to adaptiveness in forest management? (b) how can social learning be enhanced among stakeholders? and (c) what challenges are faced in facilitating social learning? To answer these questions, an ethnographic, exploratory study was conducted for a period of a year in the research area. Researchers visited the research area for about two weeks every month, and conducted various activities including training workshops, informal and formal meetings and group discussions. The researchers also made use of community partners who were selected to represent communities and were resident in the communities. The community partners helped in data collection and maintained detailed records of events (including meetings) that took place during the absence of researchers. The initial stages of the research involved promoting social learning among stakeholders. The core activities undertook to facilitate social learning included: training workshops such as Training for Transformation (T for T), participatory action research (PAR) with resource users and feedback workshops. To kick off PAR, stakeholders jointly came up with current and future scenarios (a period after two years) for the resources they were interested in namely, honey, thatch grass and broom grass. They also identified the problems they thought were most likely to encountered in moving from the current to the future scenario and later on came up with agreed action plans to and solve the problems. Participatory Rural Appraisal techniques were employed during data collection and these include; focus group discussions, participant observation and informal interactions with community members. A semi structure questionnaire was also administered for tracing social learning after the T for T workshop.

The research revealed that: (a) social learning, to a very large extent, enhanced adaptiveness in management of the forest resource; (b) training workshops, such as the T for T, feedback workshops and creation of platforms for stakeholders to share knowledge and experiences, were all effective in enhancing social learning; and finally (c) challenges faced in facilitating social learning included the following: Institutionalising the learning process was quite difficult and yet very important if stakeholders were to continue to adapt to the changing environment, making resource users appreciate each others' contribution during discussions required a lot of facilitation skills, involving everyone in the social learning process especially the innovators was difficult and

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<sup>1</sup> A saying by one resource user at a Training for Transformation workshop, where emphasis was put on the importance of sharing knowledge and learning together in management of the Mafungautsi forest.

<sup>2</sup> The study was conducted under the Center for International Forestry Research's (CIFOR) Adaptive Collaborative Management research project

finally, ensuring that stakeholders got thorough and adequate discussions to share knowledge and experiences without wasting their time was a major challenge to the research.

## Introduction

Forest management in Zimbabwe has been governed by highly biased and restrictive government policies that offered inadequate incentives for the participation of local people in management (McNamara, 1993). Control and management of resources were vested in regulatory departments such as the Forestry Commission, a parastatal organization whose roles include: forest administration, conservation of timber, state forest management, afforestation, woodland management, regulation and control of timber products and forest support services of research, education and extension. It is also responsible for the development of forest policy in consultation with the government Ministry of Environment and Tourism.

The forest resources fall under four main categories (ibid.):

- (a) forests in communal areas<sup>3</sup> (CAs). These cover a total of about 10 million hectares and are a source of various products for communal area inhabitants including construction timber, firewood, wild fruits and pastures for grazing animals;
- (b) forests in large-scale commercial<sup>4</sup> (LSC) farming areas. These cover a total area of about 7 million hectares and act as a habitat for wildlife;
- (c) forests on state land in protected areas. These make up about 6 million hectares in total. About half of the total area is operated by the Department of Parks and Wildlife, while the other half is operated by the Forestry Commission; and
- (d) industrial forest plantations. These are of high commercial value and make up a total of about 110 000 hectares.

Enforcing forestry management rules in a top-down manner has proved unsustainable partly due to the government's dwindling supply of money. Recently, there has been a realization that there is a need for increased community participation in forest management if sustainability is to be achieved. This was the main reason why a pilot resource-sharing project was initiated in Mafungautsi state forest in 1994, to try and implement this vision and to generate some lessons for the country as a whole. Mafungautsi was gazetted as a state forest in 1954 and has since been managed by the Forestry Commission. Unlike the other state forests, Mafungautsi is entirely surrounded by communal areas, and has two main stakeholders, the local communities and the Forestry Commission.

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<sup>3</sup> CAs were formally termed Tribal Trust Land, and were created during the colonial era to house cheap labour. Native Zimbabweans were forced to settle in these areas, which were densely populated and situated in remote and drier areas with poor agricultural potential.

<sup>4</sup> LSC farming areas are situated in the areas with the best agricultural potential and are dominated by the white Zimbabweans.

One of the main problems that has been faced in this pilot project is that adaptiveness in forest management by stakeholders has remained generally low (Nyirenda, 2001) despite all the efforts that have been made to increase it. This has been partly a result of the fact that, even though stakeholders were learning individually, opportunities for shared learning have not been realized. No deliberate effort has been made to consolidate lessons so that all the stakeholders could learn together and come up with better and more adaptive management strategies at the local level.

The paper examines how social learning affects adaptiveness in forest management by local-level stakeholders and also how social learning can be enhanced. The local-level stakeholders include: councillors, the headman, village heads, chiefs, the resource management committees, social clubs, political leaders and various resource user groups. It demonstrates that social learning enhances adaptiveness in forest management.

The next section briefly considers the definition, preconditions and processes involved in social learning. Section 3 provides a description of the research area and section 4 highlights the methodology for enhancing social learning. Section 5 presents and discusses the research results. The paper ends by highlighting some of the major conclusions of the research as far as the following issues are concerned: the relationship between social learning and adaptiveness in forest management, how social learning can be enhanced and the challenges of facilitating social learning.

### **The concept of social learning (Refer to Kolb's cycle!!!)**

Social learning falls under the general learning cycle that has been described by Kolb in a series of steps (\*\*\*\*ADD, ADD, ADD)

Social learning has been defined by some researchers as an approach and philosophy, which focuses on participation processes of social change (Woodhill and Roling, 1998). It involves critical self-reflection, development of multi-layered democratic processes, reflective capabilities of individuals and societies and the capacity for social movements to change political and economic frameworks for the better (Ibid.). Others define social learning as a dynamic process that involves continuous sense making of the world through perspectives or frames of references based on concrete, experience-modified knowledge, beliefs and values (Dangbegnon, 1998), and a dynamic process of adaptation and action by the stakeholders through the experiences encountered by involvement with other people and the physical environment. It is much more than memorising facts and acquiring intellectual understanding (Wilson and Morren, 1990). It is an adaptive process, which includes the ability to act as well as understand and attribute meanings (ibid.). Social learning involves tapping the capacities of different

stakeholders, learning collectively and sharing their perceptions on various problems before agreeing on what course of action to take (CIFOR, not dated).

Social learning depends on all sorts of preconditions, which have to be created and strategically negotiated in advance: it involves gaining understanding about other stakeholders' perceptions, goals and interests (Leeuwis, 1999). It is also based upon consensus building through cooperation by group members (Panitz, 1996). Interaction among stakeholders is very important because it shows alternative ways of getting things done and is most fruitful when people are able to be non-judgmental, entering into dialogue without dismissing views of others because they are different. Rather, to enhance social learning, people should try to identify the assumptions made by others and their own assumptions and learn from them.

- (i) Social learning involves a number of steps (Maarleveld *et al*, 1997):
- (ii) Shared problem definition
- (iii) Shared sense of mutual interdependency
- (iv) Shared social construction of the hard and soft systems in question
- (v) Shared perception of the causes of the problem including agreed ways of looking at intractable social impasses
- (vi) Reflective learning about how others see oneself
- (vii) Shared perspective on the nature of solutions, both in terms of hard and soft changes
- (viii) Collective resource mobilization
- (ix) Established leadership and organization for action

Drawing from the literature reviewed, social learning in forest management is defined here as a dynamic process of reflection and action by a group of stakeholders, who are continuously interacting, communicating, and sharing their experiences and coming up with lessons to influence future decision making processes. The social learning process starts with problem identification by stakeholders who share a common resource. Through facilitation, stakeholders critically analyse their different perceptions of the problem at hand and through discussion, come up with a shared problem definition. This is followed by identification of each stakeholder's interest in being involved in the process. With multiple interests, a sense of interdependency has to be cultivated among these stakeholders in order for them to realize that each stakeholder cannot solve the problem single-handedly and requires input from the others. Stakeholders then seek the various ways of solving the problem at hand. Through discussions of their experiences and negotiation, they come up with a solution(s) that ensures that all stakeholders benefit. Leadership structures are then put in place to spearhead implementation of the desired solution. After implementing the suggested solution, stakeholders reflect and learn from the whole process and the lessons learnt impact on their adaptiveness in forest management.

## **The research area**

Mafungautsi forest is located in Gokwe South District in Midlands province, Zimbabwe. The forest has an area of 82 100 hectares which makes up 17% of the district, while 73% is covered by communal areas and the remaining 10% is covered by national parks and small-scale commercial farms. Gokwe South District falls under agro-ecological region III (\*\*\*\*explain) and receives a total annual rainfall of around 800mm (which falls between November and March), and suffers from mid-season dry spells and high temperatures. The region is most suited for animal production (Katerere *et al*, 1993).

The vegetation of Mafungautsi is predominantly Miombo woodland and dominant tree species are *Brachystaegia* and *Julbernadia* species (Nyirenda, 2001). The dominant soils in Mafungautsi forest are the Kalahari sands and only a few patches can be found with sodic and heavy clay soils. The forest is a catchment area for three of Zimbabwe's major rivers, Sengwa, Mbumbusi and Lutope. Conservation of the watershed was one of the main reasons why it was gazetted in 1954 as a state forest.

Mafungautsi forest is a source of several resources including pastures for grazing animals, thatching grass, broom grass, medicinal plants, honey, mushrooms, firewood, construction timber, game meat, Mopane worms<sup>5</sup>, indigenous fruits and herbs.

The initiation of a resource-sharing project in 1994 brought some changes in forest management in Mafungautsi. The main aim of the project was to bring the surrounding communities on board as far as the management of the forest resource was concerned. Fifteen Resource Management Committees (RMCs) were set up in the various communities surrounding the forest and their main role was to monitor and control harvesting of the resources, which communities were now allowed to harvest. The RMCs also initiated beekeeping projects in the communities in order to reduce the number of people cutting trees in the forest for the purpose of harvesting honey. Trees that have hollow stems (mostly mature trees) normally house bees and are prone to being cut as resource users harvest the honey.

The research<sup>6</sup> reported in this paper was conducted in three of the 15 RMCs (Gababe, Batanai and Ndarire).

## **Methodology for enhancing social learning in Mafungautsi.**

Facilitators identified and took into account the following steps for facilitating social learning: shared problem definition; causes and possible solutions; shared

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<sup>5</sup> Mopane worms are edible and used as a relish when dried.

<sup>6</sup> The research was conducted under the Center for International Forestry Research's (CIFOR) Adaptive Collaborative Management (ACM) Project.

sense of mutual dependency; and reflective learning. Indicators have also been developed for tracing social learning and these are changes in attitudes, perceptions, management strategies, practices and enhanced collaboration among stakeholders.

The core social learning activities in the facilitation process were training workshops such as the Training for Transformation (T for T), participatory action research with resource users and feedback meetings. The T for T workshop marked the initial phase of enhancing social learning among stakeholders. The workshop focused on, among other things, the importance for communities to share knowledge amongst themselves. \*\*\*\*\* (ADD MORE ON ITS FOCUS ON LEARNING AND WHY THAT WAS NEEDED – ask Richard) The workshop was conducted in a participatory way, with extensive use of visualisation techniques, games, stories and short plays in explaining the various themes of T for T. An example of one of the games which participants played is given below. Its aim was to show the importance of collaboration and sharing information among resource users.

#### **The game of squares**

Workshop participants were divided into groups of five. The facilitator started by explaining the objective of the game: each member of the group was to build a square of equal size to the rest of the group members. Each member was given an envelope with assorted pieces for making the squares. The rules of the game were as follows:

- No member may speak to another member
- You may not take or ask for a piece from any other person but you can give pieces to others

After a signal from the facilitator, the groups started the game. When the task was finished, the groups discussed the various lessons learnt from the game and some of these are presented below.

#### **Lessons drawn from the game**

1. Sharing of knowledge is essential for development.
2. Lack of communication hinders development
3. Cooperation by community members is essential for development
4. We should be open with one another if we want our community to be developed
5. We all have different ideas and knowledge, and if we combine it we will develop

The T for T workshop also encouraged participants to be critical and analytical in whatever they did and learn by asking questions. The facilitator highlighted the importance of looking critically at the existing community norms and the reasons why they were put in place. He also highlighted that education can either domesticate<sup>7</sup> or liberate an individual. To illustrate this, the facilitator told the following story.

Once upon a time there was a mother who used to remove thighs of a chicken when cooking and would later cook the thighs on their own. Her daughter grew up seeing this and when she got

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<sup>7</sup> Domestication involves \*\*\*

married she also continued cooking chickens her mother's way. Now when she also gave birth to her daughter, she asked her why she was cooking chickens that way. The only answer she gave her was that 'I saw my mother cooking chicken that way, but I have no idea why she did that.' When they visited their granny in the rural areas, the granddaughter asked her why she cooked chicken that way. The grandmother said, 'I just saw my mother doing it but I have no idea why she cooked it that way.' This continued for quite some generations and finally, they found the reason why the great grandmother used to cook that way. It was discovered that she used to have a very small pot that the whole chicken could not fit. She therefore devised a plan to cook the thighs separately from the whole chicken.

Other attempts to facilitate social learning involved initiating a number of activities that included training workshops such as a 'Criteria and Indicators' workshop where stakeholders came together to share knowledge on criteria and indicators of sustainable forest management. Also several meetings were held in which stakeholders discussed critical issues concerning the forest and their livelihoods. Discussions and sharing of knowledge were facilitated through the resource groups (thatch, honey and broom grass), which were formed during the participatory action research (PAR) through facilitation by the researchers. Resource users were asked to join a group dealing with a resource that interested them and the groups were not fixed. Users were free to join any other group they wanted for almost all of them were involved in harvesting the three resources. The resource groups met regularly to discuss issues, concerns and share their knowledge and also jointly come up with action plans to solve the existing problems concerning their resource. This has offered a lot of opportunities for the stakeholders to learn together, and come up with joint action plans to adapt their management strategies and better their lives. The learning process in Mafungautsi is perceived as an on-going process where stakeholders will continue to learn.

For tracing social learning a checklist, presented in the box below, was developed to guide discussions. Data collection techniques that were used in the research included focus group discussions with resource groups, participant observation, group discussions, personal interviews, participant observation and informal discussions and interactions with community members.

#### Interview Checklist for Tracing Social Learning after T for T

##### 1. Questions

###### Those who attended the workshop

- Did you tell anyone about the workshop?
- What did you tell him/her/ them? Describe.
- According to you, what is the most important thing that you learnt from the workshop? From whom did you learn i.e. facilitators, other participant, ACM researchers
- How have you used, in your everyday life, the important things that you learnt

###### Those who were told about the T for T workshop

- Who told you about the workshop?
- What exactly did they tell you?
- What did you learn from the message?
- Did the lesson make you change something in your life (i.e., the way you do some things, perception, etc.), what exactly changed?
- Did you also tell someone about the workshop?
- Who else did you tell?

Communities surrounding the forest were divided into 15 sites in the 1994 pilot project, each with a resource management committee (RMC), where a site was composed of one or more villages. The RMC was responsible for governing resource use by villagers in each site. In this research, site selection was done by putting all the RMCs that fell under one chief into a hat, and one site was picked. Three sites were therefore selected and these were, Batanai, Gababe and Ndarire. Gababe falls under chief Njelele, Batanai under Chief Ndhlalambi and Ndarire under Headman Chirima. Batanai RMC consists of three villages, Gababe consists of ten villages and Ndarire consists of five villages.

## Findings

This section presents and discusses the research findings, which are related to the three resources that resource users were allowed to harvest after the initiation of the resource-sharing project. These resources are discussed briefly in the box below.

### **Broom grass.**

This is an annual grass that is used for making brooms for sweeping houses. The grass matures soon after the rainy season and resource users are allowed to harvest the grass after paying a permit price. Harvesting is monitored by members in the resource management committee. There are several rules that govern use of broom grass including:

- Lighting fires is not allowed
- Uprooting is not allowed as a method of harvesting. It is believed that the grass will not grow in areas where it has been uprooted.
- Each person has to pay a permit price of Zim\$ \*\*\*\*/ day to harvest the grass

### **Thatch grass**

The botanical name for this grass is \*\*\*\*\*. It is used for thatching. The rules that govern use of the resource include:  
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### **Honey**

This resource can be harvested from the forest. However this is illegal because resource users have bddn cutting down trees in order to harvest it. They are therefore encouraged to keep beehives in the villages near to their homesteads.

## The Machije experiment (When?)

In an effort to learn together as a community about the effect of digging broom grass, communities chose one of the wetlands in Mafungautsi, Machije, to experiment. Community members decided to uproot all the broom grass that was



available in the area. After uprooting the grass they continuously monitored the area and their major discovery was that no new broom grass germinated in the seasons that followed. For two years after the experiment, no one uprooted broom grass in Batanai. However, people resumed digging and uprooting the grass later on. During discussions held with resource users, there are a number of factors that led to the sudden change in management strategies for broom grass. One of these factors is the continued market demand for uprooted brooms. In most places where people sell their brooms, the customers always go for the uprooted brooms and these sell faster than the cut brooms. It is alleged that uprooted brooms last longer than cut brooms because the grass does not become loose easily. And this has made many of the Batanai residents choose digging even though they all know the adverse effects of such an action. One woman illustrates this point in the following case

“One day I went to Gokwe [Gokwe is about 10km from Batanai] to sell my brooms which were a scotch cart load[villagers use draft power for pulling scotch carts – they normally walk as the cart will be full of goods for sale]. When I arrived in Gokwe, all the customers rushed to see the brooms and all they were saying was, ‘*une magaro here?*’<sup>8</sup> *Une magaro here?*’ which means ‘Are they uprooted brooms? Are they uprooted brooms? Not even a single broom was bought as all the people discovered that I had cut broom. I had to come back home all the way from Gokwe with all my brooms untouched. I was really pained at all the time and effort I had wasted” The woman<sup>9</sup> just ended by shaking her head and saying, “*Ah, zvinorwadza veduwe*” meaning “Ah, it is very painful, I tell you.”

Another woman from Batanai also made a similar point.

“Last year, I also went to Gokwe with a scotch cart full of cut brooms and when I arrived, a group of customers asked me to bring my brooms since they wanted to buy them. I pushed my scotch cart to where the customers were standing and as they were looking at the brooms and putting aside the ones they wanted to purchase, another seller came by and started shouting that she had uprooted brooms. All the customers who were about to buy my brooms threw them back into the scotch cart and rushed to the newly arrived seller. We actually had such a big fight, me and the newly arrived seller, that we ended up at Gokwe police station. I presented my case to the police and told them that the other woman was selling brooms, which were illegal since they were uprooted and not cut, and this was not allowed in our RMC. The police however dismissed the case and said that there was no such law, written down. I finally left the police station angry and disappointed.”

At a meeting where resource users discussed the Machije experiment and why people have started digging again, stakeholders finally decided to come up with strategies to ensure that their resource was used in a more sustainable manner. The strategies they came up with during the discussion are given below.

### **Box \*\*\*. Strategies proposed for discouraging digging**

1. Everyone should help by telling the police whenever they see someone digging broom grass rather than leaving the duty solely to the RMC police who are sometimes too busy

<sup>8</sup> The literal translation for the phrase, ‘*une magaro?*’ is ‘does it have buttocks?’

<sup>9</sup> The woman was from Batanai RMC and she said this at an organised broom grass meeting.

- to monitor activities in the forest. According to the villagers, the RMC police are not paid, unlike the Forestry Commission police who devote most of their time to arresting people who transgress. The RMC police have to do the RMC work as well as working in their fields in order to survive. It was said that most of those who uproot the grass often go into the forest very early before everyone else is allowed in and steal the grass, and at that time, the RMC police are, with the rest of the villagers, busy harvesting produce in their fields. Some people later suggested that it could be effective if the RMC police could also be paid in order for them to put more effort into arresting people who uproot broom grass. After a long discussion on where the community could get money to pay the RMC police, it was agreed that very heavy fines need to be imposed for those who dig broom grass: their hoes and grass should be taken on the spot and they will be asked to pay a large amount of money, part of which could contribute to paying the RMC police.
2. Each and every person could pass through the RMC police and pay their permits after harvesting so that their brooms could be inspected. Even though this appeared as a good idea, people discarded it as they said that it would be difficult to implement. There was risk that some people could disobey and escape punishment.
  3. In dealing with the demand for the dug brooms from the market, the people agreed that this could be solved in three ways: (a) if all the community members cooperate and cut their brooms, there will not be any option for the customer except buying the cut brooms; (b) a law can be put through the Rural District Council at Gokwe center so that if anyone is caught selling uprooted brooms, the person can be arrested; and finally (c) sellers can actually come up with other attractive bundling methods that can make the broom grass last longer so that there will not be any difference with the dug brooms. Customers will then be attracted to buy the newly bundled brooms.
  4. It was also agreed that broom grass harvesters could advertise their brooms so that instead of the sellers going out, the customers would actually come to Batanai to buy the brooms. If that happens, it would be easy to monitor and inspect if anyone sold uprooted brooms since there would be a central market in the village.
  5. It was also agreed that there was need to organize a meeting where the other RMCs could be invited and learn from Batanai villagers about the Machije experiment. They could also visit the site as a look and learn exercise so that they could also cut instead of uproot the grass.

### **Sharing of information/ knowledge/ experiences among resource users**

In the various meetings that have been held by resource user groups stakeholders discussed and jointly came up with problems they faced in each resource area, and together devised plans for solving these problems. During these meetings, there has been remarkable sharing of information between stakeholders. For instance, one of the issues raised as hindering beekeeping in Batanai was lack of knowledge among users. When asked to specify the type of knowledge they were talking about, one man said that he had no knowledge on how to harvest honey and this has caused him not to keep bees. He went on to say that most people amongst the group use various methods for harvesting honey and some of these methods are not good for they destroy the bees. As soon as the man sat down, the RMC chairman stood up and said that that was not a problem at all to him for he has been trained in the most effective honey harvesting methods at a workshop that was facilitated by the Forestry Commission. He started narrating some of the things one has to do or not do while harvesting honey.

1. Harvesting honey when it is too cold is not allowed, for this kills the baby bees,

2. During the hot season you must harvest honey at a time when it's a bit cool to avoid being stung by bees,
3. You need a helper when harvesting honey so that the other person can hold the honey while you are harvesting. It is difficult to harvest honey alone,
4. You should not burn tyres in order to chase away bees when harvesting because you will kill them. You can use cattle dung smoke to make the bees harmless,
5. You must not make noise when harvesting honey,
6. You must not beat the beehive when harvesting because this upsets the bees,
7. Don't harvest all the honey. You need to leave some for the bees,
8. Don't mix cow dung and that from donkeys when preparing smoke for harvesting for this will make the bees upset,
9. If you upset the bees, you must leave and come back later when they have settled down and
10. There is a time for harvesting honey. You must not harvest honey at a time when bees are nesting. This makes the bees upset and they will bite you.

There has been sharing of information and knowledge by beekeepers in Gababe as well. The following case illustrates this.

At a meeting in Gababe with beekeepers, some people mentioned lack of a market as a very big problem for beekeeping, and this was identified as the main reason why people were not keeping bees. The chairman of the beekeeping committee, stood up and told the other beekeepers that truly speaking, marketing was not a problem at all. He said that there was a huge market for Mafungautsi honey in Bulawayo where he normally sells his honey. He went on to say that most of the buyers there actually preferred honey from Mafungautsi forest because it is thick, unlike the honey that comes from gum trees which is watery. He then went on to advise the rest of the people that for them to attract good prices, they needed neat packaging for the buyers did not like honey from dirty packages.

In another instance where beekeepers in Batanai were discussing ways of harvesting honey, a certain old man, stood up and said:

'Now let me tell you the best way that I have used successfully to harvest honey, and you better listen attentively. For harvesting honey, you need to go there naked without wearing anything. You must not use perfumes, and you must take a bath before you go there. Do not use perfumed soaps.' Most of the people who were present laughed, maybe in disbelief when he talked about going to harvest honey whilst naked.

In some cases however, innovators were not willing to share their knowledge with the rest of the people. For instance, there was a man, who had about 110 beehives at his homestead. When we invited him to a beekeeping meeting, he sent a message that if the researchers did not pick him up, he was not coming to share his knowledge and experience. Our driver had to go and pick him up. But at the meeting, he never said a word. At the end of the meeting, the driver had to drop him at his homestead.

There were instances also where, through the organised meetings, resource users had opportunity to reflect on their decision making process, and this reflection helped them to come up with better management strategies that were sustainable. The case below illustrates that too little reflection on people's ideas during discussions can result in valuable experience in similar situations being

ignored. This in turn, results in similar mistakes being made in the management of their resource.

At a beekeeping meeting in Gababe, when beekeepers were discussing action plans for beekeeping, everyone suggested that they needed to have a project where they all jointly keep a certain number of beehives at a place obtained, either in the forest (with permission from the Forestry Commission) or in the village (with permission from the village head). When asked if they had similar projects in the village elsewhere, the villagers said they did not have any similar projects. With more discussion and critical reflection on why they thought this was going to work, one man at the meeting ended up by admitting that such projects did not work because of the problem of free riding. He said that only a few people work on such projects whilst the rest just harvest the benefits without putting in much effort. When the man said this everyone automatically agreed that such a project would not work. They later on referred to their cotton group where they had a committee and attended meetings occasionally, but each person had individual plots where they worked individually. In the end, it was agreed that for beekeeping, it would also be better for individuals to have individual beehives, and members could also meet occasionally to discuss issues concerning beekeeping. They also agreed to select a committee that would be responsible for organising meetings and other things concerning beekeeping.

### **Change in perceptions, and norms after the Training for Transformation workshop**

When the research project was initiated, not a single woman came to the organised meetings. When the T for T workshop was organized, an effort was made to encourage women to come, and this required researchers going and negotiating with the invited women's husbands. Some of the invited women still did not make it to the workshop. In meetings that followed, at first only women who attended the T for T workshop attended. Gradually, the turn out by women changed and women currently dominate the organized meetings and there is no longer a need for the researchers to go and negotiate with their husbands.

Also, in other instances, it was extremely difficult for the researchers to conduct meetings at first, especially in one of the research sites, Batanai. They had to notify the councillor and the ruling party political leaders each time they wanted to conduct a meeting, otherwise they were threatened. The following incident illustrates this:

One day when one of the researchers was organising a meeting in Batanai with resource users, a ZANU PF chairman stopped the research vehicle and peeped in the car saying angrily, '*Ungapi uNyirenda?*' meaning 'Where is Nyirenda?' The researcher told him that Richard Nyirenda<sup>10</sup> had not joined this trip to the village, as he was busy organising other things at Gokwe center. The researcher later asked him if she could help. He just explained that he was angry because he had heard a rumor that the researchers were organising a meeting in the village and yet had not informed him about it.

At one of the meetings that the research team organised in Batanai, it took them about an hour to conduct introductions. The invited people introduced

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<sup>10</sup> Richard Nyirenda is a co-author of this paper.

themselves with their political titles, like 'the ruling party chairman', 'vice chairman', 'secretary', 'vice secretary' and so on. During the meeting, anyone who wanted to speak had to chant the party slogan before and after saying something. This went on for several more meetings, but later it became less pronounced as the very same people became more serious when they came for meetings and concentrated more on how to manage their forest resource in a better way. Currently, except for new people who come for meetings, no introductions are conducted, as all the people now know each other. Later, it was brought to our attention that the very same people who had such powerful positions in the ruling party, also held similar positions in the opposition party.

### **Feedback meetings on status of the forest resources**

There was also sharing of knowledge and information at feedback meetings where people questioned research results in trying to understand their implications for resource management. At one of the meetings where the research team presented their findings from the context studies that were carried out in Mafungautsi, resource users were very interested in knowing how much of each resource was available in the forest. Most people were quite shocked by the rate at which they were losing trees per acre due to honey harvesting. This raised a lot of questions as the figure was quite alarming and one of the villagers actually asked how the researcher, an ecologist, got these results. In the discussion that followed, people talked about how many years a big tree takes to grow and what loss they made by cutting it just for the sake of honey. In some cases, someone said, people failed to get honey after cutting the tree. It was said that people who cut trees in order to harvest honey did so in a hurry since this was an illegal act, and most of them used rubber (from used tyres) smoke to chase away bees. They were also responsible for the many forest fires that destroyed the forest resource since they were said to leave without extinguishing the fire.

It was not always the case that resource users would listen attentively to what others presented as feedback. In some cases, the resource users would disregard contributions from some of their members (maybe because they did not trust them or they did not like their personality), and this hindered the learning process since such important contributions were not taken seriously. For instance, at one meeting in Batanai, a volunteer who had attended the T for T workshop was asked to give feedback on the workshop to the rest of the villagers. A certain man, Mr. X, volunteered and started narrating what had happened at the workshop. As he stood up, some people just grumbled, and before he even finished, some were shouting that he should sit down. Mr. X ignored these protests and continued speaking. After some time he sat down and another participant, a woman, stood up and told her side of the story. As she spoke everyone was just nodding, and when she finished there was loud applause from the people.

## Results from T for T Workshop

This section highlights some of the findings of a survey conducted for tracing social learning after the T for T workshop. Both participants and non-participants of the workshop were asked about what they have learnt from the workshop and how they have used the lessons in their day to day life. It was interesting to note that in Batanai, some people heard while others did not hear about the workshop at all. Out of the 17 people who were interviewed and were non-participants of the workshop, 11 of them had heard about the workshop and 3 of these had learnt something (see Table below)

### Responses from people who did not attend the T for T workshop

	Sex	Learning	Number
Those who heard about the workshop	Males	Those who learnt something	3
		Those who did not learn something	2
	Females	Those who learnt something	0
		Those who did not learn something	4
Those who did not hear about the workshop	Males		3
	Females		5

For those who heard and learnt something, they also changed something in their lives. Examples of what they learnt and how they changed their lives are given in the table below:

What did they tell you?	What did you learn?	Did lesson make you change something in your life?	Did you tell someone else about the workshop
He told me about development. He said that when one is developed, he/she must be free from diseases, starvation, poverty and also have better education	I learnt that development is made successful by those who work for it.	It made me change my perception that it is the duty of government or the council to develop our area	No
He told me about the example of people who were crossing a river. One man was left behind in the middle of a flooding river and the other was left near the riverbank. The one who was left near the riverbank made effort and walked until he was outside and the one who was left in the middle just stood still hesitantly and he did not move at all. He was drowned in the river.	I learnt that relying on donors, government, councils or other outsiders is not good for the local community. These people normally help you for a short period of time and leave you with nothing when they leave.	It made me change my perception that development can only be done by donors and government. I now think that relying only on donors and government will make me stay poor and a beggar for the rest of my life.	Not yet
He told us about the example of Chief Njelele of Gokwe who told his people to	I learnt that when you tell people or someone to	Yes. If someone tells me something that I	Yes, I told Cannan Magutshwa.

come to a meeting one day, and each person was asked to bring milk and pour it in a large pot that was put outside his homestead. The chief did not however explain to his people what the milk was for and since they did not know, most people cheated and put water instead of milk. At the end of the meeting, people were asked to wait for food. Each person was given a plate of Sadza and was asked to help themselves with the milk they had put in the pot. Everyone was embarrassed as they discovered that instead of milk, there was water in the pot.	bring something to you, you also need to tell them the reason why. I also learnt that it is not good for people to assume wrong things when they are asked to do something for they might end up cheating themselves.	don't understand, I must ask even if the person is my boss.	
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Except for one woman who heard about the workshop from her mother, the rest of the people who heard about the workshop were told by males. In almost all cases, the women were not targeted for the message, and some overheard male workshop attendants talking or reading the workshop book to their friends. Examples to illustrate this are given in the table below.

Who told you about the workshop?	What did they tell you?
My husband	He just told me that they learnt a lot but he did not tell me exactly what he had learnt. I have seen him reading a book from the workshop, but I never asked him what it was talking about since I thought it was not important for me. I have access to the book since he did not hide it, and I can find out what it contains and I can ask for help from my husband.
My mother, Mrs. Mafa	She only told me that she had learnt a lot at the workshop but she did not tell me exactly what they learnt. But I browsed through a book from the workshop and looked at the photos, which were inside.
Shingai Maganu (Male)	I cannot remember since he was reading the book to his friends and I also listened to his stories
Nene Sibanda (Male)	He just told me that he had to leave the workshop because he had a toothache. He did not say even a thing about what exactly he had learnt, but I took a book that he had and looked at the pictures. No one explained these pictures to me.

Of those who attended, all said that they had learnt something during the workshop. All of them have used the lessons in their everyday life and all of them have told someone about what they have learnt. Their responses on what they have told others after the workshop, and how they have used the lessons learnt from the workshop are given in the table below.

What exactly did you tell other people about what you learnt?	How have you used the lessons in your day to day life
I told them the example of the symbol that looked like a 3, E, M and W. I told them that four people who were looking at this symbol saw four different things. This means that one thing can give different views to different persons depending on how they are looking at it	I told the lesson to other people, and I am now working very hard to overcome poverty
I told them about the story of chief Njelele, his people and the jug of milk. I told them that from this story I learnt that it is bad to assume negative things when asked to do something for this may be very wrong. Also that when telling people to do something for you, make sure that you make it known why they have to do it, and this will make them not cheat.	I have used other illustrations from the workshop whenever I attend meetings such as church, political, development and Sabhuku's meetings.
I told them that people need to cooperate and work together if development is to take place in the community. For example, building a school or clinic	I always tell people to work together if they want to build a clinic or a school. I always emphasize to them that it is very important that people cooperate and work together to develop our area.
I told them about the story of chief Njelele and his people	I have told the example of chief Njelele to other people and

	the lesson that I learnt, that for example, husbands should always be clear to their wives and children on why they have to do certain things. Also, women should not have negative attitudes when they are asked to do something by their husbands for it could benefit them in the end.
I told them the story of two people who were given help to cross the river. One was left in the middle of the river and the other one nearer to the riverbank. The one left in the middle of the river was so scared to move even a step, and in the end he drowned. I told them that this story teaches us that we are supposed to also work and take action on our own even though some people offer us help	I am trying to practice what I have learnt from the workshop in order for me to live a better life.
I always tell them that it does not pay to only wait to work as a cooperative with others for working as a cooperative is time wasting and not well paying. It is much better to work individually and for you get more profit. I also tell others that you will not go hungry if you work hard.	I am trying to work very hard and develop myself individually.
I told them the following stories: that of chief Njelele, the story of people who were given help to cross the river, and that of the people of Binga who were given bags of fertilizers and they threw it away since they only needed to use the fertilizer bags for drying their fish. I also explained the meanings of each of these stories to them.	I have used the stories I learned to teach other people. I also read the workshop book time and again to remind myself of the lessons. I also used the stories when teaching at church.
I have told them that at the workshop, everyone was free to say out their opinions. I also told that we should all strive for development in our area. I also told them about the story of the two men who were given help to cross a river. I explained to them that people should not only rely on help from donors, because they will not stay forever in the community.	I tell my children and neighbors about the things I learnt at the workshop. I also carry the workshop book around so that people can read for themselves when I explain something to them.
I tell others that waiting for others to do something does not help at all. You need to do things on your own if you want development. Also, I told them that women should not only rely on their husbands for help, but they should also do something and help their husbands to support the family.	I now do everything on my own in order to overcome poverty in our community
I tell them that one has to work hard and not wait for being spoon fed if she/ he wants development. I tell that it is not good for you to only rely on donors	I am trying very hard to practice what I have learnt.

## Discussion

This section revisits the research questions and tries to address the lessons learnt in light of social learning from the Mafungautsi case.

### 1. *How can social learning be enhanced in communal area forest management?*

From the evidence presented above, the Mafungautsi case has shown that:

- Training is an important tool for communities to critically examine and question their values and norms and learn together. After the T for T workshop, more women started attending meetings and other training workshops. In this case, it can be said that society in general has reflected on its norms where women were not allowed to attend certain meetings, which were meant only for men. To some extent, people have also discovered the importance of training for women, as more and more women started attending training workshops that were organised. Women, as well as men, got a chance to reflect on the various issues concerning their resources, and they have ever since begun thinking of ways of sustaining the resource. For



instance, broom grass harvesting in Batanai is mostly dominated by women, and it was more useful that they also got involved in coming up with action plans to sustain the valuable resource. Some of the measures which they came up with show how they were trying to adapt to the changing environment.

Also, the T for T demonstrated that people are not rigid but are open to new ways of thinking. All the workshop participants learned new things, which have made them change their perceptions. Learning did not only end with the individual but most of them were excited and went on to share with the rest of the villagers about what they had learnt, and in turn some of the non-participants also learnt important lessons that made them change their perceptions too. Training therefore was important in generating new insights for the resource users, which were crucial for decision-making processes.

- Experiments are important social learning tools. Reflecting on the Machije experiment, it is clear that social learning has indeed led to adaptiveness in forest management. After the experiment, there was no digging of broom grass as stakeholders learned together the impact of digging. With so much evidence at hand, it was easier for all the stakeholders to collaborate and change their broom grass harvesting methods to those that were sustainable. However, the Machije experiment also demonstrated that taking shared learning as a once-only event does not help either. With an environment that is continuously changing, there was need for stakeholders to continuously meet and discuss and reflect on what actions to take as the market continued demanding uprooted brooms. Lack of this conscious effort for people to reflect on the experiment and way forward resulted in some of the resource users resorting to uprooting the grass in order to meet the demand. When effort was made to bring stakeholders together to discuss and reflect on the way forward, they actually came up with brilliant ideas on how to adapt their broom grass harvesting to suit the new demands. One of the suggested methods to sustain their broom grass was to come up with a new bundling method that would compete equally with uprooted brooms.
- Creating platforms where communities share experiences and ideas is essential for enhancing social learning. The Mafungautsi case showed that when given the platform, stakeholders could actually share their experiences and learn together in an effort to enhance sustainable resource management. This has been demonstrated during the resource-user-groups' regular meetings where people redefined their problems and tried to find solutions to these problems. Stakeholders were willing to listen to those who had experience in doing things that were a problem to the group. For instance, those at the Batanai beekeeping meeting who had a problem with harvesting honey paid a lot of attention when the RMC chairman described what he had learnt on harvesting honey. Also, in Gababe, everyone paid attention when

Mr. Kancane Kancane explained about the Bulawayo honey market, since someone had mentioned marketing as a problem.

- Feedback meetings are important tools for enhancing learning through discussions. Presentation of the context studies by the researchers at a feedback meeting was an important way of initiating serious discussions on the status of the resource and what actions to take to sustain it. Resource users were alarmed by the rate at which they were losing trees in the forest due to honey harvesting and this made them give serious consideration to promotion of individual beekeeping projects nearer to their homesteads. This was considered as one of the measures that could discourage people from cutting down forest trees since they could harvest honey from their own bee hives.

## 2. *Can social learning lead to adaptiveness in forest management?*

So far, the Mafungautsi case has shown that social learning does lead to adaptiveness in forest management. After the Machije experiment, there was adaptiveness in the way people harvested broom grass. For two years after the experiment, no one uprooted the broom grass as everyone had clearly learnt that digging was a threat to the grass.

When stakeholders were discussing why people have resorted to digging again rather than cutting, and after coming up with the various reasons, again stakeholders undertook serious discussions and came up with several management mechanisms, which they intended to embark on in order to discourage digging. This again shows that through learning together, and redefining their problems, stakeholders can adapt their management strategies in order to sustain their resources. The Machije experiment has clearly demonstrated that there is need for continuous creation of platforms for stakeholders to discuss, share ideas and come up with more adaptive management strategies.

After getting statistics on the rate at which trees were being cut in the forest for the sake of harvesting honey, and after discussing the losses due to this, stakeholders began to take beekeeping projects seriously. The rationale being that if people keep their own bees, there will not be a need for them to cut trees in the forest. This shows adaptiveness by stakeholders after learning together.

## 3. *What challenges are faced in facilitating social learning?*

- Institutionalizing the social learning process is a big challenge that researchers face. Yet this is important for continued shared learning and adaptation by resource users that will ensure that their resource is sustained while at the same time they are benefiting from it.

- Making resource users appreciate each other's contribution during discussion and reflection sessions. Good facilitation skills are needed in order to make resource users non-judgmental and learn to listen to ideas from those they look down upon. In the case of Mr. X, people did not want to listen to him, maybe because of his personality. Also, in the case of the old man who told people that they needed to harvest honey whilst naked, most people just laughed and did not take him seriously, yet he said that he had used this method and it had worked.
- Involving everyone in the social learning process without forcing him or her. For instance, making innovators keen and willing to share their knowledge with other stakeholders. In the case of beekeeping, one of the innovators was not keen to come to the meeting, unless the researchers went to pick him up. The reason could be that he did not see any value added to his beekeeping knowledge by attending the meeting.
- Not wasting resource users' time through the critical reflection and learning sessions. It is always difficult to know when to stop these sessions and when to continue.

### **Conclusions and recommendations**

The Mafungautsi research has shown that the following tools are useful for enhancing social learning among stakeholders in forest management;

- training workshops that break passiveness among stakeholders, encourage them to be open with each other, equip them with analytical skills, and emphasise the importance of learning processes in sustainable resource management (for instance T for T workshop);
- joint experimentation by stakeholders in participatory action research processes;
- creation of platforms for stakeholders to discuss, share experiences and learn together; and
- feedback workshops where stakeholders get feedback on research results and discuss their implications.

The research also showed that social learning, to a very large extent, leads to adaptiveness in forest management. Stakeholders are always confronted with changing economic, social and political environments and should continuously adapt their management practices if the resource is to be sustained. The research also highlighted some of the challenges faced in facilitating social learning, including institutionalizing the learning process, making stakeholders appreciate each other's contribution during discussions, involving everyone in the social learning process and making the reflection and learning sessions waste resource users' time.

It is important however to highlight that learning is a continuous process that always takes place with or without facilitation. People will continuously learn together as shown by the case of T for T where participants shared their lessons

with other villagers without any outside facilitation. According to one researcher, 'learning is not something we do when we do nothing else or stop doing when we do something else' (Wenger, 1998, p8), but it is a process that always takes place whether we like it or not or whether we notice it or not. Wenger also stresses that, 'even failing to learn what is expected in a given situation involves learning something else' (ibid. p8). It is more rewarding if stakeholders could even speed up this learning process by deliberately organising situations and encounters where they learn together and take note of exactly what they have learnt in order to make decisions for sustainable resource use. Failure to tap lessons learnt through sharing and reflecting on their experiences is a tragedy for both the resource users and the resource itself.

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