

Full Length Research Paper

Small Scale Farming On Wetland Resource Utilisation: A Case Study of Mandlazini, Richards Bay

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Abstract

Wetland utilisation by rural communities in South Africa poses a serious challenge for natural resource conservation. The growing rate of rural poverty, poor education and socio-cultural beliefs contribute towards the current plight of many wetlands. The challenge that faces wetland sustainability stems from the over utilisation of wetland resources for survival as well as cultural activities that are practiced. This study aimed to investigate the impact of various wetland activities performed on a daily basis by local communities of Mandlazini in the quest for survival. The community groups were selected to study their way of life and their relation to their local environment in order to deepen the understanding of their activities and impact on the wetland. Household data gave a clear picture of socio-economic status of the community. The results of the study showed that community members, on the lower end of salary scales, were the ones who relied heavily on raising income by using resources available from the wetland. Research data showed that, there is a high demand for staple food such as amadumbe, banana, and sweet potatoes by the community under study. The study also showed that indigenous knowledge can play an important role towards the restoration of wetlands. Furthermore, as many community members practiced subsistence agriculture, most of their livestock depend on wetland resources. All these constituted good reasons why communities should be involved in wetland management and conservation.

Keywords: Agriculture, cultural practices, subsistence, sustainability and wetlands.

INTRODUCTION

The utilization of wetlands for various activities in South Africa seems to be under threat from different practices employed by the local community. Davies and Day (1998) argue that the extensive utilisation of wetlands stems from the series of demands arising from growing rural poverty and cultural beliefs. Barbier, Acreman and Knowler (1997) state that such practices impact negatively on the management of wetlands as many indigenous people lack knowledge about the proper restoration of wetlands. Several campaigns initiated by government and non-governmental organizations in pursuit

of efficient utilization of wetlands resources seem to be futile.

Wetlands resources restoration involves a complex web of a myriad of interactions that take into account local knowledge acquisition from both non-formal and formal education. In the process, these forms of knowledge construction seem to be missing analysis from a socio-cultural viewpoint, which may strengthen understanding of impacts of activities arising from the local communities' general dependence on wetland resources. The complexity surrounding the assumption that rural communities tend to intensify their activities in order to satisfy their basic needs can be interpreted in many different ways. Of course, new ideas with regard to the utilisation of wetlands require data pertaining to socio-economic analysis, livelihood strategies, wetland resources

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and knowledge construction. The objective therefore, is to provide insight into these perspectives while generating a wetlands ecosystem information database based on the poor communities of Emandlanzini, North of Richards Bay in South Africa.

AIMS OF THE STUDY

The overall aim of the study is to examine the impact of the activities of the local communities of Mandlazini, situated to the North of Richards Bay, on the wetlands.

The objectives of the study were the following:

- 1) To identify various dominant wetland crops that local people use.
- 2) To examine how people's attitudes have shaped the way they depend on wetlands.
- 3) To investigate forms of cultural traditions practised by local residents using wetland resources.
- 4) To investigate the role of indigenous local knowledge and its impact towards alleviating the degradation of the wetlands.

History of wetlands conservation

Wetland restoration has come of age since the 1970s, when the importance of the conservation of the wetlands of the world became apparent worldwide. Since then, many wetlands have been created or restored, typically without attention to the importance of natural disturbance in landscape settings (Middleton, 1999). Historically, wetlands have been considered as sites for undesirable natural plants that spread human diseases, the home of predators and parasites and places where crops do not grow. Wetlands have therefore been considered as areas with little or no value (Middleton, 1999). With advances in water resources management and ecological economics, this view has changed and wetlands are now recognized as providing highly valuable goods and services that contribute significantly to local, regional and national economics. The value of wetlands lies in their supply of goods and services that are consumed by society and their attributes which are equally appreciated by society at large (Palmer, Turpie, Manewich and Batchelor, 2002).

Wetlands are a small but extremely important part of the greater South African landscape. Although South Africa has recognized this by becoming a contracting party to conventions of wetlands of international importance (especially with regard to waterfowl habitat) as far back as 1975, their conservation has been sorely neglected. It has been estimated that over half of our wetlands have been destroyed and lost. Those that remain are some of

our most threatened natural areas. With such heavy losses to a small but extremely important landscape type, it is imperative that a strategy to conserve wetlands is developed. Such a strategy should be based on an understanding of the type and distribution of wetlands in South Africa and the development of a national policy (Cowan, 1995). Davies and Day, (1998) state that the educational potential of wetlands is linked to the possibility of studying natural history and observing botanical ornithological or environmental phenomena and processes firsthand. Work associated with wetlands programmes links various national and provincial governments with the Mondi Wetlands project, an initiative of the Wildlife and Environment Society of South Africa. By virtue of their physical presence and shape and the vegetation they support, wetlands may act as massive hydrological control systems for stream flow (Davies and Day, 1998).

RESEARCH DESIGN AND METHODOLOGY

This section incorporates the relevant instrumentations that were used to collect and analyse data. Included also in this section are the details of the population selected for the study, a description of respondents, data collection methods.

Qualitative Research

The qualitative research method is defined as a research method that involves an in-depth understanding of human behaviour and reasoning that govern human behaviour. This method was employed in order to ensure that most people in Mandlazini area would be involved in the data collection process. The study involves investigation of the socio-cultural impact of the people of Mandlazini regarding their use of wetlands as well as how they employ indigenous knowledge in order to restore the wetlands.

Descriptive design

Descriptive design is aimed at gaining more information about particular characteristics within a field of study. The descriptive study may be used to develop theory, identify problems with current practice, justify current practice, make judgments or identify what others in similar situations may be doing.

RESEARCH INSTRUMENTS

Primary data

The primary data was collected from respondents by means of interviews and structured questionnaire sheets

Pilit and Hunger (1997) define the interview as purposeful conversation, usually between two people, that is directed by one in order to get information. Burns and Grove (1993) state that the questionnaire is generally regarded as a form distributed through the mail or filled out by the respondent under the supervision of the interviewer. Face-to-face interviews were conducted to assist those who are illiterate and the digital camera was used to take photos for evidence. The interviews were conducted in isiZulu to facilitate translation into English on the questionnaire sheets, which were written in English. As the local community was not literate, the researcher asked some questions directly and wrote responses on the questionnaire sheet.

The researcher observed the wetlands area together with the respondents. During the observation process of data collection, the researcher asked the respondents to state the methods that they used for planting in the wetlands. The researcher took photographs of various activities showing how people were engaged in wetland usage. Most of the respondents agreed to have photographs taken of their activities.

RESULTS AND DISCUSSION

This part of the study sets out to establish whether the community of this area depended on the existence of the wetlands for survival or not. The following section deals with the findings of the study in multiple perspectives. Firstly, the profile of the surveyed respondents is presented. Then an in-depth critical analysis of the livelihood strategies of the two communities is carried out. The focus of attention then shifts to the socio-economic status of the community under study.

Livelihood on wetlands resources

People who participated in the study have one common voice regarding the wetlands and their livelihood. They attest to the fact that this area is a most productive and resourceful area that provides food and non-aquatic resources but still retains an ecological balance for the local residents in the area. The majority of the people utilize these resources to supplement their pensions and social grants for daily survival since the majority of them are unemployed. Agriculture is rated as the most important activity in the wetlands and as a basic source of income in the area. The counsellor interviewed by the researcher painted a very interesting picture of how people survive here;

"It is very hard to live around this place when you are a lazy; people converge in the wetlands everyday to earn a living where they share their space."

The councillor's view is apparently shared by the attitudes of the people, with most of them demanding draining of

water to make more land available for agriculture. The interviews reveal the high dependence of the people on wetlands resources such as amadumbe (*Colocassia esculenta*), thatching material for building houses, bananas and other resources. Although the concept of conservation is well known, in such a scenario the economic conditions of people dictate otherwise. The role of informal education cannot be overemphasised in ensuring that sustainable livelihood methods are practiced in harvesting and the harnessing of natural resources.

Crop cultivation in the wetlands

The population surrounding the wetlands is purely rural and major parts of the rural area are under various types of wetlands, including floodplains and the lakes in Mandlanzini. About 50 percent of the population interviewed said that they are directly dependent on agriculture for their livelihoods, while many others declared themselves indirectly dependent on agricultural input, crops and marketing activities in the wetlands areas. Many respondents argued that the high level of dependence on the wetlands for agricultural activities might be because many households have no access to other productive employment in the surrounding industries.

Women described how amadumbe (*Colocassia esculenta*), a vegetable with large elephant-ear shaped leaves, is cultivated using a hand-held hoe. This crop is widely grown by many people. Its underground starchy corms consist of small starch grains that are easily digestible. The study found that this crop is common as food for the families. The method of planting amadumbe is generally known since it is carried over to the next generation by the grandparents who live in the same place. When one prepares to plant this crop, one must prepare the soil by making furrows to drain the water from the area to be planted.

Crafts and woven construction from plants

Crafting and woven constructions are still among the most significant cultural and economic activities in the area. Crafters in the area rely on the wetland resources to earn a sustainable living. In general, most crafters still earn relatively small amounts from craft sales, as there is little support from the local community. According to an elder in the village who has been in this business for many years, he is hopeful that things will change one day;

"I started this work when I was a child; those days life was very difficult. My grandmother was very passionate about this work and there was little to earn out of it."

The positive words from the majority of the women in the area bear testimony to the value and satisfaction that

local people derive from the craftwork they produce. This observation concurs with Marcus (2001), who found that crafting adds value as a livelihood strategy and compares favourably with income that most rural women generate in formal employment in the existing labour market.

Sleeping mats

Sleeping mats have cultural significance to most Zulu communities and Mandlanzini benefits from this particular tradition. Almost 70% of the respondents, the majority of which were women working around the Mandlanzini wetland area, produce craft sleeping mats from wetlands plants that they harvest. Rural women spend most of their time harvesting wetlands sedges and weaving traditional sleeping mats from this harvested material. The women interviewed stated that different sedges harvested from the area are used for weaving, including incema (*Juncus kraussii*) and induli (*Sciypas* spp), which are all harvested on the banks of the Mzingazi river wetlands. Ikhwani (*Cyperus latifolius*) is also harvested in the wetlands within the area. The imizi (*Cyperus textilius*) is widely used to make traditional sleeping mats. These mats have traditionally been used in ceremonies such as imishado (wedding ceremonies), ukucimela (the gifts a girl gets from the family before marriage) and they are also used for domestic purposes.

Beer strainers

In the wetlands of Mandlanzini, you may find women busy harvesting the sedge (*Cyperus marginatus*) (see Plate 1). Once harvested, the stem of this plant is rolled into a durable twine. One of the items traditionally woven from this twine looks much like a very large sock as it is designed to trap the grains of sorghum from the brew as it is poured into the serving container for beer. Women involved in this kind of crafting claimed that their parents tutored them in all kinds of arts. They said they did not attend any formal schools but that their knowledge was gained from their parents.

Thatching grass for houses

The harvesting season is from May to July. Fifty-one percent (51%) of the households at Mandlanzini were involved in the harvesting of grass for thatching. One harvester harvests approximately four bundles of grass within nine hours per day twice a week. It has also been reported that it takes less time to harvest a bundle of grass than river reeds. As the total number of hours required for harvesting a bundle of grass is known, it can be calculated that a household harvests about 90 bundles during a season. A bundle of grass measures about 850mm in diameter and weighs almost the same as a bundle of river reed. A bundle of grass was worth R

45.00 in 2006.

The harvesting of thatch grass has a two-fold significance for the households residing in this area. Firstly, they sell these bundles to their neighbouring communities who do not have access to the wetland resources. Secondly, most people construct round as well as four-cornered traditional houses to appease their ancestors. There is a belief that the ancestors visit homesteads and that they need to find houses familiar to them, i.e. traditional huts. The respondents also emphasised their belief that they could not communicate with their ancestors in houses roofed with corrugated iron or in any of the other types of modern houses. They could only do so in huts with thatched roofs.

Reed harvesting

The most common reed type found in the wetlands area is long and spiny and is used for roofing. At Mandlanzini, the wetlands reed is harvested throughout the year, particularly when the water levels have receded. Reeds are harvested using a sickle and then made into bundles. Information from the household survey and discussion groups revealed that, on average, an individual harvests two bundles in a five-hour workday. The average frequency of harvesting varies from time to time, depending on the needs of the buyers. The estimated total number of bundles harvested annually is about 105. Bundles are carried on the head to the household yard where they are sold. A bundle of reeds was worth R 30 at the time.

Traditional healers and their involvement

Local traditional leaders in the Mandlanzini area fall under the uMhlathuze Municipality council. In this study, it was found that traditional leaders were not involved in the education of people or in guiding them on how to use the wetlands in a sustainable way. In interviews with some of the traditional leaders, they said that although they were aware of people using wetlands and the importance of these to society, their committee has not discussed wetlands usage. They have had no discussions on how to restore them and there were no rules and regulations towards the restoration of wetlands and against the allocation of land next to the wetlands to people. Some councillors said that this is due to lack of knowledge about wetlands and that it should be brought to the attention of the government and of non-governmental organisations (NGOs).

CONCLUSION

This paper presented a critical analysis of wetlands utilisation generally in South Africa, more importantly the series of debates, which arose during the in-depth

interviews. First it appeared that wetlands play a central role in ensuring that health of natural environment is sustained for future generation. Secondly, local communities are crafters as a result people use wetland resources to make crafts for sales and to earn income. Many farmers in this community use wetlands to graze their livestock, collect water and get medicinal plants from wetland resources.

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