



ISSN: 2319-5967

ISO 9001:2008 Certified

International Journal of Engineering Science and Innovative Technology (IJESIT)

Volume 3, Issue 4, July 2014

Deterioration of Biodiversity in Lamboua Nile Reserved Forest Sinnar State, Sudan

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Abstract—Any forest characterized by diversities. The Lamboua forest subjected to deterioration due to the settlement of people surround the forest. The objective of the study is to identify the situation of biodiversity in the past and the present so as to know the loss of species in the forest. The data collected by questionnaire. The questions designed for the elders settled around and nearby the forest. The forest officers, farmers and herders were interviewed while observation was also used. The findings revealed that, the different diversities such as trees, medicinal plants, vertebrates, birds and insects were disappeared. The forest needs urgent rehabilitation.

Index terms---Dieback, flood, reserved forest, vegetation, villages.

I. INTRODUCTION

Lamboua Nile is reserved forest located at western bank of Blue Nile River, North Alsabonabi village. Its area is about 335.087 hectares (804.209 feddans) and twelve compartments. It is a natural forest, surveyed in 1936 as reserved forest (FNC,1936).The rainfall ranges between 400-750 mm annually (Omer,2000).The vegetation cover consists of thorn trees, such as *Acacia nilotica* a long the Blue Nile bank, *Acacia seyal* and *Acacia mellifera* associated with tall grasses. The forest also contains ponds, gerf, karab and plain (dahara) area (Voget, 1995). The diversity of animals contains mammals, birds, reptilians and insects. This forest is surrounded by many villages crowded by people. They depend on the forest for grazing, cutting trees for firewood, building materials, hunting, fruits and recreation. On the other hand, the flood of the year's 199,1995,2006 and 2008 deposited huge silt in Maya area while some trees attacked by pests and diseases especially dieback(Talaat,2000).

II. METHODOLOGY

The data is collected by questionnaire. Then the questions designed for the elders settled around and nearby the forest. The forest officers, farmers and herders were interviewed while observation was also used.

III. RESULT AND ANALYSIS

A .Major trees available recently and in the past

The respondents explained, that the trees found in the forest in the past consisted of dominant *Acacia nilotica* and *Ziziphus spini kristi*, *Balanites aegyptiaca*, *salix affila* associated with *Acacia mellifera*, *Acacia nubica*, *Acacia senegal*, *Ficus cycomorous* and *Faidhertia albida*. On the other hand, the recent situation contains, *Acacia nilotica*, *Acacia seyal*, *Ziziphus spini kristi*, and *Capparis decedua*.

Table 1. Major trees available recently and in the past

Trees in the past	Respond.	%	Recent trees	Respond.	%
<i>Acacia nilotica</i>	6	40	<i>Acacia nilotica</i>	4	26.7
<i>Ziziphus spini Kristi</i>	3	20	<i>Ziziphus spini kristi</i>	2	13.9
<i>Balanites aegeptiaca</i>	2	13.3	<i>Eucalyptus</i>	4	26.7
<i>Salix affila</i>	2	13,3	<i>Canocarpus lancifolus</i>	3	18.8
<i>Acacia sebriana</i>	2	13,3	<i>Acacia nubica</i>	2	13.9
Total	15	100%	Total	15	100%

B. Plants present now and in the pas

Table 2 showed that, there are different plants found in the forest. Most of them invaded form other areas.



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Table 2. Plants present now and in the past

Plants/past	Respon.	%	Plants/present	Respo.	%
<i>Ricinus communis</i>	5	33.33	<i>Sorgham pupreosericeum</i>	3	18.8
<i>Ocimum basilicum</i>	4	26.70	<i>Cyperus rotundas</i>	2	13.9
<i>Boeharia arreta</i>	4	26.70	<i>Pharagmites australis</i>	3	20.0
<i>Solanum clubium</i>	1	6.63	<i>Ipoma carnea</i>	3	20.0
<i>Cleome gynandra</i>	1	6.63	<i>Argemona mestiaea</i>	4	26.70
Total	15	100%	Total	15	100%

C. Vertebrates and birds seen in the past and in the present

According to the respondents, there were different animals seen in the forest in the past. Such as foxes, rabbits, quella quell, Squids, Chicken valley, Rohufetch, Lunars- and the Bees. They mentioned that some of them disappeared.

Table 3. Vertebrates and birds seen in the past

Vertebrates	Respon.	%	Birds	Respon.	%	Insects	Respon.	%
Foxes	2	13.9	Hawks	2	13.9	Bees	4	26.70
Rabbits	3	20.0	Wood-peckers	1	6.63	Locusts	3	20.0
Rats	4	26.70	House sparrow	1	6.63	Termites	1	6.63
Snakes	3	20.0	Quell quell	2	13.9	Beetles	2	13.3
Monkeys	2	13.9	Swamps	1	6.63	Crickets	2	13.3
Fisheries	1	6.63	Cattle birds	2	13.9	Butterflies	3	20.0
			Squids	1	6.63			
			Numidameleagris	2	13.9			
			Rohufetch	1	6.63			
			Lunar birds	2	13.9			
Total	15	100%	Total	15	100%	Total	15	100%

Table 4. Vertebrates and birds seen in the present

Vertebrates	Respon.	%	Birds	Respon.	%	Insects	Respon.	%
Monkeys	3	20	Hawks	3	20	Termites	3	20
Rabbits	4	26.7	Wood-peckers	4	26.7	Locusts	3	20
Snakes	4	26.7	House sparrow	5	33.3	Crickets	4	26.7
Fisheries	4	26.7	Cattle birds	3	20	Beetles	5	33.3
Total	15	100%	Total	15	100	Total	15	100

D. Medicinal plants

Medicinal plants in the past were available in the forest and used by people to cure some diseases. Table (5) explained that the medicinal plants were disappeared.

Table 5. Medicinal plants in the past and in the present

Plants/past	Respon.	%	Plants/present	Respon.	%
<i>Odium babicum</i>	4	26.0	<i>Odium babicum</i>	15	100%
<i>Cephalo croton cordofanum</i>	4	26.70	-	-	-
<i>Aristolochia bracteolita</i>	3	20.0	-	-	-
<i>Acorondi</i>	4	26.70	-	-	-
Total	15	100%	Total	15	100%

IV. CONCLUSION

Lambowa reserved forest was rich by biodiversity represented animals, vegetation cover and medicinal plants in the past as mentioned by the respondents. Recently most of those diversities disappeared due to the deterioration of forest as a result of human activities. The forest needs rehabilitation.

V. RECOMMENDATIONS

- Cutting of trees and hunting animals should be stopped.



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- Protection the biodiversity needs balance between the forest environment and community demands.
- Conservation the rest of biodiversity by planting trees in open spaces in the forest.

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