

# An Assessment of Forest Laws and Forest Conservation in Sudan: Local People Perspective

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**Abstract** - The aim of this study was to assess the role of forest laws in conserving the forest resources in Sudan. Three areas were selected (Elrawashda, Darelzain and Sarf Saaid) all were located in Elgedaref State central east of Sudan. Research methods applied were: a social survey where a questionnaire was designed to collect primary data for implementation of laws and their role in forest conservation. This method was followed by participants' observations, participatory rapid appraisal and review of the documentary sources. The questionnaire was administered to 150 households randomly selected from three areas with a sample size of 10% of the total population. Result of the study revealed that local people are aware of forest laws and its content but they do never participated in their implementation and for them forest laws are still lack efficacy to conserve the forests and they lack tools of implementation. Results also revealed that there is weak coordination between local administration and forest administration in law implementation and that there is also weak coordination with other natural resource laws. The study recommended that introduction of new approaches to manage natural forests through the involvements of local peoples in laws formulation and implementation. Active local participation in designing conservation and resource management plans under a regime of very clear responsibility for protecting them from excessive exploitation is needed. There should be a coherent body for environment protection to absorb all relevant departments and must in turn fulfill the coordination among them to develop the policies, legislations and laws of natural resources.

Keywords- Forests; Forest Conservation; Forest Laws.

## I. INTRODUCTION

Forest resources are of great importance to millions of people, especially those whose livelihoods largely depend on them. These resources play a key role in protecting the environment and are of tremendous importance to the sustainable development of every country [1,2]. The Sudan forests play a vital role in the economy and welfare of the Sudanese people. The main domestic energy sources in Sudan are wood, charcoal and other biomass materials; they constitute 85% of the total energy requirement [3]. The increasing demand for domestic fuel and timber necessitates the rehabilitation of the existing forests and expansion in forest plantations to avoid further degradation of natural tree cover in the country [4, 5].

Forest Legislations and Laws are one of the important institutional elements for the development expansion of the forest sector. It provides the structural framework within which national forest policies are set and in turn reflect or should reflect their objectives and priorities [6]. Laws and Regulation are thus the result of policy formulation processes as well as being the basis for their implementation [7]. The law may prescribe that the various government and private interests involved be represent in the advisory body and specify cases and issues in which the body must be heard as well as the degree to which its advice must be considered [8]. The government depended entirely on the law to affect command and control, but even that failed because of inefficiency of guarding and the ineffectiveness of punishment to law breaker [3]. The comprehensive legislation is either lacking fragmented or contradictory, moreover, laws are implemented inefficiently, all the present legislations is not coherent and consistent enough to replace the communal land tenure system that still rules most people's use of the natural resources [3].

Despite The Sudan interests in forest development, protection and conservation, and it was therefore established Forest National Corporation (FNC), regulate forest polices and created legislation and laws since long period of time but still there was forest deterioration phenomenon in large areas in the Sudan. This deterioration happen by Man-made activity such as tree cutting in order to meet people demand, furthermore the drought, desert creep, water erosion are causes of forest deterioration [3]. This study is an attempt to investigate the prevailing laws and their impact on forest conservation. The main objective of this paper is to analyze forest laws in Sudan and to assess their role in conserving the forest resources.

## II. METHODS OF DATA COLLECTION

The study was conducted in the Elgedarif State which is one of east-central states of Sudan. It lies between longitudes 36°-33°E and latitude 14°-16°N. The State is connected to the National Capital (Khartoum, 411 kms) and the main sea-port (Port Sudan, 834 kms) by the national capital high way road. ELgedarif State has an area of approximately 71,000sq.km. The state has rainy season extending for about four months from May to October. The prevailing wind during the wet season is from south west and from north direction in the dry season. Agriculture was; and still is the main economic activity, followed by live stock raizing in the traditional seasonal transhumant pattern [1].

The data were collected from both primary and secondary sources. Data from secondary sources were obtained through the review of literature including text books, journals, reports and previous studies. Primary data were obtained through structured personal face to face interviews. A questionnaire was designed to collect primary data for implementation of laws and their role in forest conservation. The questionnaire was administered to 150 households randomly selected from three villages near to three forests namely; Elrawashda, Darelzain and Sarf Saaid. The questionnaires was designed to obtain information on personal characteristics of the respondents, knowledge and awareness of forest laws, promotion and implementation of forest laws, contents of forest law, the efficiency of forest laws, reasons to prevent forest law of not being effective, participations of local communities in forest laws implementations and aware of penal and wrongdoing of forest laws. checklists for officers from Forest National Corporation (FNC) at the central and state level, Higher Council of Environment and Natural Resources (HCENR) at both central and state levels, Natural resources department, Range and Pasture Departments and Soil Conservation, at both central and state levels, Representatives of Legislatives Parliaments and Union both central and state levels, the Ministries of Environment, Agriculture and Forestry, Government Organizations (GOs) and non Government Organization (NGOs) at both center and state levels were developed with the aim to gather information about forest laws contents and their implementation to conserve the forest resources. On the other hand Semi structured interviews were held with local people using flexible checklists in order to give them more freedom to express their opinion and to pursue topics of interests and with local leaders in the villages. The collected data were processed and analyzed using the Statistical Package for Social Sciences (SPSS) software version 16. In this research, calculation of the percentages was used as a tool of analysis for interpreting the qualitative information collected from the respondents.

## III. RESULTS AND DISCUSSIONS

### A. Forest Laws in Sudan

The first forest legislation in Sudan was enacted in 1901 followed by consecutive revisions in 1908 and 1917 [9]. The Governor General of the Sudan ratified the first National Forests Policy statement in 1932 [10]. The same year witnessed the enactment of two important laws namely: the Central Forests Ordinance and the Provincial Forest Ordinance that were designed to enforce the newly set policy and particularly forest management inside central and provincial forest reserves [11]. In 1984, the Provincial Forest Ordinance of 1932 was amended, to enable governors of provinces to delegate all or any of their powers to local government authorities. A significant amendment to the Provincial Forest Ordinance (Amendment) 1959 was made in an attempt by the forestry authorities to take control over timbre based sawmilling industry. The Provincial Forest Ordinance (Amendment) 1959 required a license to be issued from the Minister of Agriculture before erecting private sawmills using mechanical means [8].

In 1960, the provincial Administration Act came into force. Subsequently, there had been much over cutting without replanting [12]. The People's Local Government Act, 1971 Promulgation of numerous and often conflicting laws since 1971 has had the effect of transferring forest manage authority from the central government to regional and local government. Because of the Regionalization Act of 1981, the forestry sector was decentralized and the Regional Directors of forestry became responsible to Regional Governors throw the Regional Director Generals of Agriculture. The administration of forestry research was transferred to the Agricultural Research Corporation (ARC) in the Ministry of Agriculture. Forestry Education and Training administrated by the college of forestry but under the Ministry of Education [13].

Although regionalization led to devolution of responsibility, it did not led to increase funds to the regions, and thus, resulting in the mining of forest resources to generate funds locally, The funds generated in this way were directed to Ministry of Finance and were not reallocated to the Forest Administration either nationally or regionally [14]. A major decentralization process was further developed by the promulgation of the Regional Government Act 1980 and the People's Local Government Act 1981; The Regional Government Act 1980 divided the power between the Central Government and Regional Government. The reason of deforestation was mainly due to institutional difficulties related to the division of power in the forestry sector between central and provincial authorities. The provincial authorities who were expected to reserve a lot of more forest than the center, manage to reserve only 32900 feddan (1 feddan equivalent to 0.042 hectare) compared to 1362000 feddans of center reserves a quarter of a century after the policy in place [11]. The latter coupled with amended of Forest Policy (FP) statement (1986), led to revision of Forest Act (1989), the political and public recognition [12].

In the interviews with forest officers they stated that Forest laws of 1989 is weak and not effective because it was not implemented, but forest laws 2002 for forest protection and renewable natural resources is effective, However, the environmental protection Act is an umbrella and binding for the protection of forests and all the natural recourses, it was formulated in coordinated work of all natural resources administrations and all stakeholders in this. Reference [14] stated that Environment Protection Act 2001 represents an important development in harmonizing different environmental sectoral laws. It sets environmental standards, requires the injection of environmental dimension in development plans and requires that Environmental Impact Assessment (EIA) be carried before implementing any project. The Act also calls for the protection of the biodiversity, prohibit pollution, raises environmental awareness and popular participation in setting policies and decision making.

### *B. Respondents' awareness of forest laws and their content*

According to Table (1), the study revealed that the majority (84%) of the household heads interviewed knew the forest law and recognized the need of acquiring licenses of permission from FNC authorities prior to tree cutting. However, 16% of the respondents do not have Knowledge about the forest law, especially for seeking permission before cutting trees. Most of local people in the study area are knowledgeable of the forest laws and regulations. This level of awareness of local people is not due to the presence of FNC authorities in the area, but from local leaders who enforce penalties for illegal cuts. The advantage of taking licenses to cut tree is useful for conserving the forests because the licenses are usually given for a definite time and then limits the number of trees to be cut and prohibited any other access to the forest.

**Table 1. Respondents' awareness of the forest laws**

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Yes	126	84
No	24	16
<b>Total</b>	150	100

On the other hand, Table (2) indicated that the majority (66%) of the interviewed respondents stated that they were not knowledgeable of the contents of the forest laws, and (34%) of them said that they were aware of forest law contents. This may be due to the lack of extensions role in the State.

**Table 2. Respondents' awareness of the forest law contents**

Response	Frequency	Percent
Yes	48	34
No	93	66
<b>Total</b>	141	100

The law contents mentioned by the respondents were that laws content were inequitable with high financial fine (56%), followed by (32%) of them stated that forest laws content included prevention of illegal cutting, and only (12%) of them believed that forest laws content include financial fine and impound of fuel woods (Table 3).

**Table 3. Contents of forest laws as stated by the respondents**

Laws contents	Frequency	Percent
Inequitable law with high financial fine	28	56
Financial fine and impound of fuel woods	6	12
Prevent illegal cutting	16	32
<b>Total</b>	50	100

In the group discussion respondents stated that the local administrations in ELgedarif State are cooperating with forest administration in forest law's implementation. But still forest laws content were not able to protect forest, it prevents illegal cutting without laying alternative. Respondents also have knowledge of penal and wrongdoing of forest laws. Based on this results and with regards to forest conservation government should facilitate establishment of property systems by defining groups in delineated areas and with rights of inclusion and exclusion. In this, actors will be effective and sincere in managing and conserving forest resources in a sustainable way. What are needed; is not only regulations, but also cooperation with regulations. Government can help local indigenous institutions; provide a legal framework and perhaps technical assistance. "The law should make it possible for local collective action organizations; to obtain legally enforceable recognition of their identity and rights within the society. and to call up on the state as an enforcer of last resort" [15].

**C. The efficiency and implementation of forest laws**

The results in Table (4) revealed that about (54%) of the respondents stated that the forest laws were not being effective to protect and conserve the forests while (46%) of them said that forest laws were effective. Table (5) presented the stated reasons for the inefficiency of the forest laws mentioned by the respondents where 40% of the interviewed respondents mentioned the laxity in law implementation. This followed by (22%) of them who mentioned the deterrent law, followed by (20%) of them who stated that forest laws

content were not able to protect forest and only (18%) of them said the laws prevent illegal cutting without laying alternative.

**Table 4. Local peoples' awareness forest laws efficiency**

Response	Frequency	Percent
Yes	69	46
No	81	54
<b>Total</b>	150	100

**Table 5. The mentioned reasons for the inefficiency of the forest laws**

Reasons	Frequency	Percent
Laxity in law implementation	20	40
Deterrent law	11	22
Not able to protect forest	10	20
Prevent illegal cutting without laying alternative	09	18
<b>Total</b>	50	100

In the group discussion community leaders stated that forest laws usually lay bunched to implement the policy without providing an alternative energy source like gas to make the need for fuel wood and charcoal. The local people considered forest laws are uncurbed and deterrent and are not suitable instrumented to implement policies and do not achieve the forest conservation. However these laws are sectoral fragmented and lack comprehensive look to the overall environment.

Interview with officers indicated that there was lack of law implementation, this due to lack of infrastructure, inability to move to forest crime, the governmental process were longing and laxity toward forest crime. There are also some difficulties and girders that prevent the implementation of the forest laws such as: poverty, choiceness, ignorance of local communities to forests importance and forest laws, leniency of administrations in laws implementation, political interjecting of politicians men like mayor and governor in forest crimes; and misunderstanding of judders to forest laws; nothing exist or specialized for natural resources protection in the ministry of justice. They added that week of movement expedient to NFC and there is procrastinating to implement forest crime, and little government care to environment issues. Extensive efforts are needed for the statehood to facilitate forest laws implementations.

*D. Participations of local communities in forest laws implementations*

The results of this study revealed that the majority (97%) of the local people said they did not participate in forest laws implementations and few of them (3%) said they participated in forest laws implementations. The form of participation varies from extension (50%) to police notification (50%). The forest policy 1986 includes involvement of local communities in policy formulation [11]. Communities can be involved in policy implementation through laws applications. In the study area local leaders and public committees are recognized as tools in policy implementation through local supervision and laws application. Even local community courts are recognized by forest law as authorized bodies. From the group discussion with officers it was noted that participation of the local people in forest laws implementation is repeatedly referred to, but

in practice, it does not exist. The study suggested that to introduce new approaches to manage natural forests through the involvements of local peoples in laws implementation in order to conserve the forests.

#### *E. The coordination of forest laws with other natural resources laws*

According to officers investigated through personal contacts and group discussions, local administrations do not collaborate with forest administration in the management of forests and the role of forest extension is rather weak. The only form of participation of the local leaders in forest management was being only by the law's implementation to protect forests. On the other hand there is weak coordination between all natural resources administration in their laws and regulation. Although there is some activities share with the other sectors related to the forest management, such as, environmental protection, biodiversity conservation and wildlife protection.

Officers had deep scientific insight in that there should be a harmony between forest laws and other natural resources policies and laws. Forest laws formulation integrated with other natural resources laws, with the aim of the environmental conservation but coordination is weak. They concluded that the laws usually take into account non-conflict with other laws and in the case of conflict there is a legislative remedy for the matter. The majority of officers stated that the others sectors are not cooperating with FNC to implement forest laws. Reference [15] stated that the difficulty in coordinating laws between different natural resources departments is mainly because they followed to different ministries. He also added that Forest laws in Sudan formulated indoor by forestry professionals alone without consultation with all other relevant actors. This has led to the lack of commitment among other stakeholders and lack of political will that required for their enforcement. However there is a need to clearly define and agree upon land-use laws, to be developed through the participation and involvement of all relevant stakeholders, to avoid conflict and contradiction of interest between various users. The study suggested that the Higher Council for the Environment must absorb all relevant departments and must in turn fulfill the coordination among them to develop the laws of natural resources. Separating departments from each other weakens the process of co-ordination; departments must be grouped in the same sector to ensure joint action to sustain and conserve natural resources.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

The study concluded that local people are aware of forest laws and its content but they do never participated in their implementation and for them forest laws are still lack efficacy to conserve the forests and they lack tools for implementation. Results also revealed that there is weak coordination between local administration and forest administration in law implementation and that there is also weak coordination with other natural resource laws. The study recommended that to introduce new approaches to manage natural forests through the involvements of local peoples in laws formulation and implementation under a regime of very clear responsibility for protecting them from excessive exploitation. Active local participation in designing conservation and resource management plans is needed. There should be a coherent body for Environment protection to absorb all relevant departments and must in turn fulfill the coordination among them to develop the policies, legislations and laws of natural resources. Departments must be grouped in the same sector to ensure joint action.

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