

Stakeholder Assessment of Forest Governance and Logging Practises in Nigeria and Cameroon

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Abstract: Stakeholder participatory appraisal of forest governance and logging enterprise in Nigeria and Cameroon was done to pool knowledge and proffer recommendations for advancement. The study employed the use of structured questionnaire, field survey and stakeholder workshop to assess harvest management and log tracking modes, economic and revenue motivation to deforest, payoffs to identified stakeholders, governance influence, environmental awareness and capacity building efforts, inclination to reduced impact logging (RIL) and effectiveness of forest policy instruments. All the stakeholders affirmed that multi-stakeholder partnership in forest harvesting shall improve socio-economic and environmental capital. The stakeholders clamored for improved education and extension to propagate key messages underpinning RIL and appealed for improved forest law enforcement. Over 80% agreed that a change in the current forest governance structure is necessary to accommodate the FAO model code of forest harvesting. It is finally concluded that effective codes of forest practice in Nigeria and Cameroon cannot be developed in isolation of potential users and interested parties. Thus, to fast-track a credible mechanism for effective and environmentally sustainable logging, it would be rewarding to enlist the stakeholders meaningful participation.

Keywords: Logging, forest governance, participatory assessment.

INTRODUCTION

Timber harvesting (logging) is an important economic activity that touches on the sustainability of the forest base. In Nigeria, the forest area put at 13 million ha in 1990 actually shrank to 9 million ha by the year 2010 (FAO, 2010) due to forest use and abuse. Likewise in Cameroon, the forest estate by Foahon and Wonkers (1992) estimate is retreating at a rate of 0.9% per year. In both countries, illegal logging is increasingly politicized as succeeding governments see forest resources as a gift of nature to be extracted and exploited without much care for replacement or need of the future generation. Incidentally, the goal of sustainable forest management cannot be attained unless environmentally sound harvesting practices are adopted by operators.

Logging, being the totality of all operations involved in extracting logs from the forest, is an environmental issue. The activity encompasses the creation of evacuation routes, felling, limbing, crosscutting, and transportation.

Damages associated with conventional logging in many tropical forests have, hitherto, been regarded as inconsistent with sustainable forest management. Consequently, the Food and Agriculture Organization of the United Nations (FAO) model code of forest harvest was advanced to reduce negative impacts (Table 1) to residual vegetation, soils and other environmental attributes. The conventional logging methods were characterized by little or no advance planning, use of poorly trained personnel operating with improper equipment and tools, titular administration by supervisory personnel and government agents. The consequences are such that the ecosystems suffer high rates of soil disturbance and damage to residual vegetation, with skid trails covering a considerable portion of the ground surface while more of future crop trees are damaged or killed (Dykstra, 2004). It is therefore pertinent that management must advance strategies to deal with negative impacts of harvesting regimes in tropical forests by integrating appropriate governance and technical paradigms acceptable to the stakeholders.

Table 1: Direct and indirect impacts of logging.

<i>Direct impacts</i>	<i>Indirect impacts</i>
✓ Canopy loss*	✓ Increase access to forest produce
✓ Genetic loss*	✓ Deforestation*
✓ Soil erosion*	✓ Game hunting
✓ Destruction of water catchments*	✓ Bush fires*
✓ Water pollution*	✓ Colonization by invasive species
✓ Reduction in regeneration capacity*	✓ Slash and burn agriculture
✓ Loss of biodiversity*	✓ Colonization by secondary forest
✓ Forest fragmentation & degradation*	✓ Creation of stagnant waters
✓ Nutrient removal*	✓ Loss of the best seeds*
✓ Creation of access routes	✓ Wildlife displacement from their natural habitats*
✓ Strangulation of streams*	✓ Felled tree branches collected as firewood
✓ Exploitation of steep slopes	✓ Job provision for rural subsistence
✓ Felling of dominant trees	✓ Income generation activities
✓ Multiplication of skidding routes	✓ Exposure to alternate land uses*
✓ Noise pollution by heavy machinery in the forest*	
✓ Loss of persistently harvested species*	

*supposed negative impacts.

(Source: Present study)

Foresters, planners and logging operators need guidance on desirable forest harvesting and the kind of practices that the society is willing to accept. The gesture shall motivate the development of acceptable codes of forest harvesting regardless of whether they are intended to be voluntary or mandatory. According to Dykstra and Elias (2003), the primary purpose of the FAO model code of forest harvesting practice is to serve as reference for member countries. It was developed to help promote forest harvesting regime that will improve standards of utilization, reduce environmental impacts, ensure that forests are sustained for future generations and improve the economic and social contributions of forests to sustainable development (FAO, 1977; 1993; 1996). The model highlights a range of environmentally sound harvesting practices that are available to forest managers, especially techniques that require only a modest level of investment in training and technology. The knowledge of such practices should guide policy makers to develop national and local codes of practice to best serve specific needs of all stakeholders in the forest harvesting business.

Sustainable development is linked to peoples (individually and corporately) capacity and attitude towards resource management. A decision to pursue SFM as a development strategy must, for example, analyze timber-harvesting practices and associated ecological

impacts. It should also encourage institutional efforts and support in concert with the participatory role of the nations' forestry professionals. Log removal from a piece of forest land is bordered with various conflicts and trade-offs that must be carefully managed through participatory policy formulation that can foster mutual cooperation in a common goal of sustainable forest management. Where the cooperation is lacking, log flitching, undeniably, is a startling activity usually done in the forest by artisan sawyers also known as mobile chainsaw operators (Ogunsanwo *et al.*, 2005).

This practice involves identification of merchantable trees with useful bole sizes, which are then marked for felling by chainsaws. The artisan sawyers gain illegal access into the forest; cut down the trees and quickly reduce them into transportable planks of different dimensions. Flitches are normally transferred through thriving and illegal nocturnal transport arrangement. The operations are done without control and with low skilled labor which leads to resource abuse and wastage (Pulki, 1998).

Threatened by such menace, a multi-stakeholder approach was employed in this study to gather and analyze information on timber harvesting practices in Nigeria and Cameroon, analyze the strengths and weaknesses, based on the FAO model code of harvesting practice, with the hope

of recommending capacity-building strategies. The focused objectives were:

- To examine various aspects of forest governance in Nigeria and Cameroon and evaluate their impact on the administration of forest concessions and logging practices.
- To evaluate conventional logging processes and procedures and recommend how the current resource use incentives of stakeholders could be regulated and improved and
- To develop interactive and multi-stakeholder partnership for forestry development and management in Nigeria and Cameroon.

The goal is to evolve a more participatory and coherent policy development process in the timber harvesting sector by harnessing the concerns of policy makers, local forest users and other stakeholders. It is hoped that the outcome shall encourage and shape sustainable governance of forest harvesting regimes by generating the evidence, argument and leverage needed to improve relevant institutions, policies and legal frameworks.

METHODOLOGY

Data Collection

Forested States and provinces with significant logging activities were surveyed. These, in Nigeria, fall within the latitudes 4°N to 8°N and comprise of Oyo, Ondo, Ogun, Delta, Kogi, Benue, Akwa-Ibom and Cross-Rivers States. Forestry Head offices in the project States and Federal Departments of Forestry were visited and responsible management officers interviewed. Some formal integrated wood industries in the surveyed region were also visited and their log control officers interviewed to understand their forest exploitation and log harvesting concerns. Round wood buyers and marketers were interviewed to have a clear understanding of the purchasing sites, stumpage and market for timber. Also for completeness, randomly selected locations (e.g Area G4 of Omo FR) were physically surveyed during established extraction periods. Representative sawmills (at least two/project State) were visited and interviewed as a link to obtaining information from forest guards, round wood buyers and the civil society. Specific visits to logging sites and rural communities provided information from other stakeholders including forest clearers and supervisors and also provided knowledge of significant constraints to their

operations. Other influential clientele like youths clamoring for derivation rights in the Niger Delta areas, lecturers of forestry institutions and professionals in non-governmental organizations (NGOs) capable of influencing policy on natural resource use and control were sampled. In Nigeria, a total of 134 stakeholders were interviewed as respondents to the project questionnaire.

In Cameroon, forested provinces with significant logging activities were also surveyed. These provinces are: East, South, Centre, South West and the Littoral provinces. Visits were paid to the Ministry of Forestry and Wildlife, the Ministry of Environment, Douala and Kribi seaports, provincial and divisional delegations of forestry in the target provinces, logging sites as well as head offices of logging companies and NGOs for relevant discussions and literature on the country's logging practices and forest governance. The Ministry of Forestry and Wildlife, the Ministry of Environment and Nature Protection, Exit seaports of the country as well as provincial and divisional delegations of forestry and wildlife provided on hand information on the legal and institutional framework as well as the identification of loggers, logging practices, harvested volumes by zone, by species and by contractor or company and logging sites. A total of 117 stakeholders were interviewed for the survey in Cameroon.

In general, the study employed a combination of literature reviews; production, administration and completion of structured questionnaire during the interview sessions; on-site surveys; field interviews, physical observations and other documentation processes to facilitate participatory appraisal of resource incentives, concession allocation practices, log transportation impacts and forest administration practices. The questionnaire embraced issues of harvest planning, forest road engineering, felling action, extraction, landing operations, log transport, harvesting workforce and after logging assessment.

Analyses of Data

Information collected were pooled, ranked and valued from social and FAO model code of harvesting perspective. The ranking exercise helped to record and sort perceptions of relative importance to contemporary harvesting management. The data collected were analyzed using descriptive statistics and the overall

research findings were presented as hypothetical discuss to tie together the generalized viewpoints from the two countries at a stakeholder meeting held to finalize the exercise.

RESULTS AND DISCUSSION

Stakeholder Perspectives

The identified stakeholders (Table 2) include government forestry officials, logging contractors, timber harvest crews, road and environmental engineers, inventory and mensuration officers, timber marketers including sawmillers and builders, local or resident forest users, forest communities and their leaders, riotous youths clamoring for derivation rights, forest guards and other government security apparatus, forestry institutions, representatives of NGOs, technical experts and individuals whose livelihood and well being depend on the sustainability of forest resources.

Eighty three percent of the stakeholders affirmed that a change in the current forest governance structure is necessary to accommodate the FAO model code. 100% of the respondents felt that multi-stakeholder mechanism to forest harvesting shall improve socio-economic and environmental capital. The stakeholders clamored for improved education (capacity building) and extension to propagate key messages underpinning the FAO model code of forest harvest practise. All the stakeholders believe that the FAO model code makes economic sense and is relevant to sustainable forest management in Nigeria and Cameroon. Furthermore, the stakeholders appealed for forest law enforcement through collaborative alliance that employ effectively the instrumentation of the Ministry of Forestry and Wildlife, Ministry of Environment and supported by Appeal court having legal jurisdiction over the forest areas.

The multi-stakeholder partnership in forest harvesting is already embraced in Cameroon while opinion of community residents is largely ignored in Nigeria. Stakeholder commitment is needed to create awareness and policy conditions conducive to sustainable harvest practice through the establishment of a well-structured regulatory, institutional, political and economic framework (Olaseni *et al.*, 2004).

It is indeed the perception of what the local forest users stand to gain or lose from alternative course of action that determines how they will respond to change. Apparently, poverty is high among forest users (Cavendish, 1997; Jodha, 1986). Thus, finding out who are the winners and losers is central to adopting the FAO model code of forest harvesting practice.

Harvest Management and Log Tracking

In Nigeria, log tracking and control are generally facilitated by central inventory, hammering and establishment of control check points. Payment of regeneration fee is required but not always done. During and after logging, many of the remaining standing trees are badly damaged with a lot of the saplings and wildings of economic value inadvertently destroyed. This situation is worsened by activities of illegal loggers who often enter concession areas prematurely and/or desperately in a hurry to harvest and carry away un-hammered trees without regard for the ecological integrity of the forests.

Due to log tracking difficulties in Cameroon, logging data such as extraction rates and timber export statistics are at variance with records from NGOs and some importing countries. The exploitation mode are evidently not sustainable, neither in equilibrium with the forest carrying capacity. During log transport operations, the relatively high transaction costs exemplify weak institutional framework and governance structure that could be improved through participatory governance. When such matters are ignored, the costs are inevitably shouldered at the forest management level and this can reduce the financial viability and civil acceptance of sustainable harvest practices.

Economic and Revenue Motivation to Deforest

Revenue collection is crucial to forestry harvest management but the implications go beyond mere book keeping. In Nigeria, log export both in the round and processed form is prohibited because internal demand and consumption overstretches the available supply of timber. The timber marketers now convert small diameter logs for applications which hitherto have employed large diameter mahoganies that are fast disappearing.

Table 2: Categorization and numerical distribution of field survey respondents at country levels.

s/n	Category of stakeholders (Nigeria)	Number interviewed (n)	Percent of respondents (n/N x 100)%	Category of stakeholders (Cameroon)	Number interviewed (n)	Percent of respondents (n/N x 100)%
1.	Federal Forestry officials	12	8.96	Provincial Governor and Forestry delegations	3	2.56
2.	State government forestry officials	14	10.45	Divisional Forestry delegations	15	12.82
3.	Logging contractors	12	8.96	Logging contractors	10	8.55
4.	Fellers	13	9.70	Timber harvest crew	23	19.66
5.	NGOs	2	1.49	NGOs	8	6.84
6.	Environmentalists	6	4.47	Road and Environmental engineers	6	5.13
7.	Forest owners including traditional rulers and youths	7	5.22	Local community leaders	4	3.42
8.	Local forest users	15	11.19	Resident forest owners	16	13.67
9.	Forestry institution employees	16	11.94	Forestry institution employees	4	3.42
10.	Security agents/Forest guards	8	5.97	Forest guards	14	11.96
11.	Timber marketers, Saw-millers and builders	24	17.91	Inventory and Mensuration officers	8	6.84
12.	Forest industry managers/ Production managers	5	3.74	Production, Quality control and quarantine managers at seaport	6	5.13
Total		N = 134	100		N = 117	100

N.B: Contact (direct) interview of respondents with research aids is tantamount to 100% response.

In Cameroon, export of timber and derived products has and is still playing a growing role in the country's economy albeit enlarged foreign demand has raised serious concerns over the logging practices. Due to national and international demands for timber, the vast Cameroon forest base is fast retreating (Foahon and Wonkers, 1992) and is hindered by fiscal malpractices. The levels of taxes on logging are inappropriate when compared to the actual value of the resource. The mode of forest revenue collection is poor and strategies to make local communities benefit from these revenues are not in place. In reaction, some communities e.g. around the Korup National Park became so frustrated that they resulted to messing up the park.

In Nigeria, timber harvest has become a revenue engine of successive governments (military or civilian) in the forested states (Adeyoju, 2005) with environmental accountability relegated to the background. In Ondo, Oyo and Cross River States, instances were, when governors or military administrators took over the issuance of timber exploitation permits or/and collected pass holders from the Forest Guards to be managed by political loyalists hired as consultants. In all these cases, the forestry professionals, who are generally government employed, could do nothing for fear of compromising their career advancement. The reprehensible governance mode is, however not only damaging to ecosystem sustainability but also to sustainable forest management. More so, it makes it difficult for the State forestry service to keep faith with their stakeholders (Adeyoju 2002) and consequent loss of control.

Because of non-professional interventions in forest exploitation and revenue collection, Nigeria and Cameroon appear to be on the path of unsustainable forest management. Revenue records, as indicated, are frightfully non-reliable, as great disparity exists between the projected and realized revenue over years. Due to forest governance abuse, both the legitimate and unofficial transaction costs are borne by timber contractors and concessionaires. The unofficial costs are disincentives to SFM and mirror the degree of corruption that besets timber harvesting and marketing. The offshoot of these costs would be increased illegal felling or logging activities, environmental degradation and other corrupt influences that reduce social comfort.

Forest Governance and Illegal Logging

Forest management and governance in Nigeria and Cameroon are at different levels of sophistication. While forest administration and management is at a State-control level in Nigeria, it is Centrally-controlled in Cameroon. Non-professional intervention in forest exploitation and revenue collection by high ranking government officials and/or the military generals is a clear threat to SFM in these countries. The current rate of forest depletion in Nigeria implies that the forest base may be incapable of providing adequate biomass supply for the livelihoods of future generations. A major risk to the integrity of the forest base is illegal logging and flitching. There are evidences that loggers gain illegal access to forest resources by developing strong relationships with community leaders who promised them cover. Recent estimates revealed that illegally harvested timber constitutes $\geq 50\%$ of the value of timber legally harvested in the country. In other words, illegal logging is a peril to SFM and the impact is amplified by the discretionary power of governments to de-reserve forests, lack of coherent forest policy and excessive bureaucracy in harvest management. By 1998, a summit of the Group of Eight Nations (G8) in France highlighted their apprehension about illegal logging and inspired various follow-up initiatives at country and regional levels. The general consensus was that forest governance, by way of united stakeholder commitments, could stem illegal logging through capacity building and improved awareness of associated impacts.

Trees are components of the living biosphere that require the attention and support of all stakeholders to enable them deliver the variety of benefits critical to human welfare. Unfortunately in Nigeria, public and private concern for trees and forestry is, at best, epileptic. Evidence exists, for about four decades now, that the rightful owners of forest reserve lands have been denied a reward and are disenfranchised to the extent of catalyzing astronomical increase in illegal logging. The design and modus operandi of the forest service in Nigeria are completely oblivious of the potential cooperation with local communities who, at all times, should be the primary beneficiaries of the forests that the government seeks to protect and manage.

In Cameroon, allocation of logging permits is overly regulated by a governmental body (The Inter-Ministerial Commission for Forest

Concessions Allocation) through a public bidding process. Logging permits are granted on discretionary bases following criteria such as investment potentials, foreseen social impact of activities and physical presence in the country. Allocation requires a forest management plan fully approved by the relevant administrative authority. Prior to the auction, a public notice is posted to invite offers and carrying such details as, the location, initial boundary, exploitation potential, probable social services to be rendered to the local community, surface area and the classification process. All bidders must submit a file containing specified documents at least 45 days ahead. The selection criteria and procedures are ruled by an order that is circulated whenever the annual allocations occur. These criteria impinge on three types of score (points) in the evaluation of bidders as follows: Financial capability = 70, Technical capacity & professional experience = 30 and respect of previous commitments & environmental legislation = 20. A Forest Management Unit (FMU) is divided into six 5-year operational blocks, each containing five annual allowable cut areas (AACs) of equal volumes for a total rotation of 30 years. In the preparation of the forest management plan, the forest concessionaire has to provide the first detailed 5-year operational plan indicating the location of the first five AACs.

Environmental Awareness and Capacity Building

It is true that the FAO model code of forest harvest is there to guide in reducing negative impacts of logging to residual vegetation, soils and other environmental attributes as compared to conventional logging. Nevertheless, poor management of logging regimes in Nigeria have shown that the available guidelines are either unknown or largely ignored. The naked truth is that the goal of sustainable forest management cannot be attained unless environmentally sound harvesting practices are adopted by the logging operators.

Forest products harvesting in Nigeria are not adequately controlled due to poor financial and training inputs and the inefficient monitoring systems. Ingredients for successful check against illegal logging are: improvement of forest law enforcement; improvement of the quality of information on timber production and market; successful law enforcement; high level political commitment; strong involvement of the civil

society and by nurturing a culture of stewardship within the local community.

As for Cameroon, industrial logging affects about 50% of the forest estate and targets a limited number of commercial species. This is also non-sustainable because the target species are not easily raised in plantations and could face danger of extinction. To avoid undue environmental degradation, there may be serious need for Landscape Deterioration Inventory (LDI) in the two countries as an index to periodically bring attention of stakeholders to the damage impact. In Cameroon, suggested strategies by respondents that can contribute to participatory and sustainable harvesting include: Joint management, Respect for legal prescriptions, Provision of social amenities to local communities, Certification, Application of Reduced Impact Logging and Periodic capacity building of personnel. It is also important that governments should substantially appreciate budgetary allocation to the forestry sub-sector and release them promptly so that the Forestry Departments and Commissions can effectively carry out and manage regeneration, extension and protective services.

Knowledge of and Inclination to RIL

There is a generally high awareness of RIL in Cameroon compared to low awareness echelon recorded of Nigeria's stakeholders in log harvesting. In Nigeria, RIL is still apparently a strange concept and not practised even though stakeholders are positively inclined. There is therefore an impelling necessity to design and implement outreach programmes to promote and explain RIL to all stakeholders. In Cameroon, where RIL had been instituted, the FAO model code of harvest practise is acknowledged by most loggers. However, the institutional and legal framework are not regularly applied. Involvement of high ranking government and military officials in the forest sector constitute major setbacks making illegal logging, logging outside official regulation, non-respect for felling girths and other offences rampant.

A modest scientific effort is needed to protect the forest resource and enable managers to run more efficiently. RIL guidelines covered such aspect as forest inventory, mapping etc. and should be encouraged for sustainable log harvest. RIL is more environmentally friendly than the conventional logging method, albeit, log

harvesting with RIL takes a little longer and is more expensive than in conventional logging.

Effectiveness of Forest Policy Instruments

In Nigeria, the absence or lack of workable forest management plan is lamentable. The extent of Forest Reserve is not clear and the use of government discretion in forest management is overly exclusive; defective and manifests itself as a festering impact on the sustainability of forest resources. Inconsistent forest policies (Omoluabi *et al.*, 1993) and management approach have always hindered the implementation of any established management plans, thus having a diminutive effect on SFM practices. For example, undue political interference in forest management increases the uncertainties faced by forest based industries with the effect of reducing their commitment to sustainable harvesting techniques.

Forest exploitations in Nigeria often capitalize on inadequate policies or legal leakages/weaknesses. The result of exclusive processes for government decisions, cover-up strategies for various crimes, lack of monitoring, low level of literacy and a largely controlled press favoured a variety of misdeeds, hence, a growing concern for moral revival in the forest harvesting sector. For leaders who compensate their supporters by granting forest property rights, they must understand that joint solutions to illegal logging require that all stakeholders cooperate in forest harvest management. The fact that riotous youths intercept lorry loads of logs for economic gain, in Nigeria, suggests the need for improved awareness education on forestry issues with emphasis on implementing legal provisions for forest offences.

It would be useful if the conditions of service of government security apparatus are enhanced beyond a level where officers are likely to seek supplementary incomes from informal sources. Forestry staff, particularly the field staff should be adequately remunerated with incentive packages, to discourage them from taking bribes from timber contractors. The need for a review of current laws regulating timber harvest is imminent towards the production of a statutory national forest harvest code of practice. Payment of hazard allowance for forestry field workers would be incentive in the right direction.

In Cameroon, three policy tools (Provisional convention, Management plan and Final

convention) govern the management of concessions. To ensure that the tools are applied, the Cameroon government set-up a strategy for forest and wildlife control to increase state and local community revenues, create jobs, prevent economic distortions, guarantee sustainable production as well as conserve biodiversity and ecosystems.

Four logging control tools (*Planned, Routine, Special* and *Continuous* monitoring of the forest heritage) are utilized in logging sites, timber yards, frontier stations, along railway, maritime, and land routes for the evacuation of forest products, at entrances of processing units, at seaports and airports. Control focuses on the authenticity of logging titles, identity of the logger or his subcontractor, respect of boundaries, execution of clauses of specifications, respect for forest inventory standards, respect for management regulations, technical logging standards (e.g. marking of logs and stumps, minimum exploitable diameter, logging sites record keeping) and tax obligations (regular payment of taxes and forest royalties). All of these notwithstanding, sound forest governance in the country is a mirage as forest politics and economics have remained the affair of high government officials and military generals.

CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are derived from the results.

- Sustainable development is not a miracle slot. Sustainable logging practice will only be possible when sensible rules and regulations are enforced and adhered to. It is important that appropriate mechanisms, processes and tools are put in place to ensure the sustainable and fair use of forest resources.
- Effective codes of forest practice cannot be developed in isolation of potential users and interested parties. Forest governance is a societal responsibility. Thus, grassroot organizations, communities, traditional leaders and government leaders are key actors to involve, ensuring that policy and legal reforms are adopted, supported and implemented.
- Acceptable forest practices should, of necessity, achieve a desired outcome such as the harvest of commercial timber from a

specified area of forest in a way that meets the standards for sustainable forest management. Whether the accepted code are adopted or not is a function of the governance structure and the attitudes of operators towards the results that the guidelines are intended to achieve.

- To offer corporate governance in forestry is to encourage improvement potentials for the unrepresented majority of constituents, accessibility to a fair share of joint natural resources, a firm recognition of stakeholder status for commonality issues coupled with improved joint effort for resource sustainability.
- An important component of effective forest harvesting plan is capacity building for the fellers, custom officials and the judiciary. Foresters must endeavor to assess legal, economic and institutional constructs and at the same time clarify and uphold the legally recognized traditional tenure and property rights of individuals.
- Illegal logging is observed in this study to be a dissent reaction designed to draw attention to buried linkages between realities and political subterfuge.
- Illegal logging and flitching are responsible for attendant environmental degradation and landscape deterioration that impoverish forest communities. Illegal logging could be attenuated through multi-stakeholder participation in decisions about forest management. The multi-stakeholder approach to arresting illegal logging shall improve the understanding of key actors and the level of trust and openness between stakeholders while laying sound foundation for reform.
- Regulated harvest compliance demands improved forest law enforcement and log tracking modalities; improved quality of information and education on timber production and market; high level political commitment; strong involvement of all stakeholders in capacity building efforts and a culture of stewardship within the forest community.
- For every forested State or Province, the mapping of forest land ownership and record keeping of claims to the concession over defined time period is essential. Logging assessment depends strongly on the availability of reliable data on extraction and environmental impact.

- The implementation of sustainable forest harvest practice requires the support and cooperation of concessionaries and forest managers who must play their part in improving forest management practices and acknowledge the rights of other stakeholders, working with them to find mutually acceptable solutions.
- It is critical to note that concessionaries are less likely to embrace sustainable harvest practice if government policies do not encourage it and financial impediments in the form of taxes and other non-tax expenses constitute severe disincentives. In such circumstance, it is not strange to find timber production costs exceeding the local market prices that are being undercut by illegal logging and accruable revenue eroded by other illegal charges and non-relevant government fees.

Recommendations

- To improve the status quo, forestry commissions must establish independent forest monitoring network involving farmers, community leaders, concessionaries, local and state agencies. An independent monitor may be able to provide trade data on log dynamics and international trade to give a real picture of the situation and thus offer the severity or otherwise of illegal movements of log from the forests. Furthermore, the stakeholder communities should be empowered to conduct forest harvest monitoring as a means of curbing illegal entry into the forest estates.
- There is need for clear wood purchasing policies that will prevent or at least significantly limit the access of illegal fitches into the market. It is also necessary to improve information on the quantum of illegal logging and its causes so as to design specific response strategies. Guideline and policy recommendations are needed for the definition and verification of legal sources of forest products.
- Harvesting regimes must define the felling cycle; the optimal harvesting rates and intensity; the requirements to be met for harvestable species and a harvesting, haulage and packing, transport and storage system, also the social organizational structures required for sustainable harvesting management. Improved logging regime requires a clear definition of rights and

responsibilities of all stakeholders involved in the sector and a strengthening of the social contract between lawmakers and the society they govern, to support compliance with the law.

- Statistical weakness is found to be a major obstacle in the fight against illegal logging and illegal timber trade and this needs improvement. Information reliability should be addressed such as those arising from undocumented timber harvesting and transportation, timber seizure and subsequent auctioning.
- Stakeholder meetings on forest harvesting are helpful to educate and stress the need for regulated logging practices. Stakeholder involvement is akin to be a long lasting investment for bringing illegal logging under control. Partnership in forest management ensures better returns, promotes group association, helps to build local institutional capacity and promotes positive economic and socio-cultural trends in forest management.
- There is the necessity to design and implement outreach programmes to promote and explain RIL to all stakeholders. In addition, management must advance strategies to deal with negative impacts of harvesting regimes by integrating appropriate governance and technical paradigms acceptable to the stakeholders.

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