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Illegal logging in Ghana

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PHOTO: JENS FRIIS LUND

Logs on route to sawmill.

Illegal logging in Ghana

Introduction

It is generally recognised that illegal logging is widespread in Ghana. The Ghana Wood Industry and Log Export Ban Study estimates the annual timber harvest for 1999 at 3.7 million m³ with 1.6 million m³ harvested by the formal sector and 1.7 million m³ by the informal sector (chainsaw operators) (Birikorang *et al.* 2001). This level of harvest should be compared with an Annual Allowable Cut (AAC) at 1.0 million m³. Given the increasing international focus on illegal logging, surprisingly little research

has gone into assessing the timber harvest in Ghana in terms of size, and no studies have attempted to document which species were harvested where (on- or off-reserves). Our recently published research (Hansen and Treue 2008) narrows this information gap. The main results are presented here.

Approach (definitions and methods)

Illegal logging is broadly defined as »...when timber is harvested, transported, bought or sold in violation of national laws« (Brack 2003, p.



Policy Conclusions

- In Ghana, the actual timber harvest for 2005 is conservatively estimated at 3.3 million m³ while the Annual Allowable Cut (AAC) is only 1.0 million m³. Thus 2.3 million m³ (70 %) is illegally harvested.
- Chainsaw lumbering, to supply mainly the domestic market, is estimated to account for approximately 75% of the illegal harvest. This figure is, however, rather uncertain and might be considerably higher. Accordingly, there is an urgent need for research to establish more reliable estimates on the size of the chainsaw lumber market.
- The official harvest records and the estimated actual timber harvest both suggest a strong preference for scarlet and red star (the most valuable) species. The actual scarlet star harvest is estimated at 1.25 million m³, which is six times the AAC. The actual red star harvest is estimated at 1.0 million m³, which is twice the AAC.
- The annual harvest inside forest reserve is estimated at approximately 2.0 million m³, against a recorded reserve harvest of 0.6 million m³, and an AAC of 0.5 million m³. The high harvesting intensity and preference for certain species suggest that forest reserves are seriously disturbed. Illegal logging thus undermines the species composition and may threaten the very existence of a permanent natural forest estate including its environmental services and biodiversity. Moreover, persistent over-harvest renders the current on-reserve AAC unsuitable to represent a sustainable timber harvest level.
- The high incidence of illegal logging documents that the, in principle, sound forest management regulations including the AAC have not worked in practice. Illegal logging is, therefore, both a symptom and result of a malfunctioning forest policy that needs fundamental reform.

196). However, such a multi-dimensional definition allows for an array of ways according to which illegal logging can be assessed and analysed, which renders comparisons among countries and extracts of general policy conclusions almost impossible. In our study, we define illegal logging as violations of forest management and timber harvest regulations that are founded on scientifically sound silvicultural principles, which in Ghana have been operationalised through the AAC. In other words: We define illegal logging as the difference between the timber harvest and the AAC. We have compared the AAC with (i) the officially recorded timber harvest, and (ii) the «actual» timber harvest. The latter has been estimated from wood product export statistics, the domestic lumber demand and efficiency rates of converting logs into products by the formal and informal sectors.

Recorded vs. allowable timber harvest

In Figures 1 and 2, the officially recorded harvest on- and off-reserves, respectively, is illustrated together with the AAC. The figures show (i) the bole volume, as measured and recorded after felling in the Tree Information Form (TIF) and (ii) the log volume recorded in the Log Measurement and Conveyance Certificate (LMCC) that accompany the log(s) during transport. LMCC-data are shown for 1996-2005, while TIF-data are available from 1998 onwards. The harvest records are not routinely published and the data have never been systematically analysed.

Figure 1A illustrates that the total recorded on-reserve harvest (TIF) has been between 0.5 and 0.8 million m³ annually, i.e. in all years exceeding the on-reserve AAC of 0.5 million m³. Breakdowns to species classes are provided in Figure 1B-D. Figure 1B illustrates that more than half of the recorded harvest is scarlet stars (the commercially most important species), and that their harvest level has been at least twice the AAC throughout the period. Official harvesting records, therefore, document severe illegal logging of scarlet star species in the forest reserves. By contrast, the official on-reserve harvest of red and pink star species is recorded at levels below their AACs.

Figure 2 depicts the officially recorded off-reserve harvest. It illustrates a scarlet star harvest (Figure 2B) that, in the beginning of the observed period, was nearly 0.6 million m³, which is close to ten times the off-reserve AAC. The recorded harvest then decreased dramatically over the period and was in 2005 close to 50,000 m³. This shows that the District Felling Quotas introduced in 1997 to keep the off-reserve harvest within the AAC never really worked.

Moreover, the results strongly suggest that the commercially interesting standing volume of scarlet star species off-reserves has effectively been depleted. The recorded red star harvest has been close to the AAC and the pink star harvest is recorded at a level significantly below the AAC. It is noted

Figure 1

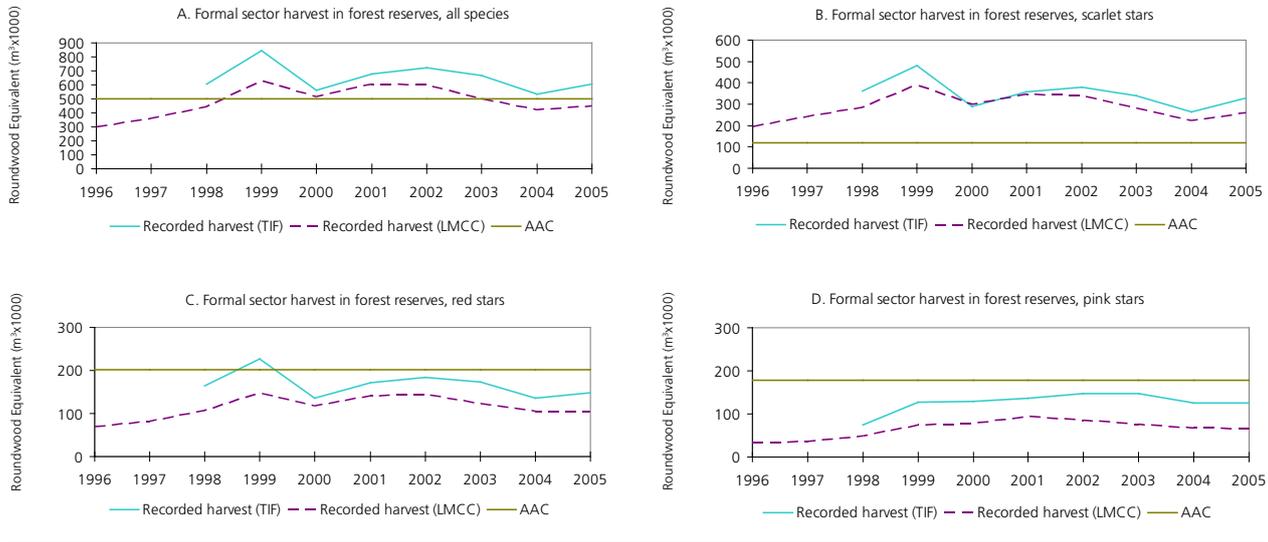


Figure 2

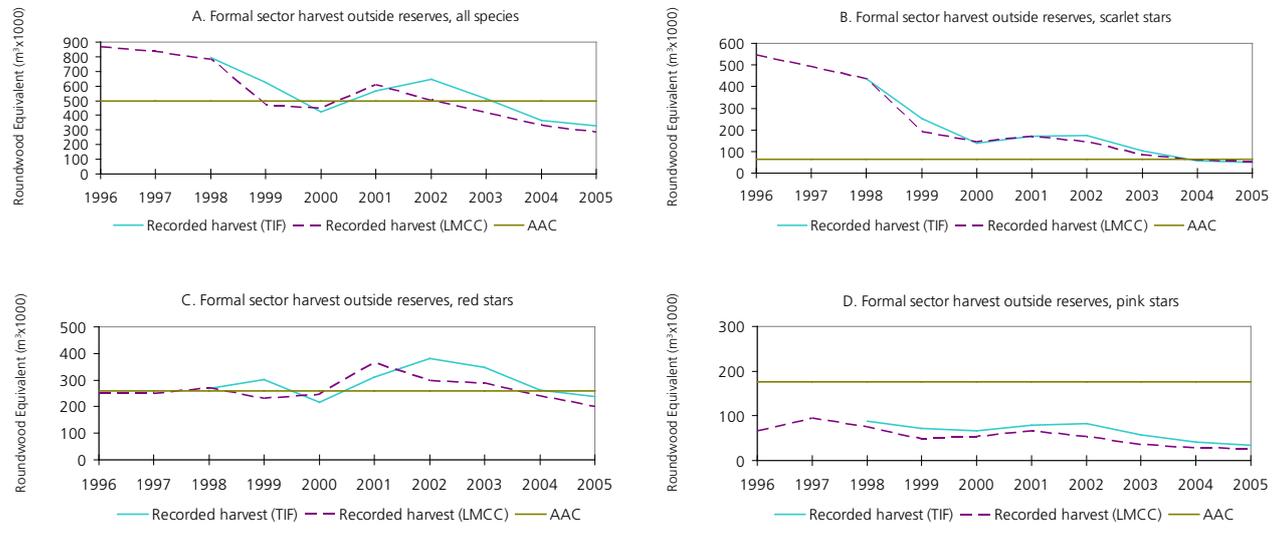
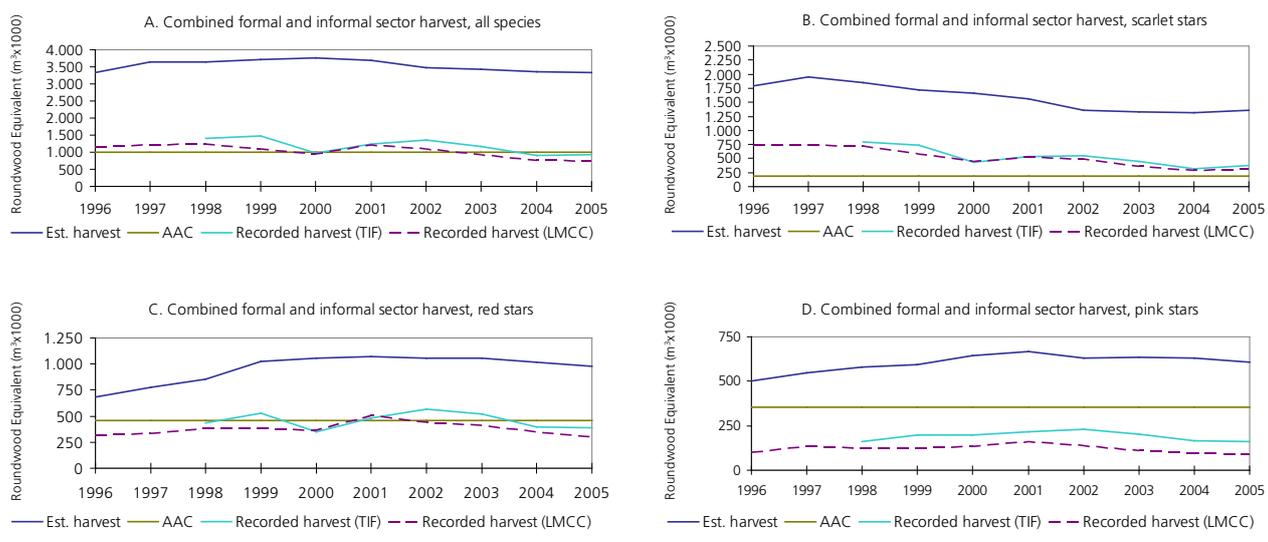


Figure 3



that in 2002 the Ministry of Lands, Forests and Mines revised the off-reserve AAC from 0.5 to 1.5 million m³.

This, however, makes little sense as the recorded off-reserve harvest at the time of revision had fallen below the original level of 0.5 million m³ and has continued to drop ever since.

Estimated actual vs. allowable timber harvest

Figure 3 depicts the estimated timber harvest against the AAC. The total harvest in 2005 is estimated at 3.3 million m³; 1.6 million m³ by the export oriented formal sector and 1.7 million m³ by the informal sector, supplying mainly the domestic market. At least 2.3 million m³ is thus illegally logged.



On-farm chainsaw operation in Brong Ahafo

The total annual scarlet star harvest (Figure 3B) is estimated at approximately 1.25 million m³ for 2005, some six times above the AAC. Also the red star and pink star harvests, estimated at approximately 1.0 million m³ and 0.6 million m³, respectively, are way above their AACs, although to a lesser extent than scarlet star species.

The available data do not allow a firm separation of on- from off-reserve harvest. Yet, since scarlet star species appear almost depleted off-reserves, the study indicates that the actual on-reserve harvest is at least in the order of 2.0 million m³ annually, of which 1.0 million m³ is scarlet star species. The scarlet stars are thus being utilised at a level exceeding eight times the on-reserve AAC.

Conclusions

The study confirms that illegal logging constitutes a serious problem in Ghana. The annual harvest is conservatively estimated at approximately 3.3 million m³ against the AAC of 1.0 million m³, i.e. some 70% of the annual harvest in Ghana is illegal. This puts Ghana in the high end internationally.

Seventy-five per cent of the illegal logging is associated with chainsaw lumbering, which suggests that a solution to the illegal logging problem in Ghana is intimately related to measures which address the underlying causes of chainsaw lumbering. Our study assumes that the annual chainsaw lumber consumption during the period 1996-2005 is about 1.7 million m³ in round wood equivalents. Yet, this probably un-

derestimates the current size of this market. There is thus an urgent need for further research on the size of the chainsaw lumber market in Ghana.

The implications of the results are grave. Forest reserves have in all likelihood been grossly over-harvested for the past 10 years, possibly longer. Due to this long standing overexploitation, forest reserves can no longer support an AAC of 0.5 million m³, and a future on-reserve AAC would predominantly consist of red and pink star species. The persistent overexploitation implies a high degree of logging disturbance inside forest reserves, inevitably involving areas like steep slopes and river banks where no logging should take place. This in turn threatens the provision of environmental services and biodiversity conservation. Moreover, off-reserve areas can no longer serve to »buffer« the logging pressure, which underlines the increasing vulnerability of forest reserves to illegal logging.

Our results suggest that the, in principle, sound forest management regulations established during the mid-1990s, and which led to the AAC, have not worked in practice. We conclude that the high degree of illegal logging is both a symptom and a result of a malfunctioning forest policy framework. Consequently, fundamental reforms of the timber governance regime will be required to address illegal logging. The suggested main elements of the policy reform process will be dealt with in a separate brief.

For a more elaborate discussion of illegal logging in Ghana including research methods, results and conclusions, please refer to Hansen and Treue (2008).

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