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CONCESSIONS TO POVERTY

The environmental, social and economic impacts of industrial logging concessions in Africa's rainforests



SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- Evidence for the economic *benefits* of industrial tropical logging is very scant. Rather, the evidence suggests that the industrial timber concession model is inherently anti-poor.
- Where logging is undertaken in situations of conflict or corruption it exacerbates these, and tends to be particularly environmentally and socially damaging
- Experience from around the world indicates that industrial logging in tropical forests has serious negative impacts on the environment, even if selective logging is practiced.
- This experience also shows that industrial logging is harmful to those people living in and adjacent to tropical forests – with severe impacts on local livelihoods, cultures and health.
- Existing laws and institutions are overly focused on 'elite' economic interests, neglecting environmental, social or developmental concerns.
- The ongoing international and regional policy processes have not undertaken a sufficiently critical look at the role of industrial logging within the forest sector, but rather, are reinforcing the existing 'presumption in favour of industrial logging', along with existing structural and power imbalances.
- Reduced impact logging has the potential to ameliorate the environmental effects of timber extraction, but the lack of enforcement of environmental regulations means that these methods are unlikely to be widely applied in the Congo Basin.

Recommendations

- The rights and concerns of local communities to land and forest resources need to be recognised in law, and these rights respected.
- Further capacity building among local communities is required, aimed at ensuring their effective participation in negotiations over forest rights and improving the generation and communication of information about forest rights and uses.
- Existing environmental and social provisions in laws and regulations relating to forestry need to be enforced.
- A critical analysis of the structural economic problems of industrial logging on tropical rainforests should be undertaken.
- Alternatives to industrial logging in tropical rainforests need to be explored, with greater focus on local forest benefits and values.
- A definition of 'conflict timber' is needed, and this used to apply trade sanctions in appropriate circumstances.
- Responsibility for forest management should be separated from that for timber extraction activities.

PREFACE

The Democratic Republic of Congo and civil society involvement in the report process

Given that this report has as one of its aims to influence policy processes and discussions in the DRC in particular, including input from Congolese voices has been an important part of the process.

In the first place, some of the articles in the report are written by Congolese contributors: these can be found in chapters 2 and 3.

Secondly, the report was reviewed and commented upon by a large group of Congolese civil society organisations, who made a series of recommendations based on their reading of the report and who contributed, collectively, to the introduction to DRC's context which follows below. This work was carried out through a workshop held in Kinshasa in February 2006, and followed up through email discussions with the workshop participants and others. Their editions and suggestions for improvement of the report itself were taken into account and their recommendations for the future management of forests have been included with those of the authors in Chapter 7.

The context of DRC

DRC is emerging from many years of conflict, and its forests and forest policies are in chaos. Already, there are many areas being logged now whose titles were allocated in the period of dictatorship under conditions that were far from transparent. Often, the management of these logging areas has been extremely poor and there have been serious impacts on the local environment.

Forest communities are facing terrible difficulties, particularly communities of indigenous peoples, who face discrimination and marginalisation. All communities have problems of poverty and those who have witnessed timber exploitation have also experienced additional problems including family breakdown, erosion of traditional cultures and health problems. There has been tremendous frustration as communities perceive that companies are not respecting the promises made in their "cahiers des charges" and there are many conflicts over land and resources. Very few communities are aware of their rights under Congolese law and the law itself, as concerns forests, is incomplete.

The Forest Code of 2002 was passed by a government that was extremely weak and under pressure from external donors. The law was based on a model of forest exploitation that did not consider the context of the country itself and that was far too focussed on timber extraction. The capacity of the government to manage its forests is very limited and there is a real need for communities, civil society and government to increase their capacities to plan, manage, monitor and control forest use before any irreversible decisions are taken.

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INTRODUCTION

Background to the report

Since 2000, various regional and international treaties and agreements have been signed, aimed at supporting the rational management and good governance of the Congo Basin's forests. Much of this has suggested large scale zoning of the region's forest, dividing it up into concessions, conservation areas and areas for community use. In 2002, the Congo Basin Forest Partnership (CBFP) was launched, putting much emphasis on key "landscapes" of high conservation value. The sub-regional Ministerial Declaration on Africa Forest Law Enforcement and Governance (AFLEG) of October 2003 placed significant emphasis on mechanisms for tackling illegal logging. In 2005, signature of the COMIFAC (Commission des Forêts d'Afrique Centrale) Treaty by Central Africa's Heads of States boosted efforts to harmonise forestry law with a systems approach to managing the forest environment.

Many Central African governments' forest management policies are based on forest zoning, with most of the forest being put under industrial forest concessions. For example, in Cameroon, around 60% of the land under forest is given over to concessions. However, the forest concessions system often fails to deliver sustainable conservation and management. Evidence from other parts of Africa indicates that opening up forests to industrial logging almost invariably leads to massive deforestation with no possibility whatsoever of any tangible social or economic benefits being generated locally.

The Democratic Republic of Congo (DRC) is also experiencing rapid change in terms of its forest sector's legal and administrative framework. The government is trying to apply the new Forest Code published in 2002, though it seems that the country is going down the usual path of setting up a geographically extensive concessions' system. The DRC has an estimated 135 million hectares of forest, or around 50% of all of Africa's tropical rainforests and 7% of the world's tropical forests¹.

However, without any strict framework for their management and without any means of controlling their sustainable management, the future of these forests is seriously threatened.

For these reasons, the authors of this report believe that it is time to examine more closely the industrial logging concessions system and to analyse whether it constitutes the most effective approach to managing Africa's forests sustainably. In their efforts to be constructive, the authors also propose a series of recommendations for improving the Congo Basin's management policies.

Aim of the report

This report addresses the issues surrounding the sustainability and the impacts of the industrial logging concession system in several Central African countries and elsewhere. Based on the contributions of experts from various backgrounds (NGOs, research bodies, government organisations), the report aims to bring these issues to the attention of national decision-makers and international community representatives. The report highlights the system's pitfalls, which various countries have experienced, as well as the policy options available that could avert or remedy some of these problems.

Through this report, the authors hope to:

- initiate a constructive debate on the issues surrounding the sustainability of the logging concessions system in Africa;
- ensure that international dialogue and initiatives, such as the EU-Forest Law Enforcement Governance and Trade programme, take account of the known failings of the present system;
- directly influence change in the legal and political processes of the Central African industrial logging system and, more specifically, that of the DRC.

¹ FAO (2001) Governance principles for concessions and contracts in public forests. FAO Forestry Paper 139.

CHAPTER 1: TOWARDS BETTER GOVERNANCE

This chapter provides an overview of the existing governance framework for forests in the Congo Basin, highlighting its shortfalls and also considering what steps are needed to achieve good, or at least better, forest governance in the region.

The Congo Basin's forests fall under a complex framework of international, regional and national legislation, as outlined in Article 1.1 by Stuart Wilson. This collection of declarations and laws includes sound principles, for example, relating to ecological sustainability and recognition of traditional land and resource rights, particularly at the international level. However, these are often not translated into national legislation or action. Recent and ongoing processes at the regional and national level aimed at improving forest governance have taken some steps forward, for example, in promoting greater participation and transparency in forest management and the consideration of an increasing range of forest values, of which some examples are presented in Article 1.2 by James Mayers. However, there has still not been a sufficiently critical look at the current situation, the status quo remaining largely unquestioned, and certain issues remain very poorly addressed. In particular, the current framework gives little, or no, recognition to the rights of forest-dependent communities, and especially, of indigenous peoples. Despite the existence of numerous international declarations on the rights of indigenous peoples, these have not been translated into effective national legislation or practice, as outlined by Dorothy Jackson and Cath Long respectively in Articles 1.3 and 1.4.

All the articles presented here highlight the need for a more fundamental questioning of the existing governance framework, based as it is on a system of "forest management" which to date has had little success in delivering stated policy objectives, and for the development of

more radical and innovative solutions. Indeed, there is consensus among the authors that what is needed to improve governance is not better implementation of the current legislation, but rather, a process of review and reform. This will need to acknowledge the role that the forestry sector plays in politics, and in particular, its role in political patronage and corruption, as highlighted in Article 1.5 by Simon Counsell and Arnaud Labrousse.

The authors call for greater transparency and free and fair participation in forest management. They also highlight the need for secure land tenure for communities, effective forest governance requiring the recognition and fair negotiation of the various rights and claims to forest land and resources.



Recognition of community land rights is an essential element for good forest governance: one tool that can enable this is community mapping. Photo: Cath Long

1.1 THE INTERNATIONAL PROCESSES RELATING TO THE FORESTS OF THE CONGO BASIN

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This section of the report will briefly review some of the international processes relating to forests and comment on their contribution to addressing the policy problems faced in the Congo Basin and their likelihood of success. It is not an exhaustive list and comments are made from the perspective of the report's overall review of the forest logging concession system and its application in the Congo Basin.

UNFF

The United Nations Forum on Forests (UNFF) was created by the UN's Economic and Social Council (ECOSOC) in 2000. It is the latest incarnation of the high-level, multi-lateral forest policy debate that began in 1994 in the wake of the UN Conference on Environment and Development (UNCED-Rio 1992). The UNFF is considered by governments and UN institutions to be the primary world forum for discussion of forest policy and the exchange of related information. It and its two predecessor forums have consisted mostly of large annual meetings where government delegations have discussed and negotiated non-binding text and relatively broad and weak commitments on a wide range of issues. The question of whether or not to negotiate a legally-binding forest convention has constantly re-surfaced, and has been a constant distraction, but has remained politically deadlocked. The UNFF has also spawned and facilitated a number of country-hosted inter-sessional conferences on a range of more specific and regionally-relevant topics, although follow-up on their recommendations in the central UNFF has been limited. Perhaps the UNFF's main achievement has been the creation of the UN inter-agency Co-operative Partnership on Forests, which has enhanced co-operation and co-ordination among existing forest-related UN institutions.

Apart from the non-binding nature of the UNFF's negotiated agreements, its effectiveness is further limited by: the lack of any compliance mechanism or enforcement authority; the absence of a funding mechanism; ineffective government implementation; sporadic, voluntary reporting on agreed commitments; and little or no mechanism for review or discussion of such reports. Finally, the UNFF has never been a place where specific forest management standards could be promoted or agreed, and the UNFF's relevance to specific forests or regions is somewhat remote.

The DRC began attending UNFF sessions in 2004. It has identified UNFF Country Focal Points (government agency contact persons), filed a National Report with UNFF in 2004, and provided a representative for a panel discussion on African and Congo Basin issues during a UNFF session in 2004.

The Convention on Biodiversity

The Convention on Biological Diversity (CBD) was negotiated and signed at UNCED in 1992. It is a legally-binding treaty with a formal funding mechanism (the Global Environment Facility). It has scientific and technical working groups and has spawned several issue-specific "Work Programmes" including one on forests. The Convention has also facilitated and funded the preparation by most country Parties of national-level Biological Strategies and Action Programmes, which is perhaps the CBD's most substantive product to date. The CBD has several reporting mechanisms and commitments, and active discussion and development of specific implementation targets and performance indicators.

On the other hand, the CBD focuses much of its effort on large meetings and conferences involving perpetual text negotiation, and has no compliance or enforcement mechanisms.

Evidence of effective implementation of national Biological Strategies and Work Programmes has again been sporadic or non-existent, and the CBD Secretariat has provided the Forest Work Programme with little staff support or resources. Any forest-related commitments that governments have made within the CBD arena are non-binding. Few such commitments, therefore, seem likely to be implemented without external pressure by civil society groups. Finally, although CBD discussion of targets and performance indicators is a useful and encouraging contribution to the multi-lateral dialogue, the CBD as a body is ill-equipped to do much about concrete matters such as illegal logging or the development or implementation of stringent forest management standards, or national or region-specific forest ecosystems. In short, without the political will of individual governments, the CBD and its various follow-on commitments are unlikely to be implemented on the ground. The CBD has also never reviewed currently operative models of forest management to determine which are more likely to lead to achieving the Convention's objectives, nor is it ever likely to undertake such a review.

The DRC has signed and ratified the CBD, identified Country Focal Points, submitted two National Reports (1998, 2001), and developed a National Biological Strategy (1998, 2002). However, the DRC failed to submit a report on its implementation of the Expanded Programme of Work on Forests, and in its completed Forest Thematic questionnaire, it was acknowledged that national actions had been extremely limited.

ITTO

The International Tropical Timber Organization (ITTO) was formed to oversee the implementation of the International Tropical

Timber Agreement (ITTA), which was negotiated in 1983. The ITTA was based on the standard "commodity" agreement format, with the addition of a commitment to sustainable management of tropical forests. However, the primary goals of the ITTA and ITTO have always been the promotion of the tropical timber trade. The ITTO is comprised of a weighted balance of "members" representing governments from both tropical timber producing and consuming countries. It collects and disseminates data on the condition of timber producing forests and the economics of the timber market and trade, conducts research and studies, hosts annual meetings where policy is developed and negotiated, and supports projects submitted by producer member governments and funded by consumer members. Since 1987, ITTO has funded more than 700 projects and activities valued at more than U.S. \$280 million. The major donors are the governments of Japan, Switzerland and the USA.

Although in its first two decades the ITTO made grand commitments to achieve sustainable forest management – such as "Target 2000" which established 2000 as the year by which all tropical timber traded internationally should be derived from sustainable sources - it was internally divided, politically reluctant, and hence failed miserably. Nevertheless, it remains the favoured forum for the main actors in the tropical timber trade, and producer governments participate actively and work hard to win funding for their pet projects. While most projects have focused quite clearly on timber-related goals, in recent years ITTO members have broadened their work to include the establishment of protected areas, reduced-impact logging, community participation, and illegal logging and law enforcement. Whereas government agencies were traditionally the favoured project implementers, NGOs are now sometimes included as full implementation

partners. The ITTO has also convened and sponsored multi-lateral and regional policy conferences on subjects that have included forest certification and law enforcement, and helped open the door to the launching of the Forest Law Enforcement and Governance (FLEG) process.

Because of its tropical-country focus and its project-funding mechanism, the ITTO has greater potential to be embraced by tropical governments and hence to influence their efforts on the ground. However, because of its mandate and focus on the timber trade, and its long-standing allegiance to fairly conventional approaches to forest management, it is not an effective agent of change or trend-setter in the field of sustainable forest management. The ITTO has never questioned the ability of the dominant industrial logging concession model to deliver sustainable or equitable forest management. The ITTO could itself be seen as a test as to whether this model could achieve these goals, but if this is the case, it is clear that little progress has been made.

The DRC, together with most other countries in the Congo Basin, is a producer-member of the ITTO.

COMIFAC - Council of Ministers in Charge of the Forests of Central Africa

COMIFAC is an outgrowth of the 1999 Yaoundé Summit of the Central African Heads of State, and its "Yaoundé Declaration". This Declaration was to be implemented by the region's forest ministers via a regional Convergence Plan. The ministers adopted the Convergence Plan and created the Conference of Ministers in Charge of Forests in Central Africa (COMIFAC) in 2000. COMIFAC's mission is to harmonize and co-ordinate the forest and environmental policies of its member countries, and oversee implementation of the Convergence Plan

(basically a strategic planning framework). As such, it considers itself "the only authority of orientation, decision-making and co-ordination of the sub-regional actions and initiatives as regards conservation and sustainable management of forest ecosystems." COMIFAC has also become a "focal point" for the Congo Basin Forest Partnership (CBFP).

At its ministerial meeting, held in Libreville in 2004, this process became known as the "Central Africa Forests Commission", though it retained the COMIFAC acronym. The same meeting also adopted the "Treaty on the Central Africa Forests Commission" in order to gain higher international recognition and qualify for international funding opportunities. The Treaty commits the member states to (among other objectives) "promote and accelerate the industrialization of the forestry sector", with no mention of good governance and transparency in the forest sector, the rights of indigenous peoples, assurance of benefits to local communities, or commitments under the CBD, and with no provisions for prior consultation with civil society or forest peoples. Some NGOs were very concerned, with good cause, that the treaty might proceed in advance of forest law reform, effective implementation and enforcement, capacity building, consultation, etc.

At the second Heads of State Summit, held in Brazzaville in 2005, heads of state resolved to sign the COMIFAC treaty and adopted the Convergence Plan. Thus, the stage was set for the expansion of industrial logging in the Congo Basin in the absence of any analysis of this model's legacy in other countries in Africa or the rest of the world.

The main concern here is the nature of the policies to be harmonised. In Central Africa the "model" often cited for forest legislation is that of Cameroon, which, as the box below explains, has largely failed local people and is anti-poor. Central Africa's forest policies need review

and reform before their harmonisation and implementation, so as to ensure that they avoid forest destruction and alleviate poverty rather than deepening it.

Box 1: The Cameroon Model²

A new forest law was passed in Cameroon in 1994 with support from the World Bank. The new law aimed to increase transparency in logging concession allocation and state capture of forest revenue. Importantly it also created legal provision for community forests. However with the benefit of hindsight, several analyses (including that undertaken by the World Bank's own Operations Evaluation Department) have suggested that this particular intervention was based on an inadequate understanding of the socio-economic forces at play within the forest sector.³ In particular, it failed to recognise the importance of deeply entrenched and conflicting vested economic interests, and did not reflect "the interests of ordinary people", all of which hampered the policy's implementation.

While the increased status accorded to the forest sector is to be welcomed, 'forestry' must be defined in a broader sense than industrial logging, and it must focus on the inclusion of people that depend on the forests. The emphasis in the Plan on the paramilitary and policing aspects of forest management is of particular concern.⁴

CBFP – Congo Basin Forest Partnership

The CBFP was announced during the 2002 Johannesburg Summit (WSSD) to provide direct support for Congo Basin forest management, protection and development initiatives. The CBFP is said to have been based on the 1999 Yaoundé Declaration, and has endorsed the COMIFAC Convergence Plan

and pledged to help implement this. The CBFP involved a partnership among governments and institutions such as the USA, the UK, France, and the European Union, along with the World Bank, ITTO, and several other partners including international NGOs.

The CBFP's main priorities are to: "provide people sustainable means of livelihood through well-managed forestry concessions, sustainable agriculture, and integrated ecotourism programs; help countries develop a network of effectively managed national parks, protected areas, and corridors; and, improve forest and natural resource governance through community-based management, combating illegal logging, and enforcing anti-poaching laws."

Identified weaknesses of the CBFP to date include its deference to a few large, international NGOs while doing a non-existent job of consulting and involving local and national civil society and indigenous peoples groups; and a failure to devote enough attention to capacity-building within each of the Congo Basin governments and NGOs.

Another approach to provision of financial support to existing regional and national forest initiatives in the Congo Basin has been taken by the UN FAO through its "In Search of Excellence" initiative, launched in 2001 under the FAO/Netherlands Partnership Programme. This is designed to identify and replicate existing examples of effective, high-quality forest management. However, given that it will be using existing operations and models of forest management as its base, the question remains as to how likely it will be to promote a significant shift away from an industrial concessions approach.

² Rainforest Foundation (2003) Forest Law Enforcement and Governance: Rights and Poverty Alleviation in the Congo Basin. ³ Essama Nssah, B. & J.J. Gockowski (2000) Cameroon: Forest Sector Development in a Difficult Political Economy. World Bank, Washington, D.C. ⁴ Rainforest Foundation (2005) Briefing note: Conference of Ministers on Forests of Central Africa (COMIFAC) "Plan de Convergence"

CEFDHAC - Conference on Central Africa Moist Forest Ecosystems (the Brazzaville Process)

CEFDHAC was launched in 1996 under the auspices of IUCN as a very broad discussion forum for consultation, collaboration and exchange among all actors working in the Congo Basin, with the goal of bringing coherence and consistency to the management and protection of the forests of the region. There are ten participating countries.⁵ CEFDHAC is administered by a conference of ministers in Central Africa and national focal points in each participating country. IUCN's Central Africa/Cameroon office is the facilitating agency, or secretariat, of CEFDHAC. The CEFDHAC/Brazzaville Process now hosts biennial conferences as its primary means of bringing parties together.

In co-operation with COMIFAC, an NGO advisory meeting in 2005 recommended setting up a representative task force as a consultative body within CEFDHAC to be in charge of the AFLEG process and to facilitate implementation of the AFLEG Ministerial Declaration, as well as to advise COMIFAC. The resulting AFLEG task force is considered to be the primary means of implementing the AFLEG Ministerial Declaration of 2005.

As far as can be determined, none of the CEFDHAC-sponsored discussions has ever questioned the basic assumptions or conventional models of 'forest management' in the region or its failure to date to deliver the development benefits expected of the forest sector. Indeed, it is unclear what, if anything, CEFDHAC has actually delivered to date.

The Africa FLEG process

The African forest law enforcement and governance (AFLEG) process followed on from its Asian predecessor, and after planning meetings in June 2002, culminated in a ministerial level summit held in Yaoundé, Cameroon in October 2003. This meeting led to the production of a Ministerial Declaration.

The process was started in recognition that widespread failure of forest governance and law enforcement directly undermines any nation's attempt to achieve sustainable economic growth, social equity and environmental protection. Internationally, governments are beginning to acknowledge the high costs of illegal logging, associated illegal trade and corruption in the forest sector.

The declaration itself notes "that in many African countries, some laws relating to forests are inadequately adapted to present conditions and in some cases are unfavourable to the interests of the poor". The declaration also assures us that there will be moves to "consider the legitimate interests of all parts of society when developing forest legislation, including addressing traditional and customary laws and practices, including, *inter alia*, sustainable bushmeat hunting".

Subsequent to the Ministerial meeting it has become apparent that the good will generated is to be picked up in regional forums such as COMIFAC and carried forward through their work programmes. An AFLEG Support Group of active "producer," "consumer" and donor governments was established in May 2004, according to the World Bank website, with the purpose of maintaining momentum for action to implement the declaration, which, two years after the Ministerial, still lacks evidence of concrete results.

⁵ These are: Burundi, Cameroon, Central African Republic, Congo-Brazzaville, Democratic Republic of Congo, Equatorial Guinea, Gabon, Rwanda, Sao Tomé and Chad.

It could be said that the group of "some laws", cited above, includes the concessions model of forest management, especially where this is implemented in weak governance environments. This position is essentially stated in the Ministerial declaration itself and is the reason the Conference took place. The question remains however as to whether the AFLEG support group and the governments themselves have the ability to look frankly at the situation and to consider alternative legal frameworks for forests, a process that should include undertaking research into alternatives through the work programmes of other processes.

EU FLEGT

At the meeting between the UK government and Cameroonian parliamentarians in 2005, it was stated that "the EU FLEGT is now the main co-ordinated mechanism by which European member state governments will address forestry problems in timber producing developing countries".⁶ In an important speech to Chatham House, London in 2006, the UK Minister for Development, Hilary Benn, stated that "The new EU Forest Law Enforcement, Governance and Trade regulation will help to tackle illegal logging in DRC",⁷ in spite of the fact there is no such FLEGT process and, to date, few moves to initiate one.

By reducing market access to timber produced in a blatantly illegal manner FLEGT can be expected to improve the situation on the ground by making these activities less profitable. This has to be welcomed and progress on developing a programme in DRC is eagerly anticipated in the hope that the governance levers are used in the right order – i.e. a pro-poor policy is put in place and the appropriate laws enacted before pressure is brought to bear to surge ahead with enforcement.

What FLEGT will not do is make technically legal logging sustainable. This and other such problems identified above cannot be tackled through FLEGT "voluntary partnership agreements" or indeed by any other "technical fix" based on existing models of exploitation. Hence there is an urgent need to ensure that the FLEGT process does not give credibility to the trade in timber that may be legal technically but produced in a manner that is unsustainable and undermines the rights of local and indigenous peoples.

Synthesis

The first delineation we need to make is between the broader, international, intergovernmental policy forums and those that have been initiated, and operate exclusively, at the regional (i.e. Congo Basin) level.

For the most part, the UNFF, CBD and ITTO tend to resist innovation and change, and operate slowly. Furthermore, they have limited immediate ground-level relevance and a generalized approach to policy-making. With the notable exception of ITTO projects, they have no means of implementation or funding, and the African government members have limited incentives for initiative or implementation. If anything, these governments may resist the recommendations and dictats of these forums because they are the product of a large and diverse collection of interests and may seem like external impositions. On the other hand, the international forums have produced a range of high-level commitments and obligations (albeit mostly non-legally binding) that could represent significant achievements and attract considerable external support if they became a substantive part of the regional processes.

⁶ Chatham House briefing on visit to UK by Cameroonian Parliamentary delegation (2005). Available at: http://www.illegal-logging.info/events/Tropical_Forest_Governance_Meeting_notes_August_05.pdf ⁷ Department for International Development (2006) Speech by the Minister for Overseas Development, Chatham House, 23rd February 2006, London.

The Congo Basin processes, on the other hand, have been initiated in the region, for the most part by a small group of countries themselves, and are very specific in their focus. Therefore, they have a greater potential to generate internal support and buy-in, as well as external funding, and thus to produce results and to do so more quickly. However, these governments tend to resist change, in order to perpetuate existing conventional models of securing rent from the forest sector (either for public or personal gain). It appears to be primarily the lure of significant external funding that provides the incentive to innovate, change, and act. Thus, when these processes can be combined with significant sources of funding, and can work in close co-operation with other parties and processes, the incentive to make initial substantive commitments, and to follow-through and implement those commitments, can be high.

By this analysis, two processes seem most likely to produce results, even more so if these operate in combination: COMIFAC, because it is based on a very high level of government commitment and participation and a formal treaty; and CBFP, because it brings significant external financial support and is designed to facilitate implementation of the COMIFAC suite of commitments. It is an excellent partnership to work from but sadly seems to be rushing towards cementing in place a model of forest management that has singularly failed to deliver development benefits in any country where there is a weak governance framework. By funding these initiatives the donors have demonstrated their alignment with existing policy models, notably in the absence of a critical structural analysis of the logging concessions system and without any evidence that these initiatives can deliver more sustainable forest management or contribute to poverty alleviation.

The key factors for success in the regional initiatives, and with COMIFAC/CBFP, are likely to be domestic pressure and support from civil society together with external pressure and support from international donors and institutions. Thus, transparency and participation will be essential requirements, as well as effective monitoring of implementation. So far, these Congo Basin initiatives have for the most part been weak on these attributes. Nor have they effectively incorporated their member governments' commitments in various international forums, and they have had inadequate feedback loops for continuous improvement. Unless these flaws are corrected, these initiatives will be unlikely to push innovative forest management very far, if at all.

In all of these processes, however, we can see an alignment of national governments with little political will to change a model of forest management that functions in the best interests of the political and economic elites, and a range of international funding agencies that are also unwilling to promote truly innovative solutions that may already exist.

For some African leaders and senior officials, logging concessions provide a means of: converting public goods into private wealth; rewarding political cronies and buying-off political enemies; pacifying rebels and military challenges; or of funding election campaigns. Yet the international community has failed to take any meaningful action against the culprits. In Gabon, it was recently found not only that President Bongo, his family, and every single important government minister holds logging concessions, but also that they had all failed to pay the prescribed taxes and were therefore operating illegally.⁸

⁸ Government of Gabon (2005) *Listes des Permits Forestiers Concernes*, *Minister de l'Economie des Finances, du Budget et de al Privatisation, Minstere de l'Economie Forestiere des eux, de la Peche, de la Environnement, l'Union, Libreville, 5 mars 2005.*

Governance problems of this nature can only be tackled through determined political action at the highest level, and a willingness to confront some of Africa's most entrenched political elite. The likes of Presidents Biya and Bongo, or their dynastic successors, will need to be challenged, to reform laws and to implement them in a consistent and transparent manner.

This moral bankruptcy on both sides perpetuates the status quo and increases the spread of forest policy models, including through the COMIFAC Plan of Convergence, that have no positive record in the weak governance environments where they are being promoted.

If the governments and donors are serious about achieving the intentions set out in the various declarations mentioned above, the COMIFAC/CBFP partnership arrangement should create the political space and provide the funding for a participative and fundamental evaluation of the industrial forest logging concessions system and the contribution it has made to the development of countries to date. The DRC should opt out of the Convergence Plan as this promotes an inappropriate development model for a country whose forest code is at an early stage of development.

1.2 POLITICAL SUSTAINABILITY: GOVERNANCE AND TRANSPARENCY

JAMES MAYERS, IIED, UK

Effective and equitable political systems, that protect and invest in a nation's citizens and environment, have been the seldom-realised right of societies since time immemorial. These days, debates about "good politics" often focus on notions of "governance" and "transparency". Such notions have come to the fore in international attention to forests recently. Box 1 explores some of these notions.

Box 1: Governance and forests: working definitions of awkward "concepts".⁹

Governance is traditionally held to be very close to that of "government" – more or less "what governments do". Over the last decade governance as a term has gained wide currency in a range of contexts – within societies and individual organisations. One simple definition of governance is "the art of steering societies and organizations." A further definition of governance in its societal dimension is: "the traditions, institutions and processes that determine how power is exercised, how citizens are given a voice, and how decisions are made on issues of public concern".¹⁰

Good governance is clearly about getting governance right, but since the "right way" is largely shaped by the cultural norms and values of each particular society or organisation, universal templates for good governance have limited credibility. The UN has suggested that some universal norms and values do apply and has published a list of characteristics of good governance:¹¹ participation, transparency; responsiveness; consensus orientation; equity; effectiveness and efficiency; accountability; and strategic vision. A notion of good governance has the advantage for some in offering a non-partisan discourse on politics.

Good forest governance as a term has evolved similarly to governance in general. It has come to the fore particularly as a result of debates on decentralisation, corruption and illegal logging. It has different meanings for different people and there are few attempts at consensual definition. The Africa Forest Law Enforcement and Governance (AFLEG) ministerial declaration of 2003, for example, does not attempt such a definition. The Forest Governance Learning Group, steered by the International Institute for Environment and Development, has a working definition of good forest governance – "the decisions and actions that remove the barriers and install the policy and institutional systems which spread local forestry success".

"Good forest governance" is clearly necessary for making forest concessions work. Concessions wrap up significant quantities of a society's land and resources and hand them over to third parties for long periods of time. We need to know that this is handled wisely. Yet putting notions of good forest governance into practice at the local level generally remains a distant prospect and therefore the concession system which is the principle object of this "governance" represents a societal asset that is generally being managed in a "sub-optimal" manner. The actual governance of access and control of forest resources often bears little relation to the situation as stated by governments. Regulations and formal institutional mandates rarely determine or secure access and use of resources in accordance with their legislation as such, but create opportunities for negotiating or abusing this. The discretionary enforcement of laws and regulations provides possibilities for monetary and political rent seeking, with the conversion of public forest resources into private wealth being a prime example of this.

⁹ IIED (2004) Forest governance learning group: Update December 2004. IIED, London. ¹⁰ Institute on Governance (2005) <http://www.iog.ca/> ¹¹ UNDP (1999) Human Development Report 1999 – Globalisation with a Human Face. United Nations Development Programme, New York.

Often, it is people's lack of awareness of the extent of their property and use rights that provides scope for local authorities to define local people's current practices as illegal despite what is enshrined in official documents.¹² While the range of institutions that play important roles in poor people's lives is vast, they are often excluded from participation in governance – being treated with disdain by institutions and having little defence in the face of institutional injustice, criminality, abuse and corruption,¹³ including the allocation of forest rights for logging outside of official procedures and the law.

Yet such situations are increasingly questioned - fragile economies have decreased the ability of leaders to counter public dissatisfaction with the use of state patronage, and civic organisations have grown more effective in their demands for greater resources and public accountability. A focus on improved justice in forest governance is increasingly being called for¹⁴. There is much to learn from the often under-recognised and poorly-connected practical systems of governance to be found in the day-to-day workings of some on-the-ground institutions - forest departments, NGOs, donor-assisted projects, local governments, companies and communities.¹⁵

Challenges are huge – but some countries are making forest governance progress

Recent years have seen some progress in developing forest governance. National policy debate and implementation tends now to involve multiple stakeholders and partnerships, and not merely government and some elites. Policy objectives in many countries have opened up, from an overriding concern with forests as timber resources or land banks for development, to a concern for a wider range of forest goods and services and stakeholder needs. Forest-dependent communities in some countries are beginning to have rights

recognised, to enable them to be effective forest managers. Meanwhile, over the last three years in particular, many international debates have identified better forest governance as a desirable goal. The Africa FLEG ministerial declaration is particularly notable as a political hook for making progress. All of these initiatives have so far only provided building blocks and there is still a long way to go.

¹² Mayers, J. *et al.* (2005) Forest governance and social justice: practical tactics from a learning group approach in Africa. Proceedings of the 17th Commonwealth Forestry Conference, 29 February to 5 March 2005, Colombo, Sri Lanka. Forestry Commission, UK. ¹³ Kaimowitz, D. (2003) Forest law enforcement and rural livelihoods. *International Forestry Review* 5(3): 199-210 ¹⁴ Colchester, M. (2004) Justice in the forest: rural livelihoods and forest law enforcement. CIFOR, Bogor (Unpublished draft); Kazoora, C. & J. Carvalho (2005) Forestry justice: combating illegality for forest-linked livelihoods in Uganda. Sustainable Development Centre, Kampala & IIED, London. ¹⁵ Mayers, J. *et al.* (2001) Forestry tactics: lessons from Malawi's National Forestry Programme. IIED, London; Sithole, B. (2002) Where the power lies: multiple stakeholder politics over natural resources. A participatory methods guide. CIFOR, Bogor.

Box 2. Rising to the tactical forest governance challenge - in Uganda, Ghana and Mozambique

Uganda - Space to tackle some major forest governance challenges has been created by a generally positive process of decentralisation and some high-profile cases of corruption linked to the timber trade to examine some of the practicalities of tackling forestry corruption and improving returns to sustainable livelihoods from better use of the justice system. Proposals currently seeing considerable attention include: an improved timber tracking system; more effective information flow; better forestry integration with the penal code; a light but effective local reporting and rapid response system at source of production and in the domestic trade chain; and a stronger system of adherence and accountability to a professional forestry code.¹⁶

Ghana - Major institutional innovations have been made in Ghana's forest sector in the last three years: competitive bidding for timber utilization has finally kicked in; stumpage prices have begun to reflect market prices; a new log-tracking system is in the pipeline; benefit sharing mechanisms have improved; forestry customer service centres have been set up in many districts; and district forest fora have begun to be effective. Yet major problems threaten to undermine all this. Bad implementation and flagrant abuse of forestry law have created a situation where almost all timber utilisation in Ghana is illegal and the revenue lost to government from this is estimated at about U.S. \$100 million annually. A potential powder keg has been created at community-level by those involved in flouting the law and over-harvesting. Communities have lost confidence in the timber-men and the government is threatening to take matters into its own hands.¹⁷

An alliance is forming - of new civil society voices in forestry and key individuals in the Forestry Commission, Parliament, the Ministry and private sector. A renegotiation amongst stakeholders in forestry is being called for to avert a major crisis and to build on the gains already made. Those involved helped get information into the public domain in gearing up to a national forest forum process in 2005, and encouraged and engaged with the political debate about potential solutions.¹⁸

Mozambique - A National Forest Forum has begun to be effective in Mozambique - and has created momentum around ideas which the prevailing sector-wide programme, ProAgri, can take forward. Reconciling the very different approaches used in the development of new policies for land and for forests has assumed high importance.¹⁹ The process of developing the new land law was highly inclusive of marginalized rural communities and a clear process is now in place whereby communities register their rights, define their group and gain legal personality. The development of forest law on the other hand was a more top-down affair and there is now considerable confusion about how communities can be granted rights to forests and how they can make such rights effective. There is a real danger that communities will disengage from a role in forest stewardship unless the National Forest Forum can install practical mechanisms for their ownership and responsibility.²⁰

¹⁶ Kazooru, C. & J. Carvalho (2005) Forestry justice: combating illegality for forest-linked livelihoods in Uganda. Sustainable Development Centre, Kampala & IIED, London. ¹⁷ Arthur, E. & C. Brogan (2005) Assessment of the impacts of local forest institutions on livelihoods and forests in Ghana. Forest Sector Development Project, Accra & IIED, London. ¹⁸ Danso, E. & K. Opoku (2005) Impacts and legality of forest utilisation permits in Ghana. Civic Response, Accra and IIED, London. ¹⁹ Macqueen, D. & A. Bila (2005) Gleanings on governance: learning from a two-year process of forest policy support to ProAgri, Mozambique. IIED, London. ²⁰ Johnstone, R. *et al.* (2005) Forestry legislation in Mozambique: compliance and the impact on forest communities. Terra Firma, Maputo and IIED, London.

Good governance – a consequence not a precondition of effective action

In the burgeoning literature on good governance and its influence on national macro-economic planning, a common message is that transparency and good governance are key conditions for all good things to follow. Yet even a cursory look at history in many developed countries, regularly branded as pinnacles of good governance, shows that factors now considered preconditions for development were actually consequences of it.²¹ This should give us cause to be wary of attempts to install rigorous systems of forest concession allocation, management and monitoring where the capacity to run them is relatively weakly developed.

Transparency and communications – always worth working on

Transparency is also a consequence, not a precondition, of effective governance action. Yet improving the generation, access and use of information about forest rights, uses and demands is probably the single most important governance tactic needed in even the most challenging environments for good governance. Whether forest concession systems are installed or not, information of this sort is vital – citizens need to know who is using their resources, how they are doing so, and how to make changes if things go wrong. This implies enabling local institutions to improve their capabilities to make information more useful: legal awareness, brokering agencies, advice provision and extension programmes.

Using forestry levers for reform – in the right order

Most problems of governance and forestry are perceived as being governance problems that affect forestry rather than forest governance problems. Greater weight should be thrown behind efforts to achieve wider accountability and equity in decisions that affect the forest

sector, but also behind efforts that recognise the key advantages and "levers" that the forest sector has in contributing to that wider reform. Work in the forest sector shows the importance of the right sequence in governance improvements - e.g. work must be done to secure land tenure or there is little incentive for land-users to collaborate with each other or the state. Forest concession systems can be considered relatively "advanced", or to have "jumped the gun", in their implementation with respect to the rights allocation sequence. They are only likely to work when good foundations of rights, responsibilities and the institutional relationships to make them work are in place, which is not currently the case.

The "real politic" of timber

Social in-cohesion and lawlessness is being created by the way forests are currently managed under the concession system in large parts of Ghana and Cameroon, and some parts of Uganda and Mozambique. In Ghana, it is not surprising that forest communities condone illegal chainsaw men when the big timber companies are operating illegally and violating communities' rights.²² Timber may not be the biggest revenue source but it can be the most accessible for political party financing. Indeed timber revenues can act as political slush funds – which is both a current threat and a potential political opportunity, if for example parliamentarians demand accountability of forest agencies.

Linking the people who can make changes

It is clear that use of the right information in a reasonably free press and some private radio stations can work wonders. There is often a constituency for change (even in apparently intractable institutional situations) – and their influence can be much greater than their numbers. There are many links amongst innovative individuals that can be built on, using astute tactics. Despite forest staff being

²¹ Grindle, M. (2002) Good enough governance: poverty reduction and reform in developing countries. Kennedy School of Government, Harvard University.

²² Danso, E. & K. Opoku (2005) Impacts and legality of forest utilisation permits in Ghana. Civic Response, Accra and IIED, London.

accused of collusion, they are still preferred as the first point of call by the public in seeking justice in Uganda.²³ In Mali, forest agents were seen as the most common instruments of state repression in rural areas ten years ago – but today this has been largely turned around.²⁴

Untying the legal knots around communities and local enterprise

Forestry seems to have more regulations than most sectors. Almost anything sensible that people at the local level want to do is illegal. Regulations are overloaded and much injustice is created, often in the name of sustainability. Double standards seem to prevail – management plans are demanded of small communities but repeatedly avoided by big companies. These double standards need to be addressed - communities are increasingly rejecting commonly used notions like “a sense of ownership” and “a seat at the table” – they generally want full ownership and control. How these double standards are addressed is another matter, as the concession holders are precisely those who are in league with the decision makers who have the power to ensure that, for the sake of both parties interests, the double standards are perpetuated.

Care with the "law enforcement" agenda

Good forest governance is not the same thing as law enforcement. Indeed enforcement of current laws is in some contexts irrelevant or, at worst, highly detrimental to poor people. Laws frequently prop up existing exploitation systems, particularly the concessions system, denying the rights and blocking the potential of poor people at local level.²⁵ Corruption thrives in such environments. The current international drive to combat illegal forestry could do more harm than good if social justice is not brought centre-stage. Some of the momentum for preventing illegal forestry needs to be converted into real capacity for targeting the major abusers of forest and land laws,

correcting unfair legal frameworks, including the industrial forest logging concessions system, and ensuring their even-handed implementation. Governance approaches that effectively address these problems must therefore involve fundamental rights, institutional roles, policy sticks-and-carrots, and systems by which decisions are actually implemented and monitored.

Conclusions

Governance systems should be able to run a country's forest concessions such that they look after the forest and deliver hefty and equitable returns to its citizens. But good examples of this are the exception rather than the rule. Concession systems on paper rarely exist in practice. Rather what we see is concession allocation as the exercise of political favour and concession management as the exercise of political power. The forests, and those who depend on them locally for their livelihoods, are rarely the beneficiaries. Better development and use of information, and investment in the capacity for accountability, can make inroads into even the most opaque and unjust concession systems. But, ultimately, alternatives generally need to be found. Such alternatives place local control at their heart – with governance by negotiated rights and responsibilities, and management by simple agreed principles and open procedure.

Recommendations²⁶

- Local institutions should be enabled to improve their capabilities to provide and disseminate relevant information that includes access to, and application of, information about forest rights, uses and demands.

²³ Kazoora & Carvalho (2005) *op.cit.* ²⁴ Cisse, M. & M. Allen (2005) *L'impact socio-économique et environnemental de l'exploitation forestière au Mali – le cas des marchés ruraux de bois. SOS Sahel International, Mali & IIED, London.* ²⁵ Colchester, M. et al. (2006) *Justice in the forest: rural livelihoods and forest law enforcement. Forest Perspectives 3, CIFOR, Bogor.* ²⁶ These recommendations are explored in more detail in: IIED (2004) *Forest governance learning group: Update December 2004.* IIED, London. Available at: http://www.poptel.org.uk/iied/docs/flu/FGLG_Update_December04.pdf

- Legislation should be drafted (or revised) in a way that does not prejudice local peoples' rights or result in double standards being applied to local people and the industrial sector.
- Greater weight should be thrown behind efforts to achieve wider accountability and equity in decisions that affect the forest sector. Work must be done to secure land tenure or there is little incentive for land-users to collaborate with each other or the state.
- Some of the momentum for preventing illegal forestry needs to be converted into real capacity for targeting the major abusers of forest and land laws, correcting unfair legal frameworks, including the industrial forest logging concessions system, and ensuring their even-handed implementation.

1.3 ADVANCES IN LEGISLATION RECOGNISING INDIGENOUS PEOPLES' RIGHTS IN CENTRAL AFRICA: A COLLISION COURSE WITH INDUSTRIAL LOGGING CONCESSIONS

DOROTHY JACKSON, FOREST PEOPLES PROGRAMME, UK

Indigenous peoples' rights to self-determination, to consent to activities that affect them, to culture, their traditional economic and subsistence activities, and their lands and resources are protected by several human rights treaties such as:

- The International Covenant on Civil and Political Rights
- The International Convention on the Elimination of All Forms of Racial Discrimination
- The Convention on the Rights of the Child
- Specialised instruments such as ILO Convention No. 169²⁷
- The UN Declaration on Indigenous Peoples.

The African Charter of Human and Peoples' Rights protects the rights of all peoples to existence, to self-determination, to freely dispose of natural wealth and to economic, social and cultural development of their own choice and in conformity with their own identity.²⁸ This has particular relevance to the use and allocation of forest resources upon which many millions of people depend for their subsistence and cultural survival. Forest zoning and the allocation of industrial forest logging concessions in the Congo Basin is currently one of the greatest impingements on the realisation of the objectives of these international treaties.

Eight central African countries (Burundi, Cameroon, CAR, Congo, DRC, Gabon, Rwanda and Uganda) although having signed these internationally binding agreements, with the exception of ILO 169, have not so far incorporated them into national legislation in order to protect indigenous rights. All eight

countries also have constitutional provisions against discrimination, including discrimination on ethnic grounds, and most have provisions for supporting minority and vulnerable groups. The Rwandan and Burundi Constitutions are exceptional among central African countries in making provision for special representation of indigenous people in the senate.²⁹

Legal versus customary rights

Traditional land holding systems based on collective rights are still the main form of land management in Africa. Recognising this, many eastern, southern and western African countries are revising land legislation to deal with the complex overlap of different types of tenure. Customary land rights and collective tenure are now recognised in the land policies and laws of 11 eastern and southern African countries.³⁰ Land reforms are often linked to changes in forest policy and law – at least six African countries now have provisions for communities to own forests with sole power over access and use of the forest.³¹ However, specific legal protection for indigenous peoples' land rights is still poorly developed – there are some provisions for pastoralists in eight countries³² and with the exceptions of South Africa and Namibia, hunter-gatherer territories have virtually no protection in law, other than by adopting the structures set up for administering land tenure for settled farming communities.³³ In South Africa the indigenous #Khomani San used the Restitution of Land Rights Act (1994) to regain part of their traditional lands now overlain by the Kgalagadi Transfrontier Park – however the San's access and use of their lands is still controlled by conservation managers.³⁴ In 2003 the Nama, an indigenous pastoralist Khoe people, used the same act and constitutional provisions to secure their land claim in the Richtersveld. In this case the Court also followed aboriginal title precedents from other jurisdictions including Privy Council decisions.³⁵

²⁷ Committee on the Elimination of Discrimination (1997) General Recommendation XXIII (51) concerning Indigenous Peoples. Adopted at the Committee's 1235th meeting, on 18 August 1997. CERD/C/51/Misc.13/Rev. ²⁸ MacKay, F. (2001) The African Commission on Human and Peoples' Rights: What it is and how it works. Forest Peoples Programme, Moreton-in-Marsh. ²⁹ The Burundi post-transition Constitution adopted in 2005 provides for 'three people of the Twa ethnic group'. The Rwandan Constitution (2003) provides for presidential nomination of eight representatives of 'historically marginalized communities'. Only one of the Senators nominated is a Twa person. ³⁰ Kenya, Tanzania, Uganda, Ethiopia (Amhara state), Malawi, Mozambique, Zimbabwe, Lesotho, Swaziland, South Africa and Botswana (Alden Wily, L. (2003) Forest Governance Lessons from Eastern and Southern Africa. Presentation to the Africa Law Enforcement and Governance [AFLEG] Ministerial Conference in Yaoundé, Cameroon, October 13-16, 2003). ³¹ Gambia, Tanzania, Uganda, Lesotho, Senegal and South Africa. In Nigeria, Malawi, Burkina Faso, Namibia and Mali communities can own forests but don't have sole decision-making power (Alden Wily (2003a) *op.cit.*) ³² Ethiopia, Tanzania, Kenya, Lesotho, Botswana, Niger, Mauritania and Mali (Alden Wily, L. (2003) Governance and Land relations: a review of decentralisation of land administration and management in Africa. IIED, London. UK).

In Central Africa, local communities' collective and customary land rights are protected only in Uganda, under the Constitution, which vests ownership of the land in the citizens of Uganda, and under the 1998 Land Act. These protections are however negated by statutory provisions permitting the Ugandan government to appropriate customary lands "in the public interest." As a result, indigenous peoples such as the Batwa and the Benet have been evicted from their collective and customary lands in national parks.³⁶ The Benet people are now suing the Ugandan government for violation of their constitutional rights to land in the Mount Elgon National Park.³⁷ In the other Central African countries, local land rights and regulatory systems are not legally recognised, and the state retains ownership of the land (except for a tiny area under individual, private title) giving an ambiguous status to local landholding systems. Currently, land legislation offers little scope for protecting indigenous collective land rights in these countries.

Changing national legislation

In theory, new forest laws in Cameroon (1994), DRC (2002) and Gabon (2001) offer some scope for indigenous peoples to gain more control over their lands and resources. These laws give local communities the right to manage areas of forest as community forests over a defined time period, and retain the benefits and products of the forest for themselves. The forests remain under state ownership and can be re-appropriated. Community forests have not yet been implemented in DRC and Gabon but experience so far shows that the model, as implemented in Cameroon, is not compatible with indigenous "Pygmy" communities' traditional resource management practices and aspirations, and they have been unable to use the legislation to secure access and control over their lands and resources. Indeed, many are worse off because the zoning process to define areas eligible for

community forests has placed indigenous hunting and gathering grounds out of bounds in the permanent forest estate, this designated for allocation as industrial forest logging concessions and environmental protection.

The wildlife and forest laws of Central African countries determine local communities' rights regarding forest use. These rights are least restricted in the non-permanent forest estate, and highly restricted or prohibited in protected forest areas. Violations of the laws are punishable by fines or imprisonment. Where hunting is permitted, it often has to be done using traditional methods and for non-commercial use only. These restrictions particularly affect Pygmy communities whose forest resources are often concentrated in protected forest areas and whose economies are based on trading game and forest products. Some protected areas have relaxed restrictions (e.g. Lobéké National Park, Cameroon) or devised new legal provisions (e.g. Dzanga Sangha Reserve, CAR) permitting indigenous communities to practice subsistence activities in parts of the forest. However, such measures do not compensate for the large areas of forest resources that are now legally out of bounds to indigenous communities.

Currently, the Central African initiatives that specifically address indigenous peoples' concerns are policy-based rather than legislative, namely the Indigenous Peoples Development Plans (IPDPs) being developed in conjunction with World Bank-funded Forest and Environment Sector Programmes (FESPs) in Cameroon, Gabon and CAR, under the requirements of the World Bank's safeguard policy on indigenous peoples (OD4.20). The Cameroon IPDP aims to increase indigenous communities' security of tenure over lands and resources, notably providing community forests and/or hunting zones for all Cameroon's indigenous communities, and establishing new forestry

³³ For example, the Hadzabe of Tanzania (Madsen, A. (2000) *The Hadzabe of Tanzania: land and human rights for a hunter-gatherer community*. IWGIA, Copenhagen) ³⁴ Dutton, S. & F. Archer (2004) *Transfrontier Parks in South Africa*. *Cultural Survival Quarterly* 28 (1)

³⁵ <http://www.constitutionalcourt.org.za/Archimages/762.PDF> ³⁶ Kenrick J. (2000) *The Batwa of South West Uganda: World Bank Policy on Indigenous Peoples and the Conservation of the Bwindi and Mgahinga National Parks*. *Indigenous Perspectives* 3(1) Tebtebba Foundation, Baguio City, Philippines. ³⁷ Okwaare Otto, S. (2004) *The fight for land rights of a minority people: the case of the Benets of Mount Elgon in eastern Uganda*. In: *Update: Innovative Methodologies for Assessing the Impact of Advocacy*. Issue 4, March 2004. ActionAid.

regulations which "legalise indigenous people to utilise their land". A national policy on indigenous people will also be developed in Cameroon. The implementation measures, however, remain to be worked out and there are currently many uncertainties, particularly the compatibility of the IPDP with existing legislation: for example, how will the government address the legal rights of indigenous peoples, how will indigenous lands be identified and "legalised", will these lands include lands in the permanent forest estate and how will competing Bantu land claims be dealt with?³⁸

Conclusion

Central Africa is far behind other regions of the world with regard to recognition of indigenous peoples' rights. In the Americas for instance, 19 countries adopted constitution provisions protecting indigenous peoples' rights in the period 1985-2003. Fourteen American states have ratified ILO 169 since 1990. Nine countries in Asia also adopted legislative or constitutional measures during this period. At the same time, international human rights law has also sharpened its focus on indigenous peoples' rights and a distinct body of law confirming their individual and collective rights has emerged and been consolidated.

This body of law is still evolving and strengthening, and applies equally to Central Africa as to other regions of the world. While the African Commission on Human and Peoples' Rights has taken some important first steps with regard to indigenous peoples in Africa, including recognising the existence of indigenous peoples as legal entities with rights in Central Africa, there is still much to be done in terms of amending domestic law and practice so that it meets these standards. Currently, however, forest zoning at the landscape level or at the logging concessions' level, that does not

acknowledge existing rights and customary land use practices is in direct opposition with the legislative advances in international fora. The allocations of logging concessions can also be in direct contravention to national legislation that is designed to protect indigenous and other peoples' rights.

Recommendations

Central African governments should recognise indigenous peoples' as rights holders in line with contemporary international human rights and environmental law. This would include the following measures:

- Ratifying ILO Convention 169 protecting indigenous peoples' rights;
- Incorporating international human rights commitments protecting indigenous peoples' rights into domestic law and policy;
- Upholding existing constitutional and legal provisions for the support of vulnerable groups and minorities who are marginalised in decision-making, including the allocation of industrial logging concessions, and developing additional measures to protect their rights.

Central African governments should provide secure legal rights for indigenous communities over their customary lands. Until such mechanisms are in place, zoning processes for classification of production forests and protected areas should be based on the free, prior and informed consent of indigenous peoples and local communities so that customary lands and resource use are safeguarded.

Participatory community mapping projects should be implemented as they can assist indigenous peoples and neighbouring farming

³⁸ For detailed information on central African legislation and policy affecting indigenous peoples see: Jackson, D. (2004) Implementation of international commitments on traditional forest-related knowledge: indigenous peoples' experiences in Central Africa. Forest Peoples Programme, Moreton-in-Marsh.

communities to identify their customary lands and ensure that demarcated areas are compatible with local land rights and meet indigenous communities' spatial needs.

Central African governments' regulatory frameworks should be modified to support indigenous and traditional communities' decision-making power over their forest lands and resources, for example, by legal recognition of communities' own representative institutions, or helping them to develop new management institutions with legal personality, yet underpinned by their customary norms and values.

Regulations should accommodate indigenous communities' customary subsistence use in protected areas and permanent forest estates. Hunting regulations should be reviewed to strengthen measures to combat large-scale commercial hunting, while giving more control over game resources to local communities, including legalising traditional hunting rights, increasing access of legitimately hunted bushmeat to the market, and empowering local registered hunters to exclude outsiders from their hunting areas.

1.4 LAND RIGHTS AND FORESTS: THE IMPACT OF THE CONCESSION SYSTEM CATH LONG, RAINFOREST FOUNDATION, UK

Any formal forest management system, whether depending on industrial logging concessions or any other management structure, involves land use planning as its basis. And with land use planning should come consideration of the land rights and tenure of the communities and peoples living in and depending on those forests.³⁹

There is fairly widespread agreement that a failure to consider and address land rights and tenure in any land use regime in an appropriate manner, suited to local circumstances, invariably has a negative impact:⁴⁰ increasing poverty⁴¹ and the likelihood of insecurity and conflict,⁴² reducing external investment,⁴³ increasing environmental destruction⁴⁴ and contravening basic human rights commitments.⁴⁵ Thus, an evaluation of any forest management system must include an examination of its land use planning and its consideration of land rights.⁴⁶

This paper will demonstrate that, as it is structured today, the industrial logging concession model as a means for forest management institutionalises and entrenches the denial of customary and local land rights and consequently lays the basis for the kind of long term problems listed above. As White and Martin explain, "this approach to public forest land management has often led to environmental degradation, social instability and insecurity, and additional financial burdens on cash-starved governments."⁴⁷

In most tropical countries with substantial forest resources, national legislation defines forest lands as distinct from agricultural lands and, frequently, forests are defined as the property of the state⁴⁸ whilst agricultural lands are subject to private and common property tenure regimes. Thus, in formal legal terms, right from the outset, forest communities are effectively dispossessed.⁴⁹ To take a concrete example from a forest area: in Ituri, in Eastern DRC, there is not one hectare of land that is

not subject to one or other customary property regime,⁵⁰ yet much of the forest land is described by local decision makers as being effectively vacant and forest exploitation has taken place there over many years with no reference to forest community rights – and no benefits accruing to those forest communities.

At present, this dispossession of forest communities is the case in every Congo Basin country, where the national legislation establishes land tenure regimes in which the state is the landowner and the traditional landowners or rights holders are granted merely user rights, and even those are relatively limited.⁵¹ States are the landowners and are presumed to manage land and forests in the best interests of their citizens. However, as Daley and Hopley point out, "Where states hold radical title to land (whether in whole countries, as in much of Africa...), rights may be notionally allocated for the wider public good through the granting of leases or concessions to foreign investors or transnational corporations (for mining, logging, tourism etc.), yet questions frequently arise about who actually benefits from these arrangements".⁵² As indicated in Article 1.5 of this report, there are structural reasons why those that actually benefit will almost invariably be national political and economic elites.

Even in those countries where new legislation has been developed that supposedly assigns greater rights to communities, the administrative procedures involved are so onerous and complicated that very few communities genuinely have access, and the restrictions on where and how they can have access bear little relationship to the pre-existing traditional land rights.⁵³

³⁹ Contreras-Hermosilla, A. & C. Fay (2005) Strengthening forest management in Indonesia through Land Tenure Reform: Issues and Framework for Action. *Forest Trends*; White, A. & A. Martin (2002) Who owns the world's forests? *Forest Trends*; Wells, A. *et al.* (2006) Public Goods and Private Rights: the Illegal Logging Debate and the Rights of the Poor. ODI Briefing 9 ⁴⁰ Alden Wily, E. (2006a) Land rights reform and governance in Africa: How to make it work in the 21st Century? UNDP discussion paper. ⁴¹ Alden Wily, E. (2006b) The Commons and Customary Law in Modern Times: Rethinking the Orthodoxies In: *Land Rights for African Development: From Knowledge to Action*. CAPRI Policy Brief. ⁴² Vlassenroot, K. & C. Huggins (2004) Land, migration and conflict in Eastern DR Congo. In: *Report of the conference on Land Tenure and Conflict in Africa: Prevention, Mitigation and Reconstruction*. African Centre for Technology Studies (ACTS). p.19 ⁴³ Augustinus, C. & K. Deininger (2006) Innovations in Land Tenure, Reform and Administration in Africa. In: *Land Rights for African Development: From Knowledge to Action* CAPRI Policy Brief. ⁴⁴ White & Martin (2002) *op.cit.* ⁴⁵ CELCOR/ACF (2006) *Bulldozing Progress: Human rights abuses and corruption in Papua New Guinea's large scale logging industry*; Ratner, B (2004) *Environmental Rights as a Matter of Survival*. Human Rights Dialogue: Environmental Rights. Spring 2004 ⁴⁶ Mayers, J. & S. Vermeulen (2002) Power from the Trees: how good forest governance can help reduce poverty. IIED Briefing Paper. ⁴⁷ White & Martin (2002) *op.cit.* ⁴⁸ White & Martin (2002) *op.cit.* ⁴⁹ *Forests Monitor & World Rainforest Movement (1998) High Stakes: The need to control transnational logging companies: a Malaysian case study*; Peluso, N.L. & Vandergeert P. (2001) Genealogies of the Political Forest and Customary Rights in Indonesia, Malaysia, and Thailand. *The Journal of Asian Studies* 60: 761-812. ⁵⁰ *Reseau Ressources Naturelles (2007) Evaluation des Impacts Environnementales des Concessions Forestières*. DRC

This simplified picture misses the enormous complexity of land rights: throughout Africa, the layers of colonial and post-colonial legislation on land, land use and forests overlap with a vast range of traditional systems of land ownership and control.⁵⁴ These systems are slowly becoming better understood by decision makers, particularly in dryland areas, but not, as yet, in the forest regions of the continent.

Key questions and issues which have arisen in discussions of land rights and land use planning in other areas of Africa include:

- Confusions between private property, common property and open access systems.⁵⁵ Most African land rights systems include some form of common property, which sets clear rules and guidelines on land ownership and access rights for a limited group of people. This is absolutely different to an open access regime, in which everyone has access and no-one has control over that access. The confusion between common property and more complex land control regimes and an open access system is frequently used as justification for the extinction of rights in areas of biodiversity importance, particularly by conservationists.⁵⁶
- The challenge of developing systems which take into account the diversity of traditional rights and control of land and natural resources and the fact that these traditional systems have interacted with and been influenced by colonial and post-colonial formal legal land tenure regimes.⁵⁷
- The powers and functions of "customary authorities".⁵⁸ In the context of forests, this is particularly important, as frequently, hunter-gatherer societies who do not have assigned "customary leaders" end up being ignored in favour of more hierarchical neighbouring communities who do. (An interesting case study that illustrates how one government has tried to tackle the

challenge of different rights regimes within one system is that of Niger, where pastoralists and settled agriculturalists have overlapping rights. There, the "Code Rural"⁵⁹ gives priority to pastoralists concerning resource rights in their "home areas", and recognises collective user rights for pastoral resources. As such, pastoralist rights are not exclusive, but they do have priority. There are also clauses recognising the equality of customary law with statutory legislation and acknowledging the role of traditional chiefs in conflict resolution).

- The dangers of granting individual private titles to land,⁶⁰ particularly that which is traditionally managed with a type of common property regime.⁶¹
- The dangers of formal titling of customary lands, even if designed to recognise traditional ownership, which unless dealt with extremely carefully can strengthen the position of the title holder in relation to all the other people who also have a range of access and use rights to the same lands.^{62,63,64}

What information we do have on land and resource use and occupation in the Congo Basin forests has been summarised by Hoare,⁶⁵ who points out that the areas of land on which forest-based communities depend vary enormously in their extent, and that control over these is complex and varied. Systems of forest rights include hunter-gatherer resource control rights – clans have non-exclusive permission rights, these implying the need to obtain the free consent of the rights holders before using a forest area for any particular activity. They also include the tenure and use rights of agricultural communities, which may involve land for cultivation and settlements, along with hunting and collecting rights in more extensive areas of forest surrounding them. These two sets of rights and understandings

⁵¹ See table 1, p.5 in White & Martin (2002) *op.cit.* ⁵² Daley, E. & M. Hobley (2005) Land: Changing Contexts, Changing Relationships, Changing Rights. DFID Briefing Paper. ⁵³ In Cameroon, the community forestry legislation restricts community forests to 5,000 ha, an area that is too small for many forest dependent communities' needs, and the bureaucratic hurdles created are such that communities are not able to gain a community forest title without extensive external support – both financial and advisory. In an example from outside the Congo Basin, the Kenyan Forest Act of 2005 also purports to promote community ownership and management of forests, but does not do so in a way which will genuinely facilitate community access. (Kenya Land Alliance Land Update 5(2), 2006) ⁵⁴ Ellsworth, L. (2004) A Place in the World: A Review of the Global Debate on Tenure Security. Ford Foundation. ⁵⁵ Wily (2006a) *op.cit.* ⁵⁶ Chapin, M. (2004) A Challenge to Conservationists. *World Watch Magazine* 17(6) ⁵⁷ Cousins, B. & A. Claasens (2006) More than simply "socially embedded": recognising the distinctiveness of African land rights.; *Forest Trends* (2002) Strategies for strengthening community property rights over forests: Lessons and opportunities for practitioners. ⁵⁸ Cousins & Claasens (2006) *op.cit.* ⁵⁹ Palmer, R. (2004) Oxfam and land in post-conflict situations in Africa: Examples from Zimbabwe, Mozambique, South Africa, Rwanda and Angola. In: Report of the Conference on Land Tenure and Conflict in Africa: Prevention, Mitigation and Reconstruction. African Centre for Technology Studies (ACTS) ⁶⁰ Quan, J (2003) Reflections on the development policy environment for land and property rights, 1997-2003. Background Paper for International Workshop on Fundamental Rights in the Balance: New Ideas on the Rights to Land, Housing & Property. IDS, UK.

of forest use overlap one another and have, at times, complemented one another.

Important to note, but which has been left out of all the forest zoning plans currently in place in Central Africa, are the widely differing areas that different communities depend upon to maintain their lifestyles. According to the current literature, these range from as little as 0.5 – 3 hectares of cultivated land per household in some agricultural communities, to 15 – 520 km² of hunting area for agricultural communities, while hunter-gather communities may use between 120 – 4831 km² of land to meet their livelihood needs.⁶⁶

In addition, it should be noted that most land tenure legislation depends on some form of “improvement” of land – implying permanent cultivation – that does not apply in the case of shifting cultivation or of hunting and gathering. Even those communities who do practice some form of long term agriculture on the same area of land frequently also depend on a much wider area of forest to complete their livelihood needs, including hunting and the harvesting of non timber forest products. Frequently, agricultural communities also depend on exchange with hunter-gatherer communities for essential forest products, and so in effect depend on a much broader forest area than that implied by examining their own direct land use.

These nuances of land ownership and control are not borne in mind in any of the current forest legislation in the Congo Basin and are certainly not reflected in the legislation concerning logging concessions. Consequently, forest lands are allocated to a resource use which can have major impacts on forest communities without those communities’ rights having been taken into account.

Part of the problem is that the professionals involved in taking decisions are coming from an almost entirely economic, formal forestry or biological perspective.^{67,68} Many decision makers appear to view the forests as “forests vacant and without master”, as much of Cameroon's forest land was defined under the French colonial legislation of 1950. However, these forests have been home to many people for thousands of years, and still are today.⁶⁹

The most common model of land use planning in forest countries tends to be that of zoning: the geographical division of forest areas into different use and access regimes. In the most comprehensive review currently available, Hoare gives an account of forest zoning as a tool for forest management and land use planning and makes some key recommendations based on the experience of four countries.⁷⁰ Each of these countries operates some form of logging concession system, with Cameroon and Indonesia having the most extensive timber concessions – and the poorest results from their forest management.

The lessons from these cases are as follows:

- Zoning is not solely a technical exercise – it is extremely political;
- Zoning has rarely, if ever, been based on “micro-level” assessment of actual tenure and traditional rights regimes: more likely, it will have been largely based on remote sensing data, which can identify major categories of vegetation, but cannot, of course, identify tenure boundaries.
- As a consequence of this, all too often, timber interests are given priority over all other forest uses;

⁶¹ This has been noted throughout the world, not only in Africa. For example, in the case of Latin America, it has been explained that “policies favouring individual resource privatisation have resulted in high environmental and welfare costs”. Richards, M. (1997) *Tragedy of the Commons for Community-Based Forest Management in Latin America? Natural Resource Perspectives* 22. ODI;⁶² Richards (1997) *op.cit.*;⁶³ For a good example of this from Côte d'Ivoire, where a well-intentioned land reform process that was supposed to recognise customary rights ended up creating further conflicts and power imbalances, see: Van den Brink, R. et al. (2006) *Consensus, Confusion, and Controversy Selected Land Reform Issues in Sub-Saharan Africa*. World Bank Working Paper 71.
⁶⁴ A succinct account of the dangers of ascribing titles to traditional land rights is given in: Nyamu-Musembi, C. (2006) *Breathing Life into Dead Theories about Property Rights: de Soto and Land Relations in Rural Africa*. IDS Working Paper 272; Pottier, J. (2004) *Land Tenure and Land Reform in Sub-Saharan Africa: Towards a research agenda*. In: *Report of the conference on Land Tenure and Conflict in Africa: Prevention, Mitigation and Reconstruction*. African Centre for Technology Studies (ACTS); ⁶⁵ Hoare, A.L. (2007) *Integrating Local Peoples’ Land Use Strategies with Forest Management Practices in Central Africa*. Rainforest Foundation;⁶⁶ For a detailed explanation of the origins of these figures and the caveats required when comparing them, refer to: Hoare, A.L. (2006) *Divided Forests: Towards a fairer zoning of forest lands*. Rainforest Foundation.

- Zoning exercises frequently omit or underrate the needs and rights of local communities, particularly of indigenous peoples;
- Zoning is often based on inaccurate or inadequate data;
- Zoning exercises need to be part of a wider integrated land use planning process;
- Genuine participation of all stakeholders at every stage in a zoning process is critical;
- Crucial to fair and effective zoning is good forest governance and clear and unambiguous legislation.

Zoning, in the way it is currently implemented in forest concession systems, implies a division of forest use between timber production, conservation and community use, usually understood to be agriculture. However, as we have seen above, the reality of forest use and control patterns as they have developed in forest areas are far more complex and nuanced than that.

These challenges must be faced by governments of forest countries and their donors.⁷¹ Quite apart from the impacts on the forest, the communities and the economy, which have been explained in the introduction to this paper and in the rest of this report, governments and donors have legal obligations.⁷² Around the world, governments are increasingly being held to account for violations of the rights of their citizens.⁷³ In a landmark case in 2001, the Inter American Court of Human Rights declared that, in the case of a logging concession granted by the Nicaraguan government on the Mayagna peoples' lands, "the community's rights to property and judicial protection were violated by the government of Nicaragua when it granted concessions to a foreign company

without either consulting with the community or obtaining their consent."⁷⁴ This was the first case taken to the Inter American Court specifically on land rights and forestry, but it is unlikely to be the last. The African Charter on Human and Peoples' Rights also contains clauses protecting land rights of African peoples and when the African Court on Human Rights becomes operational, it too may well be finding itself dealing with legal cases concerning the violation of human rights.

Given the social, economic, environmental and legal imperatives towards taking land rights into account, there is real impetus to take a fresh approach to forest management. Future land use planning in forests must consider the multiple use value of forests and the complex systems of forest access, ownership and control rights. This will involve a painstaking process of mapping and understanding forest use and control rights of the communities that depend on the forests, which will vary from area to area, and group to group. It will also involve the facilitation of negotiation of forest use with those rights holders and other interested parties: facilitation that allows the forest users and rights holders to grant or refuse permission without being coerced into accepting what is effectively offered as a *fait accompli*.⁷⁵

The Democratic Republic of Congo could set an exciting precedent for forest countries by being the first country to take this approach and to develop a forest land use planning system that recognises the critical role of local and indigenous peoples in forest management and which puts them at its centre, rather than legislating and zoning people out of the forest and into poverty.

Recommendations

- Land use decisions that will have a major impact on resources in the Democratic

⁶⁷ For example, it is suggested that: "The parameters for allocating land are neither entirely economic nor exclusively biological. Decisions must be guided by the factors of comparative economic advantage, availability of land for other uses and the political orientation of policy makers. However, since most forest products are important in the sense that they are commodities rather than prime necessities of life (such as major food items), forestry's case for land allocation is invariably of a lower priority than agriculture. It must therefore compete as an equal partner with other potential land uses." Adeyoju, S.K. (1983) Striking a balance in land-use planning. *Unasylva* 142;⁶⁸ Louman, B. et al. (2006) Science and Forest Concessions;⁶⁹ Estimates suggest that Bantu agriculturalists have been occupying large areas of forest for 2000 years and the hunter gatherer peoples of the Congo Basin region for longer still (Vansina, J. (1990) Paths in the Rainforests: Towards a History of Political Tradition in Equatorial Africa. James Curry, London.)⁷⁰ Hoare (2006) *op.cit.*; The four countries examined are: Australia, Brazil, Cameroon and Indonesia;⁷¹ Daley & Hobley (2005) *op.cit.* ⁷² ODI (2003) Rights-based Approaches. Keysheet 18. ⁷³ Wells et al. (2006) *op.cit.* ⁷⁴ Mayagna (Sumo) Awas Tingni Community v. Nicaragua ⁷⁵ In field research in DRC in 2006, it was found that for all current logging titles in operation, there was either no community consultation whatsoever, or that what consultation was carried out was information rather than consultation: a representative of the holder of the title would arrive in one or more villages with representatives of local authorities, frequently with some of them armed, and

Republic of Congo should not be taken before there is a better understanding of land rights, both statutory and customary. This must account for the varying extent of land requirements, including those for hunting and gathering, and the multiple rights regimes that operate in forest areas.

- Any national zoning plan should not over-emphasise timber production, but must take into account the multiple use nature of forests.
- A participatory land use "micro-mapping" and planning process must be initiated, taking as a starting point the identification of forest user rights and traditional ownership and control of land.
- Support should be provided to forest communities participating in any land use planning or negotiation so that they can negotiate on an equal basis.

would tell people that a title had been granted. *Reseau Ressources Naturelles (2007) op.cit.*

1.5 THE POLITICAL ECOLOGY OF THE AFRICAN LOGGING CONCESSION SYSTEM AND THE COMPLICITY OF INTERNATIONAL DONORS

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African logging concessions are usually seen as units of forest management. However, this paper argues that they are better seen as a kind of currency in a larger system of power politics and exploitation. This paper sets out to explore these issues in more detail, starting with a brief history of the relationship between logging companies and power interests in parts of the Congo Basin.

Independence and dependency

Okoumé, found in the western forests of what was then French Equatorial Africa, started to be used for the manufacture of cigar boxes in the 1880s.⁷⁶ The timber's value in the manufacture of plywood led to wider exploitation. During the early part of the twentieth century, under French colonial rule, logging expanded inland and southwards from the coastal zone, with labour being brought from dispersed villages throughout the hinterland (and, indeed, imported from elsewhere, such as Cuba). Setting a pattern that continues today in much of the region, the allocation of "concessions" to local people often simply led to "sub-contracting" of felling rights to foreign companies.

Also setting a pattern that continues to the present day, concessions – and consequently land and power – were concentrated in the hands of a small number of "proprietors", mostly French companies. In 1939, according to Colchester,⁷⁷ 66% of the 1 million hectares under logging concession in what is now Gabon were held by just seven companies. Sixty years later, twelve (mostly foreign-owned) companies

controlled more than half of the nearly 12 million Gabonese hectares under concession. According to Colchester, logging interests played a key role when French Equatorial Africa was broken up and the new west-central African states were created:

"In Gabon, French interests played a determining role in selecting the future leadership. The long-standing alliance between the Mpogwe coastal elite, [...] the coastal Fang *evolué* led by future Prime Minister Leon Mba and French loggers formed the nexus of power. The loggers poured money into Mba's election funds for the Territorial Assembly in 1957 in order to head off the leadership bid [...] headed by the more democratically inclined Jean-Hilaire Aubaume. A key figure from the French side was logger Roland Bru who threw his support behind Mba and became a prominent advisor to Mba after independence and even secured an official post in the government."⁷⁸

The dissolution of the Gabonese National Assembly by Mba in 1964 – and the protection provided by the French military to Mba to establish a one-party state – allowed the convergence of independent state and foreign private interests to continue unabated. As is explored below, the consequences of this are still very evident in the relationship between state and the logging industry today.

Timber and power

Given this long history of inter-relationship between logging companies and power elites in some African countries, it is hardly surprising that the role of logging as a means of raising tax revenue or creating jobs is fairly marginal compared with its other, usually critical, functions within the complex of "state" and elite actors' interests that characterizes most sub-Saharan African neo-patrimonial regimes.

⁷⁶ Colchester, M. (1994) *Slave and Enclave: the Political Ecology of Equatorial Africa*. World Rainforest Movement, Penang, Malaysia. ⁷⁷ Colchester (1994) *op.cit.*

⁷⁸ Colchester (1994) *op.cit.*

Such functions of logging concessions are many and varied, and include:

- Enriching the Presidential family and his extended clan;
- Rewarding political and business cronies for services rendered;
- Financing "election" campaigns;
- Encouraging loyalty among high and middle-ranking military and police officials;
- Extending a traditional power base;
- Placating or co-opting potential political rivals or opponents;
- Playing off over-zealous business and political elites against one another;
- Supplementing the legal income of senior members of government, often including the Forestry Minister and his senior staff;
- Facilitating the trade and supply of bushmeat and ivory (National Parks and "wildlife reserves" can also fulfil this function);
- Legitimising "forest sector investments" of international donor agencies such as the World Bank;
- Camouflaging unlicensed and illegal extraction of other precious resources, such as diamonds and gold;
- Developing infrastructure and services in favoured areas, such as the President's or a Minister's home region;
- Repopulating rebellious or unstable regions with pro-regime families;
- Facilitating troop movement into border areas;
- Creating border incidents;
- Sedentarising nomadic peoples, such as Baka hunter-gatherers;
- Maintaining close relationships with political, business, military or intelligence elites and political parties and the Freemasonry lodges of ex-colonial powers;
- Promoting détente with a neighbouring power dynasty;
- "Reimbursing" regional allies for military assistance;
- Providing a means to embezzle foreign aid;
- Creating a pretext for international conservation initiatives, the funds of which can also be embezzled;
- Gaining international respectability for promoting "sustainable resource management";
- Laundering the proceeds of international crime;
- Supporting "charitable" foundations;
- Purchasing weapons.

It is beyond the scope of this short study to look at any of these in detail – though the possible examples of each are numerous and consistently depressing⁷⁹ – what follows are two case studies relating to some of the first items on the list.

The case of Cameroon

It is worth quoting at length a briefing prepared for the British government which set out in candid terms how some of the factors listed above become manifest in the way the forest sector works in one country, Cameroon:

⁷⁹ Labrousse, A. & F.-X. Verschave (2002) *Les pillards de la forêt: exploitations criminelles en Afrique*. Agone.

"The DF [Department of Forestry] has long had the reputation as a lucrative posting for civil servants due to its gate-keeper role in allocating timber concessions. A focus on commercial timber exploitation continues to dominate the concerns of DF personnel, as in MINEF [Ministry of Environment and Forestry] more generally, and issues of social forestry are a minority interest at best. At present, key senior postings in the DF... are in the hands of persons with connections to President Biya (who are usually members of the Bulu-Beti-Fang ethnic block). It is these senior civil servants, along with the influential members of Biya's ruling CPDM party presently benefiting from forestry revenues as political perquisites, who are most immediately threatened by the spirit of the 1994 Forest Law... Indeed, so important is the forest sector as a source of financial perquisites that, at times, in the recent past, the allocation of timber concessions has been (illegally) carried out at the level of the Prime Minister's office or the Presidency, without reference to the usual inter-ministerial technical committee".⁸⁰

With the benefit of hindsight, and the work of independent forest observers Global Witness, it appears that the 1994 Forest Law proved to be little obstacle to the interests of Cameroon's political elite.⁸¹ Unsurprisingly, the report's authors concluded that "In such circumstances, changes in the Government of Cameroon's approach to the forest sector will not be easy to achieve, but are clearly crucial for the sustainable management and conservation of Cameroon's forests".

Despite the known problems with the forest sector in Cameroon, international funding has continued to pour into the country; one estimate suggests that, during the 1990s, at least U.S. \$75 million in foreign assistance was given for forestry and conservation projects, excluding possibly large components

of regional programmes and non-project funding, such as sectoral adjustment credits.⁸²

One of the latter proved to be particularly contentious, and illustrative of how the role of logging concessions as currency within patron-client power relationships is not something international donors are willing to take on. In the spring of 1999, the World Bank was preparing release of the second tranche of a U.S. \$180 million structural adjustment credit to Cameroon. Among conditions for disbursement were forestry-related reforms including revised criteria for awarding permits and the hiring of an independent observer of concession auctions. Although these conditions had not been met in June 1999, the Bank nevertheless proceeded to release the credit that month.⁸³

The Bank's (privately stated) "justification" was that, because of the importance of the logging industry to the political stability of the country, the Bank would have to allow the "status quo" to prevail. As has been noted by one observer, "By wavering at a critical point in the negotiations, [the Bank] avoided provoking a possible political crisis."⁸⁴ One suggestion is that the Bank's decision not to challenge mal-administration by the Cameroonian Government was provoked by French government concerns about the likely impact on French logging interests in the country.⁸⁵ Another is that the Bank feared political instability would result in the Biya regime defaulting on its foreign debts, which at that point stood at around U.S. \$1 billion owed to the World Bank Group alone.⁸⁶ Whatever the specific reasons, it is clear that the entrenchment of political interests within the Cameroonian logging industry rendered ludicrous any hope of harnessing the sector for development. And this was before the logging career of Paul Biya's son really began to take off.

⁸⁰ Burnham, P & S. Sharpe (1997) Political, Institutional, Social and Economic Dimensions of Cameroon's Forest and Conservation Sectors, University College, May 30, London. ⁸¹ Global Witness (2005) Forest Law Enforcement in Cameroon; ^{3rd} Summary Report of the Independent Observer, July 2003-February 2005, London. ⁸² Rainforest Foundation UK / CED (2000) Cameroon's Forests and the International Community. Unpublished Briefing Paper. ⁸³ Labrousse, A. (2000) *Le silence de la forêt: réseaux, mafias et filière bois au Cameroun*, L'Harmattan. ⁸⁴ CARPE - Central African Regional Programme for the Environment (2001) The World Bank, Conditionality, and Forest Sector Reform. The Cameroon Experience. ⁸⁵ CARPE (2001) *op.cit.* ⁸⁶ World Bank (2005) Cameroon at a Glance.

Reviewing its performance over the period 1980-99, the World Bank's Operations and Evaluations Department concluded that:

"The Bank made several strategic mistakes in Cameroon. First, it relied too heavily on the executive branch of the government to deliver on the promised reforms. Second, in both agriculture and forests, the Bank neglected the creation and dissemination of knowledge and information that was crucial for policymaking and implementation...Third, the Bank rightly recognized institutional weaknesses in Cameroon, but preferred to rely heavily on technical assistance to deal with the issue... Finally, the Bank... did little to gather [local communities'] views and to design mechanisms that would ensure that those views were taken into consideration. The Bank should have made a truly participatory approach a cornerstone of the policy-based lending program.

Overall, the interventions of the Bank inside and outside the forest sector in Cameroon were relevant to its strategic objectives, but they were neither efficacious nor efficient".⁸⁷

The case of Gabon

International interventions in "forestry reform" in some countries are invariably used for political purposes by the beneficiary regime. Thus, in November 2005, a mere two weeks before the "re-election" of Omar Bongo, the world's second longest-serving dictator after Fidel Castro, the World Bank approved a loan of U.S. \$15 million "to support the Government of Gabon's efforts towards improved management of natural resources", including forests, fisheries and biodiversity. According to Laurent Debroux, Task Team Leader, "Policies and actions supported by this operation focus on transparency and accountability, on protecting the environment, strengthening law enforcement, ensuring

equitable sharing of revenues, and fostering public participation."⁸⁸

Whether or not Bank funds were directly used by the Bongo regime for "election" purposes, the Bank's support undoubtedly provided an air of legitimacy to the corrupt Gabonese regime. Earlier in the year, Gabonese civil society had called attention to the extensive logging interests controlled by President Bongo himself, his family, most senior Ministers (including the Environment Minister) and many other government officials as well as MPs.⁸⁹ It was also revealed that non-payment of forestry taxes, including by the President, his son and most of the political logging elite, was depriving the Gabonese "treasury" of FCFA 8 billion (U.S. \$12.2 million),⁹⁰ or nearly as much as the World Bank was shortly to provide as a loan in order to "ensure equitable sharing of revenues".

Institutionalising "corruption"

As is noted above in the case of Cameroon, the national forest administration was (and is) considered as a coveted location for "*fonctionnaires*", because of the lucrative opportunities it offers for graft, corruption and patronage. Because of this, it is unsurprising that most African Departments of Forestry, Ministries of Water and Forests etc, are all largely or wholly articulated around the allocation of forestry concessions, in which power is centralised and often directly subordinate to political interventions motivated by personal interest.

One important consequence of this is that, whilst well-adapted to the purposes desired by the ruling elites and patrons, the forestry institutions that have evolved to serve the African logging industry are wholly unsuited to the purposes of "sustainable forest management", or of bringing about rural development, empowerment of poor people, or protection of the environment. On the contrary, all of these constitute a serious

⁸⁷ Essama-Nssah, B. & J.J. Gockowski (2000) Cameroon: Forest Sector Development in a Difficult Political Economy. World Bank, Washington, D.C. ⁸⁸ World Bank (2005) Gabon Receives U.S. \$15 Million for Natural Resources Management. Press Release, November 15. Washington, D.C. ⁸⁹ Labrousse, A. (2005a) *Le roitelet de la forêt*. Available at: www.bdp.gabon.org/content/view/1405/71/; Greenpeace (2005) Letter to Commissioner Jose Manuel Baroso, 20th June, Brussels.

⁹⁰ Labrousse, A. (2005b) *Les mauvais payeurs de la forêt gabonaise*. Available at: www.bdp.gabon.org/content/view/1651/71/; Greenpeace (2005) *op.cit.*

impediment to the task of converting the public good of forests into private wealth and power.

One striking example of this is, again, Cameroon. A senior World Bank official admitted in the late 1990s to one of the authors of this article that, of the millions of dollars that the Bank was considering investing in the forest sector of Cameroon at the time, the best investment would be to spend a mere U.S. \$1 million in pensioning off every Forest Department official, from the lowest technician to the Minister, in order to rid the administration of corruption and to start again from scratch. As detailed above, what actually happened was quite different. Apart from the long-term damage this probably led to – in terms of continued illegal logging, political domination of the forest sector, and environmental damage – the Bank's failure to seek implementation of reforms:

"may have inflicted broader damage. According to outside observers, there are younger foresters in Cameroon who seem concerned about greater efficiency and transparency, but if they are not supported and encouraged by outside pressure, they could well be subverted by the corrupting influence of their seniors. Every time the government is allowed to get away with breaking the law, the prospects for real change diminish, and the hopes of this group of professionals fall."⁹¹

In this sense, then, it can be seen that not only has the World Bank perpetuated institutions that are structurally linked to the logging concession system – and thus to the vested interests of the political elite, rather than for the purpose of advancing rural development – but that they have also served to encourage institutional corruption.

The legacy of this continues to be felt in Cameroon. During the mid 1990s, Britain's Overseas Development Administration (ODA,

and then the Department for International Development, DFID) attempted to implement a programme to "operationalise" the provisions of Cameroon's 1994 Forest Law relating to the establishment of community forests. This required, firstly, establishing a clear set of rules for the allocation of community forests – which had never been undertaken by the Cameroonian government – and secondly to establish a unit within the Forest Department to administer the community forests.

Community forests, as defined in Cameroon's law, are of extremely limited size (maximum 5,000 hectares) and duration (15 years renewable for a further 15). Further, they can only be established in the limited areas of "non-permanent" forest, thus excluding them from areas designated as forestry concessions (*Unités forestières d'aménagement*, UFA). However, subsequent to the passing of the 1994 Forest Law, these non-permanent forest areas were becoming increasingly important to the political machinery as a means of allocating short-term, "cut-and-run" logging rights, or "*ventes de coupes*". The forest administration thus worked actively to oppose the implementation of community forests.

ODA/DFID thus found that the Forest Department consigned their community forest project team to a "very small office", and that one of the personnel assigned by the government to the project was "widely known as being extremely difficult to work with".⁹² The task of developing the specific procedures for the allocation of community forests proved to be extremely difficult, partly because of inconsistencies in the relevant laws,⁹³ but also because of the sheer difficulty in "moving documents up the hierarchy for approval".

DFID staff concluded that "in this context it became clear that certain individuals [in the Forest Department/MINEF] could be termed,

⁹¹ CARPE (2001) *op.cit.* ⁹² DFID (n.d.) Community Forestry Development Project, Briefing Memorandum. Report (October 1995 - June 1997) and Work Programme. ⁹³ Djeumo, A. (2001) The Development of Community Forests in Cameroon: Origins, Current Situation and Constraints. *Rural Development Forest Network Paper* 25b. ODI, London.

at best, indifferent to community forestry". Even this proved to be something of a generous assessment; following 5 years of work by the British government, Cameroon's Minister of Forests, at a stroke, deleted the Community Forest Unit from his Ministry's organogramme, and it was only after intense pressure from donors that it was re-instated. As a result of effective institutional resistance, by December 2001 (some 7 years after the passage of the Forest Law) only 17 areas of forest (totalling less than 85,000 hectares, equivalent in size to one logging concession, of which there are dozens) were under community management in full conformity with the new procedures.⁹⁴

Despite this awful record of obstruction, Cameroon's community forest department is the only institution within the region which has actually allocated a community-based forest management unit.

This example illustrates that the institutions that now administer the "forest sector" in parts of Africa are not only primarily articulated around industrial logging but are also directly opposed to any use of forest resources – such as community forests – that might hold developmental benefits. This is because logging remains linked to the vested interests of senior political figures, and so more development oriented forestry would potentially jeopardise the absolute discretion that those political figures have had in using forests as a means of patronage.

The role of the international community

The international community has played an important role in establishing and perpetuating the politics of "logging-patrimony" as described above. Probably the most important way in which donor countries promote oligarchic logging is by providing political, military,

economic and diplomatic support for the oligarchic regimes it is designed to serve. Usually, such support is unofficial, private or covert.⁹⁵ International financial institutions (IFI) provide additional support in three main ways:

- By providing lending devoid of forestry reform conditionality;
- By providing ineffective or misguided forestry reform and project lending; and
- By providing private sector forestry-related investments.

Each of these is considered in turn below.

The "missed opportunities" - lack of sector reform conditionalities

Recent examples of failure to use possibilities for reform include International Monetary Fund lending to Gabon and to Congo-Brazzaville in 2004.

Gabon "no-conditionality" on aid in 2004

The IMF's May 2004 U.S. \$102 million Stand-By Arrangement to Gabon contained no components designed to increase transparency in the forestry sector. Of the five Gabonese public servants whom Fund staff reported having met with in Libreville to finalize the loan – the President, the Prime Minister, the Presidents of the National Assembly and Senate, and the Finance Minister – three are known to be directly involved in the logging industry.

The Finance Minister's Memorandum of Economic and Financial Policies, of 6 May 2004, quoted approvingly by the Fund, states that "a rigorous follow-up of tax payments by concession holders and termination of noncompliant concessions" had been "implemented in 2004." As was to be shown by the review of concession tax payments in 2005 (referred to elsewhere in this paper), this was entirely inaccurate.

⁹⁴ Brown, D. *et al.* (2003) Governance Reform in the Forest Sector: A Role for Community Forestry? Paper prepared for the XII World Forestry Congress to be held in Quebec City, Canada, September 2003. ⁹⁵ The interface of African logging with parallel bureaucracies and unaccountable politics is, roughly, the subject of: Labrousse & Verschave (2002) *op.cit.*

Congo "no-conditionality" on aid in 2004

Recent IFI aid to the regime of Denis Sassou Nguesso has been characterized by the total absence of forestry conditionality.⁹⁶ In October 2002, a World Bank audit of the Congolese logging sector highlighted massive unofficial "parafiscality" payments and other transfers by concessionaires in the North of the country. The following spring, Bank-proposed forestry tax hikes were rapidly reduced after complaints from powerful multinational loggers. In a 20th March 2003 letter to the German Foreign Affairs Ministry sub-director, the director of *Congolaise industrielle des bois* (CIB) had stated that the new tax rate represented "a spoliation" and "a *de facto* expropriation." He reminded his reader that his firm's "legitimate interests [...] are also those of the Federal Republic of Germany."

Soon after the Bank's retreat on forest sector fiscal policy in 2003, the IMF put an end to years of stormy relations with the Congolese government by approving an U.S. \$84 million Poverty Reduction and Growth Facility (PRGF) arrangement. This immediately triggered debt cancellation or relief by the Paris Club and announcements of future aid by the World Bank and the African Development Bank.

In its 105 page PRGF staff report, the IMF devotes only a few lines to the logging sector, including the laconic: "The staff noted that the forestry sector held good promise for economic diversification and poverty reduction."⁹⁷ Whatever the "promise", the reality was more what could have been expected in such a notoriously corrupt regime: the IMF staff report states that "While significant progress has been made in centralizing revenues at the treasury, forestry tax revenues (which represent about 6 percent of non-oil revenues) have yet to be transferred to the treasury."

Forestry reform and project lending: the bottomless pit for donor money

Given the importance of logging concessions as the "grease in the cogs" of political patronage, graft and corruption in all Congo Basin countries,⁹⁸ it is hardly surprising that internationally funded projects to provide "technical assistance" to improve the "performance" of African forestry concessions have proved to be such spectacular failures. A few examples, of the many possible, can be used to illustrate the point.

Gabon sectoral programmes for forests and the environment (1992 - 2005)

The Bank's first sectoral *Projet Forêt et Environnement* (PFE) (1992-2002; U.S. \$22.5 million) contained a U.S. \$4.06 million "Natural forest and plantation management" component. If the "impact" of this pilot project was "slightly less important than expected," according to the Bank's December 2002 Implementation Completion Report, "nevertheless, the management plan produced by the PFE [...] was sold to a forest operator in 2000 by the forest administration, and therefore has not been produced in vain." This assessment is later restated with an intriguing caveat:

[...] 250,000 hectares of forest management plan in the south [E]stuary were developed in 1999 (the management plan produced by the PFE was sold to a private company. *However, its selling price is not officially known*) [...]. (emphasis added)

In fact, the Bank had recommended that this concession be awarded by public auction.⁹⁹ The beneficiary firm was the French-owned *Compagnie du Komo*, whose apparent links to the Gabonese presidency include a 25% share of the *Banque gabonaise et française internationale* (BGFIBANK), whose Board

⁹⁶ For this section, see: Labrousse, A. (2005c) *Le bois sacré de la CIB*. Available at: <http://www.mwinda.org/article/boissacre.doc> ⁹⁷ International Monetary Fund (2004) Country Report No. 04/232. Staff Report for the 2004 Article IV Consultation and a New Staff-Monitored Program. 12 May 2004, Washington, D.C.

⁹⁸ And elsewhere: in Côte d'Ivoire, Togo, Guinea, etc. ⁹⁹ "The amount of the transaction between the forestry administration and the enterprise was kept secret; the logging permit had not been awarded by public auction as the Bank had recommended." (CERNA (2000) *Réformer la fiscalité forestière au Gabon: Les constats de départ*. September 2000.)

Chairman is also President Bongo's assistant cabinet director.¹⁰⁰

Hardly surprisingly, improvement in terms of "transparency" of Gabon's forest sector has proved to be elusive. An April 2004 Bank memo called for the immediate halt of title awards in Gabon in the absence of public auction "so as not to render impossible the implementation of this [auction] system should it prove effective".¹⁰¹ It stated that this would extend a moratorium the Bank apparently believed was already in place since "2002-2003." In fact, some 100 titles had been awarded since 2002, including 58 since the Bank's recommendation in April 2004. On 2 August 2004, Gabonese authorities awarded the second of two permits to the Indian multinational Olam International Ltd., a raw materials conglomerate in which the World Bank had recently invested U.S. \$50 million. The Presidential decree banning new titles appeared seven days later.

Despite the consistently disappointing results of previous Bank forays into Gabon's forest sector, a second sectoral project – the *Programme sectoriel forêts et environnement* (PSFE) – was agreed in March 2005. The programme document worries that the "perception of the outside world will be that the PSFE is linked to the logging of primary forests in Central Africa, even if the PSFE doesn't finance logging [...]."¹⁰² The external world can be forgiven for misunderstanding: according to the programme document, the PSFE "is in effect a program designed to attract new private investors [...]." One of its tasks is "providing businesses with wood-market and environmental services-market tendencies in order to improve competitiveness." One of the "general indicators" of this program's success is the "number of forestry-sector private enterprises created." The AFD will be complementing the PSFE by seeking to ease access to private credit for loggers "previously barred access to existing credit lines."

Zoning and management plans in Gabon

In 2001, the International Tropical Timber Organisation undertook evaluations of two of the projects the organisation had earlier funded in Gabon. The first of these was a U.S. \$1.7 million project to develop and implement a management plan in the Bokoué forest reserve, a mosaic of already-logged forest, some of which had been converted to farmland, remnant forest, and okoumé plantations. The evaluation found that, as well as the "management plan", actually only consisting of a timber inventory (and which ignored the interests of any local stakeholders), the whole exercise was:

"hampered by the lack of operational management plans. Furthermore, a logging company has been given a long-term permit to exploit the Bokoué forest without complying with the good practices that the project sought to establish...As this permit was allocated *outside the usual channel*...it can be stated that the management plan initiated by the project has had limited impact, as it failed to enhance accountable resource procedures" (emphasis added).¹⁰³

The second of the ITTO projects cost U.S. \$1.8 million and aimed to establish a forest zoning and mapping plan for Gabon's "First Forest Zone" (the coastal region logged continuously since the 1880s). Whilst the zoning project was technically well exercised, the evaluators found that it:

"did not fully accomplish its prime aim of adoption of a land use plan... because the final decision by the relevant authority has been delayed. The institutional framework for implementing land use zoning was not well established."

¹⁰⁰ Labrousse (2005b) *op.cit.* ¹⁰¹ For this paragraph and next see: Labrousse (2005a) *op.cit.*. Translations in this section are those of the authors. ¹⁰² Government of Gabon (2005) *Ministère de l'Economie Forestière, Cabinet du Ministre, Cellule de Coordination du Programme Sectoriel Forêts, Pêches et Environnement, Programme sectoriel forêts et environnement* (PSFE). DRAFT Programme Document, Version 1 March 2005, Libreville. ¹⁰³ Gasana, J.K. (2002) *The Good and the Bad of Projects*, ITTO Tropical Forest Update 12/2.

In short, these two projects, which absorbed more than U.S. \$2.5 million in international donor funds, essentially failed to achieve their objectives because of lack of political will and interference in the legal process of concession allocation.

"Certifying" the uncertifiable

In 1995, the European Commission (EC) agreed to finance a WWF Belgium project entitled "Promotion of Sustainable Forest Management and certification in timber producing countries of west and central Africa". According to WWF, the project, which ran from January 1996 to February 1997, would:

"promote sustainable forest management in West and Central Africa through the "definition and development of forest product certification schemes". The Terms of Reference of the project cover the work required for the preparation of a framework for certification in selected countries of West and Central Africa. The methodology to be followed under the contract was to start with the implementation of the program in one pilot country (Cameroon), then to incorporate lessons learned and replicate the model in some selected countries of West and Central Africa".¹⁰⁴

However, the results of the project were not encouraging. According to the final report of the project:

"In the context of West and Central Africa, certification is and will only be one of the tools which can potentially help towards the goal of achieving SFM in the region. A lot of issues regarding certification need to be resolved, especially regarding the institutional framework... Few companies will make investments toward better forest management, if they are not forced to do so. Most importantly in this context, is the application of well-elaborated forestry regulations within the

countries themselves, coupled with sufficient controls by the Forest Services."¹⁰⁵

Despite these findings, WWF applied for, and was awarded, €2.2 million of funding from the European Commission for a second, larger phase of the project entitled "Promotion of sustainable forest management and certification in timber producing countries in the Congo Basin". The project was originally designed to run for three years from April 1998, but was extended until the end of March 2002.

The results of the second phase of the project also proved to be very disappointing. An independent evaluation of the project carried out for WWF and the EC found, perhaps unsurprisingly given the political context in which the project was operating, that the project had had "insufficient impact", "insufficient viability", that its "effectiveness" was "not noted or not measurable", and that the "efficiency" of the project was "very insufficient".¹⁰⁶ It transpired that some of the companies with whom WWF had formed "partnerships" under this project had been involved in illegal logging activities.¹⁰⁷

Despite the findings of this evaluation, the European Commission agreed a third, even larger, phase of the project, entitled "Network of partners for the sustainable management of forests in Central Africa". The project is costing European taxpayers a further €3 million.

However, after nearly 8 years and more than €5 million having been spent on this series of projects, not a single logging company has yet gained certification as a result.¹⁰⁸ As noted in the report of the original project, the problems lay squarely in the "lack of control" of the forest sector: as this chapter explains, the "control" certainly exists, but only in terms of exploiting the role of logging concessions as means of political patronage, rather than in terms of forest management.

¹⁰⁴ WWF (1997) Promotion of Sustainable Forest Management and Certification in Timber Producing Countries of West and Central Africa, Final Report, EC-Project B7-5041.95.8/VIII June 1997, Brussels. ¹⁰⁵ WWF (1997) op.cit. ¹⁰⁶ Tractebel/Seca (2003) Evaluation finale du projet, Promotion de la gestion durable des forêts et de la certification dans les pays producteurs de bois du bassin du Congo, Synthèse. ¹⁰⁷ Apele, S. (2002) Tail wags the dog, Unpublished.

¹⁰⁸ At the time of writing, the only company certified in the region is the Dutch company Wijma, in Cameroon, but this has not been involved in the WWF project.

Private sector forestry loans

Examples of whereby international funding has been used directly to support private interests in the Congo Basin forest sector include:

- The IFC's U.S. \$2.1 million investment in the Congo Basin's most notorious log transport company United Transport Cameroon (UTC) in 1994 and 1997;¹⁰⁹
- The IFC's U.S. \$807,000 investment in the Cameroonian logging company and transporter Sodetrancam in 2003;¹¹⁰
- The IFC's U.S. \$50 million investment in the Indian-owned raw materials trader and Gabonese logger Olam International in 2004;¹¹¹
- The World Bank's financing procurement of at least 100,000 railroad sleepers from Cameroonian illegal loggers in 2003;
- The World Bank's financing of U.S. \$39.6 million in public works contracts awarded to the parent company¹¹² of Congo-Kinshasa logger Safbois in 2002-05. Safbois is an American-owned firm, both of whose concessions were awarded after the May 2002 moratorium on the award or renewal of logging permits, according to the most recent official list of Congolese logging titles.¹¹³

Conclusions

The authors have presented just a few specific examples to illustrate how the function of African logging concessions as political capital tends to exceed their putative role as vectors of economic growth, much less sustainable development.

It is seriously misguided to approach the dynamics of logging as a technical forestry issue while ignoring its wider role of political legitimation.

Furthermore, where senior political figures and their crony administrations reap enormous financial and political profits from the logging industry, it is deeply cynical to pretend to promote "reform" of forestry in the absence of quite thoroughgoing political change.

¹⁰⁹ Labrousse (2000) *op.cit.* ¹¹⁰ Labrousse & Verschave (2002) *op.cit.* ¹¹¹ Labrousse (2005a) *op.cit.* ¹¹² Singly or as the member of a consortium.

¹¹³ *La Référence Plus* (2005)

CHAPTER 2: CONFLICT, POST-CONFLICT AND FOREST EXPLOITATION

This chapter looks at the links between the timber industry and conflict, drawing on experiences in Liberia and DRC. The articles by Silas Siakor and Albert Barume describe how logging has been used to finance conflict and as one of the spoils of war in both these countries. Forest law enforcement is impossible in situations where there is a breakdown of law and order, and often results in liquidation forestry. Article 1.2 highlights the need to prohibit the sale of timber from conflict areas, and for those companies engaged in such activities to be held accountable.

The third article, by Theo Gata, focuses on the role of the timber industry in engendering conflict between the various stakeholders – local communities, logging companies and the State – a result of the unjust allocation of concessions, as well as a disregard of the legal obligations for concession management. To prevent such outcomes the key recommendation is to enable the engagement of local populations in forest management.



Conflict and forest resource exploitation are inextricably linked in many situations: this Batwa community in Eastern DRC have experienced years of both and are using theatre to try to find local solutions. Photo: Cath Long

2.1 LIBERIA: FOREST MANAGEMENT IN A CONFLICT SITUATION

SILAS SIAKOR KPANAN'AYOUNG, SDI, LIBERIA

Conflicts in Africa have had disastrous impacts on forests and forest management. The Liberian experience shows how the breakdown of law and order, due to the collapse of government and weakened forest management institutions, has led to the state's inability to exercise control over forest regions. These situations make implementing and monitoring forest laws impossible.¹¹⁴

The concession¹¹⁵ system of forest management that exists in Liberia has exacerbated this situation. Under this system, the government allocates forest management responsibilities to private companies. Once concessions are issued, it is the prerogative of the company to decide when and where (within their concession) they can harvest, once their management plan, annual coupes and harvesting plans are approved by the Forestry Development Authority (FDA). The forestry law of April 2000 and subsequent concession agreements provide that a concessionaire may decide whether or not they can operate in their concession in a situation of war or conflict; otherwise they may invoke the *Force Majeure* clause in their contract.¹¹⁶ In all cases, it is the responsibility of the government to ensure that it has the monitoring and regulatory mechanisms for forest law enforcement in place, war or no war.

This system made it possible for groups such as the Maryland Logging Company (MLC), Timber Management Company (TIMCO) and other companies to continue to operate in regions outside the control of various interim governments between 1991 and 1997 during the first phase of the Liberian war. The FDA was able to continue collecting taxes and other fees from some of these companies even though they did not have access to their operation areas. During this period none of the logging companies concerned chose to declare a situation of *Force Majeure*.

Following elections in 1997, the concession system was maintained without the necessary reforms to make it responsive to present day challenges in forest management. Basic principles of good governance including broad stakeholder participation, transparency and accountability were not incorporated in forest management. This allowed for the continued massive regulatory, administrative and fiscal mismanagement in the sector by the FDA, which was uncovered by a Forest Concession Review commissioned by the government in 2004. For example, some forest areas were granted without field surveys because of insecurity in those regions, consequently leading to overlapping of concession boundaries. Overall, the FDA granted eleven million hectares of forest under concession, approximately two and a half times the total forest cover of Liberia.¹¹⁷

This level of mismanagement was possible because each concession agreement has only two parties; the government and the concessionaire. Once these parties are satisfied with the level of compliance by each other with the terms of their agreement, it is almost impossible for other stakeholders such as civil society and rural people to demand improvements of governance and management; both parties benefit from the system in which there is no transparency. The corrupt administration and the logging companies depend on each other for their own survival.

For example, President Taylor depended on logging companies for financial, human and material support to finance a patronage system and to fight insurgents. Logging companies depended on Taylor's support to flout forestry laws. Between 1999 and 2000, the Oriental Timber Company (OTC) paid over US \$7m in "taxes" to various offshore bank accounts and individuals¹¹⁸ and in return received full presidential protection; President Taylor

¹¹⁴ Conflict situations in Africa, AFLEG Thematic Working Group, June 19, 2002 ¹¹⁵ In this section a concession means a governmental permissions issued to private companies to harvest timber in designated areas under specified conditions. (Taken from the Forest Concession Review Committee reports.) ¹¹⁶ An act of God, accidents, wars, invasions, acts of public enemies, hostilities, restrictions on trade or other activities of the holder imposed by any sovereign, embargoes, blockades, revolutions riots, civil, etc. that is beyond the reasonable control of the party(s), New National Forestry Laws of Liberia (April 2000). ¹¹⁷ Forest Concession Review Committee (Liberia), May 31 2005. ¹¹⁸ OTC credit notes and invoices obtained by SDI, 2005.

referred to OTC as his “pepper bush”.¹¹⁹ This highlights the controversial dimension of the widely used definition of conflict timber: “timber that has been traded at some point in the chain of custody by armed groups, be they rebel factions or regular soldiers, or by a civilian administration, or its representatives, involved in armed conflict either to perpetuate conflict or take advantage of conflict situations for personal gains”¹²⁰ (emphasis added).

However, this situation had additional impacts. Ironically, conflict prevented widespread deforestation, especially compared to regional neighbours. But now that the conflict has ended, the vacuum left by the lack of enforcement of forest regulations risks allowing unrestrained destruction of Liberia’s forests and its resources.

Despite the constitutional guarantee of local people’s participation in the decision-making process about forests, central government provided no political arena for civil society in the designation, design or allocation of concessions contracts, thus allowing President Taylor’s excessive discretionary authority over forests. This had dire consequences for forest governance and management as illegal logging and other illegal forest activities flourished. These include the bushmeat trade that went unreported because forest officers had little or no access to remote areas and local people had no incentive or means to report them.

Since the 2003 UN-brokered peace and the end of Taylor’s regime, the international community, at the request of civil society, demanded that the interim government review all forest concessions. The review assessed which concessionaires met the minimum legal standard to operate, i.e. business licence, articles of incorporation, contract, and performance bond. Of the forty-seven concessionaires that submitted documents, not one could meet this minimum standard.

Therefore, the committee recommended that every concession be cancelled. This does not even consider the widespread tax evasion and violations of laws, regulations, and human rights abuse, including the massacre of civilians by the militias of some logging companies. The committee further recommended reform of the FDA and forest management regulations before any new concessions are awarded.

These reforms provide a window for the Liberian people including the government, civil society, the private sector and local people to radically overhaul the system. The international financial and technical support being channelled through the Liberian Forest Initiative, if well coordinated, could promote reforms that are robust and operate with maximum efficiency and benefit to the various stakeholders.

This will however, only be possible if the institutional, legal and management arrangements adopted are in compliance with the basic principles of good governance and provide for adequate stakeholder participation in forest related decision-making and management; even if the concession system is maintained. The laws should be appropriate and just, including legal requirements for regular, verifiable reporting and audit by both private sector and forestry agencies, as well as participatory arrangements so that civil society and local populations are truly involved, both at the decision-making and management levels.

Conclusions

Forest law enforcement in armed conflicts becomes virtually impossible, especially in cases where there is a breakdown of the rule of law or the state loses control of forest regions to armed non-state actors. This should be acknowledged in the new forestry laws and

¹¹⁹ SAMFU (2002) Pepperbush: A Liberian parlance for a treasured possession. ¹²⁰ Global Witness (2002) The Logs of War. The Timber Trade and Armed Conflict.

provisions incorporated to safeguard against forest exploitation in conflict situations but this has not been done. As the Liberian experience demonstrates, the application of basic policy principles such as transparency and local peoples' participation in forest management give way to liquidation forestry under the pretext of addressing security issues. This is particularly important because the political and business elites often seek to take advantage of the conflict for personal gain.

In Liberia, rural populations in forest communities and civil society are the two national stakeholder groups that have demonstrated a strong commitment to promoting sustainable forest management. This is understandable as rural people need the forest for their long-term survival and development and Liberian civil society has treated the myriad of problems in the forest sector as issues of environmental and social justice as well as challenges to good governance and the rule of law.

Recommendations

To address the problem of forest management in armed conflicts, we recommend:

1. The concession system be reformed to adapt the basic principles of good governance, for example to provide for third party, including civil society and rural populations, involvement in the governance and management of forests. This should include but not be limited to clearly defined roles in: land use planning; the concession definition and allocation processes; development of management plans by concessionaires and their approval - or not - by civil society; independent monitoring of timber extraction and law enforcement, adjudicatory processes and benefit sharing arrangements.
2. The development of an appropriate forest management system that would be responsive to the challenges of managing forests in a conflict situation. For example, this should incorporate a provision that allows for third party stakeholders such as civil society or third party monitors to declare *Force Majeure* in the event that it can no longer perform its oversight or monitoring responsibilities effectively. This will guarantee that logging in areas made inaccessible due to armed conflict can be shut down by a third party independent monitor once they can show that it is no longer able to operate in such areas.
3. Establishing an internationally agreed standard for what constitutes a loss of state control over forest regions, a breakdown of the rule of law, or when the timber trade is considered to be fuelling conflicts. Also, defining in a fully consultative manner what constitutes conflict timber.
4. Once achieved, timber identified as "conflict timber" should be automatically banned from entering regional and international markets.
5. An international framework for enforcement, such as trade bans, must be negotiated amongst states, with the involvement of civil society, to compel compliance.

2.2 FOREST EXPLOITATION AND ARMED CONFLICT IN CENTRAL AFRICA: THE CASE OF THE EASTERN DEMOCRATIC REPUBLIC OF CONGO

ALBERT K. BARUME, INDEPENDENT LAWYER, DRC

Timber extraction has played a decisive role in the armed conflict which has led to the deaths of more than 3 million civilians in the Democratic Republic of Congo (DRC) since 1998. Just as with diamonds, gold, coltan, cassiterite and various other natural resources, the forests have not only served as sources of revenue for the armed factions but also as the spoils of war for foreign armies, which have done battle on Congolese soil for more than six years.



Hiding behind the various rebel factions, logging companies have extracted thousands of cubic metres of timber, some of which has been exported to various countries, in particular China and the USA. Ugandan, Rwandan and Burundian players have all been active in this operation. In return for the military protection provided by the armed groups, the logging companies provided money and various services, in particular the transportation of troops and arms.

The individual case of DARA-Forest, a Ugandan-Thai company, is just one of many cases illustrating the joint criminal actions and complicity which have existed between logging

companies and various Congolese armed factions. DARA-Forest is a subsidiary of DARA Great Lakes Industries (DGLI), as is also the Ugandan logging company Nyota Wood Industries.¹²¹ DARA-Forest moved into eastern DRC in 1998, although it was not until 2000 that it received its own forest concession of 100,000 hectares from the *Rassemblement Congolais pour la Démocratie-Mouvement de Libération* (or RCD ML).¹²² It is important to note that it was with the death of the former President Désiré Laurent Kabila that the second phase of DRC's war began in 1998. Before it obtained its concession, DARA-Forest's main activity was the purchase of lumber from local operators.

DARA-Forest was based in Mangina in the Beni Territory of the North Kivu Province, where it owns an industrial sawmill. Its operations covered several other areas including Djugu, Mambassa, and Komanda. Its annual exports were valued at more than 45,000 cubic metres of timber.

With just a telephone call from a RCD-ML or Ugandan military commander, DARA-Forest's lorries could cross Congolese customs posts without paying a penny. At other times, when it was impossible for the company to get a senior military official to intervene, the vehicles carrying the timber were escorted by military personnel from either the Ugandan army or the RCD-ML, as necessary. The DRC's tax legislation and customs regulations were not the only areas for which DARA-Forest had little regard.

The Report of the United Nations' Panel of Experts on the exploitation of natural resources of the DRC confirms that most of the timber logged fraudulently was exported via the Kenyan port of Mombassa.¹²²

DARA-Forest has therefore acted in complete

¹²¹ Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo. (S/2001/357) Available at: <http://daccessdds.un.org/doc/UNDOC/GEN/N01/323/54/IMG/N0132354.pdf?OpenElement> ¹²² Ibid.

disregard to the standards relating to social and environmental rights. Worse still, it has actively supported the RCD-ML both financially and logistically. The consequence of this has been for it to attract the enmity of armed factions opposed to the rebel movement protecting it, resulting in fighting and an escalation of rivalry between various militants.

For example, on 15 May 2001 twenty or so DARA-Forest employees – including Thai, Kenyan and Swedish citizens – were kidnapped by elements of the Mai-Mai militia group,¹²³ who demanded that both DARA-Forest and Ugandan troops leave the country in exchange for freeing the hostages.¹²⁴

It is crucial to note that the acts of cannibalism, assumed to have been committed by soldiers of the *Mouvement de Liberation du Congo* (MLC) and the *Rassemblement Congolais pour la Démocratie-National* (RCD-N) in Mambassa and surrounding areas, took place at around the same time as DARA-Forest was engaged in logging operations in this part of the Beni territory. A report by the international Human Rights Watch organisation confirmed that “in the last three months of 2002, MLC and RCD-N troops raped, killed and cannibalised Pygmies, hunters and gatherers who live in the forest. They sought thus to terrorize the Pygmies into helping them as guides through the dense forest so that they could avoid travel on the main roads where they would be subject to attack. Some of the combatants who engaged in this practice may have hoped to acquire strength from their victims.”¹²⁵

This increasingly disturbing link between serious international crimes and the exploitation of natural resources was, in July 2003, underlined by the Chief Prosecutor of the International Criminal Court in relation to the crimes committed in eastern DRC, and more accurately in Ituri. The court’s Chief

Prosecutor, Moreno Ocampo affirmed that “...companies doing business and financing crimes must now know we will follow them”.¹²⁶

Is one justified in drawing a link between DARA-Forest’s logging activities and these atrocities? In supplying the means and providing assistance to armed groups and forces which committed war crimes, crimes against humanity and other atrocities, how is it possible that DARA-Forest did not have any knowledge of the criminal use to which were put the means and assistance it provided?

This question is highly relevant legally. Assuming possession of at least a passive knowledge of the serious violations committed by Burmese soldiers in Myanmar, a Californian District judge in the USA was led to find that the multinational gas and petroleum operator, UNOCAL, for whom the Burmese military forces were providing security, was accountable for civil liabilities.¹²⁷ Similar principles were used to force certain German commercial and industrial companies to make compensation payments for having received free labour under Hitler’s Nazi regime.¹²⁸

More recently in December 2005, the International Court of Justice accepted a direct link between the armed conflict which was rampant in eastern DRC, and the exploitation of this country’s natural resources by a neighbouring country, the Republic of Uganda. The Court affirmed that “...by acts of looting, plundering and exploitation of Congolese natural resources committed by members of the Ugandan armed forces in the territory of the Democratic Republic of the Congo and by its failure to comply with its obligations as an occupying Power in Ituri district to prevent acts of looting, plundering and exploitation of Congolese natural resources, [the Republic of Uganda] violated obligations owed to the Democratic Republic of the Congo under international law”.¹²⁹

¹²³ The Mai-Mai group was one of the armed factions in the DRC conflict. ¹²⁴ Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo (S/2001/357). *Op.cit.* ¹²⁵ Human Rights Watch (2003) Ituri: Covered in blood. Report Vol. 15, No. 11(A), July 2003. ¹²⁶ Simons, M. (2003) Court likely to take up Congo first. *New York Times*, 17 July 2003. ¹²⁷ *J. Doe et al. v. Unocal et al.* (2000) U.S. Dist. LEXIS 13327, No. CV 96-6959 RSWL (BQRx) ¹²⁸ S. Jonathan Wiesen, *West German Industry and the Challenge of the Nazi Past, 1945-1955*, UNC Press. ¹²⁹ International Court of Justice, Press Release (2006/26). 19 December 2005

Conclusions

Allegedly set up to bolster the States' treasury finances, the forest concessions system introduced in the Congo Basin in general and in the DRC in particular, legitimises the annual export of millions of cubic metres of timber to the rest of the world. Depressingly, a proportion of this volume has been produced through the commitment of serious violations of human rights, war crimes and crimes against humanity.

In addition to the link which exists between logging and international crimes, it is regrettable that the current system of forest concessions has never been capable of curbing the poverty which virtually all the forest reforms undertaken in the Congo Basin were allegedly intended to address. In fact, in several countries in this part of Africa where the drafting of new forest laws have been justified on the grounds of a willingness to fight poverty, the majority of the population live either below the poverty line or in extreme poverty, as the most recent statistics released by the UNDP show.¹³⁰

The fact that the human rights dimension has never been included within the legal arrangements of the Congo Basin's current system of forest concessions is one of the major reasons behind this system's present inability to bring about development, social justice and well-being for all. Yet the belief persists that logging is legal so long as it is carried out in accordance with forest laws. This partial perception of the legality does not take into account the frequently ratified Conventions and Treaties including those concerning human rights, which automatically form part of the domestic rights of the majority of the Congo Basin countries. In other words, the law of one country is a coherent corpus made up of both domestic rules and regulations and those issued by international bodies through

periodically ratified international treaties and conventions.

For all these reasons and in view of the fact that certain logging companies are supporting the armed conflicts which rage throughout these regions, it is recommended that:

- The concession system for the logging of Congolese forests is reviewed with a view to incorporating safeguards to prevent organised crime and to protect the rights of local communities;
- The timber from conflict areas is declared illegal and unfit for export in any form; but more than this, any form of international trade in this timber needs to be prohibited and made illegal;
- A process similar to the Kimberley Process is put in place for the forest sector;
- Logging companies which have participated in war crimes, crimes against humanity and other atrocities are excluded from any future allocation of forest licences.

¹³⁰ http://hdr.undp.org/statistics/data/hdi_rank_map.cfm

2.3 CONFLICTS ASSOCIATED WITH INDUSTRIAL LOGGING IN KONGO CENTRAL PROVINCE, DRC

THÉO GATA, CENADEP, DRC

There is an estimated 135 million hectares of forests in the Democratic Republic of Congo (DRC) – approximately 50% of all of Africa’s rainforests and about 10% of the World’s tropical rainforests.¹³¹ They are teeming with biological diversity. However, without a strict management framework in place, the country – and more especially the Congolese people – is unable to gain any real benefits from the forests, despite the reforms initiated under the Forestry Law of August 2002.¹³²

Kongo Central¹³³ is a province located in the south-west of DRC, providing the country with access to the Atlantic Ocean. Logging in this province is restricted to the Bas-Fleuve district which contains the Mayumbe forest ecosystem. This ecosystem is unique to DRC and very important in terms of the region’s climate and its rich biological diversity.¹³⁴

The Mayumbe forest is, however, being over-exploited and is in a state of advanced degradation. The main reasons are the increased pressure from local communities looking to improve their livelihoods, together with an ever-growing number of industrial logging companies in the area.

Industrial logging in Kongo Central

The industrial logging operations in Kongo Central and more especially in the Bas-Fleuve district, date back to the days of colonialism. This fact explains the over-exploitation of the Mayumbe forest. Near to the coast and rich in commercially valuable species, this area is a favourite with DRC’s timber companies for logging operations.

Several companies have logged and/or continue to log the timber in this region. Currently there are sixteen logging companies, namely Agrifor, APC/Tembo, Exforma, Forabola, Mbanda, Safeco, Socofor, Soforma, PSL, CFT, SCAM,

Sodafmir, Socema, SCAEL, Extrabois and Agriumbe. Of these, the first eight are still in business while the last eight are bankrupt.¹³⁵ The forest concessions allocated by the State to these sixteen companies provide a guaranteed volume covering a total area of 960,025 hectares.

According to Swedi,¹³⁶ the many uses of, and riches contained in, the forest have always meant it was much coveted by many types of stakeholder. These include the decision-makers and managers (forestry authorities, local political and military authorities), logging companies, craftsmen and the people who live in and around the forest. From such a multitude of players springs forth a diverse range of perceptions and interests which inevitably give rise to various conflicts.

Types of conflict associated with logging in Kongo Central

The sustainable management of forests in the DRC, especially those in the Kongo Central, is related to: national zoning; the development of the national forest territory; the recognition of customs, traditions and practices of the forest communities; and especially to the settlement of conflicts over land use and ownership.

In the Kongo Central province, a region subject to significant land development pressures, forest resource management is based on traditional rights. The report by Yamba Yamba¹³⁷ exposes the impacts of forest concessions on the economy, and the conflicts that have arisen concerning land use and ownership. For example, invoking traditional rights is said to have heightened forest resource logging conflicts in concessions that have not been logged because the concession holders went bankrupt.

¹³¹ FAO (2002) <http://www.fao.org/forestry/site/23747/en/cod/page.jsp> ¹³² Law n° 011/2002 dated 29 August 2002 concerning the Forestry Code, In: *Journal Officiel de la République Démocratique du Congo* 43rd year, Cabinet of the President of the Republic, Kinshasa, 31 August 2002. ¹³³ Formerly Bas-Congo, this province was renamed Kongo Central in February 2006, when the Congolese Constitution of 2005 came into effect. ¹³⁴ Gata, D. (2001) *Participation de la population locale à la gestion des ressources naturelles dans la Réserve de biosphère de Luki (RDC) : Contraintes et perspectives pour un développement durable. Cas de l’enclave de Tsumba Kituti*. DESS unedited paper, ERAIFT. ¹³⁵ DGF (2003) Annual Report. MECNEF, Kinshasa. ¹³⁶ Swedi, E. (1998) *Gestion durable et participative des ressources forestières de la République Démocratique du Congo*. In: *Le Bassin du Congo, Ressources humaines et naturelles*. IUCN, May 1998, pp 177-186. ¹³⁷ Yamba Yamba, S.N. (2003) *Les pratiques des populations riveraines par rapport aux innovations du Code Forestier congolais et normes d’applications*. In: *Rapport de l’atelier sur le processus de mise en œuvre du code forestier congolais et normes d’application*. Groupe de Travail Forêts, November 2003. Pp. 126-158

The way the guaranteed volumes for the logging companies in the Bas-Fleuve district have been allocated does not allow sufficient land for the activities of rural populations. As such, most of the conflicts relate to land use and ownership and arise from the need of these populations to do whatever they have to do simply to survive. A survey carried out in 2003 showed five types of conflicts were present in the Bas Fleuve district:

- Conflicts between rural communities or intra-community conflicts;
- Conflicts between logging companies;
- Conflicts between the logging companies and the rural communities;
- Conflicts between the rural communities and the State;
- Conflicts between the logging companies and individual concession holders.

The various stakeholders have put forward many reasons for these.

Regarding intra-community conflicts, these include:

- The traditional management of forest resources in the area which excludes incomers who do not belong to the region or its tribes;
- The dissatisfaction of certain tribe members with the distribution of revenues paid by the developers (logging companies and craftsmen).

With respect to the conflicts between the logging companies, these are often related to:

- The concession boundaries not being clearly marked, resulting in a reduction in guaranteed volumes.

In 2002, as part of the war effort, the Mbanda company was authorised to fell timber in Sumbi. The guaranteed volume granted to CFT by the technical services of the Ministry for the Environment and the Protection of Nature, Water and Forests (SPIAF), included the area being logged by Mbanda. CFT was therefore compelled to seize and sell all the timber felled by Mbanda. This affair went to Court and in 2005, CFT was ordered to refund Mbanda as SPIAF admitted its error in the allocation of guaranteed volume.

As part of the war effort, the government's requisitioning of logs arriving at the ports of Matadi and Boma also generated a large number of conflicts between logging companies. Such was the case between Soforma, owner of the requisitioned logs, and Mbanda, a logging company used by the government to sell these logs.

- The violation by pit sawyers of the guaranteed volumes granted to the industrial logging companies holding concessions.

For example, in 2004 Roger, a pit sawyer, cut up logs in Kinzambi and Kota (in the Seke Banza territory), which made up the guaranteed volumes of parliamentarian Mbenza Tubi's company, Exforma. Exforma then confiscated the timber cut by Roger. Following a hearing by the public prosecutor's department, Exforma won the case.

The conflicts between the logging companies and rural communities cover several categories:

- Non-payment for the damage caused to crops in the fields of farmers during logging operations, and the lack of revenue for the local communities from logging their clan forests.

In Tshela, in 2005 a conflict arose between a local community and Senior Judge Gabi, President of the Tribunal de Grand Instance – or District Court – of Tshela and the owner of a woodcutting firm. Following an agreement with the legal titleholder of a forest, Judge Gabi felled the trees on the land in question, but without the knowledge of the traditional authorities of the village. The village elders formally complained to the urban co-ordinator of the Ministry for the Environment and the case is currently being heard by the public prosecutor’s office in Matadi.

- Clearing of forest concessions following agricultural activities (slash & burn farming) and the production of wood charcoal by communities;
- The lack of funding by logging operators for alternative projects aimed at local community development;
- The felling of valuable forest species and the sawing of wood in operators’ concessions;
- Customary heirs to concessions who challenge the agreements signed by their deceased parents;
- Non-observance by the logging companies of the specifications favouring local communities or non-compliance with forest legislation.

With regard to conflicts between rural communities and the State:

- The non-involvement of communities in forest management;
- The exploitation of public sector agents by logging companies, and laxity in the application of forestry law and its application measures;

- Lack of respect for customary usage rights, since the existing forestry legislation in the DRC is based on the supremacy of the State in the management of the forests.

With respect to the conflicts between operators and individual concession holders, these are mainly due to the mutual or reciprocal encroachment of concessions during felling operations, linked to the poor demarcation of concession boundaries. In the Bas-Fleuve district, concessions held by private individuals holding long lease certificates cover a total surface area of 63,763.05 hectares.

In 2003, Mr Koyi Tafiki felled trees in his private concession located in a rich corridor of valuable forest species. The company Forabola obtained a guaranteed volume in Kinshasa that covered a part of Nkoy’s private concession and thus helped itself to the timber felled by the latter. Following legal proceedings at the *Tribunal de Paix* Court at Lukula and following technical advice from the Environmental Committee of the District of Tshela, Mr Nkoy won the case. Unhappy with the judgement handed down, Forabola appealed to Boma’s Tribunal de Grande Instance (or District Court) where it lost its appeal.

As regards the conflict settlement mechanisms available to these various users of the Kongo Central province forests, the people and the operators have recourse to:

- Customary regulations (reconciliation);
- Local courts (public prosecutor’s office, tribunals);
- The forestry authorities.

Recommendations

In view of the specificity of the Kongo Central province and the diversity of conflicting situations, the resolution of timber logging conflicts should first and foremost attempt to meet the essential needs of its growing population.

Given that currently almost all the Bas-Fleuve forest land has been allocated as guaranteed volume to the logging companies, and on the basis of Article 155 of the Forestry Code pertaining to the conversion of these guaranteed volumes into forestry concession contracts, we recommend:

To the Congolese Government:

- To take account of the interests of the rural populations through the effective decentralisation of the legal and financial management of the forest;
- To adopt clear laws which guarantee rural populations the ability to exercise their usage rights in areas affected by the industrial logging of the forests;
- To reduce the area of forest concessions already allocated to industrial logging operators in order to free up sufficient forest to allow local communities the possibility of claiming their community forests in accordance with Articles 22 and 44 of the new Forestry Law;
- To improve the working conditions of forest authority technicians to reduce their vulnerability when confronting industrial logging operators.¹³⁸

To the donors (World Bank and FAO):

- To assist the Congolese government in accelerating the community forestry reform process (Article 22 of the Forestry Code);

- To promote and fund projects other than those pertaining to the industrial logging of the forests.

Conclusion

Currently, almost all of the forest-covered lands in the Bas-Fleuve district provide guaranteed volumes to logging companies, regardless of whether they are trading or bankrupt. To meet their basic needs for land, wood and other forest products, the local population is required to operate within the confines of the remaining forest corridors, which usually suffer from low soil fertility combined with a limited number of tree and animal species.

We believe that there is a pressing need to reduce the surface area of the existing concessions through the conversion of these guarantees into forest concessions (Article 155 of the Forestry Code). This will then allow enough space to be freed up for community forests in accordance with Articles 22 and 44 of the new Forestry Law.¹³⁹ For this reason we believe that the provisions of Decree n° 5/116¹⁴⁰ should be strictly applied.

The traditional land management system, which forms the basis for the existence of the landless peoples in this part of the country, does not guarantee all farmers enjoyment of the lands and the forests. A community forest domain should therefore be created and placed under the responsibility of local civil society and/or customary institutions with regard to regulation of usage rights and forest products exploitation.

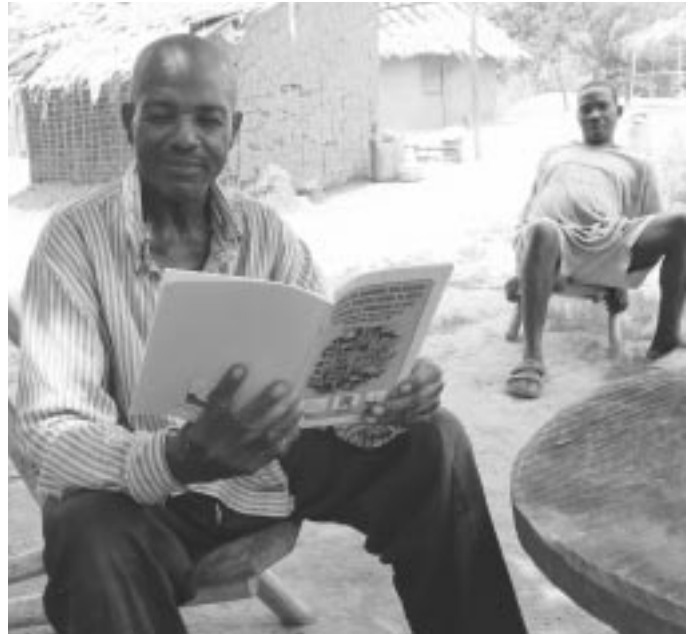
The sustainability of the Kongo Central's Mayumbe forest – which is highly important for the region's climate¹⁴¹ – is dependent on the suspension of the allocation of timber permits to logging companies, in order to rebuild this unique forest ecosystem. It is also dependent on the strict regulation of logging and support for alternatives to this type of use.

¹³⁸ Bakulu, M.J. (2004) *Rapport de l'atelier sur le code forestier et sa mise en ?uvre tenu à Matadi du 10 au 14 mai 2004, Bas-Congo Province*. CEPECO – CENADEP (Development NGOs). Pp. 20-21 ¹³⁹ Bakulu (2004) *op.cit.* ¹⁴⁰ Decree n° 05/116, dated 24 October 2005, setting out the terms for converting old forestry titles into forest concession contracts and extending the moratorium for the granting of logging titles. ¹⁴¹ Gata (2001) *op.cit.* pp. 9-10 & 58-69.

CHAPTER 3: EVALUATION OF THE POLITICAL IMPACT OF INDUSTRIAL LOGGING CONCESSIONS

In Chapter 3, the detrimental effects of industrial logging in Cambodia, Cameroon and DRC are described. In these countries, the concessions system has contributed to environmental degradation, social injustice and corruption. This is in spite of a process of forest reform in Cameroon, described in Article 3.2, and the involvement of international donors in Cambodia, as Eva Galabru describes in Article 3.1. This does not bode well for DRC, as Adolphine Byayyuwa describes. Here, industrial logging activities are seen as a key element of the country's development strategy. However, in view of the rampant corruption, disregard for law and illegal logging, it is doubtful as to whether it can do so.

These authors recommend much greater scrutiny of the industry, with better monitoring of forest operations and the imposition of tough sanctions for miscreants. Furthermore, improving access to the legal system by civil society should be a priority, for example, through the provision of better information on the legal framework and the rights and obligations of all parties.



Access to basic information for forest communities is an essential element of good governance. Photo: Cath Long

3.1 CAMBODIA CASE STUDY: CONFLICTS RESULTING FROM LOGGING CONCESSIONS

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In 1972 Cambodia's forest cover was estimated at 73% of its land surface.¹⁴² The civil war (1970-1998) largely hindered access to many of the valuable forest areas. A number of events either forced or enabled the ruling party, the Cambodian People's Party (CPP), to seek other sources of financing, namely: the end of the cold war and the subsequent loss of financing from the USSR; the withdrawal of the Vietnamese occupation army; and the lifting of the economic embargo as well as the UN-brokered Peace Agreements. At the same time, the three other protagonists in Cambodia's civil war also lost their cold war-motivated financing and resorted to seeking alternative funding sources to pursue the armed conflict and prepare for the UN-organised elections. All warring factions allocated areas under their control to fly-by-night loggers who hauled timber across the border to Thailand or Vietnam, marking the beginning of large-scale forest destruction in Cambodia.¹⁴³

The 1993 elections brought a tense truce in the form of a coalition government between three of the main warring factions, while the fourth, the Khmer Rouge, opted for continued hostilities. The three coalition factions retained control over their traditional areas of influence and awarded large tracts of forests to foreign investors. Lines were drawn on maps and no efforts were made to investigate the suitability of the concession allocations from environmental or social perspectives.

Cambodian government officials, at the time, either lacked the funds or were unwilling to invest in developing infrastructure and industrial processing capacity. Therefore, they relied on foreign capital and know-how, while establishing their relatives and business associates – often the military – as these

investors' landlords, subcontractors and business partners. As many as 40 such concessions, covering 7 million hectares are thought to have been allocated, though circumstantial evidence suggests much higher numbers.¹⁴⁴ The timber processing capacity established far exceeded what the forests could sustainably yield.

The Khmer Rouge, controlling most of the Western border areas allowed companies, mainly Thai, to log in their controlled territories, including in gazetted protected areas.¹⁴⁵

By early 1997, as relations in the coalition government soured and the Khmer Rouge showed signs of collapse as a political entity, the coalition partners started re-arming and seeking to form alliances with defecting Khmer Rouge in order to gain military superiority. The ensuing conflict culminated in a coup d'état; the CPP ousted the other factions, executed their leaders or forced them into exile while taking over their economic assets, including the logging concessions and factories. Many business people quickly aligned themselves with the CPP,¹⁴⁶ in some cases financing the coup and bankrolling the "caretaker government".

The "caretaker" period lasted from July 1997 until December 1998. During that time, shunned by the international community and cash-strapped, the CPP awarded another 2 million hectares of concessions to logging companies in reward for their contributions towards the CPP military efforts and later its election campaign.¹⁴⁷ By 1997, Cambodia's forest cover was estimated to be 58%.¹⁴⁸

In parallel, despite the blatant abuse of Cambodia's "most developmentally significant natural resource",¹⁴⁹ the World Bank and other donors continued to push for reform in the forestry sector in order to increase state revenue, foreign investment and job generation by advocating for the continuation of the

¹⁴² Service des Eaux, Forêts et Chasse (1972) *Les forêts de la république khmère*. ¹⁴³ Hibou, B. (2005) *Cambodge: quel modèle concessionnaire? Fonds d'analyse des sociétés politiques*. ¹⁴⁴ NGO Forum on Cambodia (2005) An Annotated List of Materials Relating to the World Bank Inspection Panel Investigation of the Forest Concession Management Control Pilot Project Implemented over the Period 2000 – 2005. ¹⁴⁵ Gazettement of an area by the relevant government department provides legal recognition and status, making associated laws applicable ¹⁴⁶ Scroggins, H. (1997) One million to stop looting – Boonma, Phnom Penh Post, August 29 – September 11, 1997, Vol. 6 (17). ¹⁴⁷ Chea Sotheacheath and Reuters (1997) Teng Boonma enters the logging business, Phnom Penh Post, October 10 – 23, 1997, Vol. 6(20). ¹⁴⁸ Cited by Le Billion, P. (2002) Logging in Muddy Waters. The Politics of Forest Exploitation in Cambodia. *Critical Asian Studies* 34(4). ¹⁴⁹ World Bank, UNDP, FAO, (1996) Forest Policy Assessment, Cambodia.

concession system.¹⁵⁰ Forestry reform was considered a technical issue, with the need to build capacity and establish control and regulatory frameworks. Although the corruption, cronyism and grand theft the concessionaires were engaged in was an open secret, development agencies did not seek to address the underlying causes of forest mismanagement on the grounds that they did not meddle in politics of a sovereign state. Instead, technical assistance, consultancies and working papers produced reams of superficial assessments and lists of recommendations and incentives to bring about the sustainable management of Cambodia's forests.¹⁵¹

A 1999 Asian Development Bank-sponsored study described the concession system as a "total system failure", citing illegal logging, unsustainable yields and practices and little or no concern for the welfare and user rights of local people.¹⁵² Rather than question the suitability of the concessionaires as forest managers, given their past records of illegal logging, tax evasion and human rights abuses, the Royal Government of Cambodia (RGC), with financing and technical assistance from the World Bank, established a restructuring program of the concession system. This entailed introducing checklist requirements for sustainable forest management plans, tree inventories and requiring companies to follow the legal requirements to produce environmental and social impact assessments.¹⁵³ However, the lack of defined and imposed standards combined with a clear lack of commitment on almost all sides rendered this largely a paper exercise resulting in the failure of the forestry reform process.¹⁵⁴

The international donor community, although providing about half of Cambodia's national budget,¹⁵⁵ was unwilling or unable to monitor and enforce reform conditionality in the forestry sector. In particular, the RGC became adept at appearing to comply with the undefined and

meaningless demands of donors, while introducing legal loopholes and contorted new definitions. Thus, although Cambodia has not awarded new timber concessions, it boasts stump and branch harvesting concessions, including one that is authorized to fell "nearly dead" trees.¹⁵⁶

Simultaneously, the political elite has gained confidence in its ability to operate logging operations and factories, and now has access to export markets; foreign investors, who take a cut of the profits, are no longer needed. Conveniently, donors' conditions provide the excuse to stall their operations and gradually push them out of business.¹⁵⁷

The failure of the concessionaires to reform, implications in organised forest crime and political pressure resulted in a moratorium on all timber concessions imposed by the RGC in 2002. While some local operators manage to exploit legal loopholes, the logging moratorium remains the single most important step towards reform of the sector. It generated space for debates about alternative forms of forest management and, for the first time, empowered forest-dependent communities to reclaim user rights over some high-value forest areas. The moratorium also broke the grip of logging operators and military sub-contractors over large areas of rural Cambodia, who until then had controlled access and had a strong influence over the local authorities.

Today, with the moratorium still in place, six timber concessionaires remain in Cambodia. Many have dropped out for lack of trees to cut, while others, citing alarming growing corruption have "cut their losses" and turned to what they consider easier targets: the Amazon and Congo basins.¹⁵⁸

Cambodia's political elite has also moved on. Arguing severe degradation, forests are now being sold off as economic land concessions and converted for agro-industrial purposes or

¹⁵⁰ World Bank (2000) Cambodia Forest Concession Management and Control Pilot Project, Project Appraisal Document.¹⁵¹ World Bank (2005) Bank Management Response to Request for Inspection Panel Review of the Cambodia Forest Concession Management and Control Pilot Project.¹⁵² Fraser Thomas, GFA-AGRAR, ANZDEC, ADB (2000) Cambodian Forest Concession Review Report.¹⁵³ World Bank (2000) Cambodia Forest Concession Management and Control Pilot Project, Project Appraisal Document, 2000. Project Implementation Document.¹⁵⁴ World Bank (2004) Independent Forestry Sector Review. World Bank Comments and Proposals Going Forward, Cambodia.¹⁵⁵ USAID (2004) Cambodian Corruption Assessment.¹⁵⁶ Global Witness (2003) Illegal Logging, Transportation and Log Collection in North-East Lumber Stump Collection Concession, Romtom Commune, Rovieng District, Preah Vihear Province.¹⁵⁷ Interviews with Forest Administration Officials, conducted 2004.¹⁵⁸ Interviews with officials of the Cambodian Timber Industry Association, conducted 2003 & 2004.

pulpwood plantations, quaintly described as reforestation endeavours. The Prime Minister has decreed forest cover has increased – now at 61%. Government officials have been prohibited from linking the severe droughts and floods plaguing Cambodia to deforestation.

Today, Cambodia, considered one of the oldest post-conflict countries, remains one of the poorest countries in the region.¹⁵⁹ Billions of dollars in development aid have failed to lift its people out of poverty. In the last decade, emphasis was placed on nation building and economic recovery, whereas environmental sustainability was not among the priorities established by the international donor community and the RGC. Forests continue to be viewed by many merely as an inexhaustible source of wood for export. The legacy of a decade of the forest concession system is irreversible damage to Cambodia's forests. The FAO 2005 Global Forest Resources Assessment ranks Cambodia as the third highest in the world for deforestation rates of primary forests.

Recommendations:

Regional and international efforts:

- Moratoriums, bans or export/import conditions and regulations should be agreed upon by neighbouring countries, with clear mechanisms and processes for monitoring, reporting, allocation of responsibility and enforcement.
- International law enforcement initiatives should seek ways of tracking and sanctioning rogue companies.

Policy makers and development aid partners:

- Development aid agencies should harmonize their policies concerning extractive industries, public participation and oversight.
- Recognizing that bad governance is a debilitating factor in forestry reform, mechanisms for the independent financial

scrutiny of companies and government counterparts should be established.

- Policy makers should factor into economic projections the functions and role of forests in climate, soil, water and other ecological services, as well as the importance of forests for rural populations and in particular forest dwellers.
- Alternative forest uses should be explored as a priority, including ones that are environmentally friendly and benefit directly those living in and around the forests.
- The use of incentives and disincentives, such as conditionality, to bring about reform should be clearly described and monitored. Standards to measure these should be established.
- Meaningful indicators should be developed in order to assess trends scientifically.

Forest management:

- Authority for forest management, regulation and monitoring should be separated.
- Living wages, incentives and protection mechanisms for those entrusted with those functions should be available.
- Decisions should be based on credible, recent scientific data. In the absence of these, the precautionary principle should prevail concerning the possible modification of ecosystems. Concretely this should result in a net reduction of areas under production.
- The allocation of production forests should not be justified by the existence of paper-based protected areas.
- Processing capacity should be matched to sustainable production capacity of the forests. The domestic timber supply should be prioritised. Exports, when possible, should focus on high-value products.

¹⁵⁹ UNDP (2005) Human Development Report.

3.2 THE INEFFECTIVENESS OF REFORMS AND FAILURES OF THE CONCESSION SYSTEM IN CAMEROON

SAMUEL NGUIFFO, CED, CAMEROON

Improving governance of the forestry sector was one of the main reasons for reforming forestry legislation in Cameroon in 1994.¹⁶⁰ Previously, forest concessions were allocated by mutual agreement, the lack of objective selection criteria further clouding the allocation management process, and subsequently, the management of the concessions. The result as far as the Treasury was concerned was a sector with poor profitability.

During the past twelve years, successive stages of reform have enabled the forestry sector to be thoroughly restructured, in particular with the establishment of a set of mechanisms that favour improved governance in this sensitive sector. These include:

- Introducing an open tendering system for allocating forest logging deeds;
- Adopting a set of technical and financial criteria for use in assessing the tenders;
- Creating a forest logging titles allocation committee made up of representatives from various Ministries, and open to individuals from the private sector as well as international aid agencies' representatives;
- Appointing an independent observer to the concessions allocation committee, responsible for preparing reports for the Ministry for Forests and Wildlife on the observance of the regulations governing the allocation process for forest logging titles;
- Appointing an independent observer tasked with safeguarding the credibility of the Ministry for Forests and Wildlife's monitoring of allocations, and to build the authority's capacities in terms of forest monitoring;

- Involving communities in collecting information to support the fight against forestry legislation infringements. The local communities living in the forest can in fact make available all the information they have on illegal logging to the forestry authority and/or its independent observer;
- Increasing the involvement of other Ministries in the management of the forestry sector, such as: the Ministry of Territorial Administration in managing local forestry taxes; the Ministry of Economy and Finance in monitoring the forest tax system via the Forest Revenue Security Programme; and the Ministry for Justice regarding the slow settlement of forestry disputes;
- The publishing of sanctions imposed on companies contravening forestry legislation by the Ministry for Forests and Wildlife in the national press and on its website.

Despite the best efforts of the Cameroon government, which for the most part were a result of the conditions imposed by donors, the road towards full transparency remains long.

Difficulties in implementing reform and the persistence of illegal practices

In Cameroon, the concessions system has never worked optimally. Obstacles to the reformation of forestry development persist and illegal timber felling continues. At the end of the 1980s and the early 1990s, WWF estimated that the volume of illegal timber production was around 50% of the nation's total production.¹⁶¹ In 2001, research into the production and export statistics declared by forestry companies indicated that more than 50% of the timber exports from Cameroon were of dubious origin.¹⁶²

Despite some improvements since the start of

¹⁶⁰ Ekoko, F. (1992) *The Political Economy of the 1994 Cameroon Forestry Law*. Yaoundé, CIFOR. p.10; ¹⁶¹ WWF (2002) *The Timber Footprint of the G8 and China*; ¹⁶² Nguiffo, S. (2001) *Statistiques de l'exploitation forestière illégale au Cameroun*. Presentation to the Press Conference of Friends of the Earth, Paris. 11 September 2001.

the reform process, the forest logging titles allocation process still does not always comply with the Law. The concessions are not always awarded to the parties offering the best technical or financial tenders,¹⁶³ and the strategies for circumventing the strict guidelines for the public tenders are many and ever more subtle; consider for instance the *de facto* mutual agreements to allocate timber removal permits to "elastic" land areas, price-fixing in timber auctions, or the post-allocation transfer of forest logging titles to resource-rich areas, etc.

The practice of public calls for tenders has increased the value of concessions, forcing their prices up as the concessions still to be allocated have become more and more scarce. Some logging companies justify illegal logging as a means of compensating for the sometimes unrealistic financial bids they are required to make.

The concessions system has not improved forest management. A proportion of the titles allocated using the tendering procedure (felling permit sales) are not in fact subject to such management practices. When located in the permanent forest zone, forest concessions should in fact be models for careful management. But the first management plans were approved more than eight years after the first allocations were granted, and this despite the fact the concessions had already suffered irreversible damage.¹⁶⁴

The concessions system has not contributed to any improvement in the living conditions of the local communities. In fact, most of the social investments made by the logging companies (mainly infirmaries and road networks) are vital to their operations. Moreover, the use of forest taxes as a means of financing local development does not appear to be bearing any fruit. Finally, ecological disturbances due to industrial logging operations have a negative

impact on the living conditions of the forest communities, for example, disappearance of game due to the intensification of poaching, destruction of crops, the spread of infectious diseases, and the removal of species of high cultural and social value.

Main reasons for the ineffectiveness of the reforms

There are various reasons why the reforms have been ineffective in bringing about a complete change in the way the forests are managed. These include the fact that the nature of the State of Cameroon was not taken into account sufficiently, especially in terms of its relationship with the Law. In fact, changing the Law will not be enough to bring about a change in practices in the forestry sector.

The Cameroon State reflects the neo-patrimonial model described by Jean-François Médard,¹⁶⁵ typified by a strong propensity to use public functions for private gains, the stripping-away of the mystique that surrounds the Law as an instrument for regulating social relations, and the trivialisation of the public authorities' actions. The government shows signs of strong resistance towards the adoption of reforms (from where stems the need for conditionalities), hence the delays in their incorporation and implementation.

Beyond Cameroon's usual administrative red tape, there are two crucial factors which are slowing down the achievement of greater transparency in the forestry sector:

- The "underlying" function of the forest in a neo-patrimonial system: the potential the forest sector holds for government officials to take personal advantage of the system is huge in terms of both the sums involved and the diverse ways these can be

¹⁶³ World Bank (1998) Report and Recommendation of the President of the IBRD to the Board. p.17; ¹⁶⁴ Auzel, P. et al. (2001) *Impact économique et sur l'aménagement de l'exploitation illégale de l'UFA* 10:030. Yaoundé, DFID; ¹⁶⁵ Médard, J.F. (1991) *L'Etat néo-patrimonial en Afrique noire*. In: Médard, J.F. (Ed.) *Etats d'Afrique noire. Formation, mécanismes et crise*. Paris, Karthala.

accessed (direct exploitation, "facilitating" access to the resource and relations with the government, "assistance" in managing monitoring controls, etc.). It is therefore difficult to expect those who benefit from such lack of clarity to begin reforms intended to deprive them of their forest incomes.

- The marginalisation by the Law of the legal and financial authorities, civil society organisations and communities in forestry-related disputes, which remain largely dominated by the forestry authorities. The Law of 1994 and its application decree only provide for obtaining Court rulings on transactions where agreement cannot be reached within 72 hours of the infraction being identified. In addition, the Courts may only examine the legality of the transactions signed by the Minister responsible for Forests if these are challenged by a party who is officially empowered to appeal to the Courts.

Recommendations

More careful monitoring of the implementation of the management plans and heavier fines in the case of non-compliance could be envisaged. The withdrawal of concessions, already provided for under law and forming part of the sanctions, is an option that should also be more closely considered. In the future, a periodical, independent review of the implementation of the management plans, with the results being made public, could also be envisaged. In fact the long delays in implementing the concession management plans, despite the legislative provisions already in force, have resulted in a proliferation of illegal logging, undermining the profitability of the concessions for the Treasury. It is certain that many concessions cannot continue to be logged through to the end of their validity.

Civil society organisations and communities could be given better access to the legal

system, in particular by showing more flexibility towards them in terms of their right to act in law. This measure would help reduce the government's supremacy in forestry-related disputes, and would make possible the better legal monitoring of forestry sector practices (decisions made by the concessions allocation committee, illegal logging, transactions, zoning, use of forestry taxes, etc.).

These two sets of measures could contribute to significant improvements in the way Cameroon's forests are managed and governed.

3.3 POLICY VERSUS PRACTICE: DOES FOREST LOGGING REALLY HELP REDUCE POVERTY IN DRC ?

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Upon the recommendations of experts from the World Bank and the United Nations' Food and Agriculture Organisation (FAO), upon which the Democratic Republic of Congo's (DRC) forestry policy reforms have been technically and financially based, the Congolese Government has made industrial logging activities a key priority. Thus, at least 40% of the nation's forests have been assigned as logging concessions, whereas only 15% of the forests are earmarked for conservation projects. The State's declared intention is to increase its wealth so it can "develop the country and play its part in eradicating poverty" – a very worthy cause.

In its preamble, Law n° 011/002 (29 August 2002) of the Forestry Code states that the Government wants "the Forestry authority to contribute substantially to national development and for neighbouring populations to participate actively in the management of the forests to enable them to benefit legitimately therefrom".

Given this, and considering the potential offered by the timber sector, one could say that the aim of the logging operations is both noble and defensible. However, one should remember that the problem that DRC, one of the poorest countries in the world, faces is not a lack of either ideas or potential. Nor does its poverty have anything to do with a lack of either natural or potential resources. Apart from timber, the country is rich in metal ores which the country has been mining for decades but which have never brought prosperity to the people or resulted in development within the country. The ills which are afflicting this country are more to do with corruption, a lack of political will, a disregard for the law, bad governance, unaccountability, the poor

distribution of national revenue, abuse of power, cronyism and the influence of external interests, etc.

The declared aim of logging may indeed be well intended, but given the fact there is no sign of any solutions being offered to combat the above wrong-doings, well-informed observers remain sceptical about its implementation.

Article 84 of the Forestry Code of DRC states that:

"The forest concession contract is preceded by a public inquiry carried out in the correct form and in accordance with the procedure set out in a Ministerial Decree. The aim of the inquiry is to record the nature and extent of the rights that third parties may hold over the forest area to be placed under concession, in order to determine the level of compensation as necessary. The amount of compensation is agreed amicably or, failing this, by a Court of Law. The payment of such compensation thereafter protects the forest from all further claims".

If this procedure was followed, one could hope for a happy outcome. However, non-observance will inevitably lead to crises and even very serious social disturbances over the use of the revenue generated by logging, and the expectations of the logging companies and the neighbouring communities.

Thus, several factors could result in the goals for logging not being accomplished:

- Corruption: This is a major obstacle - the managers at the head of the forest sector sign bilateral and multilateral logging agreements and contracts on behalf of the people, but the funds generated from taxes, duties and other activities often go directly into private bank accounts. This improper distribution of revenue not only impacts on

the country's coffers and therefore the well-being of its citizens, but also weakens and undermines social cohesion.

- Non-observance of the law: Non-observance of public inquiry procedures could threaten and undermine the conditions for the peaceful exploitation of forest concessions, as well as threaten the full participation of local communities in managing the forest.
- Illegal logging: Correctly observed logging operations benefit the State in terms of the taxes and duties levied. However, illegal logging is nothing more than the pillaging of the country's natural resources. The DRC knows a thing or two about forest operations from the work done in the east of the country by foreign-owned companies, supported and protected by local armed groups and even armies from neighbouring countries. Several United Nations panel reports highlight the pillaging that has gone on through illegal logging operations. The Equateur province is another example. This was supposed to be an area where felling trials were to be carried out on Congolese forests. However, the area became overrun with logging companies which carried out their illegal operations with impunity and the complicity or protection of certain of the country's most powerful citizens. Their presence had no positive impact on the local economy.

Although the FAO is a main player in this process, the Pygmies have still not been brought into the reforms. However, account needs to be taken of their ancestral rights given that they have lived in and used these forests for centuries. Keeping in mind that the Law only provides for conservation of 15% of the DRC's forests and that more than 40% are earmarked for commercial logging, we still do not know what percentage of Congolese forests

are to be returned back to the indigenous communities to enable them to practice their cultural and socio-economic activities.

To avoid conflict with local communities, surveys must be carried out prior to the receipt of requests for plots of forest land. In this way a dialogue can be started with indigenous populations and local communities, determining amongst other things the land used and occupied by local people, the type of activities they are undertaking and the conditions for compensation, if applicable. This would then avoid confrontations such as those that happened in the forest surrounding Mangina in the North Kivu province. Here, the local "mai-mai" militia, formed from the people living in this area, took the Thai forest workers hostage because the latter, working under the protection of soldiers from the Ugandan army, were "pillaging their country's riches without any regard for them".

Recommendations

To ensure logging operations benefit the State and the Congolese people, the Congolese State needs to:

- Rigorously observe the spirit of the Forestry Code with regard to development and the fight against poverty;
- Announce this new Law as widely as possible to ensure that managers within the Department of Forestry observe the provisions, that local and indigenous communities better understand their rights, and that logging companies have a thorough understanding of their obligations;
- Ensure that indigenous and local communities are consulted and provide their free and fully informed consent to zoning operations (Article 15);

- Guarantee indigenous and local communities the right to participate in the drawing up of forest management plans and forest classification procedures (Articles 39 and 74);
- Ensure that the aim of the public inquiry is not least to determine the traditional land rights of local communities and indigenous populations (Article 84);
- Guarantee the construction of schools, health centres, roads, etc., by the logging companies, in accordance with the specifications drawn up by the local communities (Article 89);
- Guarantee the pursuit through the Courts, with NGO support if necessary, of any operator violating any provisions under the Forestry Code (Article 134);
- Ensure the setting up of a representative advisory committee for monitoring decisions taken by the Forestry authorities;
- Facilitate and safeguard the management and use of designated forest areas by the local communities themselves (Article 112);
- Recognise and protect usage rights (Article 36);
- Set up reliable participatory mechanisms for distributing forest taxes between decentralised bodies;
- Guarantee and protect the right of a community to fair and equitable compensation for any harmful effects caused by logging practices to their lands.

CHAPTER 4 : SOCIAL SUSTAINABILITY OF FORESTRY MODELS

This chapter shows how current logging practices within Central Africa are not currently socially sustainable. While logging can bring some benefits, these are often limited and are outweighed by the negative impacts.

In the first article, Helen Newing describes how local peoples' rights are severely limited within the existing national legislation, and furthermore, that these rights are often ignored, Pygmy peoples being particularly severely affected. In particular, logging impacts on access to and availability of non-timber forest products, including bushmeat as well as many important plant products. These problems are clearly illustrated by the case of Moabi, described by Sylvian Angerand in Article 4.3.

Prioritising of timber over the local values of forest resources often results in conflict, as Samuel Nguiffo describes for Cameroon, where local communities have been excluded from the forest, and furthermore, have limited opportunities for legal redress. Logging can also have devastating consequences for the health of local populations, as Simon Counsell describes. Not only do logging practices encourage the spread of diseases, but it is a highly dangerous industry for its workers, with poor health and safety practices being the norm.

Timber extraction inevitably has some negative impacts on local forest users, and compromises need to be reached between the different stakeholders. However, under the current legal framework, the balance is tipped towards industrial interests – the needs and concerns of local communities are given little attention, and these broader impacts, including those on health, are not taken into account in decisions to expand timber operations.



Forest communities in Cameroon, who have lived with logging concessions for many years, see few benefits from industrial logging. Photo: Cath Long

4.1 SOCIAL IMPACTS OF INDUSTRIAL LOGGING CONCESSIONS: EFFECTS ON FOREST USER RIGHTS

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This report documents the social and cultural impacts of logging concessions in Central Africa.¹⁶⁶ A high percentage of the population in central Africa is rural and is dependent on forest resources for their daily subsistence needs.¹⁶⁷ Central Africa is home to an estimated 500,000 indigenous hunter-gatherers ("Pygmies"),¹⁶⁸ who are particularly vulnerable to the impacts of logging, both because of their close dependence on the forest and also because of their subordinate position in society.

Over the past ten years, the region has begun a process of zoning its forest areas into permanent forests (subdivided into those for production and those for protection) and non-permanent forests, and then allocating plots within production forests as concessions for industrial logging.¹⁶⁹ By the early 2000s, some 45% of the total forest area had been divided up into logging concessions (Table 1).¹⁷⁰ Forest communities have had minimal input into the zoning process and have suffered widespread loss of access to forests and their resources as a result. In addition, logging operations have reduced the abundance of many forest resources that are important to local livelihoods – either through direct removal (where the same species are important for timber and for local use), or through the wider impacts of logging activities on non-timber species and on forest ecosystems. In addition to the economic costs to local people that this entails, loss of access to forests is also associated with loss of cultural identity and traditional ecological knowledge of many forest peoples.¹⁷¹ Logging activities also have broader social and cultural impacts through changes in settlement patterns, local social dynamics and so on. In this report, evidence for each of these types of impact is examined, and recommendations are made on measures to address them.

¹⁶⁶ Central Africa is defined in this report as including Cameroon, the republic of Congo, Equatorial Guinea, Gabon, the Democratic Republic of Congo (DRC), and the Central African Republic (CAR); ¹⁶⁷ This is the highest in Equatorial Guinea, this applies to 80-90% of the population; and in CAR (70%). (Forests Monitor (2001) *Sold down the river: The need to control transnational forestry corporations: a European case study*. Forests Monitor Ltd, Cambridge.); ¹⁶⁸ For a comprehensive account of the current situation of indigenous peoples in Central Africa, see: Jackson, S. (2005) *Implementation of international commitments on traditional forest-related knowledge: indigenous peoples' experiences in Central Africa*. Pp. 151-303. In: H. Newing *et al.* (Eds.) *Our knowledge for our survival*. Vol. 1: regional case studies on traditional forest related knowledge and the implementation of related international commitments. IAITPTF & CIFOR, Chiang Mai; ¹⁶⁹ The zoning process is based on guidelines established by the International Tropical Timber Organisation (ITTO). (Foahom, B. (2001) *Integrating Biodiversity into the Forestry Sector: Cameroon Case Study*. Paper prepared for an international workshop on "Integration of Biodiversity in National Forestry Planning Programme". Bogor, Indonesia, 13-16 August 2001. CIFOR, Bogor.); ¹⁷⁰ Minnemeyer, S. (2002) *An Analysis of Access into Central Africa's Rainforests*. WRI, Washington, D.C.: p.9; ¹⁷¹ Giles-Vernick, T. (2002) *Cutting the Vines of the Past: Environmental Histories of the Central African Rainforest*. Charlottesville: University of Virginia Press. Pp. 176 & 190.

Legislation on resource rights within production forests

General measures on use-rights of forest communities are defined in the National Forest Laws of Cameroon, CAR, DRC and Gabon.¹⁷² In all four countries a distinction is made between use of forest resources for domestic use, which is permitted within certain limits, and for

commerce, which is prohibited or undefined. Clearly, the prohibition on resource harvesting for sale is a major restriction on local peoples. Furthermore, resource rights can be extinguished by the government in both Cameroon¹⁷³ and DRC.¹⁷⁴

Table 1: Measures on resource rights specified in National Forest Laws¹⁷⁵

Country	Forest Law	Resource use rights
Cameroon	1994	<p>"User or customary rights...shall be those recognised of the local people to exploit all forestry, wildlife and fisheries products with the exception of preprotected species, for personal use".¹⁷⁶</p> <p>Hunting of defined species is permitted for domestic use only, using traditional methods (materials of vegetable origin), and subject to quotas. However there is no mechanism to implement this system.</p>
CAR	1990	<p>No restrictions on forest products harvested for domestic use.</p> <p>Agriculture is permitted but may be restricted.</p>
Congo	2000	<p>Use rights are not defined in national law. These rights may be defined in permits and management plans for individual forest concessions</p>
DRC	2002	<p>Forest communities retain rights to harvest forest resources for domestic use, subject to management plans.</p> <p>Agriculture is not permitted.</p>
Equatorial Guinea	1997	<p>According to Ekobo,¹⁷⁷ the Forestry Law recognises traditional uses of forest resources.</p>
Gabon	2001	<p>The Forest Law states specifically that holders of a timber permit do not have rights to other forest products.</p> <p>Customary user rights are recognised for domestic use, including:</p> <ul style="list-style-type: none"> • The use of trees for construction and the use of dead timber or branches as firewood • The collection of secondary forest products such as tree bark, latex, fungi, medicinal or edible plants, stones, lianas; • Small-scale hunting and fishing; • Grazing in the savannah, in clearings, and the use of branches and leaves as fodder; • Subsistence farming; • Grazing and water use rights. <p>However, "the exercise of customary user rights shall be free in rural forest estates for the members of village communities living traditionally near such forests and on condition that they respect the restrictive regulations for management or protection."</p> <p>Local rights to commercial exploitation are currently undefined.</p>

¹⁷² No information is available on Equatorial Guinea; ¹⁷³ Art 8 (2), Forestry Law, 1994; Cited in: Nguiffo, S. (2003) Forestry Law and the marginalisation of Pygmy populations. p.9 In: CED (Ed.) Forest management transparency, governance and the law: case studies from the Congo Basin; ¹⁷⁴ Jackson (2005) *op.cit.*; ¹⁷⁵ Source: Jackson (2005) *op.cit.* pp. 300-303, except where otherwise stated; ¹⁷⁶ Cited in Nguiffo (2003) *op.cit.*; ¹⁷⁷ Ekobo, P. (2001) *El Estudio de Perspectivas del Sector Forestal en Africa (FOSA): La Republica de Guinea Ecuatorial. Miniterre de l'agriculture, des peches et forets, Malabo-Bioko Norte*; ¹⁷⁸ Quoted in: praxede-Mapangou, M. (2003) Illegal exploitation of Gaboon resin in Gabon. In: CED & T.R.F.F. Monitor (Eds.) Forest management transparency, governance and the law. Report prepared for the Ministerial Conference on Africa Forest Law Enforcement and Governance (AFLEG). Yaounde, October 13-16, 2003. Pp. 62-66; ¹⁷⁹ For guidelines on forest management plans see: See Foaham (2001) *op.cit.*; ¹⁸⁰ Jackson (2005) *op.cit.*; Lescuyer, G. (2003) Forest Law Enforcement and Rural Livelihoods: a case study in Cameroon. Draft report. CIFOR; ¹⁸¹ Jackson (2005) *op.cit.*; Sinafasi, A., & M. Pacifique (2005) An assessment of the implementation of international commitments on traditional forest-related knowledge in the Democratic Republic of Congo. In: H. Newing *et al.* (Eds.) Our knowledge for our survival. Vol. 2: National case studies on traditional forest related knowledge and the implementation of realted international commitments. IAITPTF and CIFOR, Chiang Mai. Pp. 108-145; ¹⁸² Jackson (2005) *op.cit.*: p.253, based on forest laws of CAR; & Lescuyer (2003) *op.cit.*;

In the Republic of Congo, use rights and mechanisms to regulate resource access should be defined in the legislative documents connected to the granting and management of individual concessions, based on prior socio-economic surveys and identification of community needs. Preparation of management plans in Cameroon,¹⁷⁹ Gabon¹⁸⁰ and DRC¹⁸¹ (but not CAR¹⁸²) should also be based partially on local consultation. Measures that may be added to management agreements include changes in concession boundaries, or measures to restrict felling of trees that are important in local livelihoods, such as the sapelli tree (*Entandophragma cylindricum*).¹⁸³

However, consultation is frequently not carried out,¹⁸⁴ or is carried out after the concession application has been approved.¹⁸⁵ Moreover, since local people are frequently unaware of the contents of such documents, and government monitoring and enforcement of logging regulations is extremely poor in all six countries,¹⁸⁶ *de facto* access to forest resources is often not in accord with the law.

Social and cultural impacts of logging

Logging companies have both positive and negative impacts on local forest communities, and in many areas local people support them, at least initially. Government presence in many areas is minimal, and many logging companies take on a quasi-statal role, undertaking social development projects such as the construction of roads, schools and clinics.¹⁸⁷ Logging companies are also often the main employer in the region.¹⁸⁸ Pygmies are often hired as guides to find the best trees and to hunt, and make up between 30% to 47% of the workforce in logging camps around the borders between CAR, Cameroon and the Republic of Congo (although they usually receive a lower wage and fewer benefits than other workers).¹⁸⁹ However, frequently, the majority of jobs go to

outsiders; at least one case has been documented where the company imports cheap labour from Malaysia and the Philippines rather than employ local people.¹⁹⁰ Also, working conditions are often very poor.¹⁹¹ Loggers live in much larger villages than is customary for pygmies, resulting in increased health problems and social conflict;¹⁹² alcohol has also become a problem; malaria, ulcers and tuberculosis are widespread in the camps;¹⁹³ and many Pygmies have become heavily indebted to other villagers. More positively, there has been a rise in literacy and an improvement in health care, since schools and clinics are more available, but Pygmies are discriminated against in relation to other ethnic groups working in the camps and have less access to these services.

Inevitably, the power relations between logging companies and local forest communities are extremely unequal, and local communities have very little leverage to influence the activities of logging companies. Indeed, it has been reported that when complaints or discontent are voiced, some logging companies act to intimidate not only community groups, but also local and even international NGOs.¹⁹⁴ Moreover the indirect effects of logging operations, such as the opening of access via logging roads, increased immigration and the presence of hunters from outside the villages, can lead to increased tensions between villagers themselves.¹⁹⁵

The common characterisation of logging conflicts is that they comprise interactions between two sets of primary, opposing actors - external loggers and local people.¹⁹⁶ A second level of conflict caused by logging activities is that between different subsections of the local population - most dramatically, between Pygmies and neighbouring farming populations. Many Pygmies have lost their traditional lands, and live in extreme poverty on the margins of neighbouring farming villages, where they hold

¹⁸³ Forests Monitor (2001) *op.cit.* The report goes on to say "but unless villagers take direct action such as blocking the loggers' roads with barricades, their needs are rarely listened to or respected."; ¹⁸⁴ Forests Monitor (2001) *op.cit.*; ¹⁸⁵ Sinafasi & Adrien (2005) *op.cit.*; Jackson (2005) *op.cit.* In practice, some logging companies do carry out some earlier informal consultation with local communities; however, it is at their discretion; ¹⁸⁶ In Equatorial Guinea, in 2004, "INDEFOR currently does not have a clear picture of what is taking place or where... It is clear in some areas that forests are being overcut...". (Palmer, J. (2004) USDA-Forest Service Technical Assistance Trip Equatorial Guinea: Final report. Mission Dates: July 31 - August 15, 2004. USDA). Only one management plan had been written (and not implemented). In Gabon in 1999, "only five of more than 200 logging companies ... had started or planned to start writing a management plan. » (Forests Monitor (2001) *op.cit.*). See also Jackson (2005) *op.cit.*; CIAJE (n.d.) Résumé d'impacts des activités forestières des compagnies européennes sur les populations locales et l'environnement, Gabon. Pp. 50-52; Collomb, J.-G. et al. (2000) A first look at logging in Gabon. A Global Forest Watch Report. WRI. Washington, D.C.; Nsosso, D. (2003) Recovery of penalties in the Congolese forest sector. In: CED (Ed.) Forest management transparency, governance and the law: case studies from the Congo Basin. Pp. 31-44; ¹⁸⁷ Forests Monitor (2001) *op.cit.*; Jackson (2005) *op.cit.*: 237; ¹⁸⁸ For example, see: WRM (2002) Logging Jobs Benefit Pygmies, But Imperil Their Forest Home. World Rainforest Movement; ¹⁸⁹ Jackson (2005) *op.cit.*; Forests Monitor (2001) *op.cit.*

a highly subordinate position; Bantu and other farming peoples often perceive Pygmies as "belonging" to them, and officials tend to agree with this view. Thus forestry companies usually only enter into negotiations with Bantu villagers, not Pygmies, and Pygmies are further disadvantaged as they are excluded from any resulting benefits – either employment or social development projects.

Furthermore, the cultural identity of many forest peoples is deeply bound up with their daily interaction with the forest. Giles-Vernick¹⁹⁷ has described how for the Mpiemu in CAR, the loss of forest access was not simply a loss of livelihood; it also affected an individual's sense of self and connection to their cultural history. Forest degradation, uptake of waged employment, settlement in large villages, and scarcity of forest products all contribute to the erosion of traditional ways of life and the loss of traditional knowledge about the forest and its resources.

Indirect impacts on resource use: the bushmeat crisis

Logging also tends to increase local pressure on resources, both by attracting immigrants and through the construction of logging roads that open access to new areas of forest. Jobs are often only temporary, and immigrants who are only employed for a short time then have to look for other livelihoods,¹⁹⁸ competing with local people both for employment and for local resources. Road networks are expanding rapidly, partly as a result of logging, especially in eastern Cameroon, northern Republic of Congo, and southern CAR. Once loggers leave the area, poachers and settlers come in on these roads.

The Congo Basin is currently undergoing a crisis in overexploitation of bushmeat,¹⁹⁹ and whilst this is not only because of logging, roads

established and maintained by logging concessions intensify bushmeat hunting by providing hunters greater access to relatively unexploited populations of forest wildlife, and by lowering the costs of transporting bushmeat to market.²⁰⁰ Moreover, many workers in logging camps rely on hunting for their food and some companies are reported to actively favour hunting. In Bayango (CAR), the decrease in populations of game animals has increased conflict both within Bayaka Pygmy communities and between Bayaka and incomers. Incoming trappers have accused Bayaka of stealing animals from their snares, which has led to the Bayaka being jailed, beaten or killed.²⁰¹ As a result of the increasing scarcity of game, forest communities find it increasingly difficult to meet their daily needs.²⁰²

Direct impacts on resource use: non-timber forest products (NTFPs)

The extensive use of NTFPs by forest communities in Central Africa has been well documented.²⁰³ Timber concessions can reduce the availability of NTFPs through three mechanisms: restriction of access to forest resources, logging of timber species that are also important as NTFPs, and indirect impacts of logging activities on other forest resources (most notably, bushmeat). The above section has dealt with forest access and indirect impacts; this section will examine the effects of logging on specific resources.

Studies from Cameroon and elsewhere confirm that many commercially valuable timber species are also of economic and cultural significance to pygmies.²⁰⁴ Indeed, 61% of the top 23 timber species exported from Cameroon are valued as non-timber forest products by local communities,²⁰⁵ and therefore direct competition for use of these species is the norm in logging concessions. In addition to their economic value, many NTFP species of

¹⁹⁰ Euloge-N'zobo, R. (2003) Forest exploitation in the Republic of Congo: The case of Tamann Industrie Limited in the Mayombe forest. In: CED (Ed.) Forest management transparency, governance and the law: case studies from the Congo Basin. Pp. 45-50.; Forests Monitor (2001) *op.cit.* ¹⁹¹ A case study with details of working conditions is presented in: Forests Monitor (2001) *op.cit.* ¹⁹² Similarly, in settlements along roads in CAR, Ba'aka people were found to have significantly heavier parasite loads than the neighbouring Bantu. (Lilly, A.A. et al. (2002) Intestinal Parasites in Gorillas, Chimpanzees, and Humans at Mondika Research Site, Dzanga-Ndoki National Park, Central African Republic. *International Journal of Primatology* 23:555-573) ¹⁹³ Euloge-N'zobo, R. (2003) Forest exploitation in the Republic of Congo: The case of Tamann Industrie Limited in the Mayombe forest. In: CED (Ed.) Forest management transparency, governance and the law: case studies from the Congo Basin. Pp. 45-50.; Forests Monitor (2001) *op.cit.* ¹⁹⁴ A case study with details of working conditions is presented in: Forests Monitor (2001) *op.cit.* ¹⁹⁵ Similarly, in settlements along roads in CAR, Ba'aka people were found to have significantly heavier parasite loads than the neighbouring Bantu. (Lilly, A.A. et al. (2002) Intestinal Parasites in Gorillas, Chimpanzees, and Humans at Mondika Research Site, Dzanga-Ndoki National Park, Central African Republic. *International Journal of Primatology* 23:555-573); ¹⁹⁶ Forests Monitor (2001) *op.cit.*;

high commercial value as timber (such as *moabi* and *bubinga*) are also of cultural importance to Pygmy communities. Felling of such species by logging companies contributes to altering the foundation of Pygmy life and to the destruction of their culture.²⁰⁶

NTFPs are particularly important for women, both in producing daily household meals and also, as they become more reliant on cash income, in sale of products such as honey, medicinal plants, and fruits.²⁰⁷ When the availability or quality of NTFPs declines, women must seek alternative sources of income, and this can lead them into prostitution, either in neighbouring communities or in logging camps. Apart from the individual suffering it causes and the strains it places on local social and kinship structures, prostitution also introduces serious health risks to local communities. Evidence for this chain of events was found during an environmental and social impact assessment on a logging operation in Cameroon.²⁰⁸ Also in Cameroon, an unusually high prevalence of HIV (nearly 25%) has been found amongst young women in commercial logging areas.²⁰⁹

Box 1 describes a case study from Cameroon that demonstrates the different ways in which logging can impact on NTFPs.²¹⁰ Caterpillars need sapelli – an important timber tree – as their host plant, and their numbers have diminished as a direct result of timber extraction. A patch of forest rich in wild mangoes was destroyed by construction of the sawmill. Bushmeat has become scarce as logging roads and camps provide forest access to commercial hunters. The reason for the decrease in fish is not stated; the most probable cause is water pollution and siltation, causing increased mortality in fish.

Box 1: The impacts of logging on NTFPs in concession 10-004, Cameroon.²¹¹

Sapelli (*Entandophragma cylindricum*)

One of the most important timber species in Cameroon is the sapelli tree.

- Sapelli bark is used to heal wounds and for digestive problems.
- It is also the host tree of the "ossié" caterpillar, which, as well as being consumed directly by local people and a significant protein source, has an annual market turnover of some CFA 10,000 per tree. A significant sum in local economies.
- The caterpillars have become increasingly scarce.

Wild mangoes (*Irvingia gabonensis*)

- The sawmill site destroyed an important harvesting site for wild mangoes, which are important for nutrition.
- Wild mangoes are possibly the most valuable NTFP in the forest in terms of market trade. One tree produces fruits worth CFA 100,000 - 150,000.
- Local people say they must now travel much further to find them.

Fish:

- Women have noticed a significant drop in fish catches.
- In some villages they now have to travel 20km to fish.

Bushmeat:

- Bushmeat is the main source of animal protein for local people and is also an important source of cash.

¹⁹⁷ Giles-Vernick (2002) *op.cit.* Pp. 171-172, 176; ¹⁹⁸ Giles-Vernick (2002) *op.cit.*; ¹⁹⁹ Binot, A., & D. Cornelis (2004) Synthèse Bibliographique du Secteur «Viandes de Brousse» au Gabon: Rapport Final. Rapport Cirad-emvt N° 04- 14 Avril 2004. CIRAD-EMVT, Montpellier, France.; Bowen-Jones, E. et al. (2003) Economic commodity or environmental crisis? An interdisciplinary approach to analysing the bushmeat trade in central and west Africa. *Area* 35:390-402; Brown, D. & A. Williams (2003) The case for bushmeat as a component of development policy: issues and challenges. *International Forestry Review* 5:148-155; East, T. et al. (2005) Determinants of urban bushmeat consumption in Rio Muni, Equatorial Guinea. *Biological Conservation* 126: 206-215; Fa, J.E. et al, (2003) Bushmeat and food security in the Congo Basin: linkages between wildlife and people's future. *Environmental Conservation* 30: 71-78; Wilkie, D. et al, (2000) Roads, development, and conservation in the Congo basin. *Conservation Biology* 14: 1614-1622; ²⁰⁰ Minnemeyer (2002) *op.cit.*; ²⁰¹ Minnemeyer (2002) *op.cit.*; ²⁰² Forests Monitor (2001) *op.cit.*; ²⁰³ For example see: Ndoye, O., & J. C. Tieguhong (2004) Forest resources and rural livelihoods: The conflict between timber and non-timber forest products in the Congo Basin. *Scandinavian Journal of Forest Research* 19: 36-44; Dkamela, G. P. (2001) Les institutions communautaires de gestion des produits forestiers non-ligneux dans les villages périphériques de la Réserve de Biosphère du Dja. *Tropenbos-Cameroon Documents* 7. Tropenbos, Kribi, Cameroon;

- Animals have been displaced by forestry operations.
- Commercial hunters in logging camps have reduced game populations.
- Local people have had to change hunting routes to avoid forestry routes, and so must travel much longer distances.
- Alternatively they buy from commercial hunters, at greater expense to themselves. Household budgets are being significantly affected by these increased costs.
- The Baka are suffering increased malnutrition as a result of meat shortages during the dry season.

NTFPs used for subsistence are "invisible" in the national economy, and therefore tend to be given little attention in legislation and planning. However, when they gain commercial significance, it does not follow that local people's rights improve. Box 2 describes the case of Gaboon resin. Local medicinal use has prompted pharmacological trials, and as a result, a significant international trade has developed. However, rather than reinforcing local use rights, this has only served to exclude local people further from its use. Instead, logging companies have begun to exploit the resin – in spite of the fact that the law states clearly that they do not have rights to NTFPs within their concessions.

Box 2: Exploitation of Gaboon resin (*Aucoumea klaineana*)²¹²

Gaboon resin, or "okoumé" is the most important commercial timber species in Gabon, contributing about 90% of production. However, it is also important to local people, who tap the resin from the standing tree. Gaboon resin is used in certain initiation rites and also for water purification, for treating abscesses, as an insecticide and deodorant. There is a significant local market, and it provides the main source of income for some families.

Research in the late 1990s revealed that some logging companies have begun to exploit the resin illegally in industrial quantities for export,²¹³ and in the early 2000s, the resin was the subject of pharmacological screening and cosmetics tests. The tests revealed that the resin had anti-protease and anti-inflammatory properties. Further supplies were required to develop cosmetic products. It was originally planned that they would be supplied by local communities, but as the supply was insufficient, a logging company was contacted to supply the resin – although logging concessions do not give rights to exploitation of non-timber products. Local communities were cut out of the supply chain and lost the income they had derived from the early stages of the project. Since the industrial exploitation is not licensed or taxed, there is no benefit to the State either. Meanwhile, there is little information on the impacts of resin harvest on the tree itself, and thus the sustainability of the increased harvest levels is unknown.

²⁰⁴ Nguiffo (2003) *op.cit.*: p.8; ²⁰⁵ Ndoye & Tieguhong (2004) *op.cit.*; ²⁰⁶ Nguiffo (2003) *op.cit.*: 8; ²⁰⁷ Ndoye, O. et al. (1998) The Markets of Non-timber Forest Products in the Humid Forest Zone of Cameroon. ODI Rural Development Forestry Network Paper 22c. London, ODI; Brown, K. & F. Ekoko (2001) Forest Encounters: Synergy among agents of forest change in southern Cameroon. *Society and Natural Resources* 14(4): 269-290; ²⁰⁸ Forests Monitor (2001) *op.cit.*: 17-19, citing Lapuyade (2000); ²⁰⁹ Laurent, C. et al, (2004) Commercial Logging and the HIV Epidemic, *Rural Equatorial Africa. Emerging Infectious Diseases* 10: 1953-1956; ²¹⁰ A similar case in CAR is documented in: Mogba, Z. & M. Freudenberger (1998) Human Migration in the Protected Zones of Central Africa: The Case of the Dzanga-Sangha Special Reserve. In: H. Eves, R. Hardin & S. Rupp (Eds.) *Resource Use in the Trinational Sangha River Region of Equatorial Africa: Histories, Knowledge Forms, and Institutions*. Yale University, New Haven, Connecticut. Pp. 104-129; ²¹¹ Source: Forests Monitor (2001) *op.cit.* p.21 (citing Lapuyade, 2000); ²¹² Source: Praxede-Mapangou (2003) *op.cit.* p.64-66; ²¹³ The research was the BIODIVALOR-Gabon programme, funded by French Cooperation and implemented jointly by the Gabonese government body IPHAMETRA and Pro-Natura International. For details see: Praxede-Mapangou (2003) *op.cit.*

Recommendations

Governments of the six Central African countries should:

- Call a moratorium on the allocation of new concessions and logging until the government has sufficient information and capacity for effective monitoring and enforcement.
- Rethink forest policy with a view to local capture of benefits.
- Review the forest zoning process proposed in DRC, in a participative manner. In particular, information is needed on lands that are in use by forest communities within production forests.
- Recognise the rights of Pygmies independently of their Bantu neighbours.
- Review the law in order to give greater recognition of customary institutions.
- Halt logging operations that don't have a legally recognised management plan.
- Where not already in place, develop enforceable standards on relations with local people (employment, health, consultation processes) and ensure that they are followed.
- Where not already in place, develop enforceable procedures to reduce the impact of logging operations on NTFPs – especially those from timber species.
- Control immigration and bushmeat hunting along logging roads. Ban commercial hunters from logging camps.

NGOs / researchers:

- Further research is needed on: the distribution of forest communities, especially Pygmies; on current conflicts with logging concessions; and on the ecology and management of key NTFP species – especially those that are also timber species.
- Substantial support and training to indigenous organisations is required in order to build an effective indigenous system of representation and communication.



Afromosia has already been logged to commercial extinction in much of its range outside the Congo. Trade in its wood is supposed to be controlled under CITES, but it is already being heavily exploited illegally in DRC.
Photo: Cath Long



The involvement of local people in forest management decision making is fundamental to sustainable forest management and poverty alleviation. Photo: Sylvain Angerand



Forest communities depend heavily on non timber forest products to meet their livelihood needs: a factor not taken into account in the logging concession model. Photo: Cath Long



Bafoto community leader agreeing on their map with members of the communities concerned, Equateur, DRC. Photo: Cath Long



Villagers look on with concern at the departure of resources from the forests upon which they depend in DRC. Photo: Filip Verbelen

4.2 SOCIAL CONFLICTS ARISING FROM INDUSTRIAL LOGGING PRACTICES IN CAMEROON

SAMUEL NGUIFFO, CED, CAMEROON

Industrial logging brings with it massive potential for conflict in Cameroon, due to the number and variety of players, the various interests and expectations in play, and the perceptions that revolve around forest areas and timber. At the local level, such divergent interests are resulting in increasingly violent conflicts around forest timber concessions.

Three principle causes have been identified for such conflicts between the local communities and the logging companies over their practices:

- The imbalance of legal pluralism around the forest, with the coexistence of a patchwork of customary laws and colonially-inspired "modern" laws. The former embody the principle of land and forest resources being communal property, while local communities have little knowledge of modern laws, which therefore lack legitimacy in their view. These modern laws establish the State as the sole owner of the forests, and provide for forest management methods which sometimes go against those embodied in customary law, in particular with regard to the assignment of land and resources. It thus results in local communities being marginalised during the assignment of logging rights.²¹⁴
- The socio-economic impact of the forest industry. On the one hand, there are claims for an equitable share of the forest income to which local communities – and in particular the Bantus – consider they have a right to, both as guardians of the forest and as compensation for the rapid erosion of forest biodiversity. On the other hand, timber logging operations are having negative socio-economic consequences, in particular with the removal of disputed species²¹⁵ and the recurrent destruction of crops.
- The local communities challenge forest zoning because it takes no account of the way they have used the forest traditionally, placing vast areas of the forest under concessions or under special protection, defined as "permanent forest" under the national forest zoning system. This new distribution of forest area confines most of the local population's activities to forest areas which are not as rich as the permanent forest which are subject to draconian restrictions. In this context, the indigenous populations are most affected as their traditional territories are often at the heart of these permanent tracts of forest.

Research carried out at the end of the 1990s²¹⁶ showed that conflicts were arising with neighbouring communities in virtually all the forest concessions. In general these remain dormant because the industrialists have far more clout and resources than the communities. In addition, the government sometimes sides with the logging companies, considering the local communities' desire to contest this new order as breaches of the peace. Such cases of conflict are rarely brought before the Courts because of the difficulty the local communities have in accessing the legal system, and also because of their ignorance of modern law. In addition, the alternative mechanisms for settling disputes do not always work in Cameroon, with forest conflicts usually coming to an end with the departure of the logging company once there is no more timber left to extract.

Recommendations

The way in which the forest is logged gives a very strong impression of injustice towards the local communities. Logging makes only a marginal contribution towards local development and sometimes has an irreversible negative impact on the local communities'

²¹⁴ With regard to Cameroon's forests, customary laws are fundamentally different to modern law, especially with regard to the ownership of land and resources (customary law gives ownership to the people whereas modern law grants the State ownership) and rights of use (in modern law the State as owner grants usage rights according to conditions it itself sets, whereas under customary law it is the communities that grant the rights to use forest resources and areas). Because modern law reduces the rights of local communities to their forests, these communities often reject modern laws out of hand;²¹⁵ These are species having a high commercial and cultural value. Highly prized by logging companies, their logging results in a drop in the living standards of the local communities. See also: CED (2001) *Les essences disputées dans le Sud forestier du Cameroun*. Yaoundé;²¹⁶ Bigombe, P. & B. Dabire (2002) *Gérer autrement les conflits forestiers au Cameroun*. Yaoundé; Nguiffo, S. (1997) *Les conflits liés à la gestion des forêts au Cameroun*. Paper presented at a workshop on the alternative management of natural resource conflicts, Niamey.

living conditions. Three sets of measures could help reverse the trends that encourage conflict in Cameroon's forests:

- Organising preventive mechanisms. This consists of imposing obligations on all external players, for example, requiring them to observe the rights and interests of local communities. Such a requirement could in fact be extended to protected area managers. With regard to logging companies, such mechanisms would be embodied in contracts with the State, and could be contained in their contracts. Finally, the rules governing the logging of timber and exploitation of non-timber forest products should be based on a rigorous analysis of the environmental and socio-economic impacts of the logging companies' activities.
- Acceptance of the right of local communities to defend themselves. This could consist of making communities more directly involved in the forest management decision-making, and giving them the right to complain to the legal authorities should a dispute arise with the logging companies or other external players. This solution could be implemented through giving local communities the ability and legal status to act in all matters pertaining to the forest.
- The government should be flexible in how they deal with local forest communities regarding customary law. Wherever possible, it should aim at balancing constitutional law pertaining to forest management with customary law in order to avoid undermining the legitimacy of the nation's forest legal framework.

4.3 THE EXPLOITATION OF MOABI: CONFLICT SURROUNDING A TREE OF HIGH SOCIAL VALUE

SYLVAIN ANGERAND, FRIENDS OF THE
EARTH, FRANCE

In Europe and especially in France, moabi is highly regarded for the quality of its wood, the ease with which it can be worked and its fine grain – which gives it a wonderful uniform pink to brown tint. In Central Africa, the moabi has multiple uses and occupies a central place in traditional societies. As such, its commercialisation by foreign-financed companies is generating many conflicts.

Moabi ecology

The moabi (*Baillonella toxisperma*) is characteristic of the Congo Basin's dense humid tropical forest. Its natural distribution extends from north of Gabon and the Democratic Republic of Congo to southern Nigeria, with southern Cameroon and Equatorial Guinea representing the centre of its range. In these forests the biggest moabis emerge from the canopy at a height of 70 metres and their large sinuous branches overhang the old growth (or "primary") forest. In the undergrowth, the trunk is massive (up to 5 metres in diameter) and the easily-identified bark is a deeply creviced reddish brown. To reach such proportions, the moabi must withstand competition from the other species in the undergrowth, and wait for an old tree to fall in order to make the most of the resultant gap in the canopy. Moabis which dominate the forest are therefore very old, generally between 600 and 700 years of age, although some scientists have even reported trees which were up to 2,500 years old.²¹⁷

The moabi is somewhat rare in the forest, with usually just one fruiting tree for every 20 hectares. However, this distribution is not homogeneous as moabi populations generally have an aggregate structure, with point concentrations of between 5 and 50 individuals in what the Bantu refer to as "clumps" or "sites".²¹⁸

The Moabi's place in Pygmy and Bantu traditions

There are two ethnic groups within Cameroon: the Bantu, agriculturalists who migrated into the area and settled along the edges of the forest stands; and the commonly-called "Pygmies", an indigenous, semi-nomadic people who until very recently lived exclusively in the forests but who are now the subject of government programmes aimed at encouraging them to settle in villages with road access. Both the sedentary and the semi-nomadic Pygmies maintain a very direct relationship with, and have an in-depth knowledge of, the forest.

The moabi is highly present in both Pygmy and Bantu traditions. The tree is featured in many Bantu songs and stories, while in the Dja region of south-eastern Cameroon, the word *edjoh*, which means moabi in Badjoué, the local Bantu language, is at the root of several village names such as *Medjoh* (which literally means "moabi nursery"), *Nemedjoh* or just simply *Edjoh*. In Gabon, the capital of the *Doigny* département is very simply called Moabi.

The cultural importance of the moabi is further strengthened by its mode of dissemination. The fruit are consumed by elephants and the seeds are expelled in their faeces, with their passage through the intestinal tract slightly accelerating the germination process. Elephants are already regarded by local populations as symbolic, so the moabi's place in their cultural traditions is only further accentuated by this association. For the Pygmies, this interaction between the elephant and the moabi gives the tree a sacred dimension as follows: *Jengi*, the spirit of the forest, appears only when an elephant dies, and guides the hunters in tracking game in the forest. The Pygmies believe that the whole of the elephant's ecosystem, in particular the moabi whose large juicy fruits the elephant is particularly fond of, is the symbolic embodiment of *Jengi*.

²¹⁷ Jacques Weber, Director of the Institut Français de la Biodiversité, personal communication; ²¹⁸ Mapaga, D. *et al.* (2002) Moabi. Forafri & IRAF, Libreville, Gabon & Cirad-forêt, Montpellier, France.

Indeed, the Baka Pygmy hunters not only use large moabi trees as markers to guide them through the forest, they also use them to make themselves "invisible". During the traditional ceremony called "yeyi", witch doctors reduce moabi bark fragments to powder and concoct a "camouflaging potion" which the hunters cover their bodies in so they can go undetected through the forest.

The Pygmies are also highly regarded healers and have a good knowledge of the properties of forest plants. For example, they use moabi bark to produce brews which relieve back ache and abdominal pains. Ethnobotanical research conducted by Jean Lagarde Betti in the Dja reserve, Cameroon, during 1994 and 1996 under the ECOFAC programme, produced a list of almost 350 plant species used to treat more than 77 illnesses or symptoms, and recorded 50 different uses for moabi alone.²¹⁹

But above all the moabi is known and appreciated for the oil which can be produced from its seeds – which for a long time was the only oil available from the forest. In fact, the moabi seed kernel is extremely toxic when eaten raw (hence the tree's scientific name "toxisperma" or "toxic seed"). However, when crushed, boiled and pressed, the result is a delicious, edible oil rich in palmitic acid. The women – whose role traditionally has been to prepare the oil – also know that if boiled a second time, it can be used to produce a butter which very closely resembles "karité" or shea butter, and which can be used as a cosmetic. Thus the Bantus often call the moabi "karité" simply because it has many of the characteristics found in *Vitellaria paradoxa* (called variously the shea nut tree, the shea butter tree, karite and karité). Trading in this oil provides a significant source of revenue, more than that generated from the sale of moabi timber.

In 1995, Schneemann²²⁰ compared two scenarios: taking a moabi tree with a diameter of 100 cm (the minimum diameter which may be commercially felled legally in Cameroon), he evaluated the tree's economic value in terms of its timber and its oil (not taking into account any discount rate). Such a tree would produce an average volume of approximately 9 m³ of timber. Given that the value of the timber is approximately 100,000 CFA Francs (the minimum roadside or expert price according to ONADEF²²¹ volume tables) then the tree is worth about CFAF 900,000. Conversely, given that a moabi only fruits abundantly once every 3 years, that a tree can produce approximately 150 litres of oil every 3 years, and that this oil is worth at least CFAF 1,000 at the roadside, then such a tree would generate revenue in the region of CFAF 180,000 every 3 years: within 15 years the revenue from the commercialisation of the oil is greater than the economic value of the timber.²²²

Conflicts between forest exploitation and social uses

Moabi seeds are harvested during July and August when the fruit reach maturity. Bantu men will go and find the fruiting moabi trees in the forest, and clear the area surrounding the tree to facilitate the harvesting of fruit which fall to the ground. To optimise the harvest, one or several Bantu households may be involved in setting up camp for several weeks close to the large trees in the forest. During fruiting, the Bakas will also use the occasion to move their camp close to a clump of moabis. In practice, he who first discovers a moabi in the forest can lay claim to it by clearing the undergrowth from around the tree and by placing a mark on the trunk. Thus a family can claim ownership of a tree and pass it down from generation to generation, and this is a traditional right.²²³

²¹⁹ Betti, J.L. (2001) *Usages traditionnels et vulnérabilité des plantes médicinales dans la réserve de Biosphère du Dja et dans les marchés de Yaoundé, Cameroun*. PhD Thesis. Sci. Agro., ULB, Brussels;²²⁰ Schneemann, J. (1995) Exploitation of Moabi in the Humid Dense Forests of Cameroon. Harmonization and improvement of two conflicting ways of exploitation of the same forest resource. *BOS NEWSLETTER* 31, Vol. 14(2): 20-32;²²¹ Mapaga et al. (2002) *op.cit.*;²²² Angerand, S. (2006) *La société R. Pallisco et l'exploitation du moabi dans l'est du Cameroun*. Friends of the Earth/Sherpa. Unpublished;²²³ Schneemann (1995) *op.cit.*

In 1995, Schneemann²²⁴ tried to evaluate the number of moabi sites frequented and their distances from four Bantu villages in southern Cameroon. He observed that each village frequents on average ten or so sites and that around 80% of the trees are 30 km or more distant, or in other words at least one day's walk through the forest. However, this spacing juxtaposes with the forestry concessions. Forest operators and villagers may each end up claiming rights to a tree, thus giving rise to numerous conflicts. In eastern Cameroon around the Dja reserve where there are dense moabi populations, the conflicts have increased since the arrival of the logging companies: several times the villagers have blocked the roads and protested against the felling of the moabi trees which they consider belong to them. At the beginning of the 1980s, the government tried to impose restrictions on the logging companies, stipulating that no moabi could be felled if it was within 5 km of a village. Despite having no relation to the reality of the situation, given that the visited moabis were often more than 30 km from the nearest village, the decree in any event went unheeded.²²⁵

Economically, ecologically and socially unsustainable exploitation

Today, the selective logging of moabis in this region provides no opportunity for reconciling economic, social and ecological interests. In 1998, Debroux²²⁶ showed that in eastern Cameroon 90% of trees measuring more than 100 cm were felled – the remaining 10% being deformed – representing 75% of seed trees. By modelling the moabi population dynamics, he concluded that logging operations working on a 30 year cycle were endangering the survival of the species, and therefore the moabi would be unable to sustain production.

This study was carried out on concessions owned by R. Pallisco, a subsidiary of the French Pasquet Group of Companies which specialises in moabi logging. In 2004, Doucet and Vermeulen²²⁷ showed that after a first selective felling, sufficient seeds remained to satisfy the oil needs of the neighbouring populations. It would however be dangerous to conclude that the social impact has been lessened, given that no account has been taken of the sacred nature of this tree for the indigenous populations present in the concession. In addition, the identified seed requirements of local people represents a harvest of 40% of the total seed yield from the moabis left standing after the logging operations (75% of the seed trees having been felled): this harvest was not taken into account by Debroux and therefore heightens still further the impact of his conclusions.²²⁸

Many other trees in Central Africa are of major social importance and yet are exploited intensively, including the bubinga, a tree considered sacred by the Pygmies, and the sapelli, on which can be found an edible caterpillar which is rich in protein and highly valued by local populations.

Conclusions

The moabi is the archetypal resource around which conflicts of use gather, like moths around a flame. To date the social value of these trees has rarely been taken into account in the management plans of forest enterprises.

The conflicts created by the logging of moabi underline the limits of a harvest model based on the intensive logging of a small number of species. Yet, non-timber exploitation of this tree (through oil production) could result in very significant economic benefits which are compatible with both the ecological requirements and the social uses of the moabi.

²²⁴ Schneemann (1995) op.cit.;²²⁵ Mapaga et al. (2002) op.cit.;²²⁶ Debroux, L. (1998) L'aménagement des forêts tropicales fondé sur la gestion des populations d'arbres : l'exemple du moabi (*Baillonella toxisperma* Pierre) dans la forêt du Dja, Cameroun. PhD Thesis, Faculté des Sciences agronomiques de Gembloux, Belgium;²²⁷ Vermeulen, C. & J.L. Doucet (2004) Conservation and sustainable use of non-timber forest products in favour of local communities within integrated forest management in Central Africa. Proceedings of the International Symposium on Tropical Forests in a Changing Global Context. Royal Academy of Overseas Sciences, United Nations Educational, Scientific and Cultural Organisation. Brussels. 8-9 November 2004;²²⁸ Angerand (2006) op.cit.

Recommendations

It is essential to affirm the rights of local populations, and in particular the indigenous populations, to use trees having a high social value.

To do this, the local and indigenous populations must be made to participate more when drawing up zoning maps (e.g. participative mapping), in particular on the areas earmarked for timber exploitation.

When a company exploits a forest on which populations depend, very precise contracts must be drawn up which take account of the exploitation of these high social value trees and which, where necessary, prohibit their felling.

Wherever possible, such as with the moabi, other economic development methods need to be compared with timber extraction and promoted as part of the struggle against poverty.

4.4 LOGGED TO DEATH: THE IMPACTS OF THE TROPICAL TIMBER INDUSTRY ON HUMAN HEALTH

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Introduction

The human health aspects of the tropical logging industry – some of which are specific to the industrial logging concession model – are usually overlooked. However, there is growing evidence that the human health costs of rainforest logging are significant, if difficult to estimate fully.

This paper suggests that, at best, the tropical logging industry, and those that advocate its continuance and expansion, are directly undermining the achievement of Millennium Development Goal #6, which seeks to reduce suffering from diseases such as malaria and HIV-AIDS. The paper also highlights that health and safety conditions for workers in tropical logging concessions rank as amongst the worst in the world.

Malaria

The relationship between the incidence of malaria and modification of tropical forests has long been appreciated. The United Nations notes that "Deforestation and road building often disrupt forest and river systems increasing the habitats for malaria-carrying mosquitoes and migration of workers into previously inaccessible areas is increasing the population at risk."²²⁹ A recent study in the Peruvian Amazon has shown that the incidence of the malaria vector, *Anopheles darlingi*, increased more than 200-fold in deforested areas compared with intact rainforest.²³⁰

The increase in mosquito populations appears to be due to the availability of standing water suitable for reproduction in effected areas. Industrial logging practices in tropical forests are usually associated with an increase in such mosquito breeding sites due to ponding of streams and rivers through road and skid-track construction, blocking of watercourses by

erosion and logging debris, deep ruts and gullies caused by heavy equipment and lorries, as well as stagnant pools occurring in and around logging camps. Clearance of overhead vegetation can also cause a reduction in the acidity of surface water, thus creating better conditions for anopheles mosquitoes to breed.²³¹

The ecological changes brought about by commercial logging and other forms of forest disturbance and damage can also cause changes in the prevalence of different types of malaria, as different species of mosquito benefit from these changes. A study in Cameroon has shown that transmissions of malaria from the bite of *Anopheles gambiae* increased from 0% of total transmissions in a still-forested area to 13% in a clear-felled area of 370 hectares some three kilometres away (most malaria transmissions in the study area were from *A. moucheti*).²³² *A. gambiae* is the most efficient vector of the highly dangerous form of malaria, *Plasmodium falciparum*.²³³ In Africa, "A. gambiae prefers sunlit pools with turbid water with little or no emergent vegetation",²³⁴ conditions unlikely to be found in unlogged forest but likely to occur where there has been heavy logging damage. In one study in Latin America, the presence of *P. falciparum* malaria in nomadic Waorani hunter-gatherers inhabiting undamaged forest has been found to be zero, whereas it was present in Waorani living in permanent settlements in a modified environment. This suggests that *P. falciparum* is not readily transmitted in undisturbed rainforest but is readily transmitted in disturbed or cleared areas.²³⁵

A study of the "zone of influence" of two logging companies in Brazil has shown that the incidence of *P. vivax* and *P. falciparum* in the town near to one logging company's operations increased 4-fold and 20-fold respectively, whilst for the second company the increases were 119% and 195% respectively.²³⁶ It was believed by the authors of this study that infected log

²²⁹ <http://www.un.org/apps/news/story.asp?newsid=13407&cr=infectious&cr1=diseases>;²³⁰ Vittor, A.Y. et al. (2006) The Effect of Deforestation on the Human-Biting Rate of *Anopheles darlingi*, the Primary Vector of *Falciparum* Malaria in The Peruvian Amazon. *American Journal of Tropical Hygiene* 74: 3-11;²³¹ Patz, J. et al. (2000) Effects of environmental change on emerging parasitic diseases. *International Journal of Parasitology* 30: 1395-1405;²³² Manga, L. et al. (1995) Malaria vectors and transmission in an area deforested for a new international airport in southern Cameroon. *Annales de la Société Belge de Médecine Tropicale* 75(1): 43-49;²³³ <http://www.cdfound.to.it/HTML/pla1.htm>;²³⁴ Patz et al. (2000) op.cit.;²³⁵ Coluzzi et al., cited in Patz et al. (2000) op.cit.;²³⁶ Fanzeres, A. (2002) The making and unmaking of forest certification in the Brazilian Amazon; a study on the certification process of two logging companies in the State of Para. In: Rainforest Foundation (Ed.) *Trading in Credibility: the myth and reality*. Forest Stewardship Council. Rainforest Foundation, London.

truck drivers were probably also encouraging the spread of the disease into adjoining communities, some of which were so badly affected by malaria that villages were becoming depopulated.

The Malaria Foundation International notes that logging and other such activities not only bring about ecological changes which favour the proliferation of malaria-bearing mosquitoes, but also increase the availability of human victims: "human environmental changes such as road building, mining, deforestation, logging, and new agricultural and irrigation projects have created new [mosquito] breeding sites. Malaria transmission in newly logged or exploited areas explodes just as a crop of outsiders with no immunity to the disease come into work camps."²³⁷

Several governments, including those of Uganda²³⁸ and Guyana have recognised the relationship between loss of, and damage to, their forests and the incidence of malaria. The government of Guyana, for example has acknowledged that "increased mining and logging activities in the hinterland regions is part of the Government's sustainable development programme, but they also contribute to the problem of malaria".²³⁹

According to the Pan-American Health Organisation (PAHO), the spread of malaria amongst logging workers in Guyana has another worrying dimension. PAHO has reported that "Mining and logging operators having access to foreign exchange, purchase antimalarials and use them indiscriminately to suppress symptoms. This practice not only compounds the difficulties of parasitological diagnosis by health service workers but also eventually enhances the problem of stable resistance".²⁴⁰ In fact, PAHO has found that *P. falciparum* resistant to Chloroquine and Fansidar "has become firmly established in

previously eradicated areas and amongst a very mobile, widely scattered mining and logging population with little or no immunity".²⁴¹ Given that medical treatment facilities in most logging concessions are rudimentary at best, this problem is also likely to be occurring in other countries, thus reducing the ability of humanity to treat malaria effectively.

The International Union for the Scientific Study of Population has noted that traditional practices of forest dwellers served to minimise vulnerability to mosquitoes within the home, whereas modern logging camps allow mosquitoes to proliferate: "In Southeast Asia new techniques of logging such as commercial teak logging have attracted new forest dwellers. Traditional forest people built homes on stilts and cooked on a smoky fire inside the house while livestock remained under the house. New settlers built homes on the ground with no space for livestock under the house and cooked in a detached room."²⁴² The smoky fires act as a natural deterrent for the mosquitoes within the home (though can also be responsible for pulmonary diseases).

HIV-AIDS

There is evidence that HIV-AIDS may have originated from the transmission and subsequent adaptation of Simian Immunodeficiency Disease (SIV), transmitted to humans via the consumption of bushmeat, a disease present in various sub-species of chimpanzee in West-Central Africa's forests. This indicates the danger of proximity of humans to such sources of disease (see below), but there is also growing evidence of the role of commercial logging in the spread of HIV-AIDS.

Logging concessions, in Africa and elsewhere, create conditions in which sexually-transmitted diseases are likely to proliferate: high

²³⁷ <http://www.malaria.org/currentstatus.html>;²³⁸ <http://www.health.go.ug/malaria.htm>;²³⁹ <http://www.gina.gov.gy/archive/daily/b030711.htm#Healthofficials>;²⁴⁰ <http://www.paho.org/english/hcp/hct/mal/cartagena-4-guy.pdf>;²⁴¹ <http://www.paho.org/english/hcp/hct/mal/cartagena-4-guy.pdf>;²⁴² http://www.iussp.org/Publications_on_site/PRP/prp2.php;²⁴³ <http://www.med.harvard.edu/chge/biobrief.html>.

concentrations of mostly male manual workers, often with relatively low levels of education, often migratory and without their families, enjoying regular cash income, located in remote areas where levels of wealth amongst the local female population is often also very low. One recent study in Cameroon, carried out in the village where a sawmill and logging camp is located, as well as in two nearby villages, has shown that nearly one quarter of women aged 25-34 were infected with HIV (compared to an infection rate of 8.3% for this gender-cohort in Cameroon's East Province as a whole).²⁴⁴ According to the researchers, this finding "could be related to commercial logging. In a context in which workers had relatively high salaries (U.S. \$60 to 530 per month), sexual networks were extensive and complex. An estimated 40 female sex workers were permanently living in the logging camp. In addition, ~100 women arrived at the logging camp from towns or neighboring villages at the time of salary distribution (twice a month), to trade or offer paid sex (U.S. \$1.50 per intercourse). Some men and women had sex with several partners a night. Some workers' wives also had extramarital sex... HIV-1 genetic diversity and its distribution were similar to that observed in towns which suggests that the spread of HIV in this rural area results from numerous introductions of the virus." The conditions in the villages and logging camp described in this account would be fairly typical of most logging operations within the Congo Basin.

In addition to the (repeated) introduction of HIV into remote forest areas, it is likely that logging camps also serve as a nexus for infection, with the disease being spread out along log extraction and transportation routes by truck drivers, though this aspect has not yet been the subject of specific study. In parts of West-Central Africa, log transportation routes, especially to the Cameroonian port of Douala,

can be many hundreds of kilometres long, with the return journey taking several days. The larger companies send several thousand shipments each year.

Outside Africa, the only other reports of a relationship between the forest industry and HIV-AIDS has come from Burma where, according to Global Witness, because of logging in Kachin state "the presence of many migrant workers has led to an increase in prostitution, HIV Aids, drug abuse and gambling".²⁴⁵

Other diseases

The full range of diseases likely to be promoted by the combined effects of forest habitat change and new settlement has not been fully documented. However, as has been noted in a Harvard Medical School study, "the majority of important vectors of human and animal diseases [are] found in the rich biodiverse tropical rain forest ecosystems, woodland savannahs, and the edges of these ecosystems".²⁴⁶

The proximity of humans to such vectors encourages the adaptation of vectors to human hosts, especially when alternative hosts become locally scarce.²⁴⁷ Local scarcity of "alternative hosts", especially in the form of large mammals, is a common feature of almost all tropical logging concessions, as logging workers, their dependents, and other people attracted along logging roads, exterminate bushmeat species in order to supplement their usually meagre incomes. Such adaptations in disease and vector behaviour may be varied, but examples from South America include the vectors of leishmaniasis, certain species of sandfly, "which were originally zoophilic and sylvatic [but] have adapted to feeding on humans in peridomestic and even peri-urban situations".²⁴⁸

²⁴⁴ Laurent, C. et al. (2004) Commercial logging and HIV epidemic, rural Equatorial Africa. *Emerging Epidemic Diseases* 10(11);²⁴⁵ Global Witness (2003) A conflict of interests; the uncertain future of Burma's forests. Global Witness, London.;²⁴⁶ Chivian, E. (2002) Biodiversity: its importance to human health, interim executive summary. Centre for Health and the Global Environment, Harvard Medical School.;²⁴⁷ Chivian (2002) op.cit.;²⁴⁸ Walsh, J.F. et al. (1993) Deforestation: effects on vector-borne diseases. *Parasitology*: 106(suppl.): s55-75

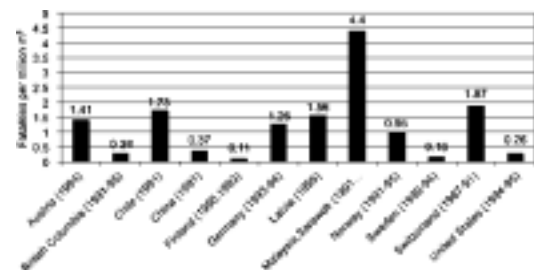
In South America, as one study has noted, "population and commercial pressures have led to the invasion of forests, exposing people to exotic agents and enzootic diseases, including yellow fever, rabies transmitted by vampire bats, arenaviruses, and others."²⁴⁹ Much of what has been noted above concerning malaria is also true of dengue and dengue hemorrhagic fever (DHF); any environmental or cultural changes encouraging the proliferation of mosquitoes is likely to promote the spread of dengue if the disease is present in the area or in those traversed by logging industry workers.²⁵⁰ A further disease spread by the Anopheles mosquito is O'Nyong-Nyong fever, which re-emerged in south-western Uganda in 1996 after an absence of 35 years.²⁵¹

Logging worker health and safety

Industrial forestry is, according to both the UN Food and Agriculture Organisation (FAO) and the International Labour Organisation (ILO), a highly dangerous undertaking:²⁵² "Forestry in general and logging in particular continue to be among the three most dangerous occupations in almost all countries."²⁵³ Even in the United States, forestry is more dangerous (in terms of fatal accidents per worker employed) than mining, fisheries or farming.²⁵⁴ According to the ILO, "forest work is characterised by serious health problems related to excessive physical workloads, noise, vibration, repetitive strain injuries and stress among machine operators to name only the most significant. In fact, most forest workers do not reach normal pension age".²⁵⁵

The situation in the tropics is worse still. According to the ILO, logging fatalities in Sarawak, Malaysia – the one tropical country for which reliable data are available – was between 3 and 40 times the level in developed countries, and 17 times the level of the USA (see Figure 1).

Figure 1. Logging industry fatalities in selected countries²⁵⁶



The figures for Sarawak are probably not unusual for the tropics; the fact that there appear to be no statistics at all available for the African logging industry (outside of southern Africa) is, in itself, indicative, reflecting the fact that occupational health and safety records are not kept, let alone monitored and acted upon. The dangers to forest workers are generally treated by tropical country governments as a matter of low priority²⁵⁷ and are usually left to the logging concessionaire to deal with.

Most accidents in forestry occur during tree-felling and the dangers are much greater in tropical forests: chainsaws are much larger (because trees are larger) and may be stripped of any safety features in order to make them lighter and easier to use. The surface roots and buttresses of tropical trees may make it difficult for chainsaw operators to fell trees safely, and lianas and vines often pull down other surrounding trees. Safety clothing and helmets are usually either not provided or are discarded by the worker, as they are mostly designed for temperate or boreal use and are unsuited to the hot and humid conditions of the tropics. Venomous snakes and other wild animals are an additional danger, especially for tree-spotters and chainsaw operators.

The next main cause of fatalities and serious injury in forestry is usually in operating

²⁴⁹ Brandling-Bennett, D. & F. Pinheiro (1996) Infectious Diseases in Latin America and the Caribbean: Are they really emerging and increasing? *Emerging Infectious Diseases* 2(1);²⁵⁰ Gratz, N.G. (1999) Emerging and resurging vector-borne diseases. *Annual Review of Entomology* 44: 51-75;²⁵¹ Gratz (1999) *op.cit.*;²⁵² http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/x5393e/x5393e07.htm;²⁵³ Blombäck, P. & P. Poschen (2003) Decent work in forestry? Enhancing forestry work and forest-based livelihoods. Paper to the XII World Forestry Congress, Quebec, Canada, 2003.;²⁵⁴ Blombäck, P. (2001) Improving occupational safety and health: the International Labour Organisation's contribution, In 'Applying reduced impact logging to advance sustainable forest management', proceedings of Conference, Asia-Pacific Forestry Commission, Kuching 26 February-1 March 2001.²⁵⁵ Blombäck (2001) *op.cit.*;²⁵⁶ From: Blombäck (2001) *op.cit.*;²⁵⁷ Blombäck & Poschen (2003) *op.cit.*

equipment. Again, this can be more problematic in the tropics because of environmental conditions. Because trees are larger, so equipment tends to be heavier, and safety devices such as seat-belts and protective guards may be unused or disconnected. Heavy rainfall, steep terrain and only rudimentary extraction tracks and roads, which usually have only an earth surface, can create very hazardous working conditions for skidder operators and truck drivers.

Log transportation is itself a notorious cause of death and injury in the tropics, especially in parts of Africa where, as noted above, transportation distances can be very long, roads poor, law enforcement non-existent or easily corruptible, and drivers paid on "piece" rates; all of this provides strong incentives for log truck drivers to work excessive hours, take risks, and often drive under the influence of alcohol or drugs. These conditions frequently prove fatal for other road users and residents along roadsides as well as for the truck drivers themselves.

In the African context, health and safety practices may not be required under national legislation and, even where they are, enforcement is likely to be non-existent. Union representation is often outlawed or strongly discouraged, and workers therefore have little redress over dangerous working conditions; they may anyway fear loss of employment for reporting minor injuries or safety equipment failure.

The full cost of health and safety problems within the logging industry is much greater than the lives lost as a result of timber extraction. As the ILO has pointed out:

"Behind the accident statistics lay much human suffering, all the more so since the many injuries tend to be difficult to treat and heal. For example, cuts by chainsaws often

tear tissue, making surgical repair difficult or impossible. The risk of an accident with dramatic consequences is aggravated when, as is often the case in forestry, it occurs in an isolated place, far from a properly equipped medical centre. Accidents also affect the victim's family, especially in developing countries where forest workers and their families often live under poor conditions with no alternative sources of income".²⁵⁸

Conclusions

There is strong evidence that industrial-scale logging operations in tropical forests are closely linked to the spread of a range of important, often fatal diseases, especially malaria and HIV-AIDS. In addition, there are good reasons to fear that further new diseases will emerge from forest areas undergoing modification, both because of environmental change as well as the proximity of larger numbers of humans to disease vectors. This strongly suggests that the promotion of commercial logging in tropical forests run directly counter to Millennium Development Goal #6, which aims to "combat HIV/AIDS, malaria and other diseases".

To a certain extent, these problems could be mitigated through improved health-care provision and screening. However, in other cases, it is difficult to see what steps can be taken in practice, as the causes for the spread of disease are fundamentally related to the nature of tropical logging: the industry necessarily requires the use of heavy equipment (as commercially viable tropical trees are generally very large), and therefore damage will be done to the soil surface, watercourses and surrounding vegetation that will tend to favour the proliferation of mosquitoes.

²⁵⁸ Blombäck (2001) *op.cit.*

Industrial logging operations invariably require male migrant labour and therefore are always likely to attract sex workers. The logging camps act as foci of transmission of HIV-AIDS. The need for the logging industry to export logs means that these diseases are always likely to be spread along corridors of infection between the logging operation and the export port.

Similarly, the dangerous conditions faced by logging concession workers could be mitigated through adoption and enforcement of stricter health and safety regulations (such as the ILO Code of Practice on Safety and Health in Forest Workers). However, given that most tropical country governments are generally unwilling to fund proper administration and enforcement of even basic forestry standards, such a prospect seems extremely unlikely in the foreseeable future.

Recommendations

In conclusion, the hidden human health costs associated with tropical logging concessions should be considered as inherent within the logging concession system. They should be assessed and internalised within the calculations by national governments and international agencies which promote the expansion of industrial logging in the tropics, and compared with the net economic value of alternative forms of forest management.

CHAPTER 5: ECONOMIC SUSTAINABILITY

Industrial logging has been justified on the basis of its economic benefits, and thus, it is widely promulgated as a means to promote development and reduce poverty. In this chapter, the three authors question this assumption. Thus, Mark van Dorp presents economic data for the major timber producing countries in Africa. He shows that overall economic growth and human development have declined in nearly all cases, despite the continued exploitation of these countries' forests.

A major factor preventing economic success is the failure of governments to capture an appropriate share of the value of their forest resources, for example, due to the non-payment of taxes. In Article 1.2, Stuart Wilson provides an analysis of the problems inherent to the forest concession system, based as it is on a structural imbalance of power between forestry authorities and the private sector.

Finally, Simon Counsell looks in detail at the purported benefits of logging, describing how these are often not delivered, and further, that these may be outweighed by the negative impacts of the industry, for example, on non-timber resources and health. All these articles highlight the need for a more comprehensive analysis of the costs and benefits of logging.



Batwa woman in Equateur, no timber forest products are an important aspect in the sustainable livelihoods in the region.
Photo: Theophile Gata

5.1 ECONOMIC IMPACTS OF INDUSTRIAL LOGGING CONCESSIONS: WHAT ARE THE BENEFITS?

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Introduction

In terms of economic value, the logging industry has an important role to play in all tropical forest-rich countries. Most of these countries are low or middle-income countries with a high dependency on natural resources including forestry. The argument often used by the World Bank and IMF is that industrial logging is a quick and easy way of kick-starting moribund economies and generates much needed foreign income and jobs in rural communities. This paper examines these assumptions and looks at the economic issues around industrial logging concessions at local, national and international levels and at international market and trade issues. We will look primarily at the direct economic impacts of industrial logging, focusing on the benefits to the national economy. However, it is important to note that the "high dependency" mentioned above, applies above all to the rural poor using natural forest resources for subsistence purposes. These economic values are mostly not included within the national accounting figures because they are not part of the formal economic system, and therefore are not accounted for when they are lost or diminished as a result of the imposition of an industrial logging concessions system.

Economic and statistical data have been analysed for the last 15 years in the major timber producing and exporting countries in Africa. Sources used include policy reports, academic articles and statistical data. It should be noted that there is a serious lack of reliable data on the economics of logging. Available reports mostly deal with the national level,

focusing on different indicators and using different methodologies for data collection. Therefore, the results are not suitable for cross-country comparison. Databases including worldwide data, like the online World Bank development indicators and the FAOSTAT database, are useful but often less accurate than national level reports.

A key concern of policymakers is how to ensure that forest resources are managed in an economically sustainable way. In the sustainable development paradigm, economic sustainability is defined as follows:²⁹³

"To maximize the flow of income that could be generated while at least maintaining the stock of assets that yield these beneficial outputs."

For the purpose of this report, a breakdown into two sub-questions is useful:

1. What are the flows of income (and other economic benefits such as employment) from forest resources?
2. What are the optimal levels of stocks needed for sustainable production?

In this paper the focus will be on the first question, related to the economic impacts of forest exploitation. Economic impact will be assessed in terms of employment, tax revenues and value-added (production and exports) arising from the forest sector. This assessment includes only the direct monetary economic impacts from these activities.²⁹⁴

²⁹³ Munasinghe, M. (2002) Macroeconomics and the environment. The International Library of Critical Writing in Economics. An Elgar Reference Collection, UK/USA. p.xiv;²⁹⁴ Indirect economic impacts, such as the trickle-down effects to national economies, have not been included because they are extremely difficult to measure and thus beyond the scope of this review. The same goes for non-monetary impacts, including social and environmental impacts. The need to integrate these impacts into economic analysis will be explained further on in this report.

Economic indicators of timber producing countries in Africa

In 2004, the five largest timber producing and exporting countries in Africa were (in descending importance) Gabon, Côte d'Ivoire, Cameroon, Ghana and Congo-Brazzaville. The data presented in this chapter will focus on these five countries. The Democratic Republic of Congo, although relatively unimportant in terms of industrial logging, has been added as a sixth case study country because of the expected growth of the sector in the DRC.

In macroeconomic terms, the six countries show great variation in Gross Domestic Product (GDP) per capita (see Table 1), ranging from more than U.S. \$6,000 for Gabon to less than U.S. \$1,000 for Congo and DRC. Gabon's national income is elevated mainly due to high revenues from oil exports in relation to a small population. For the other case study countries, national income is mainly based on a mixture of agriculture (subsistence and cash crops), agro-business (rubber and palm oil plantations), forestry (industrial timber and non-timber forest products) and mining (gold, coltan, etc). Though at present DRC has the lowest national income level of the six countries, potentially it is among the richest countries in the world in terms of natural wealth.

Table 1: GDP (Gross Domestic Product, U.S. \$) per capita for selected African countries.²⁹⁵

Country	1990	1995	2000	2004
Gabon	6140	6430	6130	5900
Cote d'Ivoire	1830	1570	1590	1500
Cameroon	2060	1670	1870	1900
Ghana	1760	1960	n.a.	2300
Congo	970	1220	960	800
DRC	n.a.	990	701	700

It has long been recognized that GDP per capita is an extremely limited indicator of economic wealth because it only shows productive capacity in the formal economy. In light of these criticisms, and coupled with the recognition that development extends beyond economic growth, various alternative measures that aim to incorporate social and political dimensions of development have been developed. One of the best-known is the Human Development Index (HDI), which measures three basic dimensions of social and political development.²⁹⁶ This index shows strong differences in our six case study countries (see Table 2). The most striking feature is that, since 1990, in all countries except for Ghana (and possibly Gabon) the HDI has decreased, with DRC showing the steepest decline. It is also interesting to note the relatively high score of Congo-Brazzaville, which ranks 23 places higher in terms of HD compared to GDP; the other countries (with the exception of DRC) all rank lower in terms of HD compared to GDP.

Table 2: Human Development Index (HDI) for selected African countries.²⁹⁷

Country	1990	1995	2000	2003 (2004 figures n.a.)	Rank (in brackets: GDP per capita rank minus HDI rank)
Gabon	6140	6430	6130	5900	123 (-43)
Cote d'Ivoire	1830	1570	1590	1500	163 (-14)
Cameroon	2060	1670	1870	1900	148 (-19)
Ghana	1760	1960	n.a.	2300	138 (-11)
Congo	970	1220	960	800	142 (+23)
DRC	n.a.	990	701	700	167 (+6)

All the above countries, with the exception of Ghana, have declined in both terms of GDP and HDI over the last 15 years. In the case of Ghana, the improvements in GDP and HDI have at least partially come about as a result of improved national governance and social programmes, which included measures to improve forest governance.

²⁹⁵ Source of figures for 1990, 1995, 2000: World Bank online database: <http://www.worldbank.org>; Figures for 2004: Central Intelligence Agency (CIA) (2004) The World Fact Book;²⁹⁶ The HDI is a composite index measuring average achievement in three basic dimensions of human development: a long and healthy life, knowledge and a decent standard of living. The human development index values in Table 2 were calculated using a consistent methodology and data series. They are not strictly comparable with those in earlier Human Development Reports;²⁹⁷ Source: United Nations Development Programme (UNDP) (2005) Human Development Report 2005.

It is interesting to note the structure of the forest sector in Ghana in which, in spite of significant illegal activity and almost a decade-long ban on chainsaw lumber production, production still persists and is thought to be on the ascendancy. From one perspective it has been noted that this has been detrimental to the national economy due to non-payment of stumpage and other statutory fees by chainsaw operators. Since 2003 about U.S. \$12.8 million of forest revenue are lost annually through illegal chainsaw activities.²⁹⁸ However, from another perspective, chainsaw milling has undoubtedly distributed benefits to the poor – the number of people indirectly involved in chainsaw milling is considerable, with estimates as high as 50,000 people. The transportation of lumber by head load fetches rates more than five times the daily minimum wage. Farmers often prefer instant payments for trees from illegal chain sawyers than promises from the forest sector institutions for benefits that are eventually distributed in a non-transparent way.²⁹⁹

The structure of the industry and distribution of the benefits needs to be examined more closely to determine if the predominance of the small-scale operators is a more effective mechanism regarding the alleviation of poverty as compared to the allocation of industrial forest logging concessions. The governance and management issues would however still have to be addressed, given the notoriously difficult nature of law enforcement with respect to chainsaw logging.

Economic impacts of the forest sector

Economic impacts of the industrial forest sector can be either positive or negative. The positive economic impacts include provision of employment, in both the primary and processing industries and generation of revenues from export and domestic industry activities.

Negative impacts of the industrial forest sector, including the loss of forest resources to local populations, are very difficult to quantify. It is increasingly realized that in the past, policymakers have focused too much on the tangible, monetary benefits that the forest industry creates, without giving due attention to the non-monetary or invisible impacts.

Employment

For the years 1990-2000, employment figures in the forestry sector are available from FAO (refer to Figure 1 below). For our six case study countries, employment figures have been estimated, since official statistics were not available or not reliable, due to weak statistical services in the countries concerned.³⁰⁰ In forestry sector employment, four categories are distinguished:

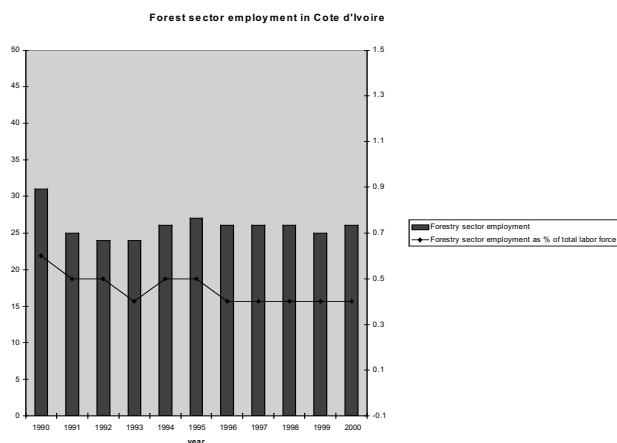
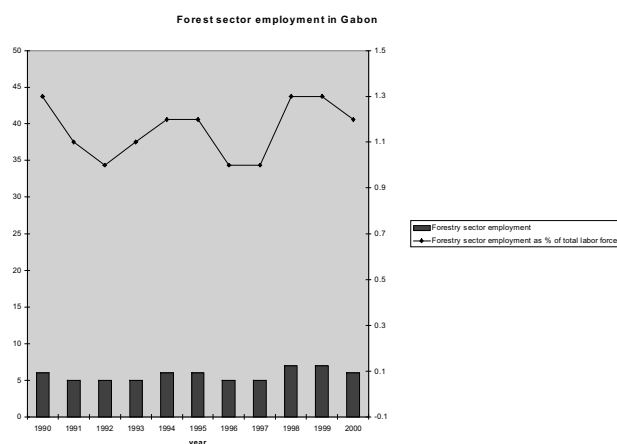
- Forestry
- Wood industry
- Pulp and paper industry
- Furniture industry

²⁹⁸ World Bank cited in: FRP (n.d.) Country Report Ghana: Chain Saw Logging and Milling in Ghana: Background Study Report, FRP. R8509.;²⁹⁹ Bird, N. *et al.* (2006) Ghana's experience in timber verification system design. Country Case Study 1, Verifor;³⁰⁰ FAO (2004) Trends and current status of the contribution of the forestry sector to national economies. Working paper FSFM/ACC/07. Forest Products and Economics Division, Rome, Italy.

In our case study countries, employment mainly consists of the first two categories, forestry (timber logging) and wood industry (local processing). From Figure 1 below, the following conclusions can be drawn:

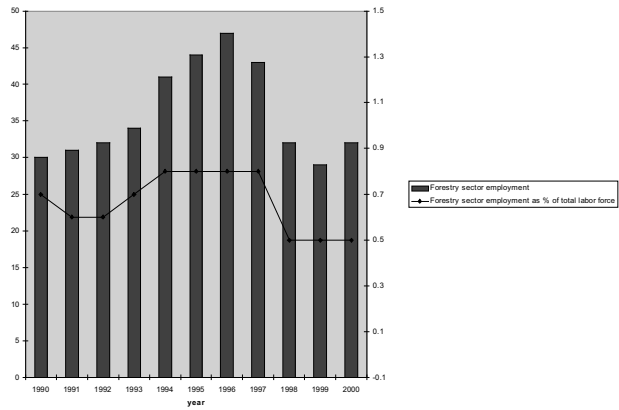
- In all the countries, the forest sector constitutes a very small proportion of total employment. Significantly, despite many years of attempts by international agencies and some governments to increase local processing and "value-added", the level of employment has not increased overall.
- In absolute numbers, Cameroon, Ghana and Côte d'Ivoire have the largest labour force in the forestry sector, each country employing between 25,000 and 30,000 people. In Cameroon, a sharp downward trend occurred between 1996 and 2000, with employment decreasing from over 45,000 to around 30,000. In the other three countries, employment has remained relatively low but stable (not exceeding 5,000).
- In relative terms, Gabon's forest sector performs best with 1.2% of national employment on average, although this is a reflection of the country's relatively small population and lack of large-scale industries. In the other 5 countries, employment in the forestry sector is less than 0.5% of total employment.

Figure 1: Forest sector employment for selected African countries, 1990-2000³⁰¹ (All figures in thousands of person-years or as a percentage of total employment.)

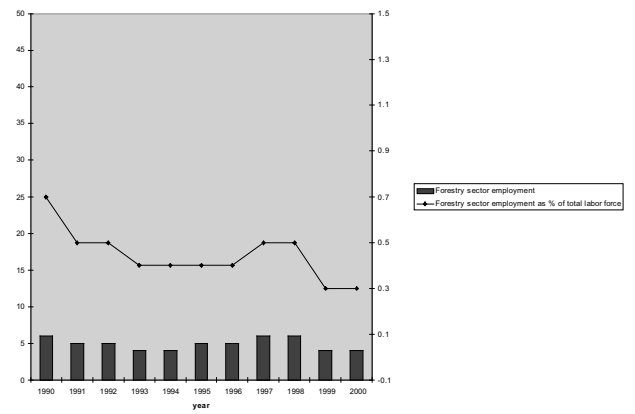


³⁰¹ FAO (2004) *op.cit.*

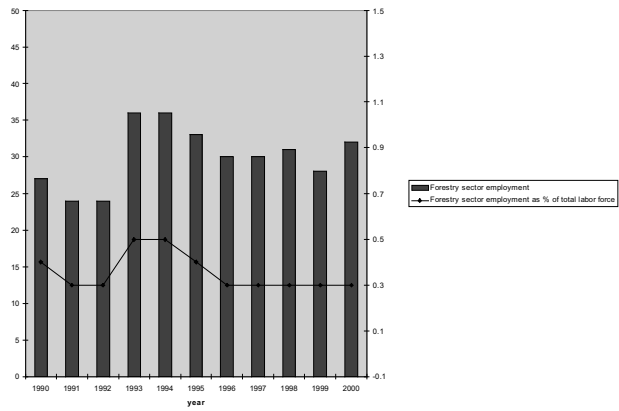
Forestry sector employment in Cameroon



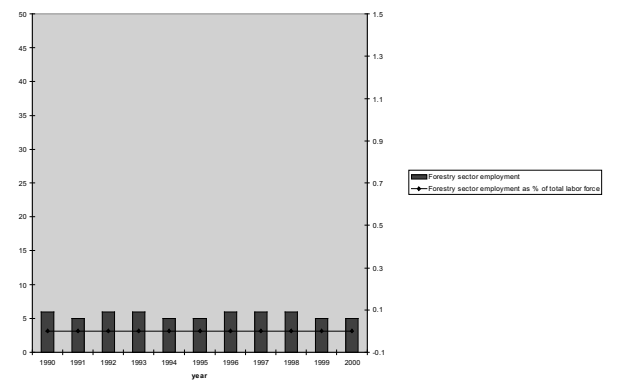
Forest sector employment in Congo-Brazzaville



Forest sector employment in Ghana



Forest sector employment in DRC



Box 1: Employment and productivity of logging concessions in the Congo Basin

From a recent study by CIFOR on logging concessions in the Congo Basin (with the exception of Equatorial Guinea), average employment is estimated at 2.7 workers per 1,000 hectares.³⁰² Average productivity is estimated at 146 cubic metre /worker. Looking on a country-by-country basis, Congo, Cameroon and Gabon show higher productivity per worker, indicating a more modern and efficient industry, while DRC has very low productivity per worker. Another interesting observation is that while employment figures do not differ between national and foreign-capital based concessions, productivity figures vary significantly. It appears that foreign concessions are more efficient in exploiting the resources in terms of amount of timber produced per worker. It is also concluded that national concessions tend to have higher processing rates, reflecting the fact that, in many countries in the Congo Basin, foreign concessionaires export the majority of their production as logs to provide European or Asian based companies with raw materials.

It should be noted that the study, which looked at 30 concessions in 5 Congo Basin countries has one major weakness: the selection of concessions was done on the basis of their willingness to participate, accessibility and level of confidence in the data offered. Looking at the high level of illegal logging and corruption in the sector, this means that by definition, the study's results cannot be representative of the whole sector and so tend to present a rosier picture than if the least sustainable companies – who might also tend to be the least co-operative – would have been included.

Revenues and tax collection

Another indicator of economic impact at the national level is the revenue that the forestry sector creates, both for the National Treasury and for the local population (local communities' revenues). The argument often used by the World Bank to justify its involvement in industrial logging is that increased timber exports can increase foreign currency reserves. In reality, one of the key problems is the difficulty in collecting tax revenues from logging permits and timber harvests. It could be argued that the way the logging concession system is applied in most African countries directly contributes to this problem, because in reality the concession system is used by decision-makers as an important tool of political patronage and graft. This has resulted in a system in which the public "good" of forests is privatised and there are strong incentives not to collect revenues, as this would necessarily reduce the value of the concession as a means of patronage. It is estimated that the losses from failure to collect the revenues and royalties from legal forest operations amounts to U.S. \$5 billion per year globally,³⁰³ which equals the total GDP of a low-income country such as Mali or Burkina Faso.

In several African countries, initiatives have been developed to improve this situation. In 2000, the government of Cameroon introduced the "*Programme de Sécurisation des Recettes Forestières*" (Programme to Secure Forestry Revenues) under World Bank/IMF pressure.³⁰⁴ Fiscal revenues from forestry have increased from 11.5 billion F CFA (= U.S. \$21 million) in 2000 to 40 billion F CFA (= U.S. \$74 million) in 2003. In addition, it has led to an increased level of local taxes for forest communities to 28 billion F CFA (= U.S. \$52 million). However, according to the same report, there is still a long way to go in the fight against fraud and corruption, especially on checkpoints along the

³⁰² Ruiz Perez, M. et al. (2005) Logging in the Congo basin: A multi-country characterization of timber companies. *Forest Ecology and Management* 214: 221-236;³⁰³ World Bank (2003) Proceedings of the international workshop on reforming forest fiscal systems to promote poverty reduction, and sustainable forest management. Oct. 19-21, 2003. Washington, D.C. p.vii;³⁰⁴ *Ministère de l'Economie et des Finances du Cameroun (MINEFI) (2005) Audit du Programme de Sécurisation des Recettes Forestières – PSRF. Rapport final.* Yaoundé, Cameroon.

roads and at the entrance of processing factories. In addition, only a small share of local taxes is invested in local development, while the rest is used for the personal benefit of local elites.³⁰⁵

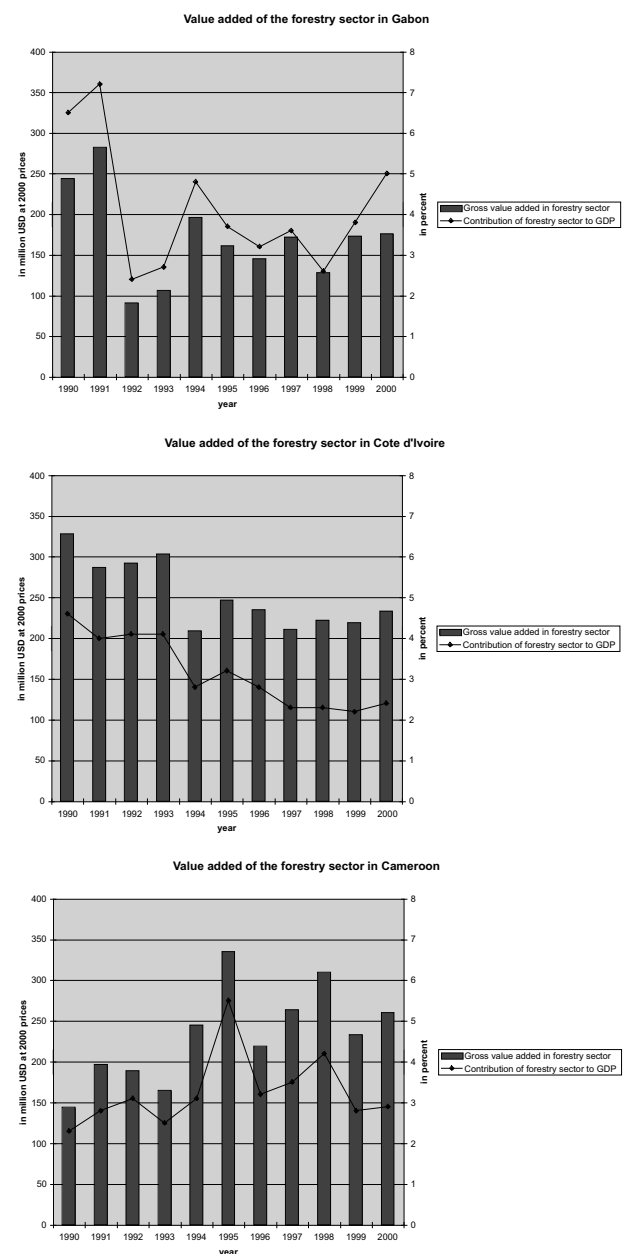
For Gabon, the estimated loss of fiscal revenues to the Treasury amounts to some 8 billion F CFA (= around U.S. \$15 million), representing more than 60% of the logging concessions valid as of 1st January 2005.³⁰⁶ Unfortunately, for the other four countries no estimates have been found on the contribution of forestry revenues to the National Treasury.³⁰⁷

Value-added contribution to the national income

Another important indicator of the economic impact of the forestry sector is the value-added, defined as net profits plus labour costs of timber producers, processing industries or exporters.³⁰⁸ Figures from FAO for the period 1990-2000 are given in Figure 2 below. The same remark applies as with employment figures regarding the limited reliability of the data. The following conclusions can be drawn:

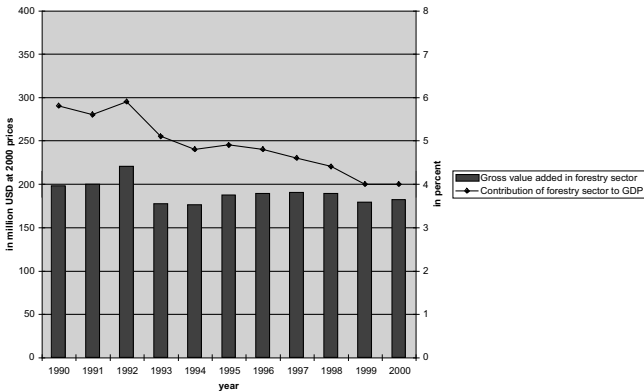
- In all case study countries, except for Cameroon, gross value-added has decreased between 1990 and 2000, indicating that in terms of monetary value the forest sector has gone through a period of stagnation. This downward trend is most pronounced in Côte d'Ivoire, where value-added fell from U.S. \$328 to 233 million. In Cameroon, large fluctuations have occurred, with peaks in 1995 and 1998.
- On average, the contribution to GDP was largest in Ghana and Gabon (with 4.9% and 4.1% respectively of total GDP). Again, with the notable exception of Cameroon, the contribution of the forestry sector to GDP has decreased considerably between 1990-2000.

Figure 2: Value-added of the forestry sector for selected African countries, 1990-2000 (All figures in U.S. \$ million at 2000 prices or as a percentage of Gross Domestic Product (GDP).)³⁰⁹

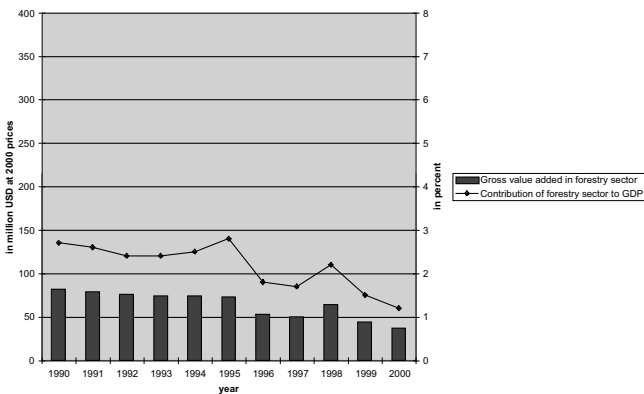


³⁰⁵ Inter Press service (IPS) (2005) Corruption threatens Cameroon's forests. Mail & Guardian Online, 19 July 2005. Online: http://www.mg.co.za/articlePage.aspx?articleid=245789&area=/insight/insight_africa/; ³⁰⁶ Greenpeace (2005) Briefing on fiscal reform of Gabon's forestry sector; ³⁰⁷ Although it is beyond the scope of this report, for both Gabon and Cameroon, it would be interesting to compare the actual levels of Treasury receipts with the theoretical or possible levels. This would have to include some kind of assessment of stumpage tax levels, area fees and other taxes, and why exactly it is that they are so low in relation to the value of the final product; ³⁰⁸ The sum of all value-added generated by all production units of the economy equals the total production of the country, its national income measured as GDP (Gross Domestic Product) or GNP (Gross National Product); ³⁰⁹ Source: FAO (2004) *op. cit.*

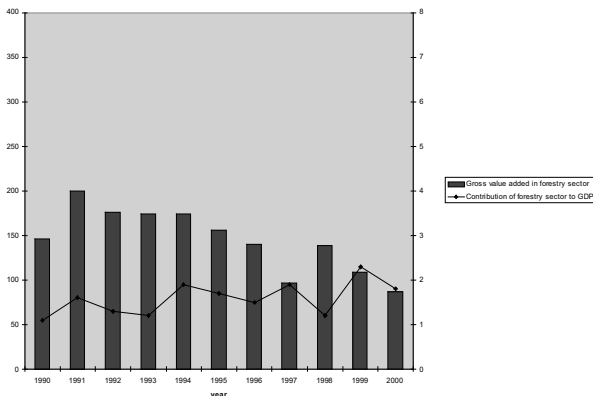
Value added of the forestry sector in Ghana



Value added of the forestry sector in Congo Brazzaville



Value added of the forestry sector in DRC



Negative economic impacts

In addition to the positive impacts highlighted above, there are a number of negative economic impacts. The cycle that industrial logging sets in motion by opening up the forest has often led from forest degradation to deforestation, as can be observed in West Africa. This results in a loss of local subsistence and ecosystem values. It is highly problematic to quantify these losses, because they mostly concern goods or services that are usually not accounted for in National Accounts, such as:

- Subsistence production and local trade of forest products, including timber, fuelwood, bushmeat, fruits, medicines and other non-timber forest products;
- Environmental services for people directly depending on the forest (e.g. water retention) and people indirectly depending on a healthy forest ecosystem (e.g. carbon storage).

In the last two decades, numerous attempts have been made to quantify the value of non-timber forest products and environmental services to the economy. However, most of these studies focus on a few products only or different methodologies have been used, making it difficult to make cross-country or cross-time comparisons. Standardized data on the economic value of all forest products and services would enable a more realistic cost-benefit analysis of different forest uses. However, since such standardized data are currently not available, economic data on the negative impacts could not be included in this report

Economic developments in the major timber producing countries

Production, processing and trade statistics for the forest sector

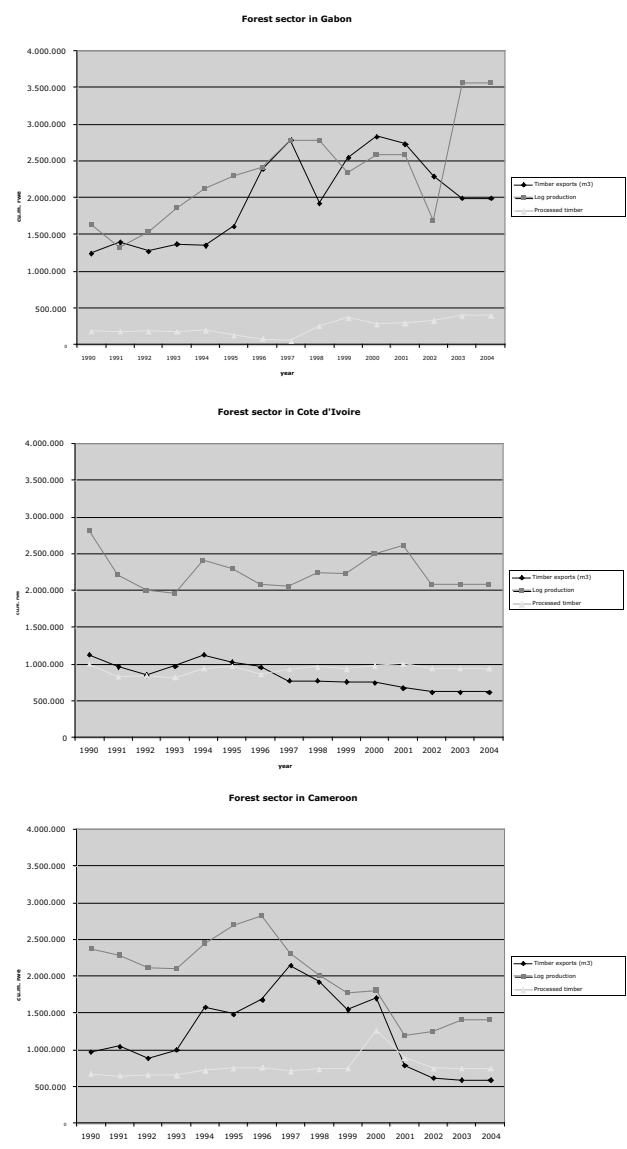
For the six case study countries, production and export figures are given in Figure 3 below. A number of interesting trends can be distinguished. Gabon has become the largest timber producer in Africa, with an annual log production of 3.5 million cubic metres. In Cameroon and Côte d'Ivoire, which have for a long time been the leading timber producing countries in Africa, log production has significantly decreased. Ghana and Congo have remained relatively small producers but stable in terms of production volume. DRC has seen a gradual decline in log production, from almost 500,000 cubic metres per annum in 1990 to an estimated 170,000 cubic metres in 2004.

According to official figures, Côte d'Ivoire has remained the number one in terms of timber processing, with around 1 million cubic metres annually. In Cameroon, the short-lived boom in processing (2000-2001) was most probably caused by the new law of 1999 that prohibited the exports of raw logs, which significantly increased the average conversion rate of timber. However, because of decreased log production, in absolute terms, timber processing did not increase.³¹⁰ Gabon, Ghana and Congo all managed to increase timber processing, although their share remains relatively small. In DRC, only a small share of total production is processed.

Gabon has become by far the number one tropical timber exporter in Africa, now exporting 2 million cubic metres annually, with more than 50% of exports destined for China. Exports for Cameroon and Côte d'Ivoire decreased sharply to around 0.5 million cubic metres. A notable development is that, as a result, Congo has now

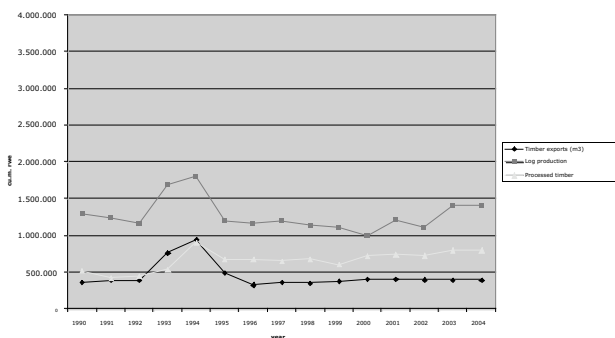
become the second largest tropical timber exporter in Africa, at 650,000 cubic metres annually. Ghana, Congo and DRC remained relatively stable in terms of exports.

Figure 3: Timber production, processing & exports for selected African countries, 1990-2004. (All figures in million cubic metres rwe (roundwood equivalent).)³¹¹

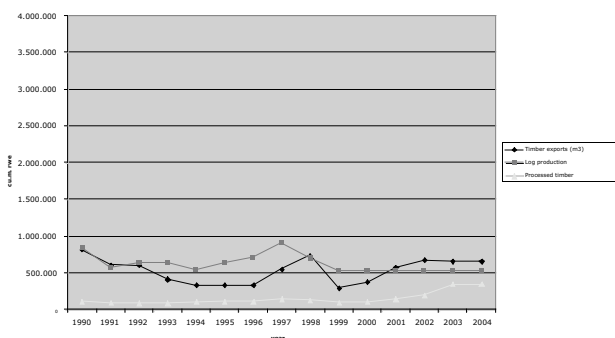


³¹⁰ Refer to Box 2 for a more detailed analysis of the forest sector in Cameroon; ³¹¹ Source: FAO (Various years) Yearbook of Forest Products.

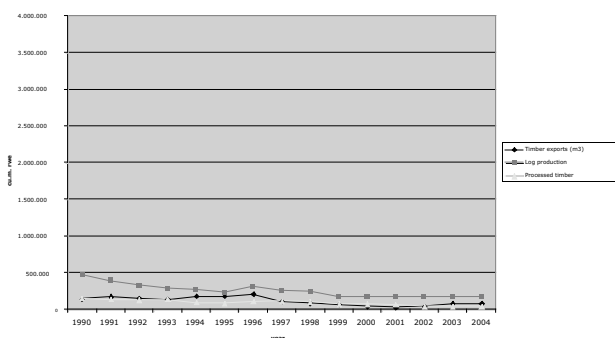
Forest sector in Ghana



Forest sector in Congo-Brazzaville



Forest sector in DRC



Regional economic trends of industrial logging in Africa

Based on the production and trade statistics presented above, a number of regional economic trends that have affected sustainability of the forest resource can be outlined for West and Central Africa. For the purposes of this analysis, the African tropical forests can be divided into three zones:

West African forest zone:

Industrial logging started in the 1950s and 1960s based on a concession system which was introduced by the former colonial powers of the UK (Nigeria, Ghana) and France (Côte d'Ivoire). Because of the lack of long-term forest management systems, combined with strong population growth and urbanisation (especially in the case of Nigeria) this has led to largely degraded forests and to deforestation. In the case of Côte d'Ivoire, despite still being the second largest timber producer in Africa, exports have halved over the last 15 years. This is largely due to unsustainable forest management - the most valuable species having been extracted, many foreign companies have moved their production sites to the Congo Basin. This means that, at present, production concentrates on less commercially valuable species.

In Ghana, despite the introduction of relatively progressive forest legislation, which obliges companies to work according to a management plan, the country has lost most of its primary forests as a result of weak enforcement and illegal logging. Only in those countries that have known extended periods of civil war, such as Liberia and Sierra Leone, have forests remained relatively intact. The timber exploitation that has taken place in these countries has left these countries with no tangible economic benefits because the profits

were completely absorbed by the warring parties while leaving the local population and the national treasury empty-handed.

Congo Basin coastal forest zone:

In the coastal areas of Cameroon, Gabon, Equatorial Guinea and Congo-Brazzaville, where transport costs are relatively low, industrial logging started in the 1970s and 1980s, following a decline in timber resources in West Africa. Many foreign (mainly French) companies formerly operating in Côte d'Ivoire moved to these three countries in the early 1970s. Similar to West Africa, the concession system introduced in the Congo Basin was focused on supplying demand without much consideration paid to the concept of sustainable forest management, nor to the needs and rights of forest-dependent communities.

Cameroon introduced a progressive new forest law in 1994 which formalised the industrial forest logging concession system and introduced the concept, if not the reality, of concession management plans. Subsequently, log production declined (considered in Box 2), although there was a short-lived boom in processing from 2000-2001 (see figure 3), probably caused by the new law of 1999 that prohibited the export of raw logs. New forest laws were introduced in Congo-Brazzaville in 2000 and in Gabon in 2001. Contrary to Cameroon, in Gabon and Congo log production has not diminished after the introduction of the new legislation. This has been attributed to the fact that the concession allocation system has not been significantly altered in either country.

Since the start of industrial forest exploitation in the Congo Basin's coastal zone, most commercially valuable trees have been extracted, mainly for export to Europe and Asia. This has resulted in a depleted forest resource and degraded forest ecosystem, both

in terms of ecological and socio-cultural values. Consequently, logging activities are shifting from these coastal zones towards the inland forests of the Congo Basin, to make up for the shortfall in production.

Congo Basin inland forest zone

In the inland forest zones of the Congo Basin, mainly limited to the south-east part of Cameroon, the north of Congo-Brazzaville, the Central African Republic, the Democratic Republic of Congo and the south-western part of Sudan, the intensity of industrial logging has remained limited until recently because of high transport costs to the nearest seaport. However, as noted above, with the depletion of the coastal forests logging has increased in these areas, with the possible exception of DRC and Sudan due to conflict and the lack of infrastructure in these countries.

With the passing of a new Forest Code in 2002 and World Bank-initiated efforts to boost the logging sector in DRC, it is anticipated that there will be unprecedented growth in logging activity. Increasing political stability has already increased such activities in the country. This will potentially result in increased employment and revenues for the country. However, to achieve this, lessons need to be learnt from experiences elsewhere in Central and West Africa. Therefore, a number of recommendations for the establishment of an economically sustainable forest sector in the DRC are outlined in section 6 below.

Box 2: The case of Cameroon: what is in store for the DRC?

Cameroon makes an interesting case study for legislative development as there is a clear correlation between the policy measures taken and economic activity in the forest sector. This experience should be considered when making

proposals for the DRC, especially the workload implications in relation to the national institutional capacity and the government's ability to undertake the tasks that the international community and the private sector are urging them to take.

In Cameroon, prior to 1994 industrial concessions were allocated on a discretionary basis that did not ensure either adequate rent capture by the government, nor the companies' technical and financial means to carry out their operations.³¹²

In 1994 Cameroon introduced forestry legislation, by which it became the first Congo Basin country to allocate concessions through open competitive bidding. In addition, management plans became obligatory for each industrial concession (Unité Forestières d'Amenagement), and possibilities were introduced for the local population to engage in community forestry. In 1999, a decree was passed that prohibited companies to export unprocessed logs. This measure was meant to stimulate local processing in order to add value to the timber exported. As can be seen in Figure 3, since the year 2000, timber exports have decreased significantly in Cameroon, indicating that the measure has had an impact. This decline is probably due to a number of factors, including increased law enforcement and fewer concessions being allocated. Although the system did not perform well from the outset, it can be argued that the new law has stopped "liquidation forestry" in Cameroon. On the other hand, the recent decline in production could also be due to exhaustion of the most commercially viable timber stocks. A likely scenario is that the degraded forest will become less interesting to logging companies, and that in the long term the opened-up forest will be invaded by migrants from ecologically less fertile parts of Cameroon, leading to a situation comparable to that in Nigeria.

Conclusions

Based on the available economic data of the forest sector in tropical Africa, the following conclusions can be drawn.

- Overall economic growth and human development have declined in all case study countries during the last 15 years, with the exception of Ghana, where GDP per capita has actually grown since 1990. In terms of economic performance, the forest sector in the six case study countries has not done well in the last 15 years. In most countries, its contribution to national income has declined, while the share of forest sector employment in the total labour force has also decreased. Cameroon is one exception, being the only country showing an increase in gross value-added of the forestry sector. In general, it can be concluded that the forestry sector has not contributed significantly to the national economies of these countries, despite large quantities of high-value timber being exported.
- The negative economic impacts of industrial logging, such as environmental degradation or decreased availability of non-timber forest products for subsistence or local trade due to deforestation, are difficult to quantify. It is increasingly recognized that these values need to be considered in the economic decision making processes for the forest sector.
- Since the introduction of the new forest law in 1994, timber production and exports from Cameroon have declined considerably. The new concession allocation system has stopped "liquidation forestry" to a certain extent in the short term and thus, it can be argued, has been a success. It has also increased the fiscal revenues from forestry

³¹² Collomb, J.G. & H. Bikié (2000) 1999-2000 Allocation of logging permits in Cameroon: fine-tuning Central-Africa's first auction system. Global Forest Watch, Cameroon.

by the Treasury due to improved tax collection systems. On the other hand, the recent decline in production could also be due to exhaustion of the most commercially viable timber stocks because of unsustainable management. If that is the case, the forests of Cameroon are destined to go the same way as those in Nigeria, that is to say that they will be settled and progressively converted to non-forest land. This can be interpreted as a failure in management and the “permanent forest estate” concept.

- In due course the same is bound to happen to countries like Gabon, Congo-Brazzaville and the Democratic Republic of Congo if no appropriate measures are taken to ensure long-term sustainability, including a sustainable logging concessions system.
- As an overall conclusion, it can be argued that, in the short term, industrial logging concessions have at best made a limited contribution to the national economy in terms of employment, tax revenues, and gross value-added. Furthermore, it is doubtful that a significant share of these benefits has reached the people living in or near the exploited forests. In other words, there is little evidence that the forestry sector has made a significant contribution to poverty alleviation. Finally, the unsustainable way in which most industrial logging concessions have operated in the past seems unlikely to have contributed to the creation of a forestry sector that will make a lasting contribution to these countries' economies.

Recommendations

Governments of Central African countries should:

- Ensure fair and transparent collection of forest taxes and revenues.
- Introduce financial incentives to attract logging companies operating according to a sustainable management plan.
- Strictly prohibit companies operating in an unsustainable or illegal way.
- Review policies for setting up local processing facilities to be more in line with optimal harvest levels.
- Take into account non-monetary values (environmental services, non-timber forest products) in decision making processes for the forestry sector, to be able to better judge both positive and negative impacts of industrial logging concessions.

NGOs/researchers should:

- Further research the economic impacts of industrial logging concessions. What benefit has the forest sector delivered to the countries where it has almost completed its cycle of exploitation? How has this benefit been distributed?
- Lobby the World Bank and IMF for making further loans in the forestry sector conditional on reform towards a more sustainable forest sector.
- Strengthen the capacity of forest communities in DRC, raising awareness of the impacts of industrial forestry, especially at the local level, and ensure that they will be allowed to play their part in the decision making process.

International donor community should:

- Put pressure on the World Bank and IMF to make further loans in the forestry sector conditional on reform towards a more sustainable forest sector.
- Put pressure on the European Union, North America, China, and other large importers to avoid buying timber from illegal logging activities, in order to increase revenues for timber exporting nations and to increase sustainability of the forest sector.

5.2 ECONOMIC THEORY AND JUSTIFICATION FOR THE INDUSTRIAL FOREST LOGGING CONCESSIONS SYSTEM

STUART WILSON, FORESTS MONITOR, UK

Introduction

Three possible broad models for formal forest management have been identified:

- Privatisation of the forest resource;
- Devolved management responsibilities to local communities or the private sector;
- Increased government capability to manage the resource.²⁵⁹

This article does not attempt to compare these different forms of management, but rather analyse the industrial forest logging concessions system as a method of devolving forest management obligations, particularly as previously applied in the Congo Basin²⁶⁰ and now incorporated into many of these countries' forest laws. This paper is primarily concerned with the nature and implementation of forest policies in states where there is weak governance. We propose alterations to the legal and policy framework for the forest sector that might be applicable in these situations.

The search for alternative arrangements for forest administration has been ongoing for many years and diverse situations have led to many different conclusions. An attempt to address these issues was made in a World Bank Technical Paper,²⁶¹ in which consultants recommended that the logging concessions system be replaced with forest management concessions, i.e. areas of forest where concessionaires would be required to care for the forests in their concession area, not just to harvest them. The paper goes on to present a method for converting standard logging concessions into forest management concessions over time. No examples were given in Western and Central Africa where the logging concession system works, yet the authors of the report provide detailed descriptions of where, how and why the system is failing.

Nine years later, a subsequent World Bank Technical Paper²⁶² again highlighted the same problems in the same countries, yet still suggested that forest concessions managed by the private sector can bridge the gap in forest management in countries where governments lack the capacity or will to do so effectively. The example provided by the Bank in support of their position was, in fact, a state corporation, *Perum Perhutani* in Indonesia. Providing this company as a positive example is unfortunate. *Perum Perhutani* has a long and well-documented history of human rights abuse and poor management. For example, over 20 people have been killed as a result of the company's actions (see Box 1), and it is also one of the few companies to have had a certificate from the Forest Stewardship Council withdrawn.

Box 1: Perum Perhutani, Java, Indonesia.

Perum Perhutani (PP) is an Indonesian state-owned forestry company responsible for the management of the state-owned forests on the islands of Java and Madura. As well as managing the forest, PP is charged with the implementation of social welfare services for the local communities and supporting national economic and development policies.

In Java province, it was estimated that 95% of the 34 million people living in forests are living on less than 1 dollar per day.²⁶³ Forest exploitation has not benefited local communities and has created conflict between those communities who log illegally in order to survive. Some communities are forced into working for PP, without a guaranteed income,²⁶⁴ trapping them into a poverty cycle.

Indigenous people, who have lived with the forests for centuries, are being denied access to resources required for their every day life.²⁶⁵ Furthermore, they have been subject to

²⁵⁹ Adapted from: Barbier, E.B. et al. (1994) The Economics of the Tropical Timber Trade. EarthScan Publications Ltd.;²⁶⁰ The Congo Basin here includes: Cameroon, CAR, Congo, DRC, Gabon and Equatorial Guinea;²⁶¹ Grut, M. et al. (1993) Forest Pricing and Concession Policies, Managing the High Forests of West and Central Africa. World Bank Technical Paper, No. 143;²⁶² Gray J. (2002) Forest Concession Policies and Revenue Systems, Country Experience and Policy Changes for Sustainable Tropical Forestry. World Bank Technical Paper No. 522;²⁶³ Guizol et al. (n.d.) Le teck javanais : de l'exploitation illégale au boycott dramatique. CIRAD UP40 Working Paper 40397.²⁶⁴ Down to Earth Newsletter, No. 63, November 2004. Available at: <http://dte.gn.apc.org/63HAL.HTM>;²⁶⁵ Down to Earth Newsletter, No. 60, February 2004. Available at: <http://dte.gn.apc.org/60LET.HTM>

violence. Between 1998 and 2003, at least 36 people were wounded and 12 people were killed at the hands of the security forces employed by PP to patrol the forests under their control, actions that were subsequently denounced by PP.²⁶⁶

Moreover, the logging activities in Central Java are unsustainable and have increased ecological risks. Although PP was certified under the Forest Stewardship Council scheme in 1995, the company's teak plantation certificates were suspended in 2001 by the Rainforest Alliance Smartwood programme, because it was considered that the long term sustainability of the plantation resources was at serious risk.²⁶⁷

In December 2005 a mudslide in the central Javan town of Banjarnegara killed 77 people. The Indonesian government blamed the coffee plantations in the surrounding areas, as many trees have been felled to make way for the plantations.²⁶⁸ However, to local environmentalists, it was clear that logging activities were the main cause of the disaster.²⁶⁹

CIFOR has posed the question; "Can forest-service payments help reduce poverty?"²⁷⁰ This is a particularly relevant question as the World Bank Technical Reports cite the contribution to poverty alleviation as one of the fundamental justifications of the industrial forest logging concessions system.

Logging has traditionally yielded few direct benefits to the poor, due to anti-poor policies as well as certain production characteristics.²⁷¹ It has been argued that trickledown economics is the basis for economic development in the short term, bringing such benefits as employment. However, the quality of this employment may be very poor: an unskilled chainsaw operator in Cameroon may receive 25,000 CFA (U.S. \$40) per month; in DRC

logging employees are paid as little as U.S. 50 cents a day.²⁷² Benefits can arise from the construction of roads by logging companies, if these are built to last, providing better access to education and health facilities, as well as helping to develop local markets.

Various policy proposals have been made which would ensure a more equitable distribution of benefits to the poor. These include:

- Increased local control over natural resources;
- Smallholder tree growing; and
- Development of small-scale wood based enterprises.²⁷³

Since the Earth Summit in Rio de Janeiro in 1990, community-based forest management has been promoted not only as a way of improving local livelihoods and of recognizing local claims to rights over forest resources, but also as part of a worldwide move towards devolving or decentralizing various governance functions. It is now broadly recognized that without local people having a significant stake in the management of local forest resources, the efforts of understaffed and poorly financed forest officials to protect forests will often be futile.²⁷⁴ Despite this, local people continue to be marginalized, as the industrial forest logging concessions system has been replicated across the tropical world in recent decades.²⁷⁵

Industrial forest logging concessions: a dominant policy and legal framework

Industrial forest logging concessions, also called forest resource utilization contracts, are the arrangement whereby the forest's owner, usually a government, agrees with another party, usually a logging company, to log and manage an area of forest for a specified period

²⁶⁶ Down to Earth Newsletter, No. 60, February 2004. Available at: <http://dte.gn.apc.org/60LET.HTM>; ²⁶⁷ Down to Earth Newsletter, No. 51, November 2001. Available at: <http://dte.gn.apc.org/51FSC.htm>; ²⁶⁸ Hopes fade after Java landslide, BBC news website, Thursday, 5 January 2006. <http://news.bbc.co.uk/1/hi/world/asia-pacific/4582988.stm>; ²⁶⁹ Disasters a result of 'disregard' for land use allocations. Tb. Arie Rukmantara, The Jakarta Post, Jakarta. National News, January 10, 2006; <http://www.thejakartapost.com/detailnational.asp?fileid=20060109.C01>; ²⁷⁰ Angelsen, A. & S. Wunder (2003) Exploring the Forest-Poverty Link: Key Concepts, Issues and Research Implications. CIFOR Occasional Paper No. 40. ²⁷¹ Angelsen & Wunder (2003) *op.cit.*; ²⁷² Keith Harmon Snow (December 2005) Personal communication; ²⁷³ CIFOR (2003) Infobrief No. 7. Based on Angelsen & Wunder (2003) *op.cit.*; ²⁷⁴ Lindsay, J. *et al.* (2002) Why law matters: design principles for strengthening the role of forestry legislation in reducing illegal activities and corrupt practices. FAO Development Law Service. Cited in: FAO (2002) Law and Sustainable Development since Rio - Legal Trends in Agriculture and Natural Resource Management. FAO Legislative Study. No.73. Rome; ²⁷⁵ See: Gray (2002) *op.cit.* p.8 and references cited therein, for the evolution of various country laws and forest policies.

of time. The model of forest management has come in for much criticism, including from its proponents (see Box 2).

Box 2: Commonly cited reasons for the failure of industrial logging concessions to deliver sustainable forest management.

One key deficiency in resource utilization contracts has been the failure of governments to capture or collect an appropriate or "fair share" of the value of the forest resource (the economic rent). These failures have resulted from a number of factors: inaccurate appraisal of resource values prior to contract signing; low forest fees; poorly designed forest revenue systems; and haphazard collection of resource levies due to negligence or corruption of government officials. In fact, much evidence from West-Central Africa suggests that such shortcomings are inherent where there is strong "political intervention" in the concessions system which, in effect, is used as a means of transforming public resources into private wealth.

A second common problem with resource utilization contracts results from conflicts over unresolved forest ownership rights. Throughout the world, the rights of aboriginal, indigenous or first nation peoples and their traditional use of forest resources and forest lands, have not been adequately recognized in forest utilization contracts or, more usually, have been ignored altogether. Failure of governments to identify prior claims and overlapping claims to resource rights, and to resolve these conflicts prior to the granting of resource utilization contracts, has led to conflicts and difficulties in the administration of the contracts. Recognition and resolution of land claims and resource use rights is a key first step in planning resource development. As above, such conflicts appear to be inherent where the concession system is essentially used by political elites as a means

of capturing valuable public resources for their own personal benefit.

A third common problem experienced with resource utilization contracts and goods and services procurement contracts is non-compliance with contract terms, often the result of inadequate monitoring and weak or non-existent enforcement. Governments frequently fail to allocate sufficient financial and human resources to these activities, and consequently, contract holders can operate unchecked. In addition, contract holders often lack the expertise required for planning and executing the required forest management practices because of insufficient staffing or trained personnel. Contract violations can lead to severe degradation of the residual forest, irreversible environmental impacts (e.g. from poorly planned logging operations and poor road construction), loss of biodiversity, and loss of forest revenues. Again, in the frequent cases where political elites (and their families and associates) have used the concession system to gain control of forest resources, there are likely to be strong incentives and pressures on the forest administration to not enforce utilisation contracts, as this would tend to diminish the private value of the concessions to those who hold them.²⁷⁶

Lost revenues through illegal logging alone costs governments between U.S. \$10 and 15 billion annually.²⁷⁷ The environmental and social costs, though more difficult to quantify, are clearly immense.²⁷⁸ It is evident that there is systemic dysfunction of the forest administration structure with respect to the stated forest policy objectives in many of the most significant timber producing countries. Many of the countries where these losses are incurred are in the developing world.

Given the above situation it is questionable whether forest concessions have been

²⁷⁶ Adapted from: FAO (2001) Governance principles for concessions and contracts in public forests. FAO Forestry Paper 139;²⁷⁷ Contreras-Hermosilla, A. (2002) Policy and Legal Options to Improve Law Compliance in the Forest Sector: Draft Issues Paper. FAO.;²⁷⁸ Lindsay et al. (2002) *op.cit.*

successful in encouraging or discouraging forest based industrial development. Any industrial benefits have often come at considerable cost in terms of other forest outputs and other benefits. Often the economic and financial benefits from these rich tropical forests have been less than expected.²⁷⁹

One of the most revealing problems with regard to the industrial forest logging concessions model is the lack of positive examples, with demonstrated economic and social development and sustainable environmental management; arguably, there are no such examples anywhere in developing countries. Those examples that appear to demonstrate some elements of sustainability have received considerable external support, including subsidies for the preparation of management plans. This can be taken as indicative of the structural failure of the contractual arrangements to effectively deliver government and international policy goals for forests.

Dysfunction of the Principal-Agent relationship in the industrial logging concessions model

The World Bank, and other international development agencies have advocated the establishment of industrial forest logging concessions in Congo Basin countries and elsewhere for many years. The World Bank is an institution that has been involved at a detailed level in providing support to the drafting of forest laws in many countries, including those of the Congo Basin. The DRC forestry code, prepared with the support of the World Bank, "reflects international best practice, to attract foreign investors". Ironically the sentence continues, "in sectors where widespread corruption has prevailed for several decades".²⁸⁰ This is, in part, the cause for the current questioning of the policy itself.

We turn to the World Bank literature for a justification of the model and the theoretical grounds for it. In their 2002 Technical Paper, it is clearly stated that:

"The theory of contracts and principal-agent relationships provide the basis for the design of forest concessions as proposed in this study".²⁸¹

It has been stated that the allocation of concessions falls under the Principal-Agent (P-A) relationships model and this relationship is at the core of the forest concessions policy and the design of the concession terms and conditions.²⁸² The model, as interpreted from economics literature, is presented in Box 3.

Box 3: The Principal-Agent model²⁸³

The aim of looking at the contractual relationship in Principal-Agent terms is to highlight the difficulties that arise in this as a result of an unequal distribution of information, in favour of the agent. Two notable problems are:

- Adverse selection - the principal, responsible for recruitment, is unable to observe directly and, therefore, assess the knowledge or skill possessed by the agent; and
- Moral hazard - the agent enjoys superior information, not only about his or her own preferences and abilities, but also about the tasks assigned to him or her, and his or her own actions, which are not usually observable to the principal.

In addition, and perhaps of most interest, the asymmetry of information may allow the agent to engage in opportunistic behaviour – shirking – that is costly to the principal, but difficult to detect. The likelihood of shirking is increased by "slippage", when the very structure of

²⁷⁹ Gray, J.A. (2000) Forest Concessions: Experience and Lessons from Countries Around the World. Presentation at IUFRO International Symposium. Integrated Management of Neotropical Rain Forests by Industries and Communities. Belém, Pará, Brasil. December 4-7, 2000;²⁸⁰ Report No. T7601-ZR, Technical Annex for a proposed grant for U.S. \$164 million and a proposed credit of U.S. \$50 Million to DRC for an Emergency Economic and social reunification Support project. August, 2003. p.24;²⁸¹ Gray (2002) op.cit., Box 2;²⁸² Gray (2002) op.cit., p.12;²⁸³ Adapted from: Kassim, H & A. Menon (2002) The Principal-Agent Approach and The Study Of The European Union: A Provisional Assessment. The European Research Institute, Working Paper Series.

delegation "provides incentives for the agent to behave in ways inimical to the preferences of the principal".

Assuring control and limiting shirking is the "principal's problem". The challenge for the principal is to find ways of ensuring perfect compliance, through reducing the costs of measuring the characteristics and performance of agents, who may otherwise act contrary to the principal's preferences. Economists' have focused on incentive structures that discourage opportunistic behaviour on the part of the agent. Contractual restrictions on the agent's operational purview or monitoring the agent are alternative possibilities, but can be costly and their effectiveness is limited by the extent to which actions can be observed.

In economic theory, the Principal-Agent model emerged in the context of an attempt:

"to move beyond the neoclassical theory of the firm, which assumes away all organisational considerations, to a theory of economic organisations that can explain why firms, corporations, and other enterprises behave as they do".²⁸⁴

It is ironic in this case that the Principal-Agent model, designed to go "beyond" the neoclassical theory of the firm, has been cited²⁸⁵ as the basis to justify logging concessions' contracts. These contractual arrangements apparently ignore the reality of the weak forest governance situation within which they are supposed to work.

Poor performance of industrial logging concessions as explained by the Principal-Agent model

Several problems can be highlighted by the analysis of industrial forest logging contractual arrangements from the perspective of the Principal-Agent relationship.

Adverse selection, moral hazard, shirking and slippage all seem to occur in abundance within the forest sector, especially in weak governance situations. The proposed industrial logging concessions system, and the contract structures that have been identified and recommended in great detail by the FAO,²⁸⁶ do nothing to address the structural imbalance of power that exists between under-funded forestry departments and the private sector. The imbalance of power can be expected to continue for the foreseeable future in the Congo Basin, especially as the international community does not seem determined to tackle bad governance, even in the forest sector (see Chapter 1).

It has been widely recognised and accepted that the "principal's problem" exists. Effective law enforcement is a pre-requisite recognised by the World Bank, FAO and others for logging concessions contracts to deliver policy objectives. Effective law enforcement presupposes good governance, the absence of corruption, and at the very least, the absence of war in the national territory. Attempts have been made to counter some of these problems in the P-A model. Some examples are presented in Box 2 above, these corresponding to the first three difficulties identified in table 1 below. These attempts can be said to have had limited success.

²⁸⁴ Moe, T.M. (1984) The New Economics of Organization. American Journal of Political Science 28: 739-77. Cited in: Kassim & Menon (2002) *op.cit.*;²⁸⁵ See: Gray (2002) *op.cit.*;²⁸⁶ FAO (2001) Governance principles for concessions and contracts in public forests. FAO forestry paper 139. Section 7.

Table 1: Problems and solutions in the P-A models applied to forests

Identified Difficulties	Forest sector problems	Proposed Solutions
Adverse selection	Non-competitive and direct agreement concession allocation	Concession allocation commissions, closed envelope bidding procedures
Moral hazard	Better technical know-how and access to logistical resources of logging companies	Training and capacity building programmes for forest departments
Shirking	Illegal logging, transport and associated trade	Increased law enforcement and independent monitoring of law enforcement
Slippage	Delegation structure where the concessionaire has reasonable assurance the forest department is able to enforce the concessions contract	Forest management concessions (see below, section 4)

In fact, most of the "proposed solutions" above have been tried unsuccessfully in countries such as Cameroon (see Article 3.2 of this report). This is because they have failed to recognise the nature of, and address, the political problems whereby individuals within government and the administration, in effect, act as both principle and agent. It is also unfortunate that the solutions that have been proposed for the "slippage" difficulties have been the least explored despite being recommended many years ago. As can be seen in Table 1, there are a number of technical solutions that can be adopted to tackle the problems presented in the first three rows of the table. Slippage, however, underpins progress in all areas and if it goes unaddressed then reforms elsewhere are likely to be limited and unsustainable.

Forest Management Concessions

Forest management concessions (FMCs) have been proposed as an alternative to straightforward forest logging concessions and combine forest utilization and goods and

services procurement contracts. They provide rights to timber, but also require the concessionaire to undertake a variety of forest management activities.²⁸⁷ Caution is needed, however, as there are relatively few references to FMCs in the literature and the concept has not been clearly defined or well developed. In this paper, three models are presented, one in which the FMC is allocated to a private sector logging company, another where the FMC is allocated to communities and finally where the contract is allocated to non-logging interests.

Forest Management Concessions and the private sector

To implement a policy of allocating lands to forest management concessions controlled by logging companies, countries will still need the capacity to implement the policies proposed to: evaluate potential concessionaires; carry out auctions of concessions; negotiate with powerful and experienced forest companies; and monitor and supervise forestry and logging activities on concessions, or delegate this to an independent organisation.²⁸⁸ Comparing the forest management and forest logging

²⁸⁷ FAO (2001) *op.cit.*; ²⁸⁸ Gray (2000) *op.cit.*

concession systems, essentially there is no structural change within the relationship between the government as principal and the concessionaire as the agent and their respective objectives and motivations. Therefore similar results can be expected in terms of contract performance, with similar dire results for the forests in question.

Forest Management Concessions, local communities and the alignment of Principal-Agent objectives

Taking the point made above, that it is futile to expect under-funded forestry departments to effectively manage forests without the involvement of local peoples,²⁸⁹ choosing a more appropriate agent whose interests for forest management concessions are aligned more closely with the principal's would cut the enforcement burden. There are examples where allocating forest management concessions to local communities has proven productive in terms of progress towards more sustainable forest management (see Box 4).

Box 4 – Community Concessions in Guatemala²⁹⁰

The Mayan Biosphere Reserve is the largest area of natural forest in Guatemala, but encroachment and illegal logging have long been major threats to the Reserve. In 1998, the National Council of Protected Areas (CONAP) issued at least four forest management concessions to local communities that were supported by partner NGOs, these providing technical, administrative and community organising expertise. The concessions range from 7,000 to 55,000 hectares. Timber and non-timber resources are managed under a single plan.

Timber is sawn on site to increase local employment. Experience has been varied but generally positive. One community's operation produced a net profit of U.S. \$89,500 for the first year in operation, roughly equivalent to U.S. \$318 per hectare or U.S. \$4,400 per family. Satellite images recently revealed that illegal logging and the agricultural frontier have continued to expand in other protected areas, while in the community concession areas, logging has decreased.

The reasons for the apparent success of the Forest Management Concessions model presented in Box 4 may be due to the fact that in this example the resource rights allocation was to communities themselves. This may be the significant factor in its success, rather than the conditions of the contract itself. The underlying reason for this is that, along with the allocation of rights provided by the contract, responsibility for the manner in which the resources are used has also been passed to the communities concerned. The community institutions that benefited from these FMCs have apparently proven strong enough, in some cases, to take on the challenge and respond appropriately. A key motivational element here is that if the contractual and institutional arrangement had failed, it would be the communities themselves that would have suffered the consequences.

In effect there is no motivation on the part of the communities (the agent) for "shirking" as they have a vested interest in the contract's success. Furthermore the cost of contract enforcement has been internalised by the communities, thus relieving a financial burden from the state. Any agent internalisation of enforcement costs may also be a result of a high degree of alignment between the objectives of the principal and the agent. This assumption should be investigated further, however.²⁹¹

²⁸⁹ Lindsay *et al.* (2002) *op.cit.*; ²⁹⁰ Ortiz, S. (2000) Community Forestry for Profit and Conservation: A successful community management experience in timber production and marketing in Guatemala. Tropical Forest Update. ITTO. Cited in: White, A. & A. Martin (2002) Who Owns the World's Forests? Forest Trends. USA & Center for International Environmental Law, USA.; ²⁹¹ The authors welcome collaboration to look further at this aspect of the FMCs and their application with relevant partners.

Before promoting this method of forest management widely there are many other variables to consider, including the skills, level of community co-ordination, and willingness to take on such an undertaking and to implement it successfully. However, it should be noted that throughout large areas of the tropics, including most of the Congo Basin, informal, but nevertheless broadly sustainable, forest management has been undertaken by countless local communities, prior to the advent of modern state assumption of control over those forests. Any proposed changes in forest or land rights allocation, process or management institutions should consider this fundamental observation at the outset.

Forest management concessions and non-logging forest management companies

An alternative approach to the "principal's problem" is to consider a different contractual arrangement, also taking into consideration the costs and real potential of solving the contract enforcement problem. The current theoretical economic framework for decision-making has provided detailed analysis of decision making related to the transaction costs of forest concessions contracts, including those of enforcement.²⁹² What we are concerned with here is a contractual arrangement that may promote the real possibility of forest policy delivery, assuming that the cost is acceptable. It is important here to distinguish between the delivery of *forest policy* versus *forest law enforcement*, specifically where solely focused on forest logging concessions.

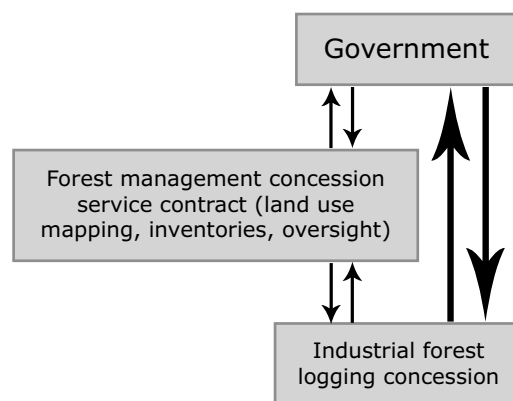
Increasing forest policy implementation

Forest sector industries have significant influence on policy development and its wider

implementation. From the situation outlined above it is clear that generally, companies with a primary interest in the logging industry cannot be expected to deliver significant improvements in forest management without there being considerable investment in enforcement. Given the absence of real capacity in many government departments, and the extended time that this would take to put in place, additional capacity should be sought from elsewhere.

Wider forest management and oversight capacity does exist and is rapidly being built in the NGO sector. Other private sector players such as certification companies, that have been expanding with the increased application of non-state market driven (NSMD) approaches, could also be considered as being suitable for this role. In the latter's case, however, potential conflicts of interest with companies' logging concerns should be carefully considered. The contractual arrangements that might harness this capacity could then take the form presented in figure 1:

Figure 1: Alternative employment of the Principal-Agent model to increase successful forest policy implementation.



²⁹² See: Leffler & Rucker (1991) Transaction costs and the efficient organisation of production: A study of timber-harvesting contracts. The Journal of Political Economy 99(5): 1060-1087

The detail of the contracts themselves, together with the structural arrangements within which the contracts are placed, are essential to rectify the problems embodied in the Principal-Agent relationship model, and so improve contract enforcement. Firstly, forest management concessions' contracts would take the form of a service contract and therefore would have to be financed by the government or from elsewhere. It is envisaged that the funds spent would be recovered through the increased policy application, more efficient use of forests and increased revenue collection. Donor support for this type of service contract may also deliver better returns than supporting individual contracts with logging companies, e.g. financing management plans, or improved performance in individual logging concessions.

The preconditions for bidders might include that no company operating a forest management concession could participate in forest resource exploitation. Functions to be included in the service contract might be: land use mapping; drafting zoning plans; technical support to concessions allocation processes and management plan approval; concession management oversight, including scheduled and unscheduled (i.e. investigative) inspections; and procedural compliance monitoring and revenue assessment. Transparency is a key issue in improving governance in the sector and the publication of reports resulting from the service contracts should be an element of the contract details. This would also establish a record of implementation by the holder of the service contract. Service contracts for management expertise are particularly important here as it enables a separation of the oversight and management function from the forest exploitation function, and establishes a dynamic tension between the two. The oversight and management companies would then have no interest in liquidation, and profiting from illegal

forestry operations would mean the loss of the service contract. This point reduces slippage, and therefore the likelihood of shirking as identified above. The forest management concessionaire is recruited to achieve the objectives of the Principal in the P-A model and importantly, brings the resources and expertise with them to effectively implement their own service contract, including oversight of logging concessions' operations.

Many other contract conditions would be required to make the system work in practice, including:

- Bidders for forest management concessions contracts should be assessed to determine their reputation in the field. Certification companies would be ideal in this new role and should be engaged with to confirm their interest.
- Short-term (3 year) service contract renewal should be based on an external assessment of the implementation of the company's obligations.

A principal concern over the implementation of forest policy is the land use planning or zoning process that takes place prior to the allocation of logging concessions. The application of a system of forest management concessions would bring additional capacity to the land use mapping process that informs zoning. Methodologies, or a process for developing a methodology for zoning, would have to be clear for the process to be included in a service contract.

Roles that might rest with the government are: final decisions on zoning and concession allocation; prosecutions based on the information provided through the service contractors and verified with government agents; and receipt of tax revenue from private sector logging operations.

The service contract might cover a significant area of forest and be based on a contiguous landscape block, covering a complex area of potential community mapped lands, forest management concessions allocated to communities (see Box 4), protected areas and a number of industrial forest logging concessions.

Oversight of industrial logging operations may also be a significant part of such service contracts, where these are not thought to be part of a separate agreement or subject to an "Independent Monitoring of Forest Law Enforcement" type arrangement. Such additional operational capacity provided by the service contracts could be employed by the state, while the state itself retains the role of law enforcement through normal judicial processes.

Forest management concessions of this nature could be seen as temporary. Contracts would not be renewed at the point where government departments were in a position to take on the roles provided by the service contractors effectively.

Conclusions

Continued support for the industrial forest logging concessions system is difficult to justify given the absence of data showing that the approach delivers real sustainable and equitable benefits. The World Bank, a major proponent of the system, has also criticised its implementation. What is alarming therefore is that, in spite of this, the World Bank is apparently rushing to expand the forest logging concessions system in the Congo Basin and in particular in DRC. Governments and international organisations should recognise that most African governments themselves do not currently have the capacity to implement effectively the policies, laws and contractual

obligations in industrial forest logging concessions agreements. Action should be taken based on this recognition.

There are clearly capacity problems within many developing country governments. It may not be that states are incapable of managing their own forests. Rather, the system of forest management and the institutional arrangements that have been, in many cases, forced upon developing states, may not be appropriate and could inhibit capacity building. The industrial forest logging concession system itself, as it has been implemented and is currently proposed in DRC, may well engender corruption within governments, making forests the subject of a patronage system and perpetuating their failure to address the system's inherent "moral hazard".

Some positive benefits have been claimed, including improved access to health and education services through the opening of roads to isolated areas, employment and the distribution of forest industry rents and taxes. However, no serious analysis of the costs and benefits of the industrial forest logging concessions system has been undertaken, despite repeated recommendations to explore alternative forest policy systems.

The problem with the industrial forest logging concession system currently being proposed in the Congo Basin, and particularly in DRC, is a structural one. In particular, there is a failure to address the problems created by the proposed contractual arrangement, as identified using the Principal-Agent model. The same structural problems of slippage arise with forest management concessions, when these are allocated to companies with a vested interest in the logging industry.

Recommendations

A gradual approach to forest management planning should be implemented, setting clear and fair procedures that follow international best practice and including comprehensive participatory mapping for the allocation of land tenure and forest use rights in advance of the allocation of forest logging concessions.

Forest concessions should only be allocated after competing tenure issues have been resolved, and existing forest use and land rights have been assessed. Rights allocation should be based on locally adapted international best practice, where this exists.

Forest concessions should not be allocated within a framework of weak governance and weak law enforcement capacity, where the contractual arrangements allow for the perpetuation of the Principal-Agent problem and where safeguards against adverse selection, moral hazard, slippage and shirking are not already in place.

Forest management concessions allocated to communities should be further explored as an alternative to forest logging concessions subject to community capacity assessments.

Forest management concessions, separating the functions of forest management (including defined oversight and administrative functions), should be considered as an alternative contractual arrangement in the Congo Basin and elsewhere, while there is weak governance.

An independent international body should be tasked with evaluating the impact of logging concessions on the rural poor, indigenous and forest-dependent peoples.

An independent comparative analysis of the industrial logging concessions system, compared to alternative forest policy models, should be undertaken from the perspective of the rural poor, indigenous and forest-dependent peoples' perspectives. This study should include broad socio-economic data from before, during and after logging.

5.3 FOR RICHER, FOR POORER: LOGGING AND LIVELIHOODS IN THE CONGO BASIN SIMON COUNSELL, RAINFOREST FOUNDATION, UK

There has been a growing debate about the role of industrial logging as a provider of developmental benefits in Africa. Essentially, the debate boils down to whether the potential benefits (both direct and indirect) are ever actually delivered, and secondly whether the potential or actual benefits outweigh the known "dis-benefits", or developmental costs. This short paper attempts to review some of the main issues in this debate, with reference to the existing literature.

What are the potential developmental benefits of logging?

The potential economic benefits of commercial logging are summarised in the table below.

	Direct benefits	Indirect benefits
Type of benefit	Employment Compensation payments	Infrastructure (especially roads) and free transport Demand for locally produced goods and services "Trickle down" effects from national economic growth

Each of these is considered in turn below, with an assessment of whether these *potential* benefits are likely to be realised in practice.

Employment

As noted in Article 5.1 of this report, employment levels in the logging industry in the Congo Basin are very low in terms of the overall size of the workforce; the highest proportion is found in Gabon, but logging workers there still represent only 1.2% of all workers. Logging work is sought after by forest dwelling people, but this in a context where there may be no other paid work available. In practice, logging work tends to be very poorly paid, short-lived and highly dangerous.

Often, logging companies bring with them their own workers. One study in a well-established concession in Gabon found that, of the 2,000 people resident within three logging camps, not a single one had been employed from the local village, which had 120 men of working age.³¹³ The concession holders, SHM, moved their workforce around with them, and found it more economical to keep the best staff rather than train local people. Such immigration of cash-earning immigrants (often of a different ethnic group to local communities) can cause social problems and conflicts.

As noted in Article 4.4, logging work everywhere in the world is considered as one of the most dangerous occupations. In Africa, this is especially so, as safety equipment is generally unavailable or discarded (most logging safety clothing, for example, is designed for use in cool temperate or boreal regions, and is insufferably hot when used in the tropics).

The high incidence of accidents causing debilitating injuries, which by their nature can often be difficult to treat, can have serious consequences for families dependent on logging income. Compensation payments for injuries are likely to be very low or non-existent, especially for local workers employed on an informal basis. Because logging operations also promote the conditions for *Anopheles* mosquitoes to breed, and workers are usually accommodated closely together in rudimentary housing, malaria can be a serious problem in logging camps. (See also Article 4.4 for a discussion of the various health consequences of logging).

Probably one of the major sources of employment and distribution of cash from logging centres into the local economy takes place through the sex trade. According to one study conducted in Cameroon, an estimated 40 female sex workers were permanently living in the logging camp. In addition, approximately 100 women arrived at the camp from towns or

³¹³ Lawrie, J. (2004) The Minkebe Expedition 2000: Gabon, A Research Project on the Effects of Logging, University of Leicester.

neighbouring villages at the time of salary distribution (twice a month), to trade or offer paid sex. However, this also has the highly negative impact of spreading sexually transmitted diseases, including HIV-AIDS, into the surrounding population. Neither the economic "benefits" of the sex trade in logging camps, nor the costs, have been adequately assessed.

Compensation payments

One of the main arguments used to justify the development of forest industries in the Congo Basin has been that it generates revenues which can promote local development and infrastructure. However, the growing consensus is that, in the Congo Basin region if not more widely, this has rarely if ever actually occurred. In fact, the timber industry uses as one of its main self-justifications that it provides infrastructure and services in the absence of any state provision of services.

Cameroon has been the regional forest "test bed" for policies to try and "reform" the concession system and use logging as a means of stimulating local development. As noted elsewhere in this report, in 2000, the government of Cameroon introduced the "Programme to secure forestry revenues", under World Bank/IMF pressure.³¹⁴ Fiscal revenues from forestry have increased from 11.5 billion F CFA (= 17 million €) in 2000 to 40 billion F CFA (= 60 million €) in 2003. Under the Cameroonian forestry law, 50% of the forestry area tax (1,500 FCFA, or around €2.25) payable by concessionaires is supposed to be returned by the national treasury to local authorities for development purposes, and one-fifth of the returned amount is supposed to be distributed down to the local communities themselves. Due to pressure from the World Bank, there is reported (by the Cameroonian government itself) to have been an increase in

the payment of taxes back to local authorities, from close to nothing in the late 1990s, to 28 billion F CFA (~ €42m) in 2003. Local communities can also, in theory, benefit from a payment of 1000 FCFA (about €1.50) per cubic metre of timber felled through short-term sales of standing volume ("*vente de coupe*") contracts.

However, a study carried out for the World Bank recorded, somewhat laconically, that "although concrete social achievements are sometimes visible in the areas benefiting from [forestry taxes], the goals of these taxation instruments are far from attained in the areas supposed to benefit from them".³¹⁵

Another study has indicated where some of the problems in the current system lay:

"The system by which the RFA is transferred from the Tax Department to local councils is clearly not working properly: the 10% intended for the forest-adjacent communities is frequently withheld in the council accounts...The impact of the decentralised taxation system is on the whole negative, and very far removed from its original aims. In the case of both the "FCFA 1000 tax" and the [repayment of the forest area tax], it is estimated that less than 20% of the revenue is actually used to fund social projects or collective services to the benefit of the councils and the rural populations. The payment of a tax for the implementation of social projects is considered by many economic operators to annul other provisions in the conditions of contract. Hence many loggers have stopped road construction and other social works over the last three years, except when these are necessary for logging."³¹⁶

³¹⁴ Ministère de l'Économie et des Finances du Cameroun (MINEF) (2005) *Audit du Programme de Sécurisation des Recettes Forestières – PSRF. Rapport final*. Yaoundé, Cameroon;³¹⁵ Mbiayor, T. et al. (2003) Cameroon background paper. In: World Bank (2003) *Proceedings of the international workshop: reforming forest fiscal systems to promote poverty reduction, and sustainable forest management*. Washington, D.C.;³¹⁶ Fomété, T. (2001) *The Forestry taxation system and the involvement of local communities in forest management in Cameroon*. Rural Development Forestry Network, ODI Network Paper 25b, London.

Because of the failures of (corrupt) government, local communities in Cameroon have a direct incentive to engage in or support illegal logging activities: studies have shown that communities are able to earn as much from direct "compensation" payments from illegal loggers as they could potentially earn from legal logging.³¹⁷

The evidence from the Congo Basin region is consistent with evidence from other regions, such as in Papua New Guinea, where the Government's own 2001 review of the forest sector found that "most stakeholders we consulted were of the view that most of the payments to landowners had been wasted and those from logged areas were made worse off by logging".³¹⁸

Infrastructure

The "dis-enclaving" effect of logging infrastructure is frequently cited as bringing important positive developmental benefits.³¹⁹ There is little doubt that new and improved roads, and occasional free transport, are welcomed by many villagers within the Congo Basin. Mobility and access to education and health services - where they exist - can be increased. But generic claims that roads act as "avenues towards economic growth (they facilitate the marketing of cash crops and raw materials, notably timber) and decentralisation"³²⁰ have to be treated with caution. In theory, road building in many locations should improve access to markets and thus promote development. But in reality, the development of logging roads takes little account of whether, for example, local markets for cacao or coffee are in fact in structural decline (due, for example, to global gluts or disease), or whether the market centres served by logging roads are the same as those used for trading other commodities. Studies in Cameroon have shown that logging

infrastructure, related as it is to the largely arbitrary pattern of concessions, tends to develop in a chaotic manner, which may also duplicate parts of the planned state road system.³²¹

As can be seen from the quote above, in terms of the relationship between logging concessions and road building, the argument can become somewhat circular: logging requires the development of roads, which in turn help to promote more logging and thus more roads. Given that the developmental benefits of roads are largely unproven or uncertain, the economic value of the logging-roads-logging "feedback loop" thus depends on the economic benefits of logging - and, as noted elsewhere in this study, the evidence mostly seems to suggest that logging has negative economic impacts. The net economic impact of logging infrastructure may thus be negative if it serves simply to promote more logging. Where road infrastructure is not deliberately built to accommodate logging vehicles, it can quickly be destroyed, as has been observed repeatedly in Cameroon.³²²

In a study in central Gabon, "public services had not improved since the arrival of the logging concession": although the nearby town of Ovan has capacity for electricity generation, and a "full range of street lamps", electricity is only available on one day per year, Independence Day; the local school and hospital are very poorly equipped and the town's only transport route, the main road from Mokokou to Libreville, had frequently been rendered unusable because of the log truck damage to bridges.³²³ The quality of the road had not improved since the arrival of the logging company SHM, and there was constant danger due to large log vehicles passing through the centre of villages.

Furthermore, the uncertain economic benefits of logging infrastructure can be outweighed by

³¹⁷ Fomété (2001) *op.cit.*; ³¹⁸ Forest Trends (2006) Logging, legality and livelihoods in Papua New Guinea: synthesis of official assessments of the large-scale logging industry, Volume 1.; ³¹⁹ Trefon, T. & P. de Maret (n.d.) Road building in Central Africa: foolproof development or a good way to get stuck in the mud? ULB-APFT briefing.; ³²⁰ Trefon & de Maret (n.d.) *op.cit.*; ³²¹ See for example Global Forest Watch, Cameroon Interactive Map, <http://www.globalforestwatch.org/english/interactive.maps/cameroon.htm>; ³²² Trefon & de Maret (n.d.) *op.cit.*; ³²³ Lawrie (2004) *op.cit.*

the known negative impacts, which can include the exacerbation of "social problems such as prostitution, Sexually Transmitted Diseases, alcoholism, acculturation, resettlement, etc. They also provoke serious ecological imbalances like forest fragmentation, erosion, biomass loss, species depletion, commercial hunting, etc".³²⁴ Importantly, logging infrastructure increases the chances of complete forest cover removal, and thus the loss of non-timber forest products (NTFPs) (discussed in Articles 4.1 & 4.3).

Demand for locally produced goods and services

Logging camps can provide a valuable market for local communities. Logging workers require feeding, and most logging centres in the Congo Basin will attract new farmers to produce carbohydrate crops such as plantain, cassava, maize and taro, or will provide outlets for existing farmers within the vicinity. The availability of heavy equipment and chainsaws means that fields can be more quickly cleared and planted.

However, there is little information about this process, or quantification of the local economic value, available in the literature. There also appear to be structural reasons why such benefits might be less than expected, as well as there being evidence of contradictory consequences.

Logging in the Congo Basin region could be broadly described as falling into two categories: "predatory, unsustainable and itinerant" (characterised, perhaps, by the *vente de coupe*, or sales of standing volume system in Cameroon, or illegal logging within the concession system), or "managed, (relatively) sustainable, and sedentary" (characterised by companies with long-term concession agreements or access to sufficiently large areas

of forest that even unsustainable forestry practices still allow them to maintain a relatively stable base).

In the case of "predatory, unsustainable and itinerant" logging, it is clear that any demand for local goods is likely to be short-lived. Contracts for standing volume of timber-type operations, or illegal operations in concessions to take advantage of "grace periods" before management plans have to be developed, typically run for about three years or so. Because of the "cut and run" nature of these operations, existing local producers would barely have sufficient time to increase production, which might require the difficult manual clearing of extra areas of forest.

In the case of "managed, (relatively) sustainable, and sedentary" logging operations, the opportunities for local producers to benefit will be much greater. Larger logging centres can grow to populations of several thousand people, generating their own markets and stimulating growth in local production of foodstuffs, as well as some other goods and services. For example, when *Congolaise Industrielle des Bois* (CIB) established its base at Pokola, northern Republic of Congo, in the early 1980s, the village had 150 people;³²⁵ it is now a town of some 15,000 people. However, there is some evidence that such developments may bring limited benefits to local people; larger centres of employment tend to attract immigrant workers, who bring with them their own cultural values and preferences, and may commence their own production, displacing local farmers. Longer-lived logging camps eventually tend to become self-sufficient in basic agricultural foodstuffs though, importantly, not in sources of protein.³²⁶

The growth of larger logging centres within the Congo Basin is invariably accompanied by significant increases in collection of bushmeat from the local forest. This in itself can be an

³²⁴ Trefon & de Maret (n.d.) *op.cit.*; ³²⁵ Amman, K. (2004) *Pers comm.*; ³²⁶ Lawrie (2004) *op.cit.*

important source of new income for local people. However, it can also be a non-sustainable means of income which disrupts traditional means of managing wildlife on a broadly sustainable basis, quickly depleting animal populations. Around CIB's operations at Pokola, for example, according to one report, "wildlife has been largely decimated in a 20km band".³²⁷ The construction of logging roads and tracks has facilitated access into the forest for hunters, and logging company vehicles have been used to transport hunters and their prey. This would have serious implications for the area's original inhabitants, especially hunting and gathering communities (even though they themselves might well be involved in hunting to satisfy the demand for protein from logging workers). Large logging centres can thus undermine local livelihoods.

"Trickle down" effects from national economic growth.

In terms of "trickle-down" effects, the main way this can happen is through private re-investment of forestry "rents" into other productive sectors which then have further developmentally beneficial consequences. Concerning this, Angelsen and Wunder acknowledge that "Historically, the forest industry has only reached high GDP share and contributed heavily to the economic development and poverty reduction in a limited number of countries, such as Finland, Norway, Sweden and Canada."³²⁸ Although the authors nevertheless assert, rather hopefully, that "it seems obvious that in a timber rich country like Indonesia, some proportion of the billions of dollars of timber rents that have been cashed in since the mid-1960s must have been invested into the rapidly growing urban sectors", they also admit that "unfortunately, we are not aware of any study that has quantified this process".³²⁹

Anecdotal evidence suggests that, because the large-scale logging industry in the Congo Basin is heavily dominated by foreign interests, much of the "rent" potentially available for reinvestment is, in fact, repatriated to other countries. Studies for international agencies have repeatedly found that the level of revenues actually accruing to governments from logging industries are only a small fraction of what is theoretical possible (or legally required).³³⁰

Loss of, or damage to, livelihoods

There are many ways in which logging can have indirect, but nevertheless critically important, negative impacts. Some of these are considered in turn below.

Non-timber forest products (NTFPs)

The greatest negative impact of industrial logging on livelihoods is likely to be through damage to, or destruction of, non-timber forest products and the environmental services provided by forests. An estimated 1.6 billion people worldwide depend to some extent on forests for their survival,³³¹ so the potential for changes to livelihoods from changes in use of forests is great.

Despite this, there is relatively little detailed information about the non-timber values of forests, and even less about the relationship between this and exploitation of forests for timber (though see the paragraph below, "The Case of Moabi"). A "meta-study" of the relationship between livelihoods and "forest environmental income", conducted for the World Bank,³³² reviewed the results of 28 household income studies on forest-based income, covering eastern and southern Africa,

³²⁷ World Bank (2002) CEO Initiative and Sustainable Management of Production Forests: A preliminary Assessment of CIB – POKOLA (Congo Brazzaville), World Bank, Washington, D.C.;³²⁸ Angelsen A & S. Wunder (2003) Exploring the Forest Poverty Link. CIFOR Occasional Paper No. 40, Bogor;³²⁹ Angelsen & Wunder (2003) op.cit.;³³⁰ See for example, World Bank (2006) Weak Forest Governance Costs Us\$15 Billion A Year. Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/EXTFORESTS/0,,contentMDK:21055716~menuPK:985797~pagePK:64020865~piPK:149114~theSitePK:985785,00.html> ;³³¹ FAO (2001) How forests can reduce poverty. FAO brochure, Rome; ³³² Vedeld, P. et al. (2004) Counting on the environment: forest incomes and the rural poor.

Asia and Latin America, and both wet and dry forest areas. The study indicated that 22% of total income in the households surveyed was derived from forests and, of this, the great majority (70%) was from the sale of wild foods and fuelwood. Timber accounted for only 2.3%. The relative dependence on forest income increased according to how poor the households were, with the poorest obtaining about 32% of their total income from forest "environmental resources".

Much of the debate on the damage to, or loss of, forest-based livelihoods as a result of industrial logging relates to the collateral damage that timber felling can cause to NTFPs. Such effects have been well reported, including:

- the loss of trees which produce food products which can be important as subsistence resources or as traded goods in local and international markets;
- the loss of plants of medicinal value;
- the indirect loss of bushmeat resources due to increased hunting pressure by logging workers or their suppliers;
- damage to water courses, including fish resources and water needed for crop irrigation;
- loss of fuelwood;
- loss of, or damage to, "forest gardens" or fallow fields.

The question this raises is "what impacts on livelihood can such damage have"? Angelsen and Wunder have summarised many of the issues concerning the relationship between NTFPs and livelihoods by asking the question, "do [non-timber] forest resources act as a poverty safety net or a poverty trap"?³³³ The

authors conclude that, for various reasons, "although most NTFPs are poor instruments for poverty *reduction*, some are important for poverty *prevention*". In short, few people seem to escape poverty through the exploitation of NTFPs, but this exploitation allows many people to at least maintain their incomes at or above poverty level.³³⁴ According to one study, most NTFPs in DRC appear not to be particularly profitable.³³⁵ However, other studies in the region have shown that the exploitation of NTFPs can be particularly important in maintaining household incomes during lean periods "when agricultural products are scarce and households are at their most vulnerable to food shortages".³³⁶

The case of moabi, given below, illustrates how logging can serve to undermine livelihoods derived from NTFPs. The impacts of logging can be catastrophic for individuals, such as when the noise and disturbance due to logging causes forest elephants to invade and destroy agricultural areas, as has been reported from Gabon.³³⁷

Logging and health

The relationship between health and poverty alleviation has been well documented:³³⁸ clearly, the ability of people to provide for themselves is reduced when they are incapacitated with malaria or other serious ailments.

As is noted elsewhere in this report, logging can directly cause increases in human disease in its operational areas and more widely. However, where logging damages medicinal plant resources, it can have the "double-whammy" effect of reducing peoples' ability to cure themselves at the same time as promoting an increase in disease. Studies in Equateur and Bandundu provinces in DRC have found that 85% of people surveyed in rural areas rely on medicinal plants to treat common

³³³ Angelsen & Wunder (2003) *op.cit.*; ³³⁴ Angelsen & Wunder (2003) *op.cit.*; ³³⁵ Bauma, I.L. (1999) A preliminary market survey of the non-wood forest products of the Democratic Republic of Congo: the Beni and Kisangani markets. In: Sunderland, T.C.H. et al. (Eds) Non-wood forest products of Central Africa: current research issues and prospects for conservation and development. FAO, Rome.; ³³⁶ Bamoninga, B.T. (2002) *Utilisation des feuilles de Gnetum sp. dans la lutte contre l'insecurite alimentaire et la pauvrete du Bassin du Congo, cas de la Republique Democratique du Congo*; De Merode et al. (2004) The value of bushmeat and other wild foods to rural households living in extreme poverty in Democratic Republic of Congo. *Biological Conservation* 118: 573-581; Ndonga Guley, J.C. (2004) Contribution socio economique du gibier dans la lutte contre la pauvrete et l'insecurite alimentaire a Kinshasa (RDC). University of Dschang, Cameroon.; ³³⁷ Lawrie (2004) *op.cit.*; ³³⁸ See, for example: OECD (2003) *Poverty and Health in Developing Countries: Key Actions*. Policy Brief, Organisation for Economic Cooperation and Development;

ailments, including malaria.³³⁹ One study in Cameroon has shown that more than half the tree species exploited for timber by commercial loggers are also used by local communities for medicinal purposes.³⁴⁰ Species such as padouk (*Pterocarpus soyauxii*), iroko (*Milicia excelsa*) and azobe (*Lophira elata*) are important for their medicinal uses, but have become scarce or even locally endangered due to selective logging.³⁴¹

In some cases logging serves to open up new habitats for NTFPs. However, because of the heavy reliance of local peoples on medicines derived from tree species, it is likely that the net effect of logging is to reduce local peoples' ability to treat themselves for illness, and thus to worsen their livelihood potentials.

The case of Moabi

Few comparisons have been made between the economic benefits of exploitation of timber with the benefits of managing the same resource for NTFPs. Moabi, *Baillonella toxisperma*, one of the most important timber species in the region, has been the subject of such a comparison (see also Article 4.3 on moabi). According to this study³⁴² carried out in Cameroon and published in 1995, the market value of a moabi tree of minimum legally exploitable diameter of 100 centimetres, yielding 9 cubic metres of timber, was around €1,350. But the moabi tree is also highly valued by local communities (especially Baka "Pygmy" women), for producing edible fruits with nuts that yield oil used for cooking and lighting. A tree can yield around 150 litres of oil per 3-year fruiting cycle, which would sell for around €1.8 per litre, or €270 in total. Thus, the total market value of the oil alone, produced over a 15-year period, would be greater than that produced from felling what would probably be at least a 260-year old tree. In addition to its oil-producing value, moabi also provides a range of other locally valued

products, including 50 different medicines.

But the Cameroonian concession system, attributing felling rights to logging companies, has been imposed with little or no consideration for local uses of moabi or other trees. Hence the "rents" from moabi accrue to logging companies, not to local communities; a proper comparison of the local economic effects would therefore be to compare the local economic benefits of €270 per tree per 15 year period, with the approximate revenues obtained from logging. On the basis of 10% of forest area taxes (legally supposed to be returned from central government to local communities) of €2.25 (FCFA 1,500) per hectare per year, and assuming a density of one moabi tree per 5 hectares, local communities would receive, over the same period, around €16.90, or one-sixteenth of the value of the moabi oil they could sell. In practice, as noted above, local communities almost never actually receive any forest area taxes, so they effectively get nothing for the felled moabi trees.

According to Schneemann, moabi logging practices are generally unsustainable and the species may disappear in a large part of its original areas of distribution in 10 to 20 years.³⁴⁴ One report notes that "The seed of *B. toxisperma* [is]...today so scarce, it is rarely sold in markets since local communities prefer to keep what they can collect for their own use."³⁴⁵ It thus seems clear in this one particular case that local livelihoods are being materially damaged by commercial logging.

Conclusions – is industrial logging inherently anti-poor?

The fact that logging concessions have tended not to deliver community economic (poverty alleviation) benefits has been widely recognised. Gray, for example, stated that "because most forest concessions agreements

³³⁹ Ndoye, O. & A. Awono (2005) The markets for non-timber products in the provinces of Equateur and Bandundu, DRC. CIFOR, Yaounde;³⁴⁰ Laird S A, (1999) The management of forests for timber and non-wood forest products in Central Africa. In: Sunderland, T.C.H. et al. (Eds) Non-wood forest products of Central Africa: current research issues and prospects for conservation and development. FAO, Rome;³⁴¹ Laird (1999) *op.cit.*;³⁴² Schneemann, J. (1995) Exploitation of Moabi in the Humid Dense Forests of Cameroon. Harmonization and improvement of two conflicting ways of exploitation of the same forest resource. *BOS NIEUWSLETTER* 31 vol. 14 (2): 20-32.;³⁴³ Les Amis de la Terre (2006) *Moabi: arbre de vie ou de profit?* Campaign document. Paris;³⁴⁴ Schneemann (1995) *op.cit.*;³⁴⁵ Laird (1999) *op.cit.*;

in the past have focussed on timber production, forest uses by forest dwellers and forest communities have been ignored. [...] In addition, forest communities often derive little benefit, employment, or revenues from forest concessions”,³⁴⁶ As with many other commentators, Gray’s proposed response to this problem is a “technical fix”, in which “it is possible to redesign concessions agreements, the forest management requirements and procedures to incorporate community forest uses and increase community benefits from forest concessions”.

In practice, however, the concession system, especially in Africa, has proven stubbornly resistant to any such technical fixes. As Angelsen and Wunder have noted in their study for CIFOR, the poor have generally not benefited from the timber industry, because “there are some fundamental characteristics of timber planting, harvesting and processing (and some features of trees as assets) that prove to be “anti-poor” in that they require capital, skills, land tenure, technology, production systems and time horizons that do not favour poor people”.³⁴⁷

In fact, there are reasons to believe that the timber industry is inherently anti-poor: “Without being a deterministic feature, an economy built around a leading timber producing sector is unlikely to be particularly advantageous for its poor people”.³⁴⁸ The authors continue: “Timber values tend to accrue in the hands of a few companies and the interest groups they are allied with”.³⁴⁹ One of the consequences of this, as is explored in more detail elsewhere in this report (see Chapter 1) is that “high profits from timber can also promote corruption, which can jeopardise the integrity of national institutions”, which can also have a wider negative impact on poor people.³⁵⁰

The authors of the CIFOR study ask “How

valuable is timber in the hands of poor local people, with the same political power and access to capital and markets [as market oligopolies and policy-created monopolies]?” Sadly, the authors are unable to answer this important question. In addition, as is explored elsewhere in this report, whilst forestry institutions remain focussed on lucrative anti-poor timber exploitation, they are not properly equipped or inclined to develop more pro-poor forestry initiatives, such as community forestry.

There is empirical evidence that neither governments nor the private sector have reinvested significant levels of timber rents back into developmentally beneficial initiatives. There is no empirical evidence from anywhere in the world, let alone the Congo Basin, that there are significant “trickle down” effects of overall economic growth as driven by the timber sector. It has also been noted that the timber industry can contribute to the destruction of NTFPs which help to prevent already poor people from falling into poverty.

Taken together, this suggests that the putative economic rationale for agencies such as the World Bank to “develop” the timber industries in the Congo Basin and elsewhere as a means of alleviating poverty is entirely unsupported by any credible evidence. As the UK Department for International Development and the UN FAO have pointed out:

“A people-centred approach can further increase the impact of forests and trees in reducing poverty. What is needed is the removal of barriers that prevent forests and trees from contributing to the livelihoods of the poor as well as support for emerging opportunities”.³⁵¹

At present, in the Congo Basin, the largest “barrier” would seem to be the industrial logging concession system, and the anti-poor institutions which service it.

³⁴⁶ Gray, J. (2000) Forest Concessions: experience from countries around the world. IUFRO international symposium, integrated management of neotropical rain forests by industries and communities, Belem, Brazil.;³⁴⁷ Angelsen & Wunder (2003) *op.cit.*;³⁴⁸ Angelsen & Wunder (2003) *op.cit.*;³⁴⁹ Angelsen & Wunder (2003) *op.cit.*;³⁵⁰ Angelsen & Wunder (2003) *op.cit.*;³⁵¹ FAO (2001) *op.cit.*

CHAPTER 6: THE IMPACT OF INDUSTRIAL LOGGING ON ECOLOGICAL DIVERSITY

In Chapter 6 the ecological impacts of industrial logging are described as well as some of the available measures to mitigate these. Article 6.1 provides an overview of the main ecological impacts of industrial logging – forest canopy disturbance, soil erosion, pollution and decline in biodiversity.

Techniques are available to lessen these – for example, reduced impact logging, described by Sylvain Angerand in Article 6.3 – but these are often not implemented. Thus, even though ecological principles are included within national forest programmes, the reality on the ground is often very different, as James Mayers describes in the case of Mozambique.



In Bas Congo, DRC, where logging has been taking place for many years, the degradation of the landscape is clearly visible.
Photo: Jan Thomas Odegard

6.1 THE ECOLOGICAL IMPACTS OF INDUSTRIAL LOGGING IN THE CONGO BASIN

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Introduction

The loss and degradation of tropical forests poses one of the most serious threats to biodiversity. During the last few decades, forest exploitation has resulted in the depletion and destruction of many of the more accessible forests in Central Africa. Increasingly, attention is turning to the Democratic Republic of Congo (DRC), whose forests are still relatively untouched.

The Congo Basin covers 4.1 million square kilometres and has a population of 74 million; DRC accounts for 57% of this total area and 68% of the population.³⁵² Therefore, this country is a major stakeholder in determining the future of African tropical forests, and is a priority for efforts to reduce the impact of industrial logging and promote sustainable forest management systems.

This paper presents the main ecological impacts of industrial logging. Four types of impact are analysed – canopy disturbance, soil erosion, pollution and biodiversity – and some potential solutions presented that may help to limit the impacts of industrial logging operations.

Canopy disturbance and shifting land use

One of the main effects of timber extraction is canopy disturbance. The increased penetration of light through the canopy causes significant changes in the microclimate and leads to drying of the soil. This increases susceptibility to forest fires, a cause of long-term ecosystem damage. Burnt forests may be taken over by secondary vegetation or such land is often converted to agricultural use.³⁵³

By opening up the canopy, commercial timber harvesting not only increases susceptibility to fire, but also results in greater damage when fires do occur. Research at a number of sites in the Amazon found that selective logging increased the amount of ground litter available to burn, so increasing the fire damage inflicted in comparison to un-logged forests, including markedly higher tree mortality.³⁵⁴

The opening up of the forest also facilitates agricultural encroachment.³⁵⁵ Cash crop and subsistence farming carried out by workers, landless farmers and opportunistic migrants can lead to rapid conversion of forest to farmland. This shift in land use upsets the sensitive equilibrium of nutrients in tropical forest soil - erosion and leaching of top-soil increases and soil productivity declines, making both farming and forest rehabilitation much harder in the future.³⁵⁶ Without the use of expensive and environmentally damaging fertilizer, such land will only be productive for an average of 3 years, after which it will usually be abandoned.

Soil erosion

Soil erosion is a natural phenomenon, caused by the wind and water run-off. However, timber-harvesting practices intensify this process. The primary cause of soil erosion in concession areas is skid track and road construction and tyre pressure on the roads. In fact, it has been found that logging roads may produce more erosion and sediment yield, than the logged areas themselves.³⁵⁷ Operational processes also contribute to significant soil erosion and compaction. For example, export-oriented logging concessions are particularly damaging, because they require heavy equipment as the main commercial trees are very large. Soil erosion results in top-soil entering the streams and rivers where it reduces the amount of light available to aquatic

³⁵² Ruiz Perez, M. et al. (2005) Logging in the Congo Basin: a multi-country characterization of timber companies. *Forest Ecology and Management* 214: 221-236; ³⁵³ Lapuyade, S. et al. (2000) Etude d'impact social et environnemental de l'exploitation forestière dans la concession de la compagnie forestière du Cameroun (C.F.C), Province de L'Est, Cameroun. April 2000. *Forests Monitor*; ³⁵⁴ Holdsworth, A. & Uhl, C. (1997) Fire in Amazonian Selectively Logged Rain Forests and the Potential for Fire Reduction. *Ecological Applications* 7(2): 713-25; ³⁵⁵ Lanly, J.-P. (2003) Deforestation and Forest Degradation Factors. FAO, Italy; ³⁵⁶ Kobayashi, S. (2004) Landscape rehabilitation of degraded tropical forest ecosystems. Case Study of the CIFOR/Japan project in Indonesia and Peru. *Forest Ecology and Management* 201: 13-22; ³⁵⁷ Alexander, L. & R. Forman (1998) Roads and their major ecological effects. *Annual Review of Ecology and Systematics* 29: 207-31; ³⁵⁷ Alexander, L. & R. Forman (1998) Roads and their major ecological effects. *Annual Review of Ecology and Systematics* 29: 207-31

fauna and flora.³⁵⁸ It has been calculated that 0.5km of road per square kilometre of forest is all that is required for river siltation to significantly decrease fish stocks.³⁵⁹

Pollution

There are two main types of pollution generated by industrial timber extraction in tropical forests: water and noise pollution. Water pollution takes the form of sediment deposits and chemical leakage. Products used to treat the timber enter the hydrological system when the logs are transported by river to the ports.³⁶⁰ Chemicals that have been found to be in use in Cameroon, Gabon and Kenya include CCA creosote, BFCA and TBT,³⁶¹ all of which are known to be toxic and damaging to the environment.³⁶²

Furthermore, noise and air pollution created by tree felling, processing sites and timber transportation frighten away many large mammals and bird species, so reducing the diversity of animals to be found in logged forest.³⁶³

Biodiversity

Flora

Numerous factors lead to the reduction of biodiversity within logging concession areas, but one of the main threats to the flora is the destruction of habitats. The targeting of high value tree species has resulted in ever younger specimens being logged, and the felling of mature trees hinders the ability of populations to recover, because these are often the main seed producing individuals. Consequently, certain species have been decimated. During an Environmental Impact Assessment carried out in a Cameroon Forestry Company concession area it was discovered that more than 76 per cent of the trees logged are threatened

species;³⁶⁴ this included Assamela / Afromosia (*Pericopsis elata*), listed on CITES Appendix I as an endangered species.³⁶⁵

Fauna

The consumption of bushmeat by forestry workers is usually unsustainable. A study conducted in 1999 in one logging camp of 648 people in the Republic of Congo reported an annual harvest of 8251 animals, equivalent to 124 tons of meat.³⁶⁶ Not only does this level of hunting lead to local extinction, but the mammals that are being hunted play a key role in forest regeneration through tree pollination and seed dispersal.³⁶⁷ Consequently, the mere presence of industrial logging operations in the forest and the associated consumption of bushmeat, is preventing natural ecological processes from occurring.

However, the biggest impact of commercial logging on wildlife is linked to roads, which provide access to previously remote forest areas. Each year, the network of roads created by logging operations increases, linking previously inaccessible forests to the national road system.³⁶⁸ The increasing access to previously isolated forests both facilitates hunting and improves market accessibility. In the Congo Basin, road construction has turned a 3-4 day hunting trip into a one-day event.³⁶⁹ The network of roads also impedes the movement of some mammals, resulting in isolated breeding populations. As fragmented forest patches increase in number "biomass declines, community structure changes, pest invasions increase and the rate of species loss skyrockets".³⁷⁰

Possible solutions

Reduced Impact Logging (RIL) is generally regarded as the main technical solution to canopy disturbance, as will be discussed in

³⁵⁸ Alexander & Forman (1998) *op.cit.*; ³⁵⁹ Wilkie, D. *et al.* (2000) Roads, Development and Conservation in the Congo Basin. *Conservation Biology* 14(6): 1614-22; ³⁶⁰ CIAJE (2000) Impacts des Activités des Compagnies Forestières Européennes sur les Populations locales et l'environnement - Gabon; ³⁶¹ CCA = Chromated Copper Arsenate; BFCA = boron-fluoride-chromium-arsenic; TBT = tributyltin; ³⁶² Venkatasamy, R. (2004) Wood preserving chemicals in Kenya: health and environmental issues. Department of Wood Science, Moi University, Kenya. Paper presented at The Environmental Impacts of Preservative-Treated Wood Conference, 8-11 February, 2004, Orlando, Florida; ³⁶³ Lapuyade *et al.* (2000) *op.cit.*; ³⁶⁴ Lapuyade *et al.* (2000) *op.cit.*; ³⁶⁵ IUCN (2004) 2004 IUCN Red List of Threatened Species; ³⁶⁶ Robinson, J.G. *et al.* (1999) Wildlife harvest in logged tropical forests. *Science* 284(5414): 595-596; ³⁶⁷ Chapin, F.S. *et al.* (2002) Principles of Terrestrial Ecosystem Ecology. Springer, New York; ³⁶⁸ Robinson *et al.* (1999) *op.cit.*; ³⁶⁹ Wilkie *et al.* (2000) *op.cit.*; ³⁷⁰ Wilkie *et al.* (2000) *op.cit.*

detail in Article 6.3 by Sylvain Angerand. However, the challenge of reducing forest susceptibility to fire, which is increased by the damage resulting from commercial logging operations, has not yet been met.

There are technical solutions available to reduce soil erosion, and it is much more effective, both ecologically and financially, to prevent these problems rather than trying to rehabilitate the soil after logging operations.³⁷¹ One measure that has had proven results is Variable Tyre Inflation (VTI) – the reduction of tyre pressure to reduce the amount of soil erosion from logging trucks and skid towers. This spreads the pressure over a greater surface area and has been shown to significantly reduce sediment yields from between 54% to 84%.³⁷² CIFOR has produced indicators and guidelines to minimise erosion and run-off during harvesting, but the extent to which they have been adopted by industry has not been assessed.

Noise and air pollution are particularly badly dealt with by industry, and furthermore, more research is required on alternative safe chemicals that can be used to treat timber.

Four critical entry points have been identified in relation to the bushmeat crisis: hunters, consumers, traders and the logging industry. The logging industry has a part to play in all of these, from curbing hunting of wild bushmeat to providing alternative sources of protein for their workers and families. The success of each approach will vary according to the local circumstances. However, none have yet proved to be an overwhelming success.³⁷³ In practise, little can be done, because when logging camps and towns are established, nothing can be done to stop people migrating to them; and these people will inevitably go hunting. So, the fact is that logging results in hunting.

Conclusion

Unfortunately, the broad application of technical solutions to reduce the ecological impact of industrial forest logging concessions in the Congo Basin is unlikely. The lack of enforcement of environmental regulations and management plans, as well as the exclusion of local people from forest concession management, means that the best techniques are not being implemented. The simple fact is that logging companies do not have the motivation, and governments do not have the resources, to enforce the regulations.

Recommendations

- Incentives should be provided for local people to continue their traditional forest management practices by recognising their traditional land rights while simultaneously addressing development issues through alternative routes to industrial logging.
- Community involvement in ecological land use mapping should be established prior to concession allocation.
- Workers' camps should be built along ecological guidelines. Logging concession operators and associated industries based in the forest should be obliged to provide adequate living accommodation, sanitation and other facilities to reduce the environmental impact of the sites.
- Land use and river system mapping criteria should be applied during land use allocation and road construction.

³⁷¹ Asdak, C. *et al.* (2003) Factors affecting runoff and soil erosion: plot-level soil loss monitoring for assessing sustainability of forest management. *Forest Ecology and Management*: 180: 361-74, 2003; ITTO (2005) Technical Series 23;³⁷² Brown, C. & J. Sessions (1996) Variable tire pressures for tropical forests? "Synthesis of Concepts and Applications" *FAO Engineering and Technology 3*.³⁷³ Bowen-Jones, E. *et al.* (2002) Assessment of the solution-orientated research needed to promote a more sustainable bushmeat trade in Central – West Africa. DEFRA, UK.

Where concessions have already been allocated:

- The existing laws and contractual procedures that provide technical solutions should be enforced.
- Community protein programmes and campaigns to protect endangered species and limit bushmeat consumption should be implemented.
- Regulations limiting the species and age of trees that can be felled should be enforced.
- Ridge-topping (banking road sides) of all roads should be carried out and "Variable Tyre Inflation" used by all logging trucks.

6.2 ECOLOGICAL STABILITY OF THE CONCESSIONS SYSTEM REFLECTED THROUGH NATIONAL FOREST PROGRAMMES

JAMES MAYERS, IIED, UK

All evidence suggests that, as people use and affect the products and services of ecosystems, an “adaptive management” approach is needed to achieve ecological resilience. If commercial timber harvesting is going to play its part in this, it needs to be embedded in governance frameworks that develop and integrate the many conditions on which ecological resilience relies.

Two frameworks dominate international attention on governance systems in developing countries – both attempt such integration of ecological, social and economic priorities at the national level. Firstly, National Sustainable Development Strategies were committed to by nations at the 1992 Earth Summit and reiterated in the 2000 Millennium Development Goals. There are few national sustainable development strategies, although the more recent development of guidance and lessons for practitioners³⁷⁴ may stimulate more. Secondly, Poverty Reduction Strategies were initially required by the IMF and World Bank as a basis for access to debt relief in highly-indebted poor countries and have since been required by all countries supported by the International Development Association since July 2002. Bilateral donors are also increasingly subscribing to poverty reduction strategies and they have thus emerged as a central determinant of the development agenda in many countries. However, their recognition of forests as a development asset has so far received very little recognition in the process.³⁷⁵

Ecological sustainability is imbedded in both National Sustainable Development Strategies and Poverty Reduction Strategies. The implementation of the concessions system so far has proved to be in contradiction to this objective. The case study on Mozambique demonstrates this (see Box 1).

Forest policy has been formulated in a number of Central Africa counties through national

forest programmes (NFPs); one of their stated goals is conservation. NFPs are being strongly promoted on the understanding that they follow a country-led approach, rather than an international formula in the style of the old Tropical Forest Action Plan.³⁷⁶ The notion of NFPs was developed by the international Forestry Advisers Group (an informal group of aid agency forestry advisers), adopted by FAO³⁷⁷ and then endorsed by the Intergovernmental Panel on Forests. The ailing United Nations Forum on Forests action plan commits countries to pursuing NFPs.³⁷⁸ Thus, all countries that have taken part in UN forest policy dialogues have adopted the requirement for a national forest programme. It is consensus-based “soft” international law.

The NFP concept currently promoted at the international level³⁷⁹ puts particular emphasis on the following:

- Multi-stakeholder involvement in forest decision making;
- Means for co-operation, co-ordination, and partnership;
- Secure access and use rights;
- Research and traditional knowledge;
- Forest information systems;
- Study and policies on underlying causes of deforestation/degradation;
- Integrating conservation and sustainable use, with provisions for environmentally sensitive forests, and for addressing low forest cover;
- Codes of conduct for the private sector; and
- Monitoring, evaluating, and reporting on NFPs and other international commitments.

³⁷⁴ OECD & UNDP (2002) Sustainable Development Strategies: a resource book. Dalal-Clayton, B. & S. Bass (Eds.) Earthscan, London;³⁷⁵ Oksanen, T. & C. Mersmann (2002) Forests in Poverty Reduction Strategies: An assessment of PRSP processes in Sub-Saharan Africa. In: Oksanen, T. *et al.* (Eds) (2003) Forests in Poverty Reduction Strategies: Capturing the Potential. European Forestry Institute Proceedings 47, Joensuu, Finland.;³⁷⁶ FAO (2005) National Forest Programmes; UNFF (2002) Report of the Secretary-General on National Forest Programmes.;³⁷⁷ FAO (1996) Formulation, execution and revision of national forest programmes: Basic principles and operational guidelines. FAO, Rome.;³⁷⁸ UNFF (2002) *op.cit.*;³⁷⁹ FAO (2005) *op.cit.*; World Bank (2002) A revised forest strategy for the World Bank Group. 31 October 2002. World Bank, Washington, D.C.

Few, if any, contemporary NFPs have achieved optimal systems for all of the above. Malawi, Uganda, Tanzania, Brazil, Costa Rica, Guatemala, Columbia, Vietnam, India, Finland, Germany, and Australia would appear to be leading the way.³⁸⁰ However, it is too early to see significant results. Many NFPs were judged to be "stalled" by implementing countries due to a lack of institutional, human and financial capacity, as well as a lack of adequate policies, poor institutional co-ordination and deficient mechanisms for public participation.³⁸¹ Not surprisingly, widespread agreement on the need for "country-driven, holistic" processes is not matched with implementation.

Box 1. Mozambique – even with a good Poverty Reduction Strategy and a Sector-Wide Programme the forest concession system is out of control³⁸²

Mozambique has considerable high-value forest resources and much poverty. Development of macro policy in the country has been the focus of much attention in recent years. A national Action Plan for the Reduction of Absolute Poverty (PARPA) is in place - which includes emphasis on participatory development of the forest and wildlife resources of the country. The PARPA is well integrated with a sector-wide National Agriculture Programme (PROAGRI) which includes a development strategy for forestry and the rural sector – and has many elements of what, in other countries, might constitute a national forestry programme. Both PARPA and PROAGRI have received substantial attention and support from national institutions and donor agencies alike.

Under these programmes, a forest concession system is supposed to replace a previously chaotic system of forest licensing. Concessions are granted for 50 years over areas ranging from under 10,000 to over 100,000 hectares. Concessionaires are expected to establish

processing industries and management plans of considerable complexity. Out of 98 approved concessions (2001-2005), 46 have submitted the required management plan, out of which 28 were approved by June 2005.

But in practice the forest concession system in Mozambique is currently doing little for ecosystem resilience or local livelihoods, or indeed for the national economic coffers. Only a few concession holders are capable and willing to practice forestry in a way that might be deemed sustainable, whilst only about 10 people in the whole country are approved to develop the complicated management plan required by law. This is good business and they would like to keep it that way. Likewise there is a strong incentive at national and provincial levels to keep the bureaucratic red tape in place. Meanwhile, little processing capacity is emerging – log and lumber exports to China have become the norm – and the vast majority of logging continues under "simple licenses". These are held by hundreds of operators who sell to the larger buyers, including concessionaires who fill their quotas and meet their orders in this way.

It can be concluded that well-meaning and well-integrated national planning frameworks can have perverse consequences on the ground if not followed through. Inappropriate expectations from the government for investment and scale, and excessive complexity in concession management in the context of low capacity and "joined up" systems – has led to a situation where control of, and local benefit from, the concession system in Mozambique is negligible.

Experience in Mozambique and elsewhere suggests that it is futile to attempt to reform everything in a sector at once. Yet without progress on policy and implementation capacity going hand in hand, little will be achieved or

³⁸⁰ Bird, N. (2002) National Forest Programmes. Key Sheets for Sustainable Livelihoods No.17. ODI, London; European Tropical Forest Research Network (2004) National Forest Programmes. ETRN News 41-42/04; Humphreys, D. (Ed.) (2005) National Forest Programmes in a Pan-European Context, Earthscan, London; Mayers, J. *et al.* (2001) Forestry tactics: lessons learned from Malawi's National Forestry Programme. Policy that works for forests and people series No.11. IIED, London; Savenije, H. (2000) National Forest Programmes: From political concept to practical instrument in developing countries. Theme Studies Series 3, Forests, Forestry and Biological Diversity Support Group, Wageningen, Netherlands; Thornber, K. (2001) NFPs: Agent or Product of Institutional Change? Unpublished draft. Available at: <http://www.fao.org/forestry/foris/>; ³⁸¹ FAO (2005) *op.cit.*; ³⁸² Johnstone, R. *et al.* (2005) Forestry legislation in Mozambique: compliance and the impact on forest communities. Terra Firma, Maputo & IIED, London; Norjamaki (2006) Pers. comm.

perverse consequences will result. Even though forest policy, in the form of national forest programmes or national agricultural programmes, might address ecological stability on paper, in reality ecological objectives are sacrificed under the concession system for short-term financial gain.

6.3 ECOLOGICAL SUSTAINABILITY: REDUCED IMPACT LOGGING

SYLVAIN ANGERAND, FRIENDS OF THE EARTH, FRANCE

The 1950s marked a major turning point in tropical rainforest logging practices. The post-war economic boom fuelled the development of new industrial techniques, leading to the intensification of logging on a global scale.

The last 20 years have seen the emergence of numerous initiatives aimed at defining and promoting sustainable forest management. In 1992, during the United Nations' Conference on Environment and Development (UNCED) in Rio de Janeiro and following on from a great deal of scientific research, it became clear to all that the intensive mechanisation of logging practices is causing serious degradation of both the soil and the residual forest. Around the same time initial studies on reduced impact logging (RIL, otherwise known as low impact logging, LIL or low impact harvesting, LIH) were published, appearing to be a timely life-saver for logging companies accused of forest destruction.

RIL differs from conventional logging in that it outlines new techniques and concepts for planning and organising timber extraction activities, the main aims of which are to reduce environmental damage while at the same time improve logging efficiency.³⁸³ As noted by Van der Hout and Van Leersum, the word "reduction" implies a comparison between two models, the more widespread of which is conventional logging, this currently experiencing notoriety for the damage it causes. As regards "low impact", it remains to be seen whether the RIL method is the hoped-for effective, environmentally-friendly solution which follows sustainable management principles. The present paper will try to answer this question.

Defining reduced impact logging: a rationalisation of industrial activities

Reduced impact logging emerged largely as a result of the international community waking

up to the alarming rate at which tropical deforestation is taking place, combined with twenty years of ineffective sustainable forest management initiatives.³⁸⁴ The increasing volume and sophistication of the research being conducted in this area has given rise to new logging techniques which allow forest areas to be harvested in a more rational manner. The RIL method is generally characterised by:

- a pre-determined cutting cycle of at least 20 years;
- a removal rate not exceeding one third of the cutting area;
- the production of a pre-operation inventory;
- the construction of access roads prior to harvesting;
- a liana cutting programme, where necessary, over a two-year period prior to the harvest;
- a felling plan consisting of marking the trees to be felled, recording their felling direction and determination of the optimal, minimal-length skid trails;
- the storage of trees on minimally-sized landings;
- the need to work in favourable harvesting conditions (e.g. on dry soil);
- the training of workers and supervisors so that they can ensure negative impacts are kept to a minimum, limit any damage to residual trees, and rehabilitate the sites following logging operations;
- the staff being suitably qualified to carry out a post-harvest assessment.³⁸⁵

³⁸³ Van der Hout, P. & G.J.R. Van Leersum (1998) Reduced impact logging: a global panacea? Comparison of two logging studies. Publ. The Tropenbos Foundation, Wageningen; ³⁸⁴ Rice, R.E. *et al.* (2001) Sustainable Forest Management: A Review of Conventional Wisdom. *Advances in Applied Biodiversity Science* 3; ³⁸⁵ FAO (2004) Reduced impact logging in tropical forests. Literature synthesis, analysis and prototype statistical framework. Forest Harvesting and Engineering Working Paper, FAO, Rome, November 2004

This method has been received favourably in particular by the United Nation's Food Agriculture Organisation (FAO) which, in 1996, published its own model code of forest harvesting practice.³⁸⁶

Many studies have shown the benefits that RIL can bring to the industrial logging of forests. At the same time there is universal agreement on the need to make rationalisation of timber extraction practices a priority. For example, a study carried out under the Bulungan Research Forest Project run by CIFOR in the East Kalimantan Province of Indonesia, compared the impact of conventional versus low impact logging techniques on forest structure. The study concluded that the total damage which results from using RIL techniques was 33% less than that caused by conventional logging. The study's results are summarised in table 1 below.

Table 1: The impacts of conventional logging (CL) compared to those of reduced impact logging (RIL)³⁸⁷

	RIL	CL	Reduction (%)
Total damage (% of initial tree density)	34	51	-33
Mortality (% of initial tree density)	13	25	-48
Injuries	21	26	-19
Surface area affected (m ² per m ³ of timber extracted)	8.6	18.6	-53
Total width of main roads (m)	6.3	8.3	-25
Total width of secondary roads (m)	5.4	7	-23
Total length of skid trails	9090	17301	-47
Canopy gap along main roads (%)	35.3	49.2	-28
Canopy gap along secondary roads (%)	26.8	40.3	-33

The so-called "low impact" logging method is above all a technical response intended to rationalise the industrial logging of forests. Even if it would now appear that the widespread adoption of RIL methods can eliminate certain negative impacts on forest structure, it would be a mistake to believe such

methods offer a universal panacea to the issues surrounding industrial logging.

Limitations of RIL techniques

Residual population damage is due more to logging intensity than to logging methods

Logging in Central Africa is often described as being of only limited intensity when compared to logging in either America or South-East Asia.³⁸⁸ In Central Africa an average of between one and three trees are harvested per hectare as opposed to an average of between two and five trees per hectare in America and between six and twenty trees per hectare in South-East Asia. These differences are explained by the fact that Central African logging practices are hyper-selective, concentrating on twenty or so internationally marketable species. In Gabon, okoumé (*Aucoumea klaineana*) and ozigo (*Dacryodes buettneri*) represent approximately 65% of the species exported.³⁸⁹ It has been shown that the land area degraded by logging is related exponentially to the number of stems harvested.³⁹⁰ Most of the low impact logging work done in forest concessions is focussed on planning roads and skid trails, as well as on training in directional felling techniques. These are not sufficient however if a maximum timber harvest level is not set during the management stage.³⁹¹ Once the operator has begun to manage the forest in order to meet international demand for timber, the maximum harvest level is hardly ever taken into account. In addition, logging, even using RIL methods, can cause serious damage when species for which there is high commercial demand are concentrated in a small area (in aggregates or clumps).

³⁸⁶ Dykstra, D.P. & R. Heinrich (1996) FAO Model Code of Forest Harvesting Practice. FAO, Italy;³⁸⁷ Chabbert, J. & H. Priyadi (2001) *Exploitation à faible impact dans une forêt à Bornéo*. In: *Bois et forêts des tropiques*. Cirad-Forêts 269(3): 83;³⁸⁸ NASA LCLUC Program. An Integrated Forest Monitoring System for Central Africa. Final report April 2003-2004. Principal Investigator, Dr. Nadine Laporte, The Woods Hole Research Center.;³⁸⁹ ATIBT (2004) 2003 Statistics. In: The ATIBT Newsletter, N° 20, Summer 2004;³⁹⁰ Durrieu de Madron, L. et al. (1998) *Les techniques d'exploitation à faible impact en forêt dense humide camerounaise*. Forafri Series, Document 17. CIRAD.

Reduced impact logging techniques do not necessarily guarantee good regeneration

The fundamental principle of forest management in Central Africa is that of minimum cutting diameter (MCD). This diameter is specified for each harvested species according to generally accepted rules of timber felling. It is therefore surprising to find that the MCD value for any given species can vary greatly between countries. For example, the MCD for azobé (*Lophira alata*) is set at 110 cm in Ghana, 100 cm in Cameroon, 90 cm in Liberia, 70 cm in Gabon and 60 cm in Côte d'Ivoire.³⁹² If forest regeneration is to occur, the MCD has to be greater than the minimum diameter for fructification (MDF).³⁹³ What is more, despite the fact that logging practices concentrate on just a handful of species, knowledge of their autecology and phenology is still only fragmentary. The minimum fructification diameters, variances and seed dispersal dynamics are all still unknown for many timber species despite the fact that an accurate knowledge of MCD would seem vital if regeneration is to be ensured. Instead it seems that MCD has increasingly been defined according to the timber processing industry's technical capabilities, taking no account whatsoever of either the ecological or the silvicultural requirements of the harvested species.

To facilitate regeneration and compensate for the lack of knowledge of minimum fructification diameters, the post-harvest preservation of a proportion of the seed trees is often considered as one effective solution. However, when the operator does agree to conserve seed trees after logging – which is not always the case – these trees are more often than not made up of ill-formed specimens having low commercial value.³⁹⁷ If such deviation is not due to environmental influences but is instead due to particular genetic traits, the operator may find himself "genetically" selecting for ill-formed trees which in turn is likely to reduce the

quality of the gene pool of the regenerated plots.

In addition, while this forest management principle might have merit because it is simple, it does not take account of the specific traits of any given species: some trees are able to regenerate easily in a highly disturbed area despite there being only a very small number of seed trees (as in the case of helophytes such as okoumé, *Aucoumea klaineana*,³⁹⁸ or obeché, *Triplochiton scleroxylon*³⁹⁹) whereas others are highly destabilised by significant "creaming off" where 75% of the seed trees may be removed (e.g. moabi⁴⁰⁰). Furthermore, tree population dynamics are currently still not being taken into account on a regional scale: thus even low impact logging of a species already in decline and at the limit of its distribution range (such as the moabi in eastern Cameroon) could result in its localised disappearance. Conversely, it has been shown in the Democratic Republic of Congo's Ituri region that regeneration of African mahogany (*Khaya spp.*, and more specifically acajou, *Khaya anthothec*), sipo (*Entandrophragma utile*) and sapelli (*Entandrophragma cylindricum*), whose seedlings require strong sunlight, is favoured not by selective logging (where the bulk of the seed trees are removed and small gaps are opened up in the canopy to enable regeneration to occur), but instead by slash and burn rotation agriculture which opens up large gaps in the canopy close to forest stands rich in seed trees.⁴⁰¹

³⁹¹ Dupuy, B. (1998) *Bases pour une sylviculture en forêt dense tropicale humide africaine*. FORAFRI Project; ³⁹² Palla, F. et al. (2002). Forafri Datasheet on Azobé, CIRAD; ³⁹³ The fructification diameter for trees in natural forests is essential for determining reproductive capacity. If the MCD is less than the diameter at which the tree produces fruit abundantly then regeneration of the exploited species is put at serious risk; ³⁹⁴ Fargeot, C. et al. (2004) *Réflexions sur l'aménagement des forêts de production dans le bassin du Congo*. *Bois et Forêts des Tropiques*, 2004, N° 281; ³⁹⁵ Durrieux de Madron, L. et al. (2003) *Fructification du sapelli par classe de diamètre en forêt naturelle en Centrafrique*. *Canopée*, 23, January 2003; ³⁹⁶ Sist, P. (2001) Why RIL won't work by minimum-diameter cutting alone. *Tropical Forest Update* 11(2); ³⁹⁷ Dupuy (1998) *op.cit.*; ³⁹⁸ Brunck, F. et al. (1990) L'okoumé. CTFT, CIRAD, Paris; ³⁹⁹ Palla et al. (2002) *op.cit.*; ⁴⁰⁰ Debroux, L. (1998) *L'aménagement des forêts tropicales fondé sur la gestion des populations d'arbre : l'exemple du moabi (Baillonella toxisperma Pierre) dans la forêt du Dja, Cameroun*. PhD Thesis, Faculté des Sciences agronomiques de Gembloux, Belgium.

"Reduced impact" techniques do not necessarily allow for "low impact" logging

While there may be a good many studies showing the effectiveness of RIL techniques, most of them draw the same conclusion: these methods allow for "better" management of forest resources at least when compared to conventional methods. However, despite these techniques appearing to be indispensable and irrespective of the logging type, it has to be said that the tangible benefit⁴⁰² which RIL can bring is not really very well understood. Systematically comparing conventional logging with RIL practices does not reveal whether resource exploitation is sustainable. While it can now be shown that these techniques reduce environmental damage, to state that RIL is "low" impact *per se* is in fact neither demonstrable nor justifiable.

In addition, while the impact of conventional logging on fauna and flora is well documented, research done on the impact of RIL on biodiversity is scant⁴⁰³ and insufficient to make any claims that these techniques address adequately any concerns regarding ecological sustainability.

Reduced impact industrial logging is always accompanied by the opening up of forest roads and trails, which hunters then use to penetrate the forests. Other research has shown that RIL techniques do not significantly reduce the negative effects of hunting.⁴⁰⁴ The spread and pollination of many tropical forest tree species depend on animals (zoochory) and in particular large animal species. Such is the case with trees like the moabi which produce large fruit and depend on elephants and gorillas to spread the seeds they contain over long distances, thus explaining why the species is found across vast areas. To date, the disappearance of large fauna has not been quantitatively integrated into any calculations of the rate of regeneration of commercial tree species.

The RIL method: forest management or harvest planning?

Forest management failure

Reduced impact logging is a technical response to a question which falls within the much wider sphere of forest policy in general. The big question is whether systematic adoption of RIL methods could result in sustainable industrial logging whilst remaining within the framework of the forest concession system. Many environmentalists denounce the incompatibility between economic profitability and sustainable environmental management. According to Hallé⁴⁰⁵ it is time to accept that the sustainable logging of tropical forest timber is simply not possible on an industrial scale. Economic profitability inevitably implies destruction". This statement comes from the fact that what passes for sustainable forest management in Central Africa is more a timber harvesting plan than a management plan covering the ecological, social and economic aspects equitably.

The underlying reasoning behind this statement is structural: the logging company is responsible both for the extraction of timber and forest management. To entrust the same company with both roles, as is the case throughout Central Africa, with the possible exception of the Central African Republic,⁴⁰⁶ leads to a forest management policy which meets the needs of the logging company, that being to harvest timber. Countries such as Cameroon, Gabon and the Democratic Republic of Congo apply a policy where the operator is exclusively responsible for the production of both the technical and the financial aspects of its management plan, "the role of the State being limited to the validation of the documentation produced and to the monitoring and verification of its implementation".⁴⁰⁷ The ecological and social aspects of management are, for their part, relegated to second place.

⁴⁰¹ Makana, J.R. (2004) Ecology and sustainable management of African mahoganies and other selected timber species in northeastern Congo Basin, Democratic Republic of Congo. PhD Thesis, University of Toronto; ⁴⁰² "Tangible benefit" in this case means the positive impact of RIL in economic, ecological, social and even cultural domains.; ⁴⁰³ Jonkers, W. (2002) Reduced impact logging in Sarawak, Guyana and Cameroon - the reasons behind differences in approach. In: Applying reduced impact logging to advance sustainable forest management, FAO, Bangkok; ⁴⁰⁴ Jonkers (2002) *op.cit.*; ⁴⁰⁵ Hallé, F. (2000) *Le radeau des cimes. Lattès*. p.56; ⁴⁰⁶ The 1990 Forestry Laws state that the forest management plans are the responsibility of the State. The operators are required to work to such plans. With the support of the *Agence française de développement*, the regulating Ministry should be able to equip itself with a management committee having the technical and human resources needed to direct operations and train the operators.

This situation explains why RIL methods, which concern only the harvesting of timber, are presented by industrial logging companies working in the Congo Basin as the cornerstone of sustainable management practices in Central Africa.

Obstacles to the application of RIL techniques

Reduced impact logging techniques are still only rarely implemented in forest concessions. This is especially true in the Congo Basin. Several reasons have been cited for why operators are disinterested in these techniques:

- the perception that RIL systems are costlier than conventional methods;⁴⁰⁸
- conventional logging accounting systems fail to recognise the direct and indirect costs associated with wasted wood;
- the lack of personnel qualified in RIL methods;
- a high profit margin will always be favoured over any long term approach;
- the cost of replacing machines and of training personnel are discouraging;
- standing timber prices may be undervalued;
- environmental regulations are not fully enforced.⁴⁰⁹

It is very clear that environmental concerns do not sit well alongside the aim of industrial companies to maximise profit. RIL implies additional investment for planning and training which is hardly appealing to logging operators. In addition, with local authorities not putting in place strict regulations or methods of policing these, it is difficult to see how RIL methods will ever be widely adopted.

Conclusions

Despite the indisputable benefits of “low impact” logging methods, they would appear to be insufficient - as long as forest management is entrusted to logging companies whose sole interest is to ensure they satisfy international market requirements. This phenomenon is not confined to Central Africa: all of the world’s forests are suffering in the same manner. The current system places ever-increasing pressure on forest resources in order to meet industrial requirements and global demand. Therefore, the sustainable management of forest resources continues to be of only secondary importance.

The result is that low impact logging methods are reduced to purely civil engineering issues (road/track optimisation, heavy plant adaptation) without any real effort to integrate ecological or political considerations. The current intense level of logging of a very limited number of species whose ecology is only partly understood, and the lack of data available on the impact of such methods on biodiversity, both tend to suggest that there would be very little benefit from promoting such techniques for the purpose of sustainable logging. As long as policies favour economic interests, it seems futile to hope that sustainable ecological practices will ever see the light of day.

⁴⁰⁷ Liabastre, T. & J.M. Borie (2005) Aménagement forestier en Centrafrique. Available at: http://www.cbfp.org/documents/rca/amenagement_rca.pdf;⁴⁰⁸ Putz, F. et al. (2000) Why poor logging practices persist in the tropics. *Conservation Biology* 14(4): 951-956;⁴⁰⁹ Holmes, T.P. et al. (2000) Financial Costs and Benefits of Reduced-Impact Logging Relative to Conventional Logging in the Eastern Amazon. Available at: http://www.fs.fed.us/global/globe/l_amer/reports/tomholmes/Tom_Holmes_report.doc

Recommendations

Forest management needs to be readjusted so that it takes better account of ecological factors and improves the effectiveness of low impact logging methods. To achieve this, the following recommendations are made:

- Disassociate responsibility for logging activities from forest management activities. Forest management should be the responsibility of the State and local communities;
- Encourage research on the ecology of the main commercialised species and on how the whole forest ecosystem functions;
- While keeping the total harvest level constant, encourage diversification of the number of species extracted to prevent over-harvesting of those species most in demand on international markets. In addition, develop both local and national markets for these so-called "secondary" species;
- Impose high minimum regeneration values for the most sought-after species in order to prevent their over-harvesting. This minimum may be anything from 50 to 80% depending on the ecology of the species being harvested;
- Require the operator to provide a minimum level of regeneration following felling. As already practiced by some countries in Central America, the State could demand financial security before logging begins, which could then be used to enrich the forest if the operator does not meet his obligations.



Community management of forests will play an essential role in any effective forest management: community members in Equateur Province, DRC, are already mapping and discussing forest use. Photo: Cath Long

CHAPTER 7: CONCLUSIONS & RECOMMENDATIONS

Main recommendations by Congolese civil society:

- There should be an analysis of what is happening in the field in DRC, (this has been taken on as a challenge by Congolese civil society itself and a report on logging titles in DRC has recently been published)
- Capacity strengthening for indigenous peoples and local communities should take place before the development of any project or forest rights allocation affecting an area
- Ensuring genuine consultation with indigenous peoples and forest communities before policies are made and implemented
- Preparation of local development plans, including the participation of all groups of local people, before the arrival of any forest exploitant.
- Demands for an environmental impact assessment should be met, which includes the option of refusing a project permission to go ahead, before the realisation of any development project that may affect the forest
- Strict control of any logging operations should be realised, particularly as concerns their social impacts and obligations and systematic and meaningful sanction of logging companies that do not respect the law or their obligations
- Legislation protecting the rights of indigenous peoples should be developed
- The area of forest assigned to industrial scale timber production should be reduced and that under community management increased

- Transparency on the part of donors, governments and forestry companies in all their operations should be increased

Main recommendations drawn from the text of the report:

Chapter 1: Towards better governance

None of the global or regional political process concerning forests are taking the radical approach required to tackle the problems presented by the industrial forest logging concessions system as it is being applied today. In fact, the regional processes with the greatest potential to have an impact, such as COMIFAC, appear to be rushing to cement in place the very system that has failed to deliver on so many stated policy objectives.

The most significant failure is that forest-dependent communities have been almost totally excluded from decision-making processes. This is more than ironic; as the international "policy dialogue" on forests has given greater recognition to the important role of multiple "stakeholders", so actual "rights-holders" in the Congo Basin region have mostly been completely ignored. This is a reflection of the fact that regional forest policy has been shaped by government agencies (which include some of those widely recognised as suffering from endemic corruption), the timber trade (widely recognised to be mired in illegal and unsustainable practices), international agencies such as the World Bank (largely supporting an out-dated "binary" model of forest management consisting of industrial timber exploitation and strictly protected areas) and international conservation organisations (who have a poor track record in recognising the needs of local communities).

In fact, the Congo Basin lags far behind other regions of the world regarding the distinct body of law affirming indigenous peoples' individual

and collective rights that has emerged and been consolidated in recent years. The African Commission on Human and Peoples' Rights, for example, has taken some important first steps with regard to indigenous peoples in Africa. Zoning, in the way it is currently implemented, is potentially creating future legal and social conflict by ignoring pre-existing forest use and management patterns that are far more complex and nuanced than "logging", "conservation" and "community use".

Mapping forest use-rights will take time, and rights will vary from area to area and from group to group. This work must be done however, to avoid further cases such as that successfully brought against the Nicaraguan government, which was found to have violated the rights of local people when it granted logging concessions to a foreign company without either consulting or obtaining consent from the communities concerned.⁴¹⁰

Recommendations

A thorough assessment needs to be undertaken of the compliance, or otherwise, of the forest policies and practices of the Congo Basin region with international and regional agreements concerning the protection of the environment and human rights/indigenous peoples' rights.

Those participating in and financing international processes relating to forests, including the international donor community, should acknowledge that the industrial forest logging concessions system has failed to deliver policy objectives in countries with poor governance. Support should be provided for alternatives to this model.

To prevent any increase in conflict resulting from forestry activities, future land use planning should include a painstaking process of mapping and understanding the forest use

rights of the communities that depend on the forest for their survival. These rights should be recognised within national legislative frameworks and respected.

Forest communities should be facilitated in negotiations concerning forest use with other interested parties.

Chapter 2: Conflict, post-conflict and forest exploitation

It is clear that the existing international forums in which forests are being discussed, and in particular those focusing on the trade aspects, have failed to take concerted, rapid and systematic action to stop "conflict timber" being traded internationally. The moratorium imposed on timber from Liberia is to be applauded. However, in spite of the obvious need, the necessary research has not been undertaken nor the systems put in place to replicate this effort in other areas. DRC is a case in point.

Accepted definitions for "conflict timber" are required. These should give consideration to the scale and nature of the conflict, to address:

- "Chronic" conflict situations such as those where forest use rights and land rights are contested or where forest exploitation is financing failed states; and
- "Acute" conflict where open armed conflict or corrupt regimes are being financed by logging operations.

Recommendations

A definition of conflict timber should be agreed on and used to apply trade sanctions through the appropriate UN institutions, FLEG-T Voluntary Partnership Agreements and other

⁴¹⁰ Mayagna (Sumo) Awas Tingni Community v. Nicaragua

relevant trade forums. Mechanisms and processes for monitoring, reporting, allocating responsibility and enforcement should be identified.

Timber originating from logging concessions in countries experiencing ongoing conflict or from those that can be classified as "failed states" should be subject to the same sanctions as "conflict timber". These should be maintained for the lifetime of the concession(s) concerned, including where concessions are subsequently sold or otherwise transferred. To help bring a stop to ongoing rights abuses and to deny further support to illegitimate governments these sanctions should be applied retrospectively.

To stop ongoing social conflict, detailed mechanisms for the inclusion of local and indigenous peoples should be designed and implemented. Allocations of commercial forest use rights should be redefined where these are in conflict with pre-existing rights recognised in international, national and customary laws.

Chapter 3: Evaluation of the impact of industrial logging concessions

The legacy of the industrial forest concession system in those countries where it has been in operation for many years provides a stark warning for countries such as DRC. Cambodia, for example, now has the third highest rate of primary forest destruction in the world. In Cameroon, illegal logging is rampant, environmental destruction and damage widespread, and forest-dependent communities are slipping into deeper poverty rather than becoming richer.

It is clear that in a number of countries the introduction of the industrial logging concession system into a weak governance environment has provoked conflict and undermined legal and

democratic processes. Where there is a neo-patrimonial model of government there is a strong propensity to use public functions for private gains, and so valuable public assets such as logging concessions tend to become "currency" in systems of patronage and outright corruption. Therefore, in such an environment, the industrial logging concession system can perpetuate weak governance and undermine development, rather than support it.

It can be argued that legal mechanisms and administrative procedures do exist to address some of the problems highlighted in this report. The fact is, however, that these are simply not implemented. Over 10 years of reform in Cameroon and in other developing countries have failed to deliver on policy objectives, in large part because there has not been sufficient consideration of the weak governance context within which forestry operates.

Recommendations:

Alternative forest models should be further developed, factoring into economic projections the functions and role of forests in climate, soil, water and other ecological services, and the benefits to those living in and around forests.

Policy makers and development aid partners should publicly recognise that bad governance is a debilitating factor in forestry "reform", and should use incentives and disincentives, such as conditionality in aid, to bring about reform. Conditionality by international agencies should be clearly described and its application monitored. Reform should include establishing functional mechanisms for the independent financial scrutiny of companies and government counterparts. Structurally, the authority for forest management, regulation and monitoring should be separated. These authorities must pay living wages and provide incentives and

protection mechanisms for those entrusted with these responsibilities.

Lessons need to be learnt from other countries as to the design and function of forestry institutions; those that serve principally to allocate, administer or support industrial logging concessions are unlikely to contribute towards developmental or environmental objectives. Where such institutions already exist they should be dismantled, and replaced with those that will promote pro-poor, pro-environmental models of forestry.

To support the application of forest-related law, public access to texts and legal process should be increased. Development of law and its enforcement should be consistent, promoting policy objectives of poverty alleviation, respect for the rights of local peoples, and protection of the environment.

International law enforcement initiatives should seek and implement means of tracking and sanctioning rogue companies operating in the forest sector.

The allocation of production forest concessions should not be justified by the existence of protected areas.

Chapter 4: Social sustainability of forestry models

Current logging policies and practices have led to the exclusion of different groups, especially Pygmy peoples, from forest-related decision-making processes. There is a need to re-think forest policy and law in order to recognise the rights of local people and to facilitate the local capture of benefits. The forest zoning process proposed in DRC should learn lessons from previous zoning processes (such as in Cameroon), and how these have either promoted or hindered local peoples rights over the forest.

The availability of non-timber forest products (NTFPs) can be severely degraded during and after logging operations, including bushmeat and those from tree species which are also valuable for their timber. This, together with the influx of employees from outside, can have severe impacts on local livelihoods, cultures and customs. These phenomena also have severe implications for the health of communities, including the spread of HIV-AIDS and malaria. Thus, the environment created by the industrial logging of tropical forests is dangerous for local people and employees alike.

The needs and concerns of local communities are given little attention by either logging companies or the governments which are supposed to regulate them. These broader impacts, including those on health, are not taken into account in decisions to expand timber operations.

Recommendations

To prevent further conflict the moratorium on the allocation of new concessions and logging in DRC should be continued until the government has sufficient information and capacity for effective monitoring and enforcement.

The rights of Pygmies should be recognised independently of their Bantu neighbours, and these rights should be respected in forest management decisions.

There should be rigorous enforcement of existing laws relating to consultation, health and employment, including the suspension of all logging operations that do not have a management plan or that have not conducted an environmental and social impact assessment. This should be supported by providing communities with the right of appeal to legal authorities on all aspects of forest-related decision-making and implementation.

In order to guide policy reform, further research should be conducted on: the distribution of forest communities, especially Pygmies; on current conflicts arising from logging concessions; and on the ecology and management of key non-timber forest products, especially those that are also timber species. The social costs of any existing or proposed forest management systems should be incorporated into calculations of the perceived economic benefits.

Substantial support and training to indigenous organisations is required in order to build an effective indigenous system of representation and communication.

Chapter 5: Economic sustainability

There is evidence that the large-scale industrial timber concession "model", as operated in the tropics, is inherently anti-poor; it has failed to contribute to the sustainable development of countries where it has operated for many years. In fact, where this model has been employed, development indicators have largely declined.

The failure of the model to deliver economic benefits may be due to an imbalance in power between the logging companies and the government, the latter having a limited ability to enforce concession agreements or to collect and redistribute the appropriate revenues in a correct manner. Therefore in many cases, the concession model is simply not suited to the political environment in which it is supposed to operate.

Many international forestry institutions are not properly equipped or inclined to develop more pro-poor forestry initiatives, such as community forestry, that incorporate property rights allocation at the community level.

Recommendations

The industrial forest logging concessions system should be publicly recognised by international development agencies and research institutes as a barrier to the development of "pro-poor" forest policies in countries with weak governance.

A fundamental review of the structural economic problems associated with the industrial forest logging concessions model should be undertaken and applied to the development of alternative forest policies and laws, especially in the DRC.

The international donor community should contribute to the development of alternative forest management models applicable to DRC and other developing countries.

Chapter 6: The impact of industrial logging on ecological diversity

Although industrial logging in tropical moist forests is usually undertaken on a "selective" basis, there is much scientific evidence to show that it directly causes serious and possibly irreversible ecological impacts. Indirect impacts – such as widespread, large-scale bushmeat hunting and in-migration of settlers and farmers – can have even greater impacts.

Unfortunately, the broad application of technical solutions to reduce the ecological impact of industrial forest logging concessions in the Congo Basin is unlikely to occur in practice. The lack of enforcement of environmental regulations means that the best available techniques are not being implemented.

Despite the indisputable benefits of the full suite of "low impact" logging methods where industrial scale logging might be appropriate,

their application is insufficient. Low impact logging often has been reduced to purely civil engineering issues (road/track optimisation, heavy plant adaptation) without any real effort to integrate ecological or social considerations.

Even though forest policy, in the form of national forest programmes or national agricultural programmes, might address ecological stability on paper, in reality ecological objectives are sacrificed for short-term financial gain. This situation is repeated all over the world and until the policy imbalance is corrected, shifting away from those that favour purely economic interests, it seems futile to hope that sustainable ecological practices will ever see the light of day.

Recommendations

To increase the quality of forest management, responsibility for logging activities should be dissociated from forest management activities. The State could demand financial security before logging begins, which could then be used to enrich the forest if the operator does not meet his obligations. Environmental regulations should be enforced and, where breached, sanctions should also be applied.

Incentives should be provided for local people to continue their traditional forest management practices by recognising their land rights, while simultaneously addressing development issues through alternative routes than industrial logging.

Where industrial logging is being considered, land-use mapping should be undertaken prior to any concession allocation, using community-based mapping techniques and leading to legal demarcation and recognition of traditional land-use practices and tenure regimes, and ensuring free prior and informed consent for communities.

The existing laws and contractual procedures that provide technical solutions to many of the

known problems should be enforced.

The international donor community and ecological research institutes should encourage research on the ecology of the main commercial tropical timber species and on the functioning of whole rainforest ecosystems.

NOTES

NOTES

PREVIOUS REPORTS IN THE SERIES:

Concessions to Poverty is the 5th in a series that looks at the social, environmental, economic and political impact of the forest and mining sectors.

High Stakes: The need to control transnational logging companies; A Malaysian case study. August 1998. By the World Rainforest Foundation and Forests Monitor

Undermining the Forests: The need to control transnational mining companies: A Canadian case study. January 2000 By the World Rainforest Movement and the Forest People Programme

Sold Down the River: The need to control transnational logging companies; A European case study. March 2001. By Forests Monitor

Forest Management, Transparency, Governance and the Law: Case studies from the Congo Basin. October 2003. By CED, Rainforest Foundation UK and Forests Monitor

The border design is based on the patterns found in the traditional cloth made by the Kuba people from the Kasai river region in Southeast Democratic Republic of the Congo. Thanks to the Kuba peoples for providing the inspiration and the University of Cambridge Museum of Archaeology & Anthropology, UK for providing images.

Front cover: The benefits of the timber industry by passing the local people. Filip Verbelen, Greenpeace Belgium

Inside front cover: Roads are built but there is no increase in income in farm gate prices for the poor farmers. Kjell Kuhne, Rainforest Foundation

Back cover: New road construction without consultation or consent. Theophile Gata, CENADEP

Back inside cover: Validation of the final map of a community mapping exercise, DRC. Cath Long, Rainforest Foundation

CONCESSIONS TO POVERTY

The environmental, social and economic impacts of industrial logging concessions in Africa's rainforests

By the Rainforest Foundation UK and Forests Monitor

Edited by Simon Counsell, Cath Long and Stuart Wilson

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