Independent Monitoring: A Practical Manual

Financed by the environment/tropical forests budget line of the European Commission, DFID, NC-IUCN and World Bank PRCTG

Independent Monitoring of Forest Law Enforcement and Governance (IM-FLEG)

Practical Manual – 2010

CO-AUTHORS OF THE MANUAL

Forests Monitor (FM)

Production of the manual and training in IM-FLEG

Forests Monitor coordinates the “Capacity building in the Congo Basin and Implementation of IM-FLEG in the Republic of Congo” project. This project comprises two components, namely: training in IM-FLEG, implemented by Forests Monitor, and IM-FLEG itself, implemented by REM. Forests Monitor has coordinated the production of this manual, the contents of which are largely based on REM’s practical experience.

Established in 1994, Forests Monitor is a British non-profit organisation. Its mission is to encourage and support the development of new forest management models and mechanisms through an open and transparent dialogue with all relevant stakeholders. This dialogue takes place after commercial players have been monitored and weaknesses identified in existing legal frameworks aimed at achieving the policy objectives defined by third-party governments.

FM uses a four-pronged approach to achieve its mission: 1) providing accurate information to civil society and local populations on the activities of logging companies; 2) building the technical capacity of both civil society and government in forest law enforcement and governance through the provision of long-term training; 3) supporting the development of community forestry as a means to secure the rights of forest-dependent peoples; and 4) lobbying for policy change and/or the enforcement of existing policies that will lead to a more sustainable use of the forests and contribute to poverty alleviation.

Forests Monitor has implemented long-term (three-year) and short-term (one-week missions and workshops) training on the IM-FLEG approach and techniques (Republic of Congo, Liberia, DRC, Gabon, CAR). This training is aimed at supporting civil society representatives and sworn government officials.

www.forestsmonitor.org

Resource Extraction Monitoring (REM)

IM-FLEG implementation

Established in 2003, REM is a British non-profit organisation specialised in the independent monitoring of law enforcement and natural resource extraction. REM is not a lobbying organisation and has no political agenda but does proactively encourage improvements in governance. Our recommendations are intended to strengthen forest law enforcement on the ground and to promote forest litigation.

REM’s team of technical experts is largely made up of forest policy experts, specialists in forest law enforcement systems, foresters, documentation and database technology specialists, economists and environmental specialists.

REM is based in the United Kingdom but it opens offices in countries where long-term IM-FLEG projects are being implemented (Cameron 2005-2009, Republic of Congo since 2006, Democratic Republic of Congo and Tanzania planned 2010/2011). REM has also undertaken short-term IM-FLEG missions to Gabon, Central African Republic, DRC and Tanzania.

The organisation has published more than 100 reports on forest infractions and problems related to forest law enforcement in various African countries. Its IM-FLEG reports have identified the potential recovery of hundreds of millions of Euros relating, among other things, to forest infractions, unpaid taxes and administrative frauds. Our role in forest processes such as the Forest Environment Sector Programme and FLEGT and our involvement in forest governance monitoring are seen as essential.

www.rem.org.uk

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INTRODUCTION

Illegal logging, IM-FLEG and FLEGT

The aim of this manual is to strengthen civil society's technical capacity to provide independent monitoring of forest law enforcement and governance (IM-FLEG). It may also help other actors, such as government officials, improvement their infraction detection techniques.

The target of IM-FLEG: illegal logging

Illegal logging can represent a considerable cost for timber-producing countries and a significant loss of income for the governments in question (an estimated 10 billion US dollars are lost in taxes every year[1]). Corruption, the perpetuation of conflicts, increased human rights violations along with deforestation (which accounts for between 20% and 30% of annual greenhouse gas emissions, or around 1.6 billion tonnes per year), all contribute to biodiversity loss and to a degradation of the global services provided by ecosystems.

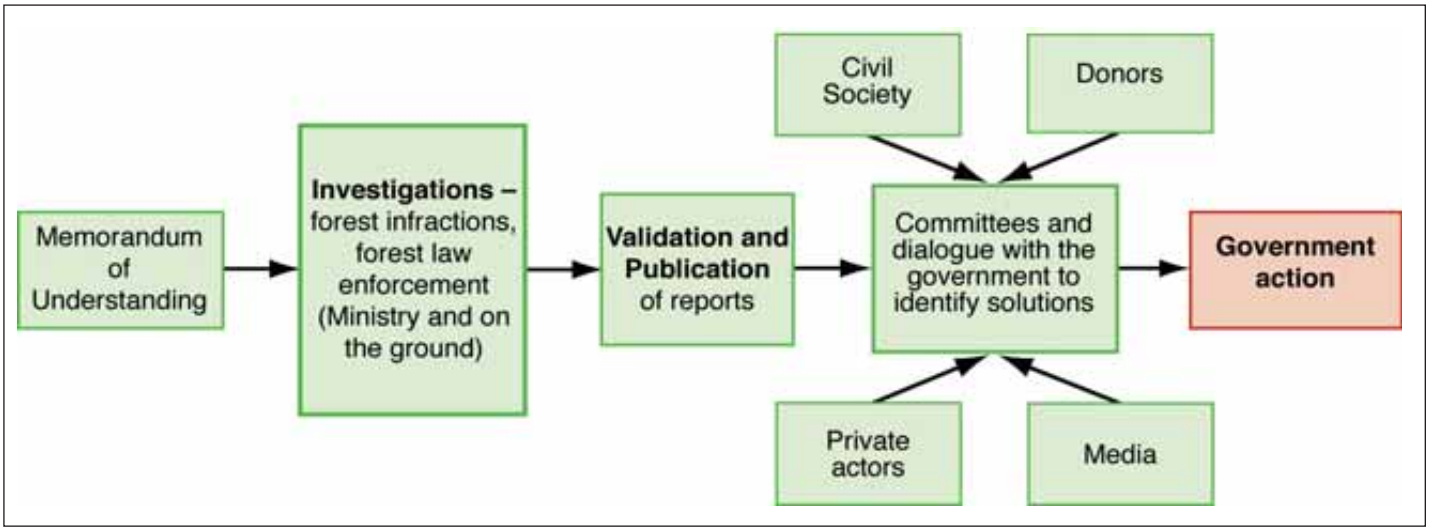
Towards a solution: IM-FLEG

Independent monitoring of forest law enforcement and governance (IM-FLEG) consists of gathering credible information on the realities of the forest sector , and using this information to encourage governments to resolve the identified problems. The IM-FLEG approach applied by REM involves a number of stages:

- Establishing a formal contract between REM and the government, as an integral part of the contract with the donors. This contract ensures access to information, and to the places necessary for conducting in-depth investigations. Italso encourages the governments concerned to become involved in implementing and taking initiatives aimed at better law enforcement;
- Conducting field investigations in association with government officials and, where appropriate, civil society;
- Getting mission reports validated by a reading committee composed of government officials, donors, members of the diplomatic community, IM-FLEG and representatives of national civil society;
- Publishing and disseminating the validated IM-FLEG reports;
- Providing follow-up to forest litigation through administrative and legal processes;
- Encouraging governance reform through constant dialogue and/or via steering committees comprising government, donors and civil society.

It is important to negotiate a Memorandum of Understanding with the government in order to ensure IM-FLEG's physical site access (logging sites, saw mills, ports, ministerial offices) and thus access to more accurate and up-to-date information than would be available from the local authorities (e.g. documents recording felling, transport and processing of timber). International initiatives such as FLEGT also often provide governments with an incentive to support IM-FLEG.

Figure 1: Major IM-FLEG stages and actors. The main role of the monitor is to provide detailed reliable information that can be used by other actors to promote good governance.



1. Formulation and Implementation of National Action Plans to Combat Illegal Logging and Other Forest Crimes. Results of ENA-Fleg. World Bank Technical Paper

When there is no cooperation with the government, External Monitoring (EM) can be undertaken. This is possible but access to information and to logging areas can often be difficult. It is also more difficult to ensure that the government will take your recommendations into account and put preventive/corrective measures in place.

IM-FLEG and FLEGT

If the problem of illegal logging is to be resolved, investment and coordination are required from and between both the importing and exporting countries. The **FLEGT** initiative is the European Union's response in this regard. One of the major objectives of the FLEGT action plan is to strengthen developing countries' capacity to monitor the logging of their forests more effectively and to prevent illegal exploitation, thus reducing the trade in illegal timber between these countries and the European Union.

The FLEGT initiative relies on partner countries establishing a Legality Assurance System (LAS) via the signing of a Voluntary Partnership Agreement (VPA). The LAS comprises the following elements[2]: (1) a definition of what constitutes legally-produced wood (table of legality indicators); (2) a system for verifying compliance with the law; (3) a system for tracing wood and processed products from the forest to the end consumer; (4) the issuing of licences attesting to the legality of the exported products. An Independent System Auditor (ISA) is responsible for verifying each of the elements in order to establish the effectiveness of the LAS. However, to conduct an accurate and credible audit, the ISA needs to have access to reliable information from the field (monitoring, investigations, observations): this is where the ***Independent Monitoring of Forest Law Enforcement and Governance (IM-FLEG) comes in as it represents an excellent source of information.***

How IM-FLEG promotes good governance

The REM project in Cameroon, implemented from 2005 to 2009, shows that IM-FLEG can result in specific government actions in favour of forest law enforcement and governance. The following are some concrete examples of the results obtained:

- A decision to set a minimum threshold for fines that result from direct arrangements between an offending company and the Ministry of Forests (i.e. without going through the justice system), in order to maintain the dissuasive nature of forest law enforcement (2006);
- The establishment of a more coherent numbering system for Small Logging Permits (SLPs), which are particularly susceptible to illegal activities (2007);
- The creation of a "secure documents committee" to ensure better law enforcement with regard to the logging, processing and transport of wood (2008);
- The suspension of 14 SLPs involved in illegal logging activity (2008);
- The creation of a committee to analyse the volumes of timber logged within small logging permits from 2007 to 2009, with a view to recovering the taxes due.
- The adoption and dissemination of a new circular letter on issuing permits and monitoring logging activity, with the aim of preventing abuses in the allocation and monitoring of small permits (2009).

IM-FLEG REM taking note of the discussions, and the methodology used by the Law Enforcement Brigade as lorries transporting illegal wood are stopped, Cameroon

Objectives of this Manual

This manual is intended to strengthen civil society's capacity to implement IM-FLEG (known here as IM), in particular in the context of the FLEGT. More specifically, it is aimed at helping civil society organisations to:

1. Prepare and conduct field investigations;
2. Develop an approach to producing reliable, objective and useful accounts and reports - supported if possible by a well-managed database;
3. Engage the different actors in a governance reform process.

[2] European Commission (2007) FLEGT Note 7. www.loggingoff.info/media/articles/article_363.pdf

INTRODUCTION

It should be noted that this manual does not offer a complete and exhaustive methodology, nor does it list all of the resources necessary for successfully implementing an IM programme. Readers are therefore encouraged to adapt the practices given in this manual to the specific circumstances of their particular regions.

Who is this manual intended for?

The target readers of this manual are civil society organisations working or about to work in partnership with an international IM organisation. REM is convinced of the need for civil society participation in each country, whether it is involved in the FLEGT process or not, so that in the long term IM will become a systematic reality. To achieve this, REM is working in close cooperation with organisations (and/or individuals) from civil society to develop and implement IM projects. Such long-term cooperation will enable these organisations to gain IM experience and to develop proposals that include and adapt the approach to their particular circumstances.

This manual may also be of use to organisations wishing to conduct EM; some specific aspects of such an approach are not, however, considered here, such as ways of accessing information or advocacy actions.

The skills provided in this manual can also be applied to a wide range of other monitoring activities, in other natural resource extraction sectors in particular.

Finally, state officials are strongly encouraged to put the lessons learned in this manual into practice to improve their own strategies for law and regulation enforcement.

Summary and definitions of the technical terms used

The definitions given in the table opposite include the names given in the Republic of Congo and Cameroon, to show that each country has its own interpretation.

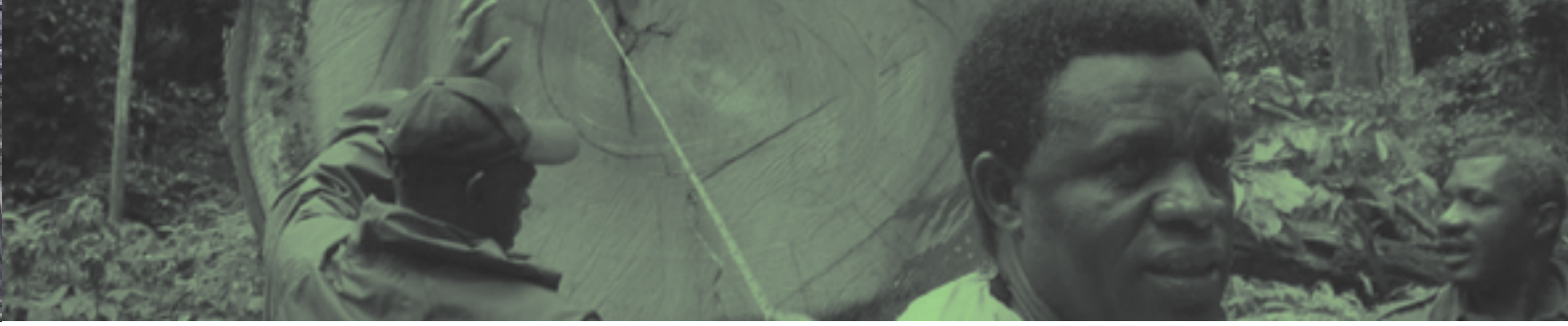


Table 1: Definitions of common terms in the forestry sector

Term	Definition	Name in Rep. Congo	Other name (Cameroon)	Specific features according to the countries' legislation
Field documents	Documents that record the actual felling at a logging site	*Carnet de chantier,* stamped by the appropriate administrative authority	*Carnet de chantier* / DF10	The format differs from country to country. In Cameroon, for example, it is provided by the administration while in the Congo it is the operator who produces this record
Forest concession	Area covered by a logging agreement	*Concession forestière (une unité forestière d'aménagement)* (forest concession/forest management unit/FMU)	*Concession forestière* (includes one or more forest management unit(s))	The number of forest units that form the concession
Inventory	Activity of locating and counting saleable standing trees and species in the different plots within a cutting area	*Inventaire nationale* (national inventory), *inventaire de coupe* (cutting inventory) (systematic counting of species over 5% of the logging plots)	*Inventaire forestier* (forest inventory) *(inventaire d'aménagement et inventaire d'exploitation)* (management inventory and logging inventory)	Each kind of inventory is done in accordance with rules set by the forestry administration
Small Logging Permit (SLP)	Area in which time-limited logging is authorised for reasons of development	*Petit Titre d'Exploitation/PTE (autorisation de déboisement, permis de coupe des bois de plantations, permis spéciaux)* (logging authorisation, felling permit for plantation wood, special permit	PTE *(permis d'exploitation des bois d'œuvre et de chauffage, autorisation personnelle de coupe, et bois récolté dans le cadre du droit d'usage, autorisations de récupération et d'enlèvement de bois)* (logging permit for lumber and firewood, personal felling authorisation, and wood harvested in the context of use rights, authorisations to recover and remove wood)	The duration and method of allocation differ from country to country
Sawmill records	Documents recording volumes and species entering and being processed in the sawmill	*Registre usine (entrée et sortie)* Sawmill records (entry and exit)	*Carnet entrée usine* (Sawmill Entry Records)	The template differs from country to country, as does the purpose. In Cameroon, these are used for calculating export taxes; in Congo, for statistical purposes related to production
Transport document (waybill)	Document required before any cut wood can be moved from an approved logging site	*Feuille de route*, or allocation decision in the case of special permits	*Lettre de voiture*	The format differs from country to country. In Cameroon, for example, this is provided by the administration while in the Congo it is produced by the operator
Annual Cutting Authorisation	Permission given by the forestry administration for felling operations over the course of a year, for established species and quantities. Authorisations to extend the duration of felling are sometimes issued	*Autorisation de coupe annuelle, Autorisation d'achèvement, Autorisation de coupe provisoire, Autorisation de coupe des essences de promotion* (Annual cutting authorisation, Completion authorisation, Provisional cutting authorisation, Authorisation to fell promotional species)	*Certificate annuel de coupe* (Annual cutting certificate)	The kind of felling authorisation varies depending on its purpose (for example, extending the duration of felling)
Export document	Document necessary for exporting forest products	*Feuille de spécification* (Specification sheet)	*Bulletin de spécification* (Specification bulletin)	The information contained in the document is the same

ANALYSIS OF FORESTRY SECTOR LAWS AND REGULATIONS

Before you can begin to investigate logging activities, you need to have a good understanding of what is legal and what is not, along with the way in which different government bodies operate and their procedures.

A legal expert will need to produce an initial study of the forestry sector in clear terms so that all members of your IM team can easily and accurately understand the policies, laws and regulations governing the sector. This study should focus on producing a detailed report of the procedures to be followed when logging, the anticipated infractions and applicable penalties. It is first advisable to produce a chronological diagram of each procedure, starting with the necessary conditions for accessing the forestry profession through to the export of products, and including the allocation of logging titles/permits, along with the logging, transport and processing of wood. This diagram will serve as a guide to clarify the often complex matrix of procedures and will help to ensure that all procedures are included in your study. The study will answer a number of questions, the main ones being:

Acquiring logging permits

- What are the necessary conditions for entering the forestry profession?
- What are the different logging authorisations and how are they obtained?
- Once a permit has been obtained, what are the other documents that are required before you can fell, transport, process and export wood?

Prior to logging: inventories and management plans

- What are the duties with regard to forest management?
- What do the inventory rules and management guidelines specify? Who is responsible for producing them - the State or the companies themselves?

Logging, processing, marketing and export: forest law enforcement

- What are the different forestry revenue streams; how are they calculated and collected?
- What are the logging standards to be followed (minimum diameters to be felled, marking of wood, opening of access roads, etc.)?
- Which are the different government departments responsible for law enforcement, and what are their respective responsibilities?
- Is there an enforcement strategy, are there enforcement methods? What do they state?
- What are the different infractions classified by law and the applicable penalties according to the case (fines, compensation, seizure of wood, etc.)?
- What are the different stages in the process of preventing/correcting infractions? Who is responsible for this and at what level? How are rulings followed up and penalties applied?

It is also important to analyse other additional related aspects, such as:

- **What do the forestry law and its implementing regulations state with regard to participatory management and customary rights?** Recognition of rights of use and customary land rights; procedures anticipated during the classification of a zone; the allocation of a concession; the inclusion of social and financial clauses in the contractual obligations; the production and implementation of management plans; the creation of community forests; conflict resolution between companies and local communities, etc.
- **"Non-industrial" logging sector:** what other types of forest use, apart from industrial logging, are legally recognised (community forest, small logging permit, protected areas conservation)? What are the problems, conflicts and illegal activities frequently encountered in these sectors?
- **Other laws to consider:** are there other laws or regulations (environmental law, land code, wildlife protection regulations, employment and social security laws, etc.) that complement or contradict forestry legislation?
- **International agreements, treaties and conventions:** what are the international agreements, treaties and conventions applicable to the forestry sector and which have been signed or ratified by the government of the country in which you are working (e.g. VPA FLEGT, Convention on Biological Diversity - CBD, COMIFAC Treaty, etc.)?

It is absolutely essential that this analysis of laws and regulations provides detailed and accurate information that is easy to understand. This analysis will serve as a reference during investigations and when producing reports. If it is not accurate, the credibility of your investigations may be questioned and this could lead to conflicts with the government, or even the loss of donor support.

INITIAL ANALYSIS OF PROBLEMS

Before planning and conducting investigations, it is important to have an idea of the kinds of problem (e.g. illegal activities, governance weaknesses) you are likely to encounter. This chapter offers a brief overview of the most common problems encountered by REM during its investigations. More specifically, it will try to answer the following questions: what kinds of illegal activity are frequently encountered in the forestry sector? What are their main indicators?

The information provided in this chapter draws on REM's seven years of experience in various countries. Although the legal framework and the fraudulent activities vary from country to country, REM has produced a catalogue of the most common illegalities in the timber-producing countries of Central Africa, based primarily on the examples of Cameroon and Republic of Congo. It is not our intention to provide an exhaustive list of illegal activities and frauds; this chapter merely provides a number of examples that will better enable you to ascertain what kinds of illegality may be occurring and help you develop your own database of illegal activities and indicators.

Illegal wood seized by the Law Enforcement Brigade in IM-FLEG REM's presence, Cameroon

The following examples of illegal activities and their indicators have been listed according to whether they **are committed prior to the start-up of logging activities** (in other words, during access to the forestry profession and its resources), **during the implementation of activities** (felling, hauling, marking, scaling) or during **processing, transport and marketing operations** (local or for export).

A second section will consider additional aspects such as respect for contractual obligations, forest management and environmental provisions.

Before considering the list of illegal activities, it is important to consider some factors that may influence such actions.

Factors encouraging illegality

Inaction and corruption are both factors that encourage illegality. Corruption is not an uncommon phenomenon in timber-producing countries at all levels of the administration, from field agents up to the highest civil servants. Corruption can also be fuelled by external factors such as job insecurity and low salaries. Lawful monetary or material contributions made by logging companies to the administration, even when they are contractually established, can also create an environment that is conducive to corruption.

Never forget that your main role as IM is to provide reliable information. Do not speculate when drawing your conclusions. A list of factors that may indicate the existence of corruption in the forestry sector is given below but you should bear in mind that these indicators do not systematically mean that corruption or illegal activity is taking place:

- Limited access on the part of the IM to certain important documents (files, permits, letters, etc.), in violation of the provisions of the Memorandum of Understanding signed between the IM and the Ministry;
- Excessive administrative delays that interfere with the IM's activities. This often manifests itself in the context of examining and validating the IM's mission reports, or when considering the recommendations made;
- Logging permits allocated without due respect for the legal provisions (in general, the holding a committee meeting) or even sometimes in areas intended for other uses, such as protected areas;
- Annual cutting authorisations granted without respect for the stipulated provisions (date of submission, production of an inventory by the company, etc.);
- Government resistance to developing and implementing a strategy or clear procedures for law enforcement, with different departments setting the methods of control;
- Suspicious human resource management, involving the movement, transfer or demotion of staff who try to improve local governance. Cases of corruption may also be occurring if administrative posts linked to law enforcement remain vacant for an excessive period of time or if staff are kept in the same post for several years;
- On-the-ground law enforcement missions are not implemented in accordance with government work plans: an insufficient number of missions are taking place in

relation to the objectives set; some concessions are visited less frequently than others or form the object of significantly fewer official statements of offence; some aspects of enforcement are not verified during some missions. In the case of field missions, it is nonetheless necessary to be able to distinguish between serious failings in terms of observing infractions and their penalties and the constraints or problems caused, for example, by a lack of equipment or inadequate knowledge of legal texts and other factors that may encourage bad law enforcement (e.g. low salaries of enforcement officials and/or their logistical dependence on the operator to conduct missions). It should be noted here that a failure on the part of the relevant departments to make the necessary funds available to conduct enforcement missions often highlights a lack of political will rather than any specific constraint, so to speak;

- Official statements of offence are not issued when infractions are noted, are cancelled or are never passed on to the relevant level of the justice system;
- Fines and penalties are never paid by the offenders and the forestry administration allows them continue operations without any constraint;
- Transport or export is undertaken mainly at night, under limited government supervision;
- Auctions of confiscated timber are conducted without due respect for the legal procedures (no public committee, wood undervalued, etc.).

Possible illegalities prior to start-up of logging operations

These kinds of illegal activity take place when private individuals or companies first enter the forestry profession and/or access its resources.

Possible illegalities related to entering the forestry profession

To gain access to the forestry profession, economic operators must first obtain a legal document from the appropriate regulatory authority. The name of this document varies from country to country but is generically known as an “exploitation document”. This document enables an individual or company to apply/bid for a logging title/permit. If any company or individual should exercise the profession of forester without this legal document they are acting illegally. It would be the same case if such a document were granted but without due respect for the legal procedures, as this would invalidate it.

Possible illegalities linked to accessing forestry resources

These actions relate to:

The allocation of logging permits

The allocation of logging permits requires bidders to pass through a number of stages that are generally quite similar from country to country. They must:

- Hold an exploitation document or a document allowing access to the forestry profession (other documents may be required, depending on each country’s specific legislation);
- Bid in a tender launched by the relevant ministry (which assumes that the conditions required in the tender are met by the bidder);
- Be selected by the logging permit allocation committee;
- Be notified that their bid was successful;
- Establish a surety bond for the allocated logging permit;
- Sign the exploitation contract, which is published in an official text (administrative or ministerial order) and which validates allocation of the logging title/permit.

In order to identify whether there has been any illegal activity in the process of allocating logging permits, you need to have access to information held by the central forestry administration departments. Access to this kind of information may be sensitive, hence a Memorandum of Understanding signed between the IM and the government is extremely useful. It should, however, be noted that in some countries, specific IM mechanisms already exist for the purpose of logging permit allocations. Such is the case, for example, in Cameroon, where an IM responsible for monitoring the allocation of logging concessions has been established. This example has been followed by the Central African Republic, which launched a call for tenders for the post of IM in the process of allocating logging and management permits in August 2009. The existence of an allocations IM, if it operates alongside IM-FLEG, should not prevent IM-FLEG from conducting cross-analyses or similar with regard to permit allocations as these will enable some illegalities to be identified that the allocations IM may have been unable to detect, given the wider field of information available to IM-FLEG within the ministries and from the results of field investigations.

Among the illegal activities linked to the allocation of logging permits, the following are particularly noteworthy:

Geographic relocation of logging permits

This fraud requires cooperation between government officials and a logging company. An area of low commercial value is put out to tender. The logging company puts in a bid above the market value, knowing that the zone that it will actually be

allocated will be of a much higher value. To investigate this kind of fraud, the IM needs to compare maps of the zone forming part of the tender with maps of the zone that was actually allocated. If they do not correspond, illegal activity has taken place. This fraudulent complicity is relatively easy to detect provided the necessary information is available and accurate.

Influence peddling / lack of liability
This kind of fraud involves cooperation between a logging company and a private individual or company that does not have the necessary capacity to manage a concession but which has close links to the political decision-makers. The person or company uses their influence to win a tender and is thus allocated a permit to log a concession. Once the permit has been allocated, they sub-contract activities within this concession to the company for which they are covertly acting. In addition, the company enjoys limited legal liability as responsibility for any irregularities that are detected lies with the permit holder. Cases of sub-contracting of logging permits therefore need to be carefully analysed as they may indicate upstream collusion between the permit holder and the sub-contractor. The IM also needs try to find out the relationship between the individual permit holder and the logging company that is managing operations in the zone.

Lack of a logging title or permit
To be legal, all private individuals or corporations wishing to exploit the forestry resources must obtain a logging permit/ title from the competent authority. For this, they must meet the conditions stipulated in the forestry law of the country in which they wish to practise. Illegality with regard to the lack of a logging title/permit is above all perpetrated by small loggers and not logging companies holding large-scale forest concessions allocated via a tender process. The nature of these small permits, like the conditions for their allocation, differs significantly from country to country. Nonetheless, they are generally permits that only cover a limited number of trees (a few dozen, on average) and a limited period of time (generally one year). Small-scale logging is often a major activity in tropical countries, as it enables much of the national and sometimes even international market to be supplied under conditions of bad governance. It is quite difficult to analyse as it is often spread across the country, along communication routes, and involves a network of corrupt local authorities.

Note on Small Logging Permits (SLPs)

Be aware that there are a number of illegal activities associated with SLPs, in particular related to logging in the context of development projects (road construction, plantation clearing) or natural disasters. These permits are often easier to obtain and taxed more lightly than concessions. Illegalities associated with SLPs are also common because they tend to be subject to less rigorous regulations than concessions. The following are just some of the possible illegal activities: logging companies request authorisation on the pretext of building a road when the main aim is to fell trees; the procedural and substantive conditions for allocating the permit are not respected (the road is never built, the wood is not lined up on the side of the road and blocks access, the regulations on road width are not respected, etc.); wood is illegally felled using this permit (off-limits, forbidden species, etc.) and then marked and moved in secret with legally felled wood.

As will be seen in the following chapter, community forest titles also encourage fraud, particularly in terms of passing off wood cut in a legally-acquired concession as coming from a community forest.

Lack of administrative documents prior to start-up of logging activities
Once a forest concession has been obtained by signing a forest exploitation contract, access to the forest resources is dependent upon obtaining a number of administrative documents, the nature of which differs from country to country. In the Congo, for example, the start-up of logging activities cannot take place until an installation authorisation has been issued by the Departmental Director for the region in which the title is located. Without this authorisation, any activities conducted by the company will be illegal. Elsewhere (Cameroon in particular), an activities start-up notification signed by the appropriate regional official is required. The IM can detect this kind of fraud by checking whether the company has obtained the necessary authorisation or not[3].

[3] The felling dates given in a company's field documents can also be checked to see if any felling took place before the authorisation was obtained.

INITIAL ANALYSIS OF PROBLEMS

Possible illegal activities during forestry operations

These illegalities take place during the logging, processing, transport and marketing of wood.

Possible illegal activities during logging

Logging involves the prospecting, felling, hauling, marking and scaling of wood. Logging procedures are generally the following:

- Prospecting: before felling the trees, the operator is required to conduct an inventory of timber resources (location and number of standing trees for saleable species located in different plots within the cutting area).
- Felling of trees: the tree must be felled according to the minimum diameters set by current regulations;
- Marking of the stump with a chronological number related to the logging permit, a date (compulsory in some countries such as Cameroon) and the logging hammer number of the operator (initials) recorded with the clerks of the relevant court;
- Scaling of trunks according to the regulations established by the law of the country and their registration in field documents, listing the species felled, trunk volumes, etc.;
- Hauling of wood: movement of felled trees to a collection point (log storage site);
- Sawing: cutting of trees into logs for transport, followed by marking and scaling of logs;
- Recording of logs in transport documents (waybills): recording of species, lengths, diameters and volumes of logs produced.

Depending on the country[4], reduced impact logging (RIL) rules may be suggested or imposed during the different stages of logging and beyond[5]. These measures, promoted in the context of sustainable forest management, are aimed at reducing the environmental impact.

Logging can involve numerous illegal activities and the following are given by way of example:

Lack of signature on field documents
Before using field documents, an operator must get them initialled by the appropriate local official.

Non-marking of wood
The felling of trees must be followed by marking of the stumps and logs. This infraction is easily detected. It is a question of checking whether marking is present on the stumps and logs.

Monitoring of a waybill may indicate illegal activity

Cutting of trees below the minimum required diameter
Tree felling must observe the diameters required by forestry regulations. To detect cases of trees felled below the minimum diameter, the IM can refer to the field documents, in which the company records information on its felling, and compare the diameters noted with those stipulated in the forestry regulations. This fraud will, however, be more reliably detected by visiting the field and measuring the circumference of stumps where below-diameter felling has been noted.

Felling outside the boundaries of the forest concession or authorised cutting area
Off-limits felling takes place when a permit holder cuts wood outside of the area he is annually allocated for logging or outside

4 In the DRC, for example, an operational guide for RIL measures has been produced with a view to completing and facilitating the mechanism for implementing the ministerial order establishing production, approval, monitoring and control procedures for implementing management plans for forest concessions. This guide constitutes the implementing measures for Law 011/2002 of 29 August 2002 on the Forest Code.

5 Examples of stages covered by RIL: logging inventory; unexploitable zones; the road network and log yards; controlled felling; pollarding and coppicing; uprooting and hauling; sawing, marking and processing of wood; loading and transport of wood; post-logging operations; waste management; wildlife; monitoring and enforcement of operations.

of the area covered by his forest concession. Felling outside the boundaries of the concession can be difficult to detect as it is not realistic to examine the entire boundary of large concessions.

The IM can rely on a network of informants who know the area well, such as local community members or even other loggers, in order to identify this kind of fraud and its location. Once these areas have been pre-identified, the IM can go to the field with an up-to-date map of the concession / permit and a GPS in order to establish whether logging activity has actually taken place outside the boundary (with a minimum margin of 15 m to take account of GPS error).

Fraudulent manoeuvres when transporting and selling wood cut illegally (wood laundering)

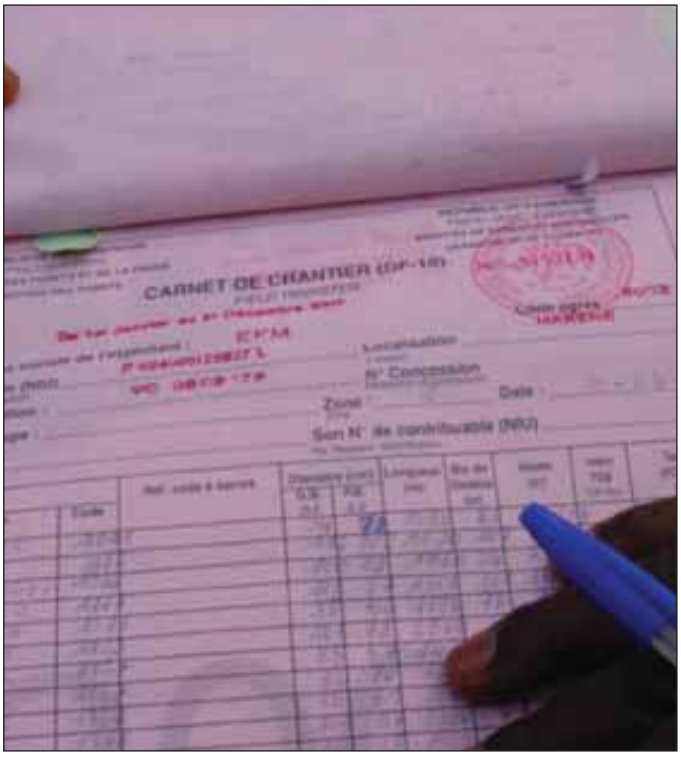
Wood cut illegally but coming from a legally-acquired concession (case of off-limits felling)
Logging outside of the boundaries involves fraudulently marking the illegally cut wood in order to pass it off as coming from the authorised concession/permit. The illegally cut wood will therefore be marked, registered and removed legal. Although this kind of fraud is more easily detectable nowadays thanks to remote sensing technologies, you should be aware that you will still need to conduct an inventory on the ground of the total number of stumps in question in order to quantify the illegally cut wood. The volume of timber felled can be estimated by collecting field data on stumps, on the one hand, and on trunks in the field documents, on the other, along with their destination (factory, export) although this may be difficult if the marks on the stumps and trunks are not identical. Such an assessment thus remains approximate, based only on the average volumes of trunks estimated according to a sample taken from the field documents for different species. This data on volumes and species is extremely important as it will enable the compensation to be paid to the State to be calculated.

Wood cut in a legally-acquired concession / permit passed off as coming from a community forest
In countries where there is community forest legislation, taxes are generally lower for community logging than for industrial. Some logging companies therefore take advantage of this situation by coming to agreements with holders of community forest titles to pass off wood from their concession as coming from these community forest titles. To uncover this kind of illegal activity, the IM has to ascertain the true origin of wood declared as coming from a community forest.

Abandoned wood
Wood is deemed abandoned when the holder of a logging permit has not removed the wood after felling, nor sold or processed it (counting as from the date of storage) within the period anticipated by the regulations. Abandoned wood generally becomes the property of the State. To detect this illegality, the IM simply has to check the markings on the wood found. In Cameroon, this illegality is easily detectable as the mark that each tree bears the date on which it was felled. In the Republic of Congo, where the mark does not contain the felling date, the IM has to refer to the date given in the field documents, using the number of the log found in the field.

Logging of unauthorised species or above the quota granted by the felling permit
Logging companies may, for the purposes of meeting their orders, break the forestry law by felling species for which they have no authorisation or by felling more trees than they have been allocated in their annual permit or annual cutting authorisation. This illegality can be detected via the annual cutting authorisation, which notes the species to be logged, the volume and/or the total number of trees authorised. The IM will need to compare this data (total number of trees and number of trees per species authorised) with the data given in the registration documents (field documents).

Logging prior to issue of felling permit
Logging companies may break the forestry law by removing species before their felling permit has been issued or after it has expired. To detect this illegality, the IM need to check the felling dates given in the company's field documents in order to see if felling has taken place before or after the period of validity of this authorisation.



REM monitoring field documents

Documentary frauds
Compared with illegal activities detected directly on the ground, illegalities related to documentary frauds are often more difficult to identify and require specific knowledge (scaling of wood, species identification). This kind of fraud consists of wilfully changing the details recorded in the documents on timber felled (volume, species, diameter), generally by making a small but constantly repeated change that is unlikely to attract the law enforcement official's attention. It should be noted that these frauds often affect operations other than logging, such as transport or export.

A number of examples of such documentary fraud are given below:

Under-estimating the volume
The felling tax is normally calculated on the actual volume of trees felled (that is, the volume of the part included between the felled section - 30 cm above the buttress - up to the first large branch.) By under-estimating the actual volume of felled trees, and deliberately omitting to record some evacuated wood in the field documents, the company can thus reduce the amount of stumpage tax paid. The volume generally used for calculating this tax is recorded by the company in its field documents.

To ascertain whether a logging company has stated accurate volumes of logged wood in its field documents, the IM can compare a sample of trunks found in the field (generally at the yard) with the data given in the field documents. To ascertain whether the logging company has noted all of the cut wood in its field documents, the IM can compare the data given in the transport documents with that noted in the field documents.

In some cases, operators do not declare the actual volume of all trees but only the volume of saleable parts and thus pay lower taxes by abandoning pieces of logs in the forest. The IM can ascertain whether this illegal practice is taking place by going to the felling site to assess the volume of abandoned shorts, adding them to the evacuated volume of corresponding species and finally comparing the result obtained with the volume declared in the field documents. This comparison can also be done directly between the volume declared on the field documents and the volume removed. This latter must be equal to or less than the volume declared, and on which the payment of the stumpage tax is based.

Annexed to this manual you will find detailed instructions on how to calculate the volume of trunks. It should be noted that many logging companies manage to reduce the amount of their fines by arguing that the calculations of the authorities and/or monitor were incorrect. Particular attention must therefore be paid to how you document your methodology - photos clearly showing the identification number of the trunk and a tape measure will give more weight to your reports. It should also be noted that there is a strong incentive to provide and defend false information on the volume of trunks as this leads to cumulative reductions in taxes all the way along the chain of control.

Inaccurate declaration of species
To reduce the stumpage or export taxes (by passing one species off as another with a lower price / lesser FOB value), some operators log protected species and/or species for which the quota set in the annual cutting authorisation has already been reached and provide false information on species. To uncover such a fraud, the IM must be able to compare the species declared with those actually felled, as observed on the ground. This can be done at the log storage sites (field documents), on the lorries (transport documents) or even in the storage yards of sawmills (transport documents, mill records) and ports (transport and export documents). This kind of irregularity can also be discovered by comparing the information contained in the different work site documents (field and transport documents).

During processing operations

The basic processing procedures are generally:
1. Obtaining an operating permit;
2. Recording the wood (rough and processed) in a register established for this purpose.

Some common illegalities are as follows:

Failure to respect the quota of logs for export
Timber processing methods are governed by the forestry law and regulations of each country. Operators are obliged to ensure that a certain percentage of the total volume of wood felled is processed locally; the rest can be directly exported in the form of logs. This rate differs from country to country. By way of example, the rates of log export are 15%, 20% and 30% respectively in the Republic of Congo, CAR and DRC, while this figure is set annually via administrative order in Gabon. To ascertain whether a company is breaking this rule, the IM needs to refer to documents relating to trees felled, processed and exported. In general, the documents summarising this kind of information that are regularly produced (monthly, for example) by the company or by the administration will be sufficient, although it will be necessary to conduct spot checks of basic documents (field documents, sawmill timber entry and exit records and export documents).

Processing wood of fraudulent origin
The problem here lies in the fact that it is very difficult to trace processed wood to the trunk. It is therefore important to check the wood lying in the log yards of the wood processing units as it may

be that a company is processing timber coming from its permit but which was felled illegally (i.e. wood felled when the company did not have authorisation) or wood coming from permits the validity of which has expired. To detect this kind of fraud, the IM must be able to analyse and interpret the markings on the wood and compare them with the information contained in the records of wood entering the mill or in the transport documents.

Processing without the necessary authorisation
People other than logging companies have to obtain authorisation before establishing a processing unit. The name of this document varies from country to country. It enables an industrial operator to legally conduct his processing activities. To detect whether an industrial operator is operating legally or not, the IM simply has to ask the person responsible for the processing unit to produce the document authorising them to conduct processing work.

During transport and marketing operations
The transport and export of wood and processed products offers numerous possibilities for investigation as monitoring can be conducted in easily accessible areas such as at checkpoints and ports. To remove logs from a logging site, they are loaded onto a lorry, boat or train for export (generally to a port) or processing. The most important aspect in the case of transport and export is to verify the volumes, species and origin of logs in a particular load, comparing this to the information declared on the transport or export documents. In general, the information contained in these documents is quite similar and takes into account volumes, species, the origin and number of each log in the load (or each batch of processed product).

Transporting without the necessary documents
There are several possible situations. The haulier may: not hold the transport document at all; hold an expired transport document; hold an irregular transport document (relating to another company or another load).

Wood sealed far from place of export, encouraging smuggling
Some countries allow the export of containers that have been sealed prior to their arrival at the port, where they arrive with an export permit issued by the decentralised administrative authorities. Although this speeds up the export process, this practice can be liable to fraud as containers are sometimes filled and sealed under minimal supervision, encouraging the possibility of corruption.

Other kinds of illegalities and monitoring activities to be conducted

Apart from illegal activities directly related to accessing the forest resources, their logging, transport, processing and export,

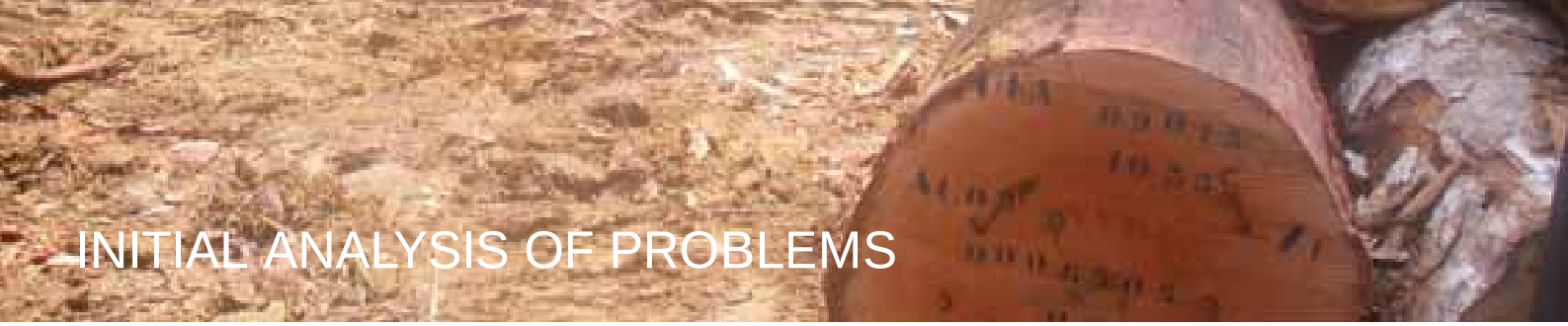
Confiscating illegally transported wood

other aspects of forest law enforcement and governance are also of interest to the IM and may form the object of monitoring. The aim of this section is not to provide detailed information on each of them but to give readers some guidance so that they have a general overview of the possible areas of investigation:

Managing litigation and recovery
Forest litigation begins with the issuing of an official statement citing infractions and continues until payment of the amount by the offending company. Various checks can be conducted in this regard: if infractions are noted during verification but no report is produced; if a report has been cancelled for no good reason; if a smaller amount than anticipated has been applied as a fine; if there is a failure to apply damages, or too little damages have been applied, if the amount to be paid following a transaction is too little; if fines remain unpaid by the deadline given; if there is a failure to apply sanctions in the case of non-payment.

Forest tax collection
Apart from verifying the accuracy of forest taxes to be paid (stumpage, export and acreage are some of the main ones), the IM can also check that taxes have actually been paid by the deadline, that sanctions have been applied for non-payment and even, if it is within its mandate, whether it has been received by the Treasury and effectively redistributed to the appropriate bodies (particularly in terms of local development).

Fulfilment of contractual obligations
The contractual obligations that operators sign with the government list the obligations a company must meet according to a given timetable. This may include, among other things, a requirement to obtain equipment; to provide social and economic benefits within the logging zone (schools, roads, etc.); to create



INITIAL ANALYSIS OF PROBLEMS

a certain number of local jobs; to construct a certain standard of living base for logging site employees (water supply, electricity, etc.). Should the company fail to meet any of these obligations as stipulated in the work plan, they are acting illegally.

Duty to consult the local population
Depending on the countries' forestry laws and regulations, operators and/or companies have a duty to ensure participatory mechanisms, particularly with regard to local and indigenous populations or their representatives. The duty to consult generally covers the stages of classifying a forestry zone; allocation of a concession; production of contractual obligations; and production of management plans (boundaries of community development areas, establishment of participatory management methods).

A failure to respect consultation obligations is a characteristic of bad governance in the application of agreed and participatory management standards.

Respect for environmental standards
Certain environmental standards may be imposed on logging companies, either directly through their contract or via the existence of legislation that incorporates such aspects. This relates in particular to: conducting impact studies and waste management (wood, waste oil, etc.)

When a logging company has not complied with environmental standards in its logging activities, it has behaved illegally and is liable to sanctions.

ADOPTING A METHODOLOGY FOR COLLECTING ANALYSIS INFORMATION

One fundamental aspect of IM is to compare what *should be done* (according to the law, regulations, standards) with *what is being done in reality*. The examination of the forest sector that was discussed above can serve as a basis for understanding what should be done. Once you understand what should be done, you will have a good basis for clearly identifying illegalities, and bad or corrupt practices both in the forest and at the administrative level. When you design your data collection sheets, you need to be sure that the information is collected in such a way that you are able to compare what is being done on the ground (the reality) with what should be done (laws/official procedures). For example, if the law requires volumes of trunks/logs to be expressed in cubic metres, your sheets should also be expressed in cubic metres.

The value of an IM programme is largely determined by the way in which information is collected, organised, managed and reported. This chapter focuses on collecting reliable data. In general, the recommended processes for collecting information are as follows:

1. Produce an investigation table that summarises the stipulated obligations, known illegalities, indicators used and, where necessary, tools and equipment used to collect the information;
2. On the basis of this table, develop tools with which to gather evidence (e.g. level of sampling, internal procedures for collecting, recording and backing up data depending on its nature, including data collection sheets, etc.);
3. Plan and conduct field missions to collect data;
4. Record data systematically and accurately.

Producing a list of investigation criteria

Producing a list of investigation criteria:

- Enables you to be sure that everyone agrees on what is or is not legal and on the best way of collecting the information (provided all the IM team are involved in the process of producing the list);
- Serves as a basis for planning and implementing missions;
- Clarifies the equipment needed and the data collecting tools (field sheets, etc.) that need to be developed;
- Highlights the specific information necessary, thus preparing the IM to negotiate specific clauses for information access to be included in the Memorandum of Understanding.

Where the FLEGT process has been initiated, you can also use the legality matrix annexed to the Voluntary Partnership Agreement signed between the producer government and the EU. This matrix outlines the criteria for forestry sector legality chosen by the countries and lists the sources of verification. The VPA also establishes the public documents that can be used when verifying legality.

The monitoring missions include two closely-related aspects: documentary analysis and field checks.

- **Data analysis:** the collection and analysis of documents is an ongoing exercise prior to and during the missions. It is important to identify the different kinds of document relating to the logging site, the sawmill and to transport (annual cutting authorisation, operator's card, field documents and waybills, records of timber entering the mill, summary production lists - in the case of the Republic of Congo), their use and the main information contained in them, along with the checks to be conducted by IM-FLEG for each document and the infractions that correspond to the observations made.

- **On-the-ground monitoring:** on-the-ground monitoring consists of verifying or physically checking the different information listed and processed during a documentary analysis. Cross-referencing of information from the different documents (e.g.: consistency of log numbers, volumes and species between the field documents, waybills and sawmill records), or between documents and the field (e.g. consistency of numbers and species of logs recorded in the documents with the tree stumps found on the ground) is essential, particularly to detect documentary frauds.

The following tables are constructed around these two aspects. Based on the legal and regulatory provisions in the Republic of Congo, they provide an example of the kind of work to be done. A similar table adapted to your country's specific features will help you to design your IM programme and to be more effective when conducting field missions.

ADOPTING A METHODOLOGY FOR COLLECTING ANALYSIS INFORMATION

Table 2: Outline Table of Investigation for documentary monitoring in the Republic of Congo

Main documents	Definition and main information contained	Some checks to be made	Examples of problems or possible associated illegal activities
Carte de comptage **(Tree counting map)**	**Definition:** Document required of the operator when requesting a felling authorisation, and on which the plots for the cutting area and results of tree counts are given **Main information:** Technical features of the Maximum Authorised Volume = total: 1. Useful area 2. Number of plots 3. Total number of species per plot 4. Total volume 5. Total density per hectare of standing trees	- All required information is present - The counting covers all of the exploitable trees for the saleable species - The counting is accurate (requires cross-checking on the ground)	- Non-compliant document - False or fanciful counting
Autorisation de coupe **(Cutting authorisation)**	**Definition:** Decision from the relevant administrative authority to give the operator the right to log trees in a specific area. **Main information:** 1. Geo-referenced limits of the area (position of the area) 2. Number of trees of each species that can be felled 3. Species and their anticipated volume 4. Corresponding stumpage tax 5. Duration of logging	- Date of validity and duration - Definition of the boundaries of the logging area - Compliance of species and volumes or number of standing trees to be logged (in relation to the information contained in the contract)	- Non-compliant document - Unauthorised logging (prior to date of issue and/or after date of expiry)
Carnet de chantier **(Field documents)**	**Definition:** Documents in which the operator records information on each tree felled **Main information:** 1. Date of felling of tree 2. Tree number 3. Logging hammer and holder 4. Commercial or local tree name 5. Name and numbers of logs coming from the tree (trunk) 6. Dimensions and volumes of trunks (with diameters “at base and at summit”) 7. Dimensions, volumes (with average diameter) and destination of logs 8. Cumulative volumes of trunks and logs 9. Date of removal and observation (export, factory, abandoned wood, etc.)	- The document must be filled in without deletions or alterations and updated (daily or weekly) - All required information is present - The species noted in the document must be those given in the cutting authorisation - The number of trees felled by species must be equal to or less than the quota granted in the authorisation - The total number of trees felled must be equal to or less than the quota granted - Diameter of trunks “at the base” must be more than the minimum diameter for logging of the species concerned - Consistency of dimensions and volumes between trunks and logs Comparisons with the field enable you to verify whether: - All felled trees are recorded - The data on volumes, number of logs and species is correct	- Bad keeping of document/ document not updated - Unauthorised felling of some trees - Logging of products not mentioned in the cutting authorisation - Logging of a greater number of trees than indicated in the annual cutting authorisation. - Trees felled below a minimum diameter (in relation to that authorised) - False or fanciful declaration of volumes, numbers and species with a view to avoiding payment of the stumpage tax

Main documents	Definition and main information contained	Some checks to be made	Examples of problems or possible associated illegal activities
Carte d'exploitation **(Exploitation map)**	**Definition:** Operator's document that serves to monitor logging within the area **Main information:** 1. Number of plots logged 2. The opening of roads and log storage sites built. 3. Number of trees felled in each plot	- The plots logged must be indicated - The number of trees felled per plot must be indicated	- Document not up to date
Carnet de feuille de route **(Waybill)**	**Definition:** Compulsory operator's document for transporting forest products (logs and sawn timber) **Main information:** 1. References of the logging permit 2. Origin and destination 3. Date of dispatch 4. Name and surname of lorry driver 5. Credentials of means of transport 6. Quality of products, number, species, unit dimension and volume (for logs: information similar to that of the field documents)	- The document must be filled in without deletions or alterations and updated (daily or weekly) - All required information is provided Particular attention should be paid to: - Validity of permit - Credentials of means of transport - Date of transport - Authenticity of document Comparing this document with the field documents enables consistency and compliance of the numbers, species and volumes of logs to be verified.	- Movement of timber without waybill - Bad keeping of document/ document not updated - Fraudulent logging - Sub-contracting of timber transportation - Unauthorised transport - False of fanciful declarations of species, numbers and volumes
Etats de production **(Production reports)**	**Definition:** Operator's document that summarises, by species, the volumes of trunks and logs: products in stock and delivered by destination (export, sawmill). There are monthly, quarterly and annual reports **Main information:** 1. Volume by species of trunks and logs 2. Volumes of logs in stock at the start and end of the period under consideration 3. Volumes of logs delivered by destination (sawmill, export) 4. Volumes of stocks of logs at sawmill entry 5. Volume of logs processed in the mill and volumes of products obtained after processing 6. Volume of products sold (export, local market)	- Export and processing quotas met - Consistency of data provided in the production reports with the information given in the field documents	- Failure to respect set quotas - False or fanciful declarations (in relation to the field documents)
Registre entrée parc usine **(Sawmill entry records)**	Definition: Operator's document in which logs coming from the forest to the log yard/sawmill are recorded. Main information: 1. Number of logs transported to sawmill 2. Date of unloading 3. Number of logs, species and volume	- The document must be filled in without deletions or alterations and updated (daily or weekly). - All required information is present Particular attention should be paid to: - Date of storage of logs at the yard - Consistency of data with that given in the waybills	- Bad keeping of document/ document not updated - Abandoned wood - False or fanciful declarations

ADOPTING A METHODOLOGY FOR COLLECTING ANALYSIS INFORMATION

Table 3: Model Table of Investigation for field monitoring, in the Republic of Congo

Examples of activity	Definitions	Some checks to be made	Examples of problems or associated illegal activities
Monitoring of boundaries	The monitoring of boundaries (annual cutting authorisation, forest concession) is a field activity that consists of assessing whether the following have been met: - Regulations for opening boundaries (access roads) - Positioning of boundaries as stipulated in the cutting authorisation - Logging within the given boundaries	- Marks (marking large trees with paint) + maintenance and opening of access roads - Position by noting GPS points at the boundaries of the main access roads for the concessions or cutting areas - Cases of off-limits felling	- Failure to open access roads/access roads do not materialise/failure to maintain main access road - Failure to respect logging rules - Logging outside of boundaries
Monitoring of stump, butt and log marking	Activity to check that the marking of stumps, butts and logs has been conducted in accordance with the rules	- The stumps, butts and logs are marked with the impression of the logger's hammer, the year of felling and an order number - Marking on both sides of the logs	- Failure to mark stumps, butts and logs - Lack of marking - Duplication of numbers
Monitoring of stocks	Activity to check stocks of logs/ trunks at log storage sites in the forest or at the sawmill	Forest: - Marks on the tree butts, nature of abandoned shorts - Check stumps against logs stored in the forest. - Consistency of data with that of the field documents (number, species, volume/scaling) Sawmill: - Date of storage of logs - Consistency of data with that of the waybills and/ or sawmill entry records (number, species, volume/ scaling)	- Abandoned logs - Lack of marking - False declarations (of species and numbers)

Data collection tools

Filling in the table of investigation above requires the use of numerous data collection tools such as sheets, questionnaires and checklists. These tools will need to be developed according to the specific regulations in your country and the IM programme. This section gives general advice that will enable you to develop these tools. It is advisable that your data collection tools are *semi-structured*, i.e. structured enough to ensure systematic information collection but still offering enough flexibility to be adapted to a wide range of observations. Flexibility is also important in terms of data collection because offenders tend to change their frauds in response to monitoring and/or law enforcement efforts. If you conduct a structured investigation, it will be easier for offenders to conceal elements once they know what you are looking for.

Data is collected on the basis of three sources:

1. Documents;
2. Field observations;
3. People (testimonies).

Interviewing the local population

Collecting documentary-based information

There are a large number of different documents to verify, including:

- The *legal documents* specific to logging companies (e.g. permit, annual cutting authorisation, maps, etc.). These

documents should be available from the centralised and decentralised public administration offices;
- *Documents used for recording information*, on which companies provide information on felling, transport, processing and export. These documents are stipulated by law and usually submitted regularly to the administrative authorities for checking. They should be available from the company's offices;
- The *statistical documents* that companies produce on the basis of data provided in other wood production, processing and export documents. These documents are stipulated by law and usually submitted regularly to the administrative authorities. They should be available at the company's and the public administration's offices;
- *Internal administration documents*
  - Used to record certain information, particularly on the payment of taxes and fines or on official statements and notifications of offence produced.
  - For example, activities conducted by the administration and other administrative procedures (mission reports, activity reports, minutes of meetings,...);
- *Documents concerning other uses of the forest space.* This may relate to maps detailing protected areas, community development zones or mining permits, etc.

A list of basic rules should be produced to guide the observer in his/her examination of the documents. The following list can be used as a basis:

- What are the applicable regulations, laws, standards and procedures?
- According to the regulations, what documents need to be produced?
- Has the document been validated (Is it forged? Has it expired?)?
- Is it the original of the document or a photocopy?
- Has it been issued by the relevant authority?
- Are the stamps and signatures genuine?
- Is the format of the document correct?
- Does the information in the document correspond to the reality (e.g. volumes, species, number of logs, boundaries of logging area, etc.)?
- Are the documents available? If not, why not?

Collecting information on the basis of field observations

The field observation sheet you use will depend on the kind of illegal activity you wish to identify. Although it is not always necessary to design a different observation sheet for each kind of illegality, you will probably need to produce several different field information collection sheets.

Some basic examples are given below. Some of the columns in the tables refer to GPS points and to log volumes.

Using GPS to mark the location of a stump outside the authorised cutting area

For the GPS points, you can refer to the user's manual that came with your GPS or other resources available on the Internet[6]. In addition to saving the GPS points on your receiver, it is useful to note all the GPS coordinates, with the number and name of the corresponding waypoint, in a notebook. This manual back-up is a safeguard in case your GPS receiver should be lost or damaged.

For log volumes please refer to the appendix, which gives instructions on how to estimate these. Field observations must be recorded so that you are able to compare them with the data given in the documents. For example, if company A is authorised to transport X cubic metres of species C, you should collect data specific to company A by species in cubic metres.

The following tables give examples of field sheets for lumber, logs and general observations. Collecting quantified data via a standard methodology is a fundamental aspect of IM.

6 Manuals for all Garmin models are available, in English only, at http://www8.garmin.com/support/userManual.jsp. On the first dropdown menu, choose Outdoor then the GPS model you are using. You can also consult www.rem.org.uk/documents/GPSmanual.html

ADOPTING A METHODOLOGY FOR COLLECTING ANALYSIS INFORMATION

Table 4: Lumber inventory sheet - used to record the quantity, size and volume of lumber. This data is necessary to compare the real volumes with the volumes declared by the company in question.

Label No	Species	Quantity	Thickness (mm)	Width (mm)	Length (mm)	Volume (m^3)
ZST1786GB	KHA	50	25	160	2700	0,54

Table 5: Log inventory sheet - used to record the quantity, size and volume of logs. This data is necessary to compare actual volumes with the volumes declared by the company in question.

Log marking	Photographic reference	GPS point	Species	Diameter				Average diameter	Length (m)	Volume (m^3)
				Thick end		Thin end				
				Min	Max	Min	Max			
TCG67797 GH/OCUFOR	2	3	KHA	75	73	64	62	68,5	7,1	7,1

Table 6: General observation sheet - used to compile data (on the basis of log and lumber inventory sheets) and also to record other more general observations

Comment	GPS point	Photographic reference	Dimensions (volume, diameter, etc.)	Additional comments
Intersection on the forest track	1	NA	NA	NA
Wood stack	2	1-5	67,789 m^3 (inventory 1)	All trunks are marked
Lorry	3	6-8	13,678 m^3 (inventory 2)	Images of documents on photo 7; divergence in volumes.

Collecting information with the help of questionnaires

Whilst open discussions with people are a useful source of information, questionnaires are also needed to collect systematic information. This will facilitate the compilation and analysis of the data collected. In addition to the activity forming the object of the investigation, when designing a questionnaire you need to take into account certain aspects such as the key informants (local community members or leaders, company staff, national or international company staff, forest law enforcement officials or other administrative official, etc.) and whether the interviews are to be conducted individually or in participatory groups.

A semi-structured questionnaire comprises both closed (a choice of several answers is given) or open (the person questioned is encouraged to answer in their own words) questions. Closed questions are often used to collect information on quantifiable variables. For example, if you want information on the frequency of enforcement missions, one possible format would be:

In the past year, how many times have you visited concession X to verify respect for the boundaries?

☐ Never	☐ 3 times
☐ Once	☐ 4 times
☐ Twice	☐ More than 4 times (specify how many)

Remember that, as it is a semi-structured interview, you can ask open questions such as the following to a local enforcement official: *"Why don't you go to the concession every two months as specified in the national forest law enforcement strategy?"*

The value of the information you obtain from your questionnaire will depend not only on the quality of the

questionnaire but also on the style of your interview. Here is some basic advice:

- Establish a polite and respectful rapport with the person being questioned and try to put them at their ease by chatting about different topics before commencing the interview;
- Use body language to show that you are interested in what they are saying;
- Ask your questions in a logical order;
- Do not press the person being questioned;
- Don't let the interview go on too long - normally 15 to 20 minutes, depending on the person being interviewed and their interest.

Take notes during the interview[7] and start by noting the time, date and names of the people present. Interviews can be recorded but make sure that you have sufficient cassettes, that your batteries are charged (use rechargeable batteries) and that you have asked permission from the person being interviewed (obtain this verbally to begin with and then make sure to get the request for permission and confirmation of authorisation recorded on tape, once it has been obtained).

REM interviews a Forest Officer

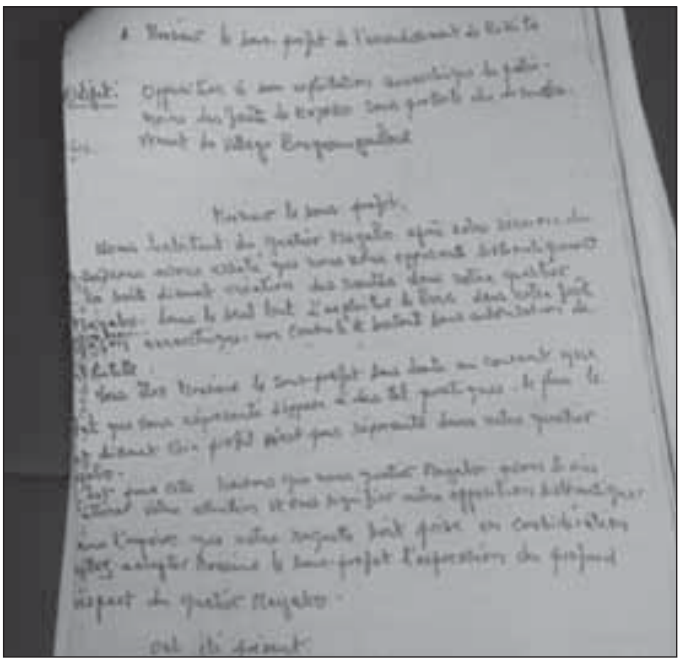
7 You will need a notebook, a pencil and a pen. Unlike pencils, pens do not write on damp paper although neither pen no pencil will work if the paper is completely soaking. It is preferable to have a bound, hard cover notebook that can be kept dry in a plastic bag.

PREPARING AND UNDERTAKING IM MISSIONS

Identifying objectives

To be as effective as possible, it is best to establish specific objectives for each field mission you conduct. The general questions to ask when setting the objectives are as follow: what kind of illegal activity will the investigations focus on? Where will the investigations be conducted?

You can follow a schedule aimed at covering a certain proportion of all kinds of forest permits (routine) or respond to specific complaints (ad hoc).



A letter from the local population to a sub-prefect with regard to illegal logging may result in a targeted mission

For example: The objective of the mission is to visit concessions 1 and 2 of company X to: 1) investigate felling that has been notified outside the boundaries of the current logging permit, and 2) conduct at least 4 checks on the volume of logs being transported from concessions 1 and 2 to their destination.

The objectives must be logical and defensible. Why are you intending to investigate only concessions 1 and 2 of company X and not other concessions or the concessions of another company operating in the same area?

Finally, the objectives must be realistic. Are the objectives achievable with the resources available and in the time devoted to the mission?

If you cannot answer these questions confidently, think about changing your objectives until you can justify the need for the mission. Field missions take time and cost money, so you should ensure that you have all necessary information and documents prior to your departure.

Producing a detailed profile of the companies to be visited

A good knowledge of the logging companies to be visited will maximise the chances of your mission's success. Here are a few suggestions for information that your company profile should include:

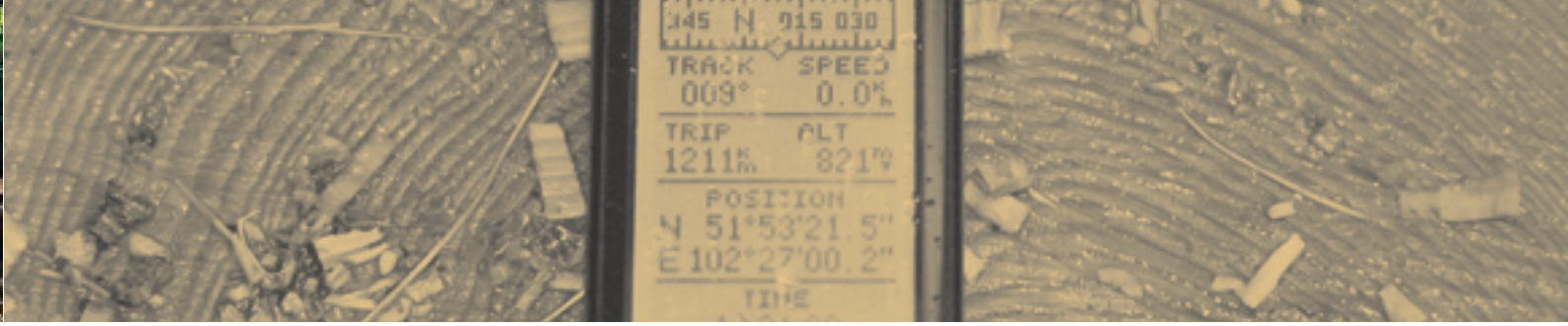
- Contact details of the company's managers;
- Nature of the permit held;
- Annual authorisations obtained;
- Whether there is a forest management obligation or not;
- Existing government enforcement mission reports (and possible minutes of meetings held with the company);
- Official statements of offence and administrative measures taken against the company.

If any information is unavailable, this will need to be recorded in the mission report. Remember that, in the context of the Memorandum of Understanding (if you have established one), the state authorities are obliged to provide you with free access to a wide range of information and data.

Producing a work plan for the mission

In order to ensure an effective and successful mission that achieves its objectives, you need to produce a detailed plan of work. This should be completed at least one week prior to departure in order to give the IM team sufficient time to organise the logistical aspects. The basic elements of a work plan are as follows:

- **General and specific objectives of the mission** - what are your aims?
- **Itinerary and timetable** - when and where are you going?
- **Profile of the logging company or companies to be visited** - who are you going to meet?
- **Specific activities and tools** - what are you going to do and how? How will these activities enable you to achieve your objectives?
- **Research tools** - what research tools will be used?
- **Equipment** - what equipment do you need to take (a checklist is advisable)?
- **Staff** - who will form part of the mission and what will each person's specific responsibilities be? Is the mission a



joint mission? If so, which government organisations are accompanying you?

- **Documentation** - make a list of the documents to take. These must include:
  - General legal documents (strategy, forest code, forest management guidelines, etc.);
  - Documents specific to the company: company profile with maps of concessions and copies of permits and authorisations;
  - Data collection sheets;
  - The mission order signed by the authorities or project leaders.
- **Contacts** - have the state and/or logging company representatives in the target area been informed of your mission? If not, what measures will be taken to communicate with the local authorities when you arrive at your destination? If an element of surprise is important for this mission, what are the minimum contacts that need to be made to ensure compliance with the Memorandum of Understanding?
- **Logistics** - are the vehicles available and ready? Is accommodation planned?
- **Safety** - what is the region's security like? What precautions should be taken to minimise the risks? Do you have a satellite phone and a first aid kit? What is your plan in case of emergency?
- **Budget** - draw up a table to include equipment, *per diems*, accommodation, tools, fuel, etc.
- **Draw up a final checklist** to ensure that you are fully ready to conduct your mission.

Conducting your field mission

The way in which your mission is conducted will depend on certain factors, including: the nature of the mission (in cooperation with the government or independent); your knowledge of the illegal activities noted and/or suspected that are going to form the object of monitoring; and even the relations between the authorities and logging companies in the area. Nonetheless, certain general principles do apply to all field missions:

- Don't rely on your memory. **Take clear notes** to ensure that all information is recorded and can be easily typed up later. Use as many standard documents as possible to collect information/data. If an important piece of information does not fit into your data collection sheet, you should note it in your notebook.
- **Analyse and compare the information *in situ*** as far as possible. For example:
  - Compare the concession boundaries on maps with the actual boundaries using a GPS. If possible, take a laptop with you to the field and produce maps *in situ* or programme the boundaries of the concession into your GPS.
  - Do the same for the locations of tree stumps that appear off-limits to you.

Be vigilant with regard to the chain of offence. The initial infraction identified may be linked to a far more significant infraction. In this case, it is important to ask yourself about the consequences of the initial infraction. For example, bad keeping of the field documents (logs not recorded on the pretext that wet weather prevented the daily reporting of information, use of the same numbers for different logs, or deletions) is often presented by the company as human error when it may be a systematic failure and thus signify a failure to declare the full volume of wood felled, and hence a significant under-payment of taxes.

During the course of joint missions with the state authorities, you should observe how the officials react when they encounter illegalities. Are they enforcing the law? If so, are they doing so rigorously or are they giving offenders some margin for manoeuvre? Do the penalties applied correspond to those stipulated by law? If the officials are reluctant to enforce the law, it is important to understand why, because this may indicate weaknesses or systematic corruption.

Seizure of wood during a joint IM-FLEG REM and Enforcement Brigade mission

AFTER THE MISSION: DATABASE MANAGEMENT AND REPORTS

The value of the data collected on the ground depends largely on how it is subsequently used to engage actors as catalysts of governance reforms. The precise process by which actors are engaged in turn depends on the political and economic context in your country. Nonetheless, whatever the situation, it is still useful to produce well-managed and verified (by cross-checking) data that can be used to inform/denounce and thus change the situation rather than not disseminating the information gathered and analysed.

Creating and managing your database

Ensuring the security of information

The first protocol to be put in place when managing a database is that of protecting your evidence. Field missions take time and are costly, so special precautions need to be taken to ensure the security of the information gathered on the ground. For this you must:

- Give one team member with the necessary skills the responsibility of ensuring that all information is kept safely;
- Upload all photos onto a computer and back them up on an external hard drive or second computer. Before deleting the photos, ensure that they are recorded and classified with a name relating to the field mission;
- Upload all GPS data to a computer and a back-up hard drive. Once the GPS data is recorded in two different places, the GPS unit's memory can be wiped for the next mission;
- Make sure you have a backup of all your data! The backup copy must be kept in a safe place.

Compiling and recording data

A competent database manager (often a GIS technician) will be an asset to your IM team. It is essential that all information is managed in such a way that the credibility of your data is not compromised. Microsoft Excel or a more specialist database management software such as Microsoft Access can be used to create and manage the database. In general, the database must be:

- **Accurate**: The data recorded on the field observation sheets must tally with the data recorded in the database. The names given to the GPS points, photos and field observations must be correct;
- **Complete:** It must contain all evidence collected over the course of all field missions;
- **Managed by one or two people only:** If several people are involved in managing it, then it will be useful to create a user register so that each person's operations can be monitored;
- **Easily understood by a wide public:** It must include descriptions of each kind of data: what the data is, when it was collected, who collected it and whether it was verified by cross-referencing;
- **Easy to update** and the data must be easy for the user to file, find and analyse;
- **Well-organised** and "fault free" (consistent labelling, no spelling errors, etc.);
- **Backed up** each time it is updated.

The electronic database will also need to be supplemented with a good number of field notes, systematically filed and held at an office.

Verifying the data by cross-referencing

Verification by cross-referencing is a process that enables data accuracy to be examined. This process involves comparing what has been observed with information coming from other sources such as informants, documentation and other databases. Data verification is an essential stage in ensuring the credibility of your IM programme. Imagine that you are trying to convince a senior official that a logging company is committing serious illegalities - you will be better able to defend your position if your evidence has been backed up by various sources.

Take the example of a field observation relating to illegal felling outside the area of a concession. In many developing countries, there may be limited capacity to produce an accurate map of the concession's boundaries and this can lead to confusion as to their precise location. You will therefore need to ask the following questions during the monitoring process: what map was used to verify the concession's boundaries? Is the scale on which it was produced appropriate? Are there other maps or GIS data that could be used to verify the location of the concession's boundaries? Given that GPS coordinates are often only accurate to the nearest 15 metres, what distance was the GPS point from the boundary? Verification by cross-referencing can be applied to virtually any kind of observation. For example, it is possible to recalculate the volumes of trunks and logs and compare them with photos taken of wood stacks and data recorded on the companies' inventory sheets.

You will need to hold a meeting with your team to produce a report within a few days of the end of the mission. This meeting will enable the observations/evidence requiring

significant verification by cross-referencing to be identified, cross-referencing methods to be discussed, additional necessary information to be identified (for example, other documents at ministry level) and cross-referencing tasks to be shared.

Writing and validating reports

Once all the observations and evidence have been compiled, verified and securely entered into the database, you can write the mission report. The mission report is extremely important as it may be read by a wide audience, including government authorities, international donors, partner organisations, logging companies, civil society and the general public.

Mission report structure

The format of the mission report will depend on various factors such as the kind of mission (independent or joint with the administration) and the target readership (government, donors, civil society, etc.). Nonetheless, the basic principles underlying the production of reports remain the same whatever the kind of mission and format.

In general, the report must be:

- **Objective:** this is the most important aspect of the report. Keep to the facts and only base your conclusions on the evidence presented. Specify the additional investigations needed to be able to draw conclusions. Do not speculate. Remember that the IM does not have an ultimate mandate of enforcing the law.
  The IM should restrict itself to noting the infraction and recommending that the competent authority apply a sanction (including, where appropriate, conducting a mission to evaluate the extent of the illegality, with a view to calculating compensation).
- **Understandable:** reports must often be accessible to a variety of different audiences. It is therefore advisable to use clear and simple language, avoiding overly technical terms or overly detailed descriptions.
- **Complete:** it must include all the relevant facts and information, including information on any investigative work that did not uncover illegal activity.
- **Concise:** give the facts or conclusions in the body of the report but present the details (calculations, analyses, cross-referencing) in an appendix. Avoid overly detailed descriptions and instead use tables and lists.
- **Laid out according to a standard format:** this will make the report easier to read and compare with other reports. The use of the same format will also facilitate the production of thematic reports or the transfer of information to a database.

A typical mission report format can be found in the appendices.

Report validation

Once a Memorandum of Understanding has been signed with the government, the IM is obliged to have a multipartite reading committee (comprising members of the forestry administration, the IM, national civil society and donors) examine and validate its mission reports. This kind of procedure enables observations and recommendations to be discussed, a dialogue to be commenced on weaknesses in law enforcement and possible solutions to be identified with the government authorities. This also sets an example of open and transparent debate within the forestry sector. Moreover, it is important to ensure that clear procedures are established with regard to methods for resolving differences of opinion. In fact, the administration may try to use or influence the reading committee in order to change the observations noted in the reports or block their publication.

It should also be noted that if you are working in an external context (EM), there is nothing to prevent you from freely proposing a feedback meeting to the administration, and possibly to other parties (donors, etc.) following your mission in order to encourage exchanges and decisions with a view to improving the forest law enforcement system.

Producing thematic reports

Once you have conducted a number of missions, you will probably notice similarities or trends in the illegalities recorded. Logging companies may, for example, try and remove far more logs illegally from one region than another or the vast majority of companies may not pay one kind of tax but regularly pay another. Identifying such trends and their immediate or underlying causes will enable you to produce thematic reports identifying the reasons for these problems. While the aim of a mission report is to present evidence, a thematic report provides data from several reports in order to draw more general conclusions.

Is there evidence of widespread corruption within various ministries? Do the law enforcement authorities simply ignore the existence of some taxes? These are questions that a thematic report may be able to answer or at least raise. It is always preferable to give the Ministry an opportunity to make comments on or amendments to thematic reports before publishing them (often with a 30-day delay). This enables possible errors to be corrected, a dialogue to be initiated on some questions, and actions that may have been taken by the government during the drafting period to be incorporated. It is nonetheless important to maintain the independence of the report and, if there is a difference of opinion, the Ministry's point of view should be given in a box or footnote without, however, removing that of the IM from the report.

INFORMATION DISSEMINATION TO ENGAGE PLAYERS IN A REFORM PROCESS

This section deals with the IM's ultimate goal, namely that of engaging actors in the forest governance reform process. Governments do not generally respond rapidly or significantly to advice from an NGO, even if it has overwhelming evidence of illegal activity. It is therefore essential to raise awareness of the results and solutions highlighted by your NGO among those actors that are interested and/or directly involved in governance reform and to encourage them to take measures to improve governance. Actors likely to be interested and/or directly involved in governance reform include civil society, international donors and the general public.

It is highly likely that the results you obtain, along with the detailed and reliable ***information*** that you collect on ***specific*** governance problems, will be of interest to other non-governmental players concerned with improving governance. Once a mission report has been reviewed and validated, an Internet link to the downloadable report should be sent to the relevant forest law enforcement authorities and to other government authorities (e.g. Ministry of the Environment, Ministry of Finances and other legal bodies concerned), programme donors, partner organisations, the media, national and international civil society and the logging companies. Try to draw up a list of all recipients in advance so that the dissemination of your reports can be well-organised.

Engaging interested parties in the reform process requires various actions:

1. Ensuring wide dissemination of mission reports, particularly among actors that might be able to influence high-level decision-making on forest law enforcement and governance;
2. Following up the government's consideration and application of the recommendations in your mission and thematic reports involving, if possible, the above mentioned players;
3. Publishing information on the government's consideration of your recommendations in the thematic reports.

Raising the awareness of the public

It is important to inform the national public and local communities. The national public can be reached by publishing your validated conclusions and recommendations in the national press and via radio and TV broadcasts. It is unlikely that national-level awareness raising will lead to immediate action; it is more a question of making a continued effort to increase the forest administration's accountability by enhancing an awareness of the problems and creating public pressure. National-level communication therefore needs to be an ongoing activity throughout the course of your programme.

Although the press can be an effective tool, you also need to be very careful in this regard. Newspapers are not always friendly and their accounts are not always accurate. For example, if you work in partnership with the government, the press may raise concerns as to your objectivity, which can make dialogue and cooperation difficult. Some national and international press bodies may also try to satisfy a growing interest on the part of their readers with regard to the illegal activity of certain companies (of a specific nationality, for example), without putting this into context, and this can give a very different impression of the reality. The 'tabloid' newspapers may also place unnecessary emphasis on certain negative aspects noted in relation to governance or illegalities, without mentioning other positive aspects, and this can give a bad impression of your independence and neutrality, even threatening your IM programme by creating resentment on the part of the ministry in question, and leading to a refusal to continue to cooperate.

Providing the press with evidence in support of your statements may be sufficient to neutralise the accusations and dispel all doubts. Although journalists can form an important source of information for the IM, it is always essential to verify what they tell you, as they may have hidden interests.

It is very important to conduct awareness raising activities with local communities whose livelihoods are likely to be directly affected. As many local community members do not have access to a radio, a television or the newspapers, it can be far more time-consuming and costly to develop a communication strategy at this level than to implement a national programme. Field activities (awareness raising sessions and workshops, public meetings, etc.) are one way of reaching these groups. Participatory activities encourage community action and increase the impact of your own initiatives.

Raising the awareness of civil society

It is important to engage civil society organisations in this process as they can use information from your IM programme to initiate change themselves. It is advisable to inform organisations interested in governance issues (even if their interest lies outside

the forestry sector) via regular working sessions and individual meetings or even by cooperating on the implementation of some activities. As an IM, it is not in your interest to play an advocacy role as this may endanger your objectiveness and independence. Nonetheless, there is nothing to prevent other advocacy NGOs from using information drawn from your observations in their own campaigns. In fact, if your programme is successful, the resulting transparency will help this process to occur naturally.

Raising the awareness of the international community

It is important to inform international donors of your activities and the results obtained because:

- It is likely that the initial funding for your IM programme will come from international donors and that these bodies will be more likely to offer their support if they are well-informed;
- International donors often exercise influence over beneficiary governments and can therefore be a powerful ally in bringing about governance reform, particularly at a high level, in financial transparency, for example;
- International donors themselves need to be held accountable for their actions. Some donors give or lend large sums to governments. If your investigations reveal systematic corruption in the forestry sector, international donors will come under significant pressure from the international community and national civil society to change their lending strategy.

We suggest you use the following communication strategies:

- Invite donor representatives to attend the report validation workshops and meetings (it would be good if they could become official committee members) and to participate in some field missions;
- Distribute annual and thematic reports to all international donors present in the country in which the monitoring is conducted;
- Organise private meetings with donor representatives to explain your programme and its results in detail.

In general, when you communicate with an international donor, explain how your results impact on their work and their projects.

The REM team in Cameroon organised a field mission with enforcement officials from the Ministry and four ambassadors to raise awareness of forest governance issues and to create support for the project

This first conceptual part allowed you to become familiar with Independent Monitoring basic concepts. Let's move to practical field work with the technical sheets, which are included in annexes.

ANNEX n°1: calculating log and wood volumes

This section explains the measuring techniques that can be used in different situations (trunk and logvolumes or estimating volumes on the basis of stumps). It therefore covers different cases when the IM is conducting monitoring with the aim of uncovering frauds (consistency in dimensions and volumes between trunks and logs recorded in the field documents, comparison between measurements taken by the IM and figures declared in the documents). Under-declaration of volumes of wood in order to reduce stumpage taxes is a common infraction and so it is important to take great care when measuring as your measurements, when compared with those declared, will help to denounce illegal activity.

Applications of volume calculations

Measuring a log

Calculating volumes in the forest relates to calculating the volume of a log and listing it in the operator's field documents. A log refers to a tree once it has been felled, i.e. the part that starts at the base and goes up to the top (based on the first main branch). Volume calculations also take place at the log yard where the log where it is sawn into different smaller logs according..

Importance of the IM monitoring this scaling
The IM's monitoring of volume calculations is aimed at checking whether the volumes declared in the operator's documents (field documents, waybills, sawmill records) are accurate.

The most common infraction to detect isany under-declaration of volumes by the operator in order to minimise the payment of felling taxes.

It should be noted that some documentary inconsistencies can be noted without carrying out any actual volume calculations but that these may sometimes require additional checks on the ground, depending on the possible causes identified:

FINDINGS	POSSIBLE CAUSES
Volumes declared by the operator are different from those calculated by the IM (on the basis of diameters and lengths)	Calculation error on the part of the operator when applying the formula for assessing the volume on the basis of the diameter and length of the wood
	Fraud, by intentionally reducing the volume of trunks in the field documents to minimise the felling tax
Log volume less than resulting log cutting volumes	Calculation error or the fact that, in the end, the operator recovers sections not taken into account in the initial log volume estimation (e.g. branches, other parts)
	Case of fraud, for example by intentionally minimising the volume of logs in the field documents, or by passing off illegally cut wood (e.g. a log yields 2 smaller logs but 3 logs are recorded in the field documents as the 3rd actually comes from another, illegally felled and generally unmarked, tree.)

In cases of illegal felling (off-limits felling, unauthorised felling, etc.), the calculated volumes of illegally felled wood can be used to calculate the financial value of the wood and thus the damages payable by the operator.

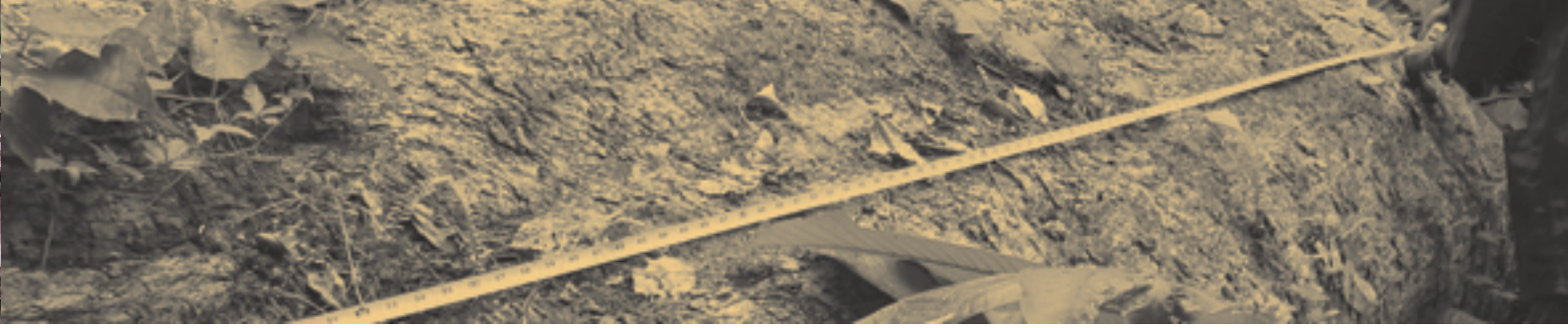
Volume calculation techniques

Measuring and calculating the volume of a log

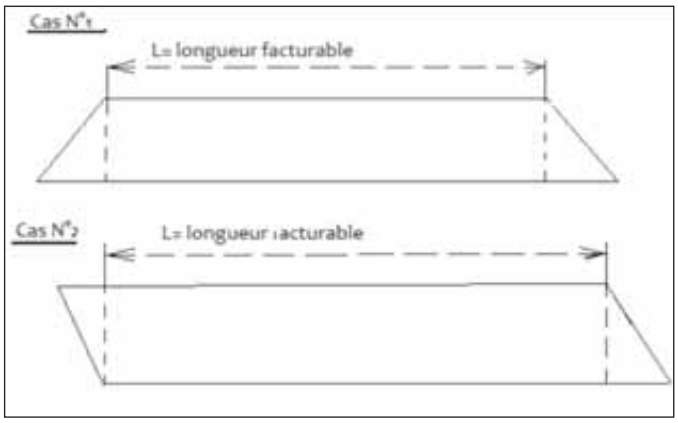
Tools used
Metre rule, decametre rule, ready reckoner.

General formula
The volume of wood is obtained using the following formula: $V = \pi/4D^2 \times L$ where $\pi = 3.1416$
(Simplified formula: $V = 0.7854 \times D \times D \times L$)

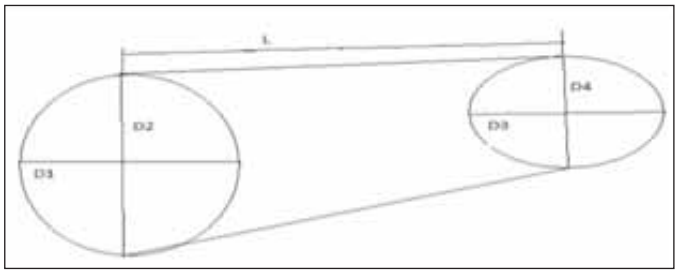
V - volume, expressed in m^3
L - length of log: the shortest distance between two (2) ends, expressed in metres and decametres; rounded down to the nearest centimetre.



D - average diameter of the log: average of 4 diameters taken 2 by 2 at each end of the log



Average diameter: Dav = (D1+D2+D3+D4)/4



For each end, the diameters are taken:

- crossways (perpendicular)
- crossing at the side's centre of gravity;
- not including the bark;
- on sapwood;
- excluding the base.

Example:

If the diameters have the following values:
End A: D1 = 112 cm and D2 = 97 cm
End B: D3 = 90 cm and D4 = 91 cm
If the length of the log is 10 metres and 28 centimetres, it is rounded down to the nearest full decimetre or centimetre: 10.20 m.
The formula gives:
D = (112+97+90+91)/4 = 97.5cm being 97cm rounded down to the nearest centimetre
This log, 10.20 m in length and 97 cm wide, will have a volume of:
V = 0.7854 x 0.97 x 0.97 x 10.20 = 7.538 m^3

Using the ready reckoner

In practice, the volume is obtained with a ready reckoner according to the length (L) in metres (m) and the average diameter in centimetres (cm).

Length: L = 10.20 m
Average diameter: Dav = 97 cm
By cross-referencing the length in metres with the average diameter in centimetres, the volume obtained equals 7.538

NB: Given the wide diversity of logs, calculating volumes requires great rigour. Each log is different and so particular attention must be paid to measuring and calculating.

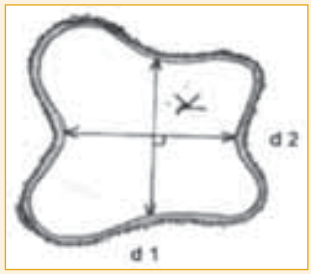
It should always be remembered that the value of a log depends on its volume and quality, but also that the volume calculations must correspond to the actual part that can be used.

Value of the log = Volume of the log x Price/m^3
Price/m^3 depends on the quality

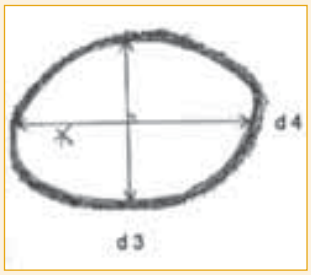
It is important to get as close as possible to the actual useful volume of the log. In terms of measuring the length, the margin for error is very little and does not raise any particular problems in practice. This is unfortunately not the case for measuring the diameter. This needs greater care.

The reference points chosen at each end for measuring the four diameters must therefore take account of the general aspect of the log and not include certain faults such as root swellings (buttresses), bumps or ovality. A failure to take these faults into consideration can substantially reduce the accuracy of the measurement and hence the volume of the log.

Example:
The wood that forms the buttress is not usable but represents a high percentage of that end of the tree. The diameters therefore need to be determined as objectively as possible so that they are as close as possible to the actual diameter of the log.



Buttress



Ovality

ANNEX n°1: calculating log and wood volumes

Estimating volumes on the basis of stumps (cases of off-limits felling)

This can be used to roughly evaluate the volume of wood illegally logged on the basis of the stumps discovered on the ground alone.

The formula to determine volume: V = AEV x Ns

Ns = **Number of stumps**
AEV = **Average Exploitable Volume**
(Given by species and by sector, according to Order No. 2694 MEFE/CAB establishing the average exploitable volumes for lumber tree species.)

For example:

N = 26
Species: Okoumé *(Aucoumea klaineana)*
AEV= 6 m^3 for Okoumé (for the Centre and South forestry sectors)

V = 6 x 26 = 156 m^3

Measuring and calculating the volume of sawn timber

Application of the complete formula

The volume of sawn timber is obtained by applying the formula:
V = L x w x t x n

L - **Length** of piece, in metres
w - **width** of piece, in metres
t - **thickness** of piece, in metres
n - **number** of pieces

For example:

L = 2.50m / w = 22cm / t = 34 mm / n = 20

The formula gives:
V = 2.50 x 0.22 x 0.034 x 20 = 0.374m^3

Quick estimate

In general, sawn pieces are all of the same length so when you want to make a quick estimate of a large number of batches, you can calculate the volume of one piece and then multiply it by the number of pieces in each batch and then by the number of batches.

Estimating the value of illegal wood

To determine the *market value*, you multiply the volume obtained by the FOB value of the species in question.

The formula: **VAL = V x FOB**

FOB value = market value of wood[8]
(defined in the Congo by means of Order No. 2739 MEFE/MEFB establishing FOB values)

For example:
Illegal felling. Calculation on the basis of unmarked stumps found outside the cutting area

Ns = 26 Okoumé stumps
FOB value = 110 160 FCFA for Okoumé

Method 1:
Calculation only on the basis of the stumps found
We use the AEV (average exploitable volume established by geographic sector)
Valid but approximate method

With AEV = 6 m^3

VAL = Ns x AEV x FOB = (6x26) x 110 160 FCFA = 17 184 960 FCFA

Method 2:
Calculation by combining the information on stumps with information taken from the company's field documents (if available).

The company's field documents as a whole can help to calculate the average volume for the species in question. This means taking the average of all volumes of Okoumé trees felled in the area and recorded in the field documents. *This method is more accurate.*

In the field documents, we have Nt = 26 trunks
The total volume of 26 trunks is: V = 140,406 m^3
Being an average volume per trunk of: AVt = 5,400 m^3

VAL = Nt x AVt x FOB = 26 x 5,400 x 110 160 FCFA= 15 466 464 FCFA

8 A commodity is sold or bought *FOB* when it is bought excluding the transport costs and other related costs and taxes and without *insurance* for this commodity. Consequently, when you buy a commodity at an "FOB" price, you then have to pay for its transportation and taxes, along with the costs of its insurance. The "FOB" cost is therefore always less than the *CIF*" (Cost, Insurance and Freight) cost.

ANNEX 2: Use and usefulness of GPS

This section focuses on the different ways in which the IM can use GPS (checking the position of actual boundaries in relation to those authorised, checking cases of off-limits felling, navigating to a location, recording points and itineraries with a view to finding the location of illegal activity and creating thematic maps).

There are numerous technical manuals on how to use GPS available at:

https://support.garmin.com/support/manuals/searchManuals.faces?refresh=true

Use of GPS by IM-FLEG

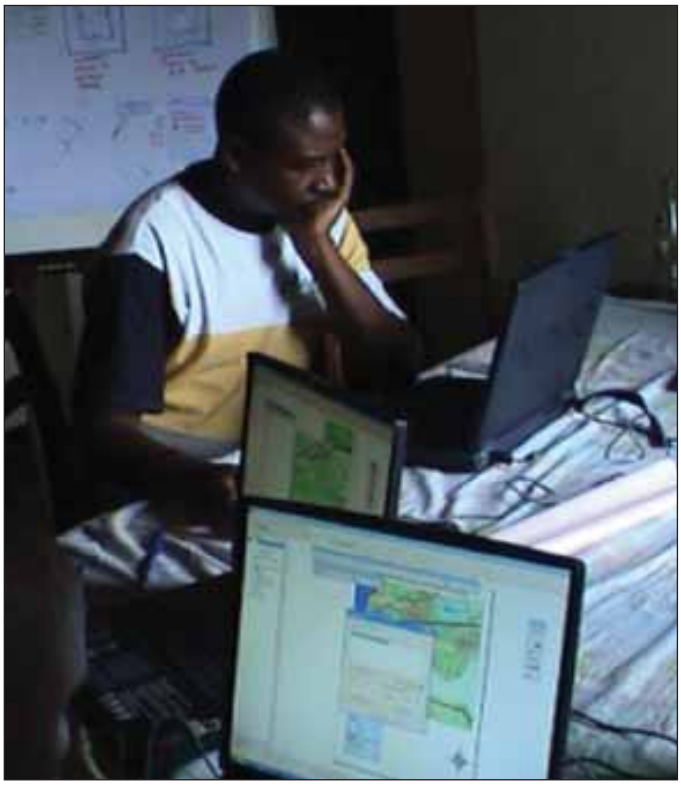
NB: General navigation is via three main pages: Map, Compass and Trip Calculator

Recording your itinerary
Recording a route during the mission will enable you to piece together your journey and produce a map with the help of a GIS.

Plot the location of major events observed on the ground accurately (illegalities or other facts of interest)
- The stumps, butts and unmarked logs, abandoned wood, log storage sites, access road intersections, by using the "Mark/Save a Waypoint" function.
- These GPS points, once transferred onto a PC, can be used to create a map using GIS.

Finding a location
The "Go to" function can be used in various situations. It is useful for finding a specific location for which you already have the geographic coordinates, in the following cases:
- Once you have obtained an up-to-date exploitation map for the area, you may want to go to a given zone (plot being logged, access road or intersection);
- You have received accurate information on the location of a case of illegal felling (from a third party, or a previous IM team).

To do this:
- In the office, input and backup the geographic coordinates for the points in the GPS;
- In the field, first of all find your point using the "Found" function;
- When you have found your point, press ENTER to access the information page;



Transferring GPS coordinates to a map with the help of GIS software

- Activate the "Go to" button on the information page for this point, the GPS will then create a direct path from your current position to that one;
- You will see yourself getting gradually closer on the map page.

You should remember that the GPS is accurate to 10 or 15 metres and so, when you are within this range, the device will indicate that you have reached your destination.

This function is also very useful for finding your way back when you stray from a marked path in the forest.

Checking the position of forest concession or annual cutting area boundaries
It may be that the actual boundaries of an annual cutting area (boundary roads) may not conform to the description given in the annual cutting authorisation. This means that the company is felling outside the authorised boundaries, perhaps even outside of their concession (Figure 2). However, this can be very difficult to detect on the ground, particularly without GPS, as you will have the impression, by using the access roads only, that logging is being conducted within the official limits of the cutting area when it is in fact the roads that have not been correctly laid out; this can be checked using GPS.

ANNEX 2: Use and usefulness of GPS

To illustrate this situation, take the case of an IM mission to the Congo.
It had been discovered that the boundaries of the company's annual cutting area as given in the annual cutting authorisation differed at certain points from those noted in the field.

The IM came to this conclusion by transferring the GPS points noted in the field onto a map giving the boundaries of the annual cutting area as anticipated in the authorisation. This map was produced by the IM, with the aid of a GIS, by simply entering the geographic coordinates given in the authorisation.

Process to be followed:

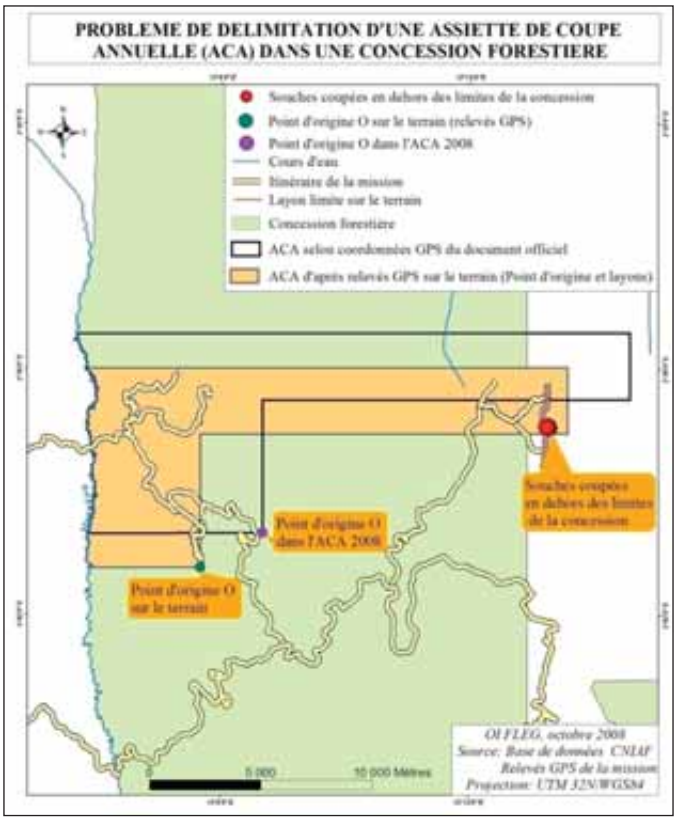
In the office
- Obtain the annual cutting authorisation, which gives the geographic coordinates for the cutting area boundaries (with, if possible, a digital or paper map of the cutting area);
- Check in advance, using the geographic coordinates, whether the map boundaries obtained correspond to the boundaries given in the authorisation or not;
- Enter the geographic coordinates for the points given in the authorisation or associated map into the GPS (longitude and latitude). To enter geographic coordinates into a GPS, use the **"Edit a Waypoint"** function:
  - Access the Routes page from the Main Menu. The pages gives you the New button, the Active button and a list of saved routes;
  - With the New button highlighted, press ENTER to add waypoints to the Route;
  - With the option Choose New Point active, press ENTER to choose a waypoint from the list of saved waypoints and display the information page for the chosen waypoint. Highlight the Use screen button and press ENTER to place it in the list of route waypoints;
  - Repeat stages 2 and 3 to add more waypoints;

On the ground
- Obtain a copy of the exploitation map from the logging operator;
- Go to the place corresponding to the theoretical boundaries of the authorisation (previously entered into the GPS in the office) by using the **"Go To"** function;
- If these theoretical boundaries do not correspond on the ground to the cutting area boundaries, go to the cutting area boundaries (access roads) and take the corresponding GPS points.

On return to the office
- Compare the different data by superimposing it on a paper map or, better still, with the help of a GIS.

Example of an analysis using maps

Figure 2 : Map created by the IM with GPS data gathered during a mission to the Republic of Congo in 2008.



The IM's work here consisted of comparing the position of this concession's annual cutting area's boundaries with the official description of the GPS points given in the official annual cutting authorisation. This was done by transferring the two series of GPS points onto one map that also included the official boundaries of the forest concession. The IM then checked where logging had been taking place. This cross-verification exercise leads to a number of observations:

- The annual cutting area in both cases exceeds the boundaries of the concession and encroaches upon the area of another concession; this is the result of a bad georeferencing of the annual cutting area by the Forest Administration;
- Felling is taking place outside of the concession but within one of the annual cutting areas, which may mean:
  - That either the duplicate cutting area is a fraudulent attempt by the company to log in a richer area under the guise of an error;
  - Or that the company has actually made an error.

Investigations need to be conducted. In all cases, the IM may recommend that compensation be paid to the neighbouring

concession holder (or even an impact study if there has been significant felling that risks affecting this concession's management plan). The IM may also recommend a review of the system for allocating annual cutting areas so that the Ministry provides maps of these areas, also including the boundaries of the concession in question rather than leaving it up to the companies to work this out merely on the basis of digital coordinates; such errors will thus be easily identified.

Checking cases of felling outside the boundaries of forest concessions and annual cutting areas

To check for off-limits felling you need to check the position of the boundaries.

Process to be followed: ***Inputting points into the GPS***

- Obtain the annual cutting authorisation, which gives the geographic coordinates of the cutting area boundaries (with, if possible, a digital or paper map of the cutting area);
- Check in advance, using the geographic coordinates, whether the map boundaries obtained correspond to the boundaries given in the authorisation or not;
  - Enter the geographic coordinates for the points given in the authorisation or associated map into the GPS (longitude and latitude). To enter geographic coordinates into a GPS, use the **"Edit a Waypoint"** function: access the Routes page from the Main Menu. The pages gives you the New button, the Active button and a list of saved routes;
  - With the New button highlighted, press ENTER to add waypoints to the Route;
  - With the option Choose New Point active, press ENTER to choose a waypoint from the list of saved waypoints and display the information page for the chosen waypoint. Highlight the Use screen button and press ENTER to place it in the list of route waypoints;
  - Repeat stages 2 and 3 to add more waypoints.
- Entering the geographic coordinates (longitude and latitude) for the cutting area will enable you to create a "plot" that represents the annual cutting area that you will then visit.

Monitoring on the ground

- At the logging site, on the basis of the exploitation map, choose several paths along the edges of the cutting area boundaries that you will travel by car and on foot.
- As you progress along these paths, try to follow the other skid trails outside the area boundaries to see if they are leading away from the plot or not.
  - As the "plot" is active, highlight the Navigate button and press ENTER to begin navigating;
  - The "plot" remains visible in the GPS via the map page where you can see movements outside or inside the plot (annual cutting area) via a direction arrow;
  - When the arrow crosses the limits of the plot, this means that you are now outside the boundaries, any felling in this area is off-limits.
- When you see a path crossing the boundaries, follow it, and try to note stumps, logs and butts, taking GPS points via the "Mark waypoints" function.

On return to the office

Compare the different data by superimposing it on a paper map or, better still, with the help of a GIS, which will help you to highlight the cases of off-limits felling.

Note also that:

If you have not obtained the cutting area boundaries and an exploitation map in advance, you can ask the company guide to lead you to strategic places such as, for example, the point of origin of the cutting area and where access roads intersect, where you should take GPS points. You can then compare this data with the cutting area boundaries that you will *subsequently* obtain on your return to the office.

Analysing a company's exploitation map on the ground

ANNEX n°3: Checklist for preparing missions

TO DO

AT LEAST ONE WEEK PRIOR TO THE MISSION	
❑	Finalise preparations with civil society partners, local authorities and administrative departments
❑	Check the availability and good working condition of the equipment
❑	Gather together all maps and documents relating to the forest permits you are going to visit
24 HOURS BEFORE DEPARTURE	
❑	Confirm the preparations and arrangements made with central and/or local partners
❑	Check equipment (recharge batteries, check memory cards, fill cans)
❑	Pack all the equipment (with waterproof plastic bags to keep paper and equipment dry)
❑	Leave a copy of your itinerary and mission contact details with the office and send a copy by email to your organisation's HQ.
DURING THE MISSION, ON THE GROUND	
NB: Your safety is paramount!	
DURING THE DAY:	
❑	Note the information in a notebook as you go along (monitoring data, no. and details of photos and GPS points)
IN THE EVENING:	
❑	Recharge the batteries of all equipment
❑	Upload and name the photos and GPS points
❑	Begin transfer of written monitoring data
❑	Carry out a team debriefing on the day's work
❑	Plan the next day

DOCUMENTS TO BE CHECKED

DOCUMENTS	
OFFICIAL DOCUMENTS:	
❑	IM's Terms of Reference
❑	Permanent Mission Order signed by Minister for Forests
❑	Staff Mission Order signed by Team Leader
❑	Identity Card
MAPS:	
❑	Roads
❑	Logging permits
❑	Logging zones
DOCUMENTS FROM THE MINISTRY OF FORESTS (if available centrally):	
❑	Permits (boundaries and conditions)
❑	Cutting authorisations
❑	Previous monitoring mission reports
❑	Other: specify
OTHER USEFUL DOCUMENTS :	
❑	Monitoring guides
❑	Project presentation documents
CONTACTS:	
❑	People you are going to meet on the ground
❑	People to contact in case of emergency

MATERIAL TO BE CHECKED

EQUIPMENT

- ❑ GPS device and aerial (+ batteries and charger)
- ❑ Camera (+ memory card and cable to upload + batteries and chargers)
- ❑ Video camera (+ memory card and cable to upload + batteries and chargers)
- ❑ Laptop with GIS software + transferred vector data for the permit (+ charger)
- ❑ Scanner for documents from departmental forest law enforcement authorities and logging companies
- ❑ Mobile and/or satellite phone (+ charger and credit)
- ❑ Ruler, pens, notebooks, calculators, decametre and metre measuring tapes

FOR THE CARS

- ❑ Sand ladders and spades
- ❑ Tarpaulin and straps
- ❑ Car jack
- ❑ Puncture repair kit; axes and machetes
- ❑ Cans of water and diesel oil
- ❑ Siphoning tube

FOR WALKING AND FOR THE NIGHTS

- ❑ Torches
- ❑ Sleeping bag and mattress, hammock or tent
- ❑ Mosquito nets
- ❑ First aid kit (aspirin, water purification, wound disinfectant, plasters, Aspivenin sting kit, anti-malarials, Flagyl, anti-diarrhoeals, etc.)
- ❑ Waterproof coat and boots
- ❑ Food and water

OTHER ASPECTS TO BE CHECKED

OTHER LOGISTICS TO BE CONSIDERED

- ❑ State of the roads (in order to produce a realistic itinerary)
- ❑ Presence of phone signal or not
- ❑ Security aspects in the field
- ❑ Safety procedures
- ❑ Validity of vehicle insurance

ANNEX n°4: Content of a mission report

What is a mission report?

Le rapport de mission est un rapport technique, c'est-à-dire un texte A mission report is a technical report, i.e., an informative, consistent and rational text that aims to answer certain questions, clarify certain situations or specify certain factual events. The report must be objective and concise.

The IM's reports generally also contain evaluations and recommendations.

A mission report:

- ❏ Enables events to be explained and clarified;
- ❏ Is clear, concise and objective;
- ❏ Contains evaluations, in the form of conclusions and recommendations, provided there is supporting evidence.

How to produce factual and objective reports

Ensuring that a report is objective means:

- ❏ Always working on the basis of the given monitoring criteria (refer to the Principles/Criteria/Indicators grid);
- ❏ Avoiding assumptions and hypotheses that have not been confirmed by clear observation;
- ❏ Always referring to the basic documentation, in particular the legal provisions (Forest Code and other legislation) to enable a factual analysis;
- ❏ Using a constant format (see below).

Report structure and details to be included

Identifier (on one page)

- ❏ A unique reference number
- ❏ Date and type of mission (e.g. joint, independent)
- ❏ Information on the forest concessions visited: place (department), name or number of the concession (Forest Management Unit/Forest Logging Unit), name of operator/ company
- ❏ Name of IM team members, government's forest law enforcement officials, and any other official (local) representative involved in the mission

Executive summary (summary of mission results)

The summary should be no more than one page in length, written in clear and concise language and should avoid any subjective statements. It should include:

- ❏ Identification data: kind of mission (if joint with officials: from what department); names of permits and logging companies visited, time spent at each permit;
- ❏ Background to the mission (e.g.: "This mission took place in the context of the implementation of the monthly programme of joint missions conducted by IM and the Congo's forest law enforcement agencies");
- ❏ List of the main infractions emerging from this investigation, for each permit visited (e.g. failure to keep field documents);
- ❏ List of observations relating to monitoring of forest law enforcement for each permit visited (e.g. did the Ministry of Forests staff produce an official statement of offence when they detected an infraction? If so, name the infraction, e.g. "fraud on all documents issued by the forests administration");
- ❏ List of main recommendations made by the IM.

List of Abbreviations used and objectives

- ❏ Reminder of the abbreviations used in the report;
- ❏ General objectives, who authorised or planned the mission (with Ministry of Forests Mission Order No., if joint), dates of the mission, department and districts where the mission took place;
- ❏ Specific objectives.

Background to the mission

- ❏ This depends whether it is a joint or independent mission. If it is a joint mission, include the terms of the Ministry of Forests' mission programme. If not, those of the IM.
- ❏ Mission timetable and itinerary. If possible, add a map showing the itinerary.
- ❏ Activities implemented:
  - Where and how was enforcement conducted (name and number of the concession, name of logging company in question, kind of check)
  - Aspects on which the mission focused its work, in relation to the objectives set
- ❏ People met and information gathered.
- ❏ Difficulties encountered and measures taken in this regard. For example: vehicle breakdowns and bad road condition, road blockages (etc.) which resulted in lost time and prevented the mission from satisfactorily conducting its work.

Monitoring results (may differ according to the nature of the mission)

- ❏ Accurately describe the information gathered during the inspections and the results of the investigation with regard to legislation and procedures.
- ❏ Also include an analysis of illegal activities observed, in particular discussions on the legal implications in order to be able to draw clear and objective conclusions with regard to the events observed on the ground and their implications for governance, and expected actions.

Give a succinct overview of the permit visited

As mentioned in the list of criteria, specify:

- ❏ The number of the concession in question and the company to which it is allocated.
- ❏ The order by which the concession was granted, its date of signing and who signed it.
- ❏ How many years the concession is valid from and from what date, for what volume of wood and over what area of land.
- ❏ Details of prior visits conducted by the IM along with the recommendations made, infractions and any other information that may facilitate an analysis of the current situation.

Compare the findings on the ground with the legal provisions

- ❏ List all infractions observed.
- ❏ Always mention the article of the law that has been broken, along with the stated provisions.
- ❏ Avoid any subjective statements; everything you write must be based on clear data. Phrase your words in the conditional if necessary (hypotheses, assumptions, deductions).

Cartographic illustration of infractions

GPS data processing in ArcView enables you to highlight, on a previously obtained base map (showing the boundaries of concessions, annual cutting areas and protected areas in particular), the location of noted infractions.

Photographic illustration of infractions

Illustrations (GPS point photos) can serve as evidence of the observations made.
GPS data can relate to the location of:

- Tracks / skid trails
- Log yards
- Abandoned logs
- Marked/unmarked logs and/or stumps
- Flooded areas or destroyed crops due to badly-built bridges
- Infrastructure built and equipment provided for the beneficiaries

These GPS elements must be linked to photos/videos each time. The photo must show the GPS screen in order to locate the image and a person for scale. Each photo must have a title (e.g. “Photo 1”, followed by a clear and concise explanation of the photo, highlighting the infraction detected).

Conclusions and recommendations

- ❏ Main conclusions. When there are several conclusions, they should be numbered.
- ❏ Recommendations and follow-up measures agreed with the government departments responsible for enforcement, if they were present. It is essential to use a constant format when listing these in order to facilitate a synthesis of the work and to be able to draw global conclusions in the future (for a deeper analysis and to establish general trends in the forestry sector).
- ❏ Detailed list of necessary actions: what are the IM’s recommendations with regard to the infractions detected during this mission?

OVER TO YOU!

This guide has given you a practical overview of how IM-FLEG works and some areas on which your investigations could focus. It has introduced an approach that is characterised by three principles:

- Objectivity
- A spirit of investigation
- Rigour

It is also important to remember that, rather than simply denouncing bad practice, IM-FLEG aims to seek out the causes of illegal activity and offers solutions with regard to law enforcement, in order to prevent it from recurring. Dialogue and negotiations with government, donors and civil society should take precedence over discussions with the press.

Once these principles have been followed, each IM-FLEG project can include innovations such as greater civil society involvement, the development of a useful state forest law enforcement tool, training workshops on specific themes, etc.

Good Luck.

LIST OF ABBREVIATIONS

ACA	Annual Cutting Authorisation (decision of the administrative authority enabling a cutting area to be logged for a calendar year within the context of a wider forest concession)
VPA	Voluntary Partnership Agreement
DEC	Delegation of the European Commission
DFID	UK Department for International Development
FLEGT	Forest Law Enforcement, Governance and Trade
FM	Forests Monitor
CN-UICN	Netherlands Committee of the International Union for Nature Conservation
IM/IM-FLEG	Independent Monitoring of Forest Law Enforcement and Governance (REM)
NGO	Non-Governmental Organisation
EM	External Monitoring (no agreement with the government)
ILP	Industrial Logging Permit (Forest Concession or industrial-size logging permit obtained following a call for tenders and the holding of a forestry committee, and valid for a period of at least 15 years)
SLP	Small Logging Permit (a small permit, allocated without a call for tenders to a small-scale operator, valid for a limited duration, usually one year)
PRCTG	Capacity Building, Transparency and Governance project (World Bank)
PV	*Procès Verbal* (Official Statement/Official Notification of Offence)
REM	Resource Extraction Monitoring
EU	European Union

LIST OF REM REPORTS ON IM-FLEG AVAILABLE ON WWW.REM.ORG.UK

Cameroon

Between March 2005 to December 2009, 20 quarterly and annual thematic reports were published by REM on governance and forest illegalities. These reports provide specific information on progress made on law enforcement, outstanding problems and recommendations.

86 field investigation reports on 1 to 30 forest titles each, following joint BNC/IM-FLEG missions, were published by REM on forest illegalities.

5 IM-FLEG independent investigation reports were published by REM on forest illegalities

Tanzania

Two REM scoping mission reports were published in 2006 and 2009, exploring the potential set-up of a long term IM-FLEG project in Tanzania.

A REM pilot investigation report was also published following a mission on forest illegalities.

Republic of Congo (Brazzaville)

Following the publication of 2 REM scoping mission reports, a capacity building and IM-FLEG project is implemented by Forests Monitor (training component, www.forestsmonitor.org) and REM (IM-FLEG component) since December 2006.

3 quarterly and annual thematic reports were published by REM on governance and forest illegalities.

19 field investigation reports on 1 to 6 forest titles each were published by REM on forest illegalities and 4 are currently being reviewed.

2 Congo Basin workshops reports (IM-FLEG/Civil society), and 3 national workshop reports (IM-FLEG/Civil society in Gabon, RDC and RCA) were published by Forest Monitor and REM.

Democratic Republic of Congo (Kinshasa)

Recommendations were published by REM for the conversion of old licences, in October 2004

All reports are available on:
www.rem.org.uk
www.observation-cameroun.info
www.observation-congo.info

Acknowledgements:

This manual has been produced with funding from the European Commission's Environment and Tropical Forests budget line, external actions of the European Community grant Contract No. ENV/2006/131823, beneficiary: Forests Monitor.

REM takes sole responsibility for the content of this publication; it should not be construed as reflecting the opinion of the European Union or of the other donors: DFID, NC-IUCN and PRCTG (World Bank's Capacity Building, Transparency and Governance project).

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Printed on 100% recycled paper

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Cover image: GPS training of forest community members in Cameroon by Forests Monitor