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# Illegal Logging and Related Trade

## Indicators of the Global Response

Sam Lawson and Larry MacFaul

July 2010



CHATHAM HOUSE

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# Acronyms and Abbreviations

ACA	Anti-Corruption Agency (later the Malaysian Anti-Corruption Commission or MACC)
BPK	Badan Pemeriksa Keuangan – National Audit Board (Indonesia)
BRIK	Badan Revitalisasi Industri Kehutanan – Forest Industry Revitalization Body (Indonesia)
BV	Bureau Veritas
CAF	Chinese Academy of Forestry
CAR	Central African Republic
CITES	Convention on International Trade in Endangered Species
CoC	Chain-of-custody
CPET	Central Point of Expertise on Timber (the advice service on the UK government timber procurement policy)
CPI	Corruption Perceptions Index (an annual study by Transparency International)
CTDA	China Timber Distribution Association
DEFRA	Department for Environment, Food and Rural Affairs (UK)
DFID	Department for International Development (UK)
DOF	Document of Forest Origin (Brazil)
EIA	Environmental Investigation Agency (an NGO)
ETS	Emissions Trading System
FAO	Food and Agriculture Organization of the United Nations
FIM	Forest Information Management (Ghana)
FLEGT	Forest Law Enforcement, Governance and Trade (an EU programme)
FMU	Forest Management Unit
FPL	Forest Products Laboratory (part of USDA)
FSC	Forest Stewardship Council
FTAs	Free Trade Agreements
G8	Group of large developed-country economies (US, Canada, UK, France, Germany, Italy, Japan and Russia).
GACC	General Administration of Customs of China
GDP	Gross Domestic Product
GFTN	Global Forest and Trade Network (run by WWF)
GIS	Geographic Information System
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis – Brazilian Institute of Environment and Natural Resources
IBGE	Instituto Brasileiro de Geografia e Estatística – Brazilian Institute of Geography and Statistics
IFM	Independent Forest Monitoring (this process involves an international, independent third party which monitors official processes relating to forest management with the agreement of state authorities)
IIED	International Institute for Environment and Development
IMAZON	Instituto do Homem e Meio Ambiente da Amazônia – Amazon Institute of People and the Environment (an NGO)

IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
JKKK	Village Development and Security Committees (Malaysia)
LDP	Liberal Democratic Party (Japan)
LEI	Lembaga Ecolabel Indonesia (the country's national certification system)
MACC	Malaysian Anti-Corruption Commission (see also ACA)
MINFOF	Ministère des Forêts et de la Faune – Ministry of Forestry And Wildlife (Cameroon)
MoU	Memorandum of Understanding
MTCS	Malaysian Timber Certification Scheme
NGO	Non-Governmental Organization
NWGTR	Groupe National de Travail sur les Forêts Tropicales Humides – National Working Group for Tropical Rainforests (France)
PEFC	Programme for the Endorsement of Forest Certification
PIAIL	President's Initiative Against Illegal Logging (USA)
PSCLF	Parliamentary Select Committee on Lands and Forestry (Ghana)
PSRF	Programme de Sécurisation des Recettes Forestière – Forestry Revenue Programme (Cameroon)
REDD	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
REM	Resource Extraction Monitoring (a not-for-profit organization)
RMSC	Resource Management Support Centre (Ghana)
RWE	Roundwood Equivalent (a measure of volume)
SFA	State Forest Administration (China)
SICAFI	Registration, Collection and Inspection System (Brazil)
SIGICOF	Système Informatique de Gestion des Infractions et du Contentieux Forestiers – Computerized Forest Infractions and Litigation Management System (Cameroon)
SIGIF	Système Informatique de Gestion d'Informations Forestières
SPP	Sustainable Public Procurement (Vietnam)
TFT	The Forest Trust (UK)
TPA	Trade Promotion Agreement
TTAP	Timber Trade Action Plan
TTF	Timber Trade Federation
UCBD	Union pour le Commerce de Bois Durs dans l'UE – European Hardwood Federation
USDA	United States Department of Agriculture
VLC	Verification of legal compliance
VLO	Verification of legal origin
VLTP	Validation of Legal Timber Programme
VPA	Voluntary partnership agreement (a trade agreement between the EU and a timber-producing country under the EU FLEGT Action Plan)
WWF	World Wide Fund for Nature

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For more information please visit the web pages of the Energy, Environment and Development Programme at Chatham House:

[www.chathamhouse.org.uk/eedp](http://www.chathamhouse.org.uk/eedp) and [www.illegal-logging.info](http://www.illegal-logging.info)

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# About the Authors

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# Executive Summary

## Chapter 1: Introduction and methodology

Illegal logging and associated trade in illegally sourced wood products are important causes of deforestation and forest degradation in many developing countries. Forest destruction in turn **contributes up to 20 per cent of global carbon dioxide emissions**. Illegal logging also robs cash-strapped governments of vital revenues, has a devastating impact on the livelihoods of forest-dependent people, and fosters corruption and conflict.

Over the last decade governments, the private sector and civil society have recognized these impacts and have made increasing efforts to tackle the problem. **This study attempts to measure the scale and the effectiveness of the response to illegal logging**. It examines the response in countries where illegal logging occurs and also in those countries which import, process and consume illegally sourced wood.

In addition to measuring the extent to which illegal logging and associated trade has changed over time, the study examines how attention to the problem has changed and how governments and the private sector have responded. **Various indicators and means of verification have been designed, tested and used by Chatham House to measure the response** in five timber-producing countries, five consuming countries, and two countries whose timber trade is largely based on processing imported raw material for export.

The study finds that **while illegal logging remains a major problem, the impact of the response has been considerable**. Illegal logging is estimated to have fallen during the last decade by 50 per cent in Cameroon, by between 50 and 75 per cent in the Brazilian Amazon, and by 75 per cent in Indonesia, while imports of illegally sourced wood to the seven consumer and processing countries studied are down 30 per cent from their peak.

## Chapter 2: Media attention

**The amount of international media attention paid to illegal logging is now falling, partly owing to a shift in attention towards the role of forests in climate change**. While attention to illegal logging globally and in consumer countries increased dramatically during the early part of the decade, it peaked around 2007–08 and is now rapidly declining. A key proximate cause has been a reduction in NGO attention paid to the problem. Ultimate causes of the declining media coverage include reductions in the scale of the problem.

## Chapter 3: Government policy development and implementation

### *Producer countries*

A review of relevant policies, analysis of relevant data and the survey of relevant experts all indicate that **the response of governments to illegal logging in the five producer countries is improving**.

### *Policy assessment*

Although there have been some improvements in recent years, **relevant government laws, regulations and polices in producer countries remain poor in most areas**. Brazil scored the best of the five countries studied, thanks to a major overhaul of laws, policies and regulations during the last five years.

Incoherence and ambiguity in legislation were found to be a feature of all countries studied. The situation appears to be somewhat less acute in Malaysia, and worst in Indonesia. The situation is improving in most countries, however, often as a result of work being carried out in the context of voluntary partnership agreements (VPAs) with the EU. The performance of each country's forestry agency is subject to some form of monitoring by government, but this is not done well. Only Cameroon has in place a national-level independent monitor of forest law enforcement and governance.

Thus far, **the only direct cooperative trade measures involving the countries studied are the licensing schemes planned under the EU's FLEGT VPAs**, which have been agreed or are being negotiated with Cameroon, Ghana, Indonesia and Malaysia. None of the producer countries has a formal system for exchanging enforcement information with destination countries. Although all countries have permit approval systems for primary wood-processing facilities, none are using these effectively to ensure that demand matches legal supply. The issue of tenure and use rights has proved more intractable than many others, with relatively few policy improvements in recent years seen in the focus countries. There are also fewer improvements under way.

**Timber-tracking regulations were generally weak in most of the countries studied.** Brazil has recently introduced a very impressive and sophisticated system, although it still has teething problems. Major improvements are currently being developed in Indonesia and Ghana.

Brazil scores well on transparency, with relevant requirements included in law and sound design and implementation. Transparency in Indonesia and Malaysia is generally very poor. Brazil has also recently implemented robust systems for allocating and managing rights to harvest; Indonesia and Malaysia are again weak in this regard, relative to the other countries examined.

**There is significant scope for improvement in all focus producer countries with regard to policies and regulations designed to improve forest law enforcement.** While most countries already have reasonably proportionate and dissuasive maximum penalties in their laws, the application of these penalties is poor. **Enforcement has increased but there remains much scope for improvement, and follow-up – prosecuting cases and collecting fines – remains poor.** In Brazil, for example, the total value of fines increased eightfold between 2003 and 2007 – but only 2.5 per cent have been successfully collected, and seizure volumes represent just 5 per cent of estimated illegal production.

The producer countries studied are generally poor at managing forest-related information, although most are developing improved systems. **Producer countries must improve information management if they are to be able to prevent, detect and suppress illegal logging effectively.** Despite the fact that audits of the forest administration are conducted in all countries, systems for monitoring revenues due and received and for investigating discrepancies either do not exist or are poor in most countries. The data necessary to assess revenue capture ratios reliably and to see how they may have changed over time are seldom available.

### *Expert perceptions*

Experts judged the government response to illegal logging to be relatively good in Malaysia and relatively poor in Cameroon, with Brazil, Ghana and Indonesia in between. **A majority of survey respondents in Brazil, Cameroon, Indonesia and Malaysia felt that the government response to the illegal logging problem had improved at least slightly during the last year.** A relatively poor response in combating corruption and promoting transparency was considered the most important impediment to an effective government response to illegal logging in all countries.

### *Processing countries*

There has been some limited progress in the government response to trade in illegally sourced timber in both China and Vietnam. Pressure from consuming-country governments has been a key factor, and NGO campaigning work has also played an important part. **The two governments still lag behind the consumer and producer countries studied in their response,** however, and the actions taken so far have had limited practical impact on volumes of imports of illegally sourced wood.

The governments of both countries have now studied both the problem and possible solutions to some extent. All relevant Chinese government agencies are now engaged, and China has also commissioned a study into the country's role as an importer of illegal timber. However, neither country has a national action plan to tackle illegal timber imports. **China and Vietnam also do not yet have legislation in place to prevent the import of illegally sourced timber, nor is either country currently planning to implement such legislation.**

Neither China nor Vietnam yet has any formal trade arrangements in place with major source countries designed to prevent imports of stolen timber, or systems in place for receiving enforcement alerts. On the few occasions when Indonesian officials have requested their counterparts in China and Vietnam to intercept shipments of illegal logs, the shipments were permitted to enter, despite apparent legal justification for action based on misdeclaration.

### ***Consumer countries***

All five consumer countries assessed have shown considerable improvement over the last few years in their governmental response to illegal logging and associated trade. Overall, the UK and the Netherlands receive the highest scores on the assessment of relevant policies, while Japan scores relatively poorly.

While relevant studies have been carried out for the other consumer countries, a detailed assessment of illegal wood imports for Japan is lacking and, if undertaken, could help to drive improvements in the response. All consumer countries studied have a process in place for coordinating action by the relevant government departments, but only France and the UK have detailed action plans in place.

**The US is currently the only consumer country with legislation in place to prevent imports of illegally sourced timber.** France, the Netherlands and the UK receive partial scores on new laws, based on bilateral arrangements under development between the EU and some producer countries and on new EU legislation currently under consideration. The response of Japan on legislation to prevent imports of illegal wood has been poor relative to that of the other consumer countries examined.

**The three EU countries have very strong international trade cooperation measures under development** with a number of producer countries within the context of FLEGT voluntary partnership agreements. Japan has no concrete measures in place.

**All the consumer countries assessed, with the exception of the US, have adopted national public procurement policies regarding timber and wood products** during the last seven years. These have been important drivers of the private-sector response to illegal logging in consumer, processing and producer countries. The timber procurement policies in the UK and the Netherlands have better design and implementation than the policies in France and Japan.

## Chapter 4: Progress by the private sector

### ***Expert perceptions***

At least 70 per cent of survey respondents in each producer country felt that larger concessionaires and companies supplying more sensitive markets had improved their response to illegal logging in the last year. Perceived improvements were less marked for smaller companies and those supplying less sensitive markets.

**Private-sector surveys in processing countries indicate that the response has been more marked in Vietnam than in China.** Very few respondents in China reported inquiries from buyers about legality, whereas in Vietnam such inquiries are common and growing. Chinese companies did not think legality of timber supplies was going to be very important in future in terms of their overall competitiveness. However, 95 per cent of respondents in the five producer countries believed that response to legality demands would be a factor in industry competitiveness.

### ***Sustainability certification and legality verification***

Independent certification of sustainability of timber production continues to grow in producer countries, but has been outstripped in the last three years by growth in legality verification. **The area**

**of sustainability-certified or legality-verified production forest doubled in Cameroon and trebled in Indonesia between 2006 and 2009.** Most of the recent growth in independent certification and verification, however, has been legality verification to a low ‘legal origin’ standard, which does not examine actual harvesting practices.

**The number of companies with FSC chain-of-custody certificates in the seven consumer and processing countries increased fourfold in the three years to 2009.** This has been in response both to government actions on illegal timber in consumer countries (especially procurement policies) and to campaigning on the issue by non-governmental organizations. The strongest growth has been in China and the US; relative to the size of their industries, the private-sector response in France and Japan has lagged behind the other consumer countries. It should be noted that chain-of-custody certificates demonstrate only that a company can trace and segregate timber certified as legal and sustainable and is not proof that its products themselves are certified; many Chinese companies holding such certification are not actually using any certified wood.

### *Timber price and trade pattern response*

A simple majority of **survey respondents in Brazil, Ghana and Indonesia felt timber prices had increased recently owing to reduced supplies resulting from increased enforcement.** Two-thirds of private-sector experts surveyed in Vietnam also thought prices had increased because of enforcement in source countries.

There is some evidence that exports of Brazilian tropical timber may be shifting to less sensitive markets, partly in response to increased action on illegal timber in more sensitive markets. The share of Ghana’s exports destined for sensitive markets has declined dramatically over the last ten years, from 80 per cent to less than 40 per cent. **The low sensitive market share of exports from Indonesia and Malaysia and the declining share in Ghana may reduce the potential impact of demand-side measures in more sensitive consumer countries** – making it more important that the response in Japan and China is improved. A majority of Chinese private-sector survey respondents believed that exports were shifting to less sensitive markets at least partly in response to demand-side action in more sensitive markets.

## Chapter 5: Levels of illegal logging and associated trade

### *Producer countries*

There is strong evidence from multiple indicators that **levels of illegal logging have declined significantly in Brazil, Cameroon and Indonesia in recent years.** Expert perceptions indicate that there may also have been some improvement in Ghana and Malaysia. A large majority of surveyed experts in Brazil and Indonesia, including a large majority of NGO respondents, believed that the situation had improved in the last five years.

Wood-balance analysis indicates that illegal logging has fallen by 54–75 per cent in the Brazilian Amazon over the last ten years. The greatest reductions have occurred in the last five years, and show a close correlation with a dramatic fall in deforestation rates. Overall illegal logging in Cameroon is estimated to have fallen by about half since the late 1990s, although this is due solely to a reduction in illegal logging for export markets, and small-scale illegal production for the domestic market may actually have increased. Illegal logging in Indonesia has fallen by 75 per cent since a peak in 2000, and analysis of trade data discrepancies indicates that log smuggling from Indonesia to China has been reduced by 92 per cent since 2004. Wood-balance analysis for Ghana and Malaysia was inconclusive on long-term trends for illegal logging.

**An increasing proportion of illegal timber is being consumed by domestic markets** in producer countries, and much of this is coming from small-scale artisanal logging. Wood-balance analysis suggests that such logging accounts for three-quarters of illegal timber production in Ghana, and nearly all illegal production in Cameroon. The perceptions surveys also suggest that smaller-scale illegal logging by unauthorized companies has declined less than that by larger concessionaires. The surveys suggest

that artisanal illegal logging, less easily detectable illegal harvesting practices by licensed companies within logging concessions, and logging-related corruption are among the most intransigent parts of the problem. Corruption may have actually worsened in some cases in response to increased enforcement.

Despite the considerable reductions seen in some cases, **illegal logging remains a major problem in all producer countries studied.** Wood-balance analysis and expert surveys suggest that illegal harvesting represents 35–72 per cent of logging in the Brazilian Amazon, 22–35 per cent in Cameroon, 59–65 per cent in Ghana, 40–61 per cent in Indonesia, and 14–25 per cent in Malaysia. Although there is less illegal logging in Malaysia than in the other four countries, both the survey and the wood-balance analysis suggest that it is worse than is commonly thought.

Assuming that illegal logging in countries which were not examined has remained unchanged, the indicators suggest that improvements in the focus countries have reduced global illegal timber production by 22 per cent since 2002. Worldwide, however, more than 100 million cubic metres of timber are still being cut illegally each year, leading to the degradation and possible eventual destruction of five million hectares of forest. **The illegal logs still being cut each year, laid end to end, would stretch ten times around the Earth.**

### *Consumer and processing countries*

Detailed modelling by Chatham House suggests that **imports of illegally sourced wood products by the seven consumer and processing countries have fallen 30 per cent** since reaching a peak in 2004. Estimated Japanese and French imports of illegally sourced wood products peaked earlier, and those by the US, UK and the Netherlands later. Import-source analysis estimates also indicate that consumption of illegally sourced wood products is falling on a per capita basis in all seven countries and imports of illegal wood are falling as a percentage of overall wood imports in all of the countries examined, with the exception of the US.

The recent economic slowdown has played a part in reducing flows of illegal wood, but the peak in estimated imports occurred well before that. The main influence on the estimates is the large reduction in illegal logging in Indonesia, although other aspects of the response elsewhere have also been a factor.

The analysis indicates that more than half of illegal wood-product imports are now of processed products, particularly furniture. Between 2000 and 2008, the proportion of illegal wood-product imports which arrived in consumer countries via processing countries increased from 15 per cent to more than 50 per cent. These trends present an increasing challenge for demand-side measures to tackle illegal wood consumption in consumer countries, since they make it more difficult to distinguish legal from illegal wood.

Annual **imports of illegally sourced wood products by the seven countries studied are still very large**, with estimated imports worth more than US\$6 billion in 2008. Of the five consumer countries, the US imports the most illegally sourced wood while Japan has the highest per capita illegal wood consumption and highest percentage of overall imports estimated to be illegally sourced. China now imports more than twice as much illegally sourced timber from affected producer countries as the five consumer countries combined.

## Chapter 6: Conclusions and recommendations

### *Scale and impacts of reduced illegal logging*

The data suggest that **illegal logging worldwide has reduced by almost a quarter over the last decade**, based only on estimated reductions in Brazil, Cameroon and Indonesia. Around 17 million hectares of forest may have been protected from degradation and possible eventual destruction as a result – an area larger than England and Wales combined. This in turn could have **contributed to the avoidance of between 1.2 and 14.6 billion tonnes of carbon dioxide emissions** – more than half the amount which is emitted through human action worldwide each year. Alternatively, if all the timber involved had been harvested legally instead, this could have earned up to US\$6.5 billion of government revenues.

### ***Causes and cost of reduced illegal logging***

Immediate drivers of reductions in illegal logging include increased enforcement in Brazil and Indonesia, and the introduction of independent monitoring of forest law enforcement and governance in Cameroon. Some ultimate drivers are not directly related to the efforts to tackle illegal logging. These include improvements in broader governance: in Indonesia, there is a close correlation between reductions in illegal logging and reductions in general corruption.

**Actions to tackle illegal logging by governments and the private sector in consumer countries have played an important role** in Cameroon, and were also a driver in Indonesia. These actions, and those in the producer countries themselves, have in turn often been driven by awareness-raising by non-governmental organizations. Improvements in laws and policies in Brazil have been important, though in Indonesia and Cameroon reductions in illegal logging seem to have occurred despite relatively weak regulations.

If all the timber estimated to have been prevented from being illegally logged were legally logged instead, for every dollar invested in reducing illegal logging, additional revenue of between US\$2 and US\$6 might have been brought into the exchequers of the countries concerned. On the other hand, if legal logging did not increase in step with reductions in illegal harvesting, the cost of **carbon emissions reductions achieved might have been between US\$0.07 and US\$2.48 per tonne**. This compares with recent prices in the EU Emissions Trading System of around US\$18 per tonne.

### ***Tackling illegal logging: conclusions and lessons for the future***

If illegal logging were to be slowly brought to a complete end within the next ten years, between 2 and 22 billion tonnes of CO<sub>2</sub> emissions might be avoided. There are risks that the recent shift in attention to forests' role in mitigating climate change may reduce the focus on tackling illegal logging in favour of the development of financing mechanisms to incentivize forest retention. **These results demonstrate the importance of maintaining and reinforcing the current response to illegal logging and poor forest governance.**

In producer countries, **greater effort is needed in those areas of the illegal logging problem that have seen least improvement.** This includes logging by smaller-scale concessionaires, domestic producer-country markets for illegal wood products, and failure to gazette forest concessions. As the more blatant forms of illegal logging are reduced, the more persistent and less easily detected types of illegality become much more important – such as overcutting by licence holders within licensed areas, or the illegal issuance of licences. Addressing these forms of illegality will require a more profound overhaul of government policy and regulation.

In consumer countries, there are limits to how much more can be achieved solely by procurement policies and voluntary private-sector action driven by NGOs. **If consumer countries are to reduce their role further it is crucial that well-designed import legislation is enacted** and properly implemented. Of the consumer countries studied, Japan is of greatest concern in this regard.

The majority of consumer-country imports of illegally sourced wood products now arrive via processing countries, presenting a major challenge to the implementation of new import controls. Initiatives to clean up the supply chains for products originating in China have hit serious problems, and it is crucial that these are overcome. **It is increasingly important that processing-country governments take additional and more significant action.**

In all these areas, **the EU's voluntary partnership agreements with producer countries could have a crucial broader role to play beyond preventing illegal wood reaching member states.** This study has shown that such agreements have already had a significant positive impact on producer-country policies and regulations. In terms of tackling continued consumption of illegal timber domestically and in less sensitive markets, it is vital that VPA legality assurance systems cover all harvesting, processing and exports, not just those destined for Europe.

***Conclusions regarding measuring illegal logging and the response***

In order to allow for easier monitoring of illegal logging and the response, **producer-country governments must collect more reliable data and make all relevant data public.** The existing indicators are poor at capturing some forms of illegal activity; a more complete and accurate picture of illegal logging might involve field inspections and analysis of satellite imagery for sample areas. For such independent analysis to be possible, transparency of information regarding licensed logging must be improved.

The twelve countries examined in this study represent around 20 per cent of illegal timber production and around 50 per cent of illegal wood trade. Ideally, the assessment should be expanded to cover additional countries and should be repeated at least every two years.



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# 1 Introduction and Methodology

## 1.1 Background

### 1.1.1 *Illegal logging and associated trade – the problem and the response*

Efforts to protect the world's forests from unsustainable and inequitable exploitation have been undermined in recent years by rampant illegal logging in many timber-producing countries. Large-scale illegal logging and its harmful effects have been documented in at least thirty countries, spanning every continent bar treeless Antarctica. By some estimates, in five of the top ten most forested countries on the planet, at the beginning of this century at least half of the trees cut were being felled illegally.<sup>1</sup> Just under half of the tropical logs, sawn timber and plywood traded worldwide in 2004 was estimated to have been illegally sourced.<sup>2</sup>

Illegal logging has a wide range of negative environmental, social and economic impacts. Immediate impacts include loss of biodiversity, erosion and subsequent water pollution, forest fires, flash flooding and landslides. Illegal logging also threatens the livelihoods of around one billion forest-dependent people. Illegal logging starves cash-strapped governments of billions of dollars in revenue, undermines the rule of law, fosters corruption, and creates and fuels armed conflict. Illegal logging is also thought to depress world timber prices by as much as 16 per cent, distorting global markets and undermining legal operations.<sup>3</sup> Studies have shown that, in primary tropical forests, selective illegal logging of large high-value trees is often the critical first step on the road towards eventual forest destruction.<sup>4</sup> Clearance and degradation of the world's forests contribute between 12 and 20 per cent of human-induced greenhouse gas emissions,<sup>5</sup> and illegal logging is among the most important drivers.

Illegal logging and the largely unregulated international trade in cheap, illegally sourced timber have thwarted efforts in the past two decades to implement sustainable production through legislation and to implement sustainable consumption through certification. A widespread failure to effectively enforce forest laws has meant that the progressive forest management regulations enacted in many producer countries in the late 1980s and early 1990s have failed to live up to their promise to provide for sustainable and socially equitable forest use. Meanwhile, efforts to harness consumer concern through sales of timber and wood products certified as sustainable have been stymied by competition from much cheaper products made from illegal wood.

The main catalyst for the increased attention to the problem of illegal logging and associated trade was the Action Programme on the subject agreed by the G8 nations in 1998. This was followed, in 2002, with a commitment at the World Summit on Sustainable Development to '*Take immediate action on domestic forest law enforcement and illegal international trade in forest products*'. Since 1998 this initial commitment

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1 Illegal logging estimates in Seneca Creek Associates and Wood Resources International, '*Illegal Logging and Global Wood Markets: The Competitive Impacts on the U.S. Wood Products Industry*' (American Forest & Paper Association, 2004): Russia 20–50%; Brazil 20–90%; Indonesia 70–80%; Peru 80–90%; figure for DRC (50%+) estimated based on available literature. Top ten most forested countries based on Food and Agriculture Organization, *State of the World's Forests 2005* (FAO, 2005).

2 Estimate based on export figures reported to ITTO, converted to round wood equivalent (RWE) and multiplied by estimated rates of illegal production in source countries collated in Seneca Creek/Wood Resources, '*Illegal Logging and Global Wood Markets*, and published elsewhere; S. Lawson, *Illegal Logging and Related Trade: Measuring the Global Response* (Chatham House, 2007), available at [http://www.illegal-logging.info/uploads/Measuring\\_the\\_response.pdf](http://www.illegal-logging.info/uploads/Measuring_the_response.pdf).

3 Seneca Creek/Wood Resources, '*Illegal Logging and Global Wood Markets*.

4 See for instance, G. Asner et al., 'Condition and Fate of Logged Forests in the Brazilian Amazon', *Proceedings of the National Academy of Science*, Vol. 103, No. 34, 22 August 2006.

5 S. Solomon et al. (eds), *Climate Change 2007 – The Physical Science Basis: Working Group I Contribution to the Fourth Assessment Report of the IPCC* (Cambridge University Press, 2007), pp. 499–587; G. R. van der Werf et al., 'CO<sub>2</sub> emissions from forest loss', *Nature Geoscience*, November 2009, Vol. 2, No. 11, pp. 737.

has spawned a proliferation of meetings, agreements, processes, studies and initiatives. Many tens of millions of dollars have been provided by multilateral institutions such as the World Bank, International Tropical Timber Organization (ITTO) and UN Food and Agriculture Organization (FAO), by Western governments including the UK, US, Japan, Canada, Norway, Germany, the Netherlands and the European Union (EU), and by grant-making foundations and the public in Europe and North America. Large sums have also been invested by the more progressive elements of private industry. Recognizing the net value of increasing revenue capture, some producer-country governments have also ramped up spending.

Initially, much of the response focused on improving the understanding of the problem and potential solutions – through desk-based studies, expert workshops and field investigations. A great deal of effort has also gone into raising awareness among governments, traders and the general public; into increasing the political will of governments; and into providing frameworks for different governments to work together. Almost every aspect of illegal logging and associated trade has been analysed in some manner, from timber tracking to foreign investment, and from money-laundering to government procurement.

Actions which have sought to actually reduce the scale and severity of illegal logging and the volume of illegal timber traded have included capacity-building for enforcement agents and customs officers, regulatory changes and public- and private-sector procurement policies. A number of systems have been developed for licensing and tracking legal timber, while most recently a number of key consuming countries have begun developing or implementing legislation designed to prevent the import and sale of illegally sourced wood products.

### ***1.1.2 Measuring the response***

More than ten years have now passed since, in 1998, the G8 leaders recognized the importance of the illegal logging problem and committed to act. During that time, large amounts of time and money have been spent trying to tackle the problem. This report attempts to measure what difference this effort has made, using a set of standardized indicators.

In 2006, Chatham House published an initial assessment of how the global response to the problem of illegal logging and associated trade might be assessed.<sup>6</sup> The paper sought to find a way to measure not just the end goals, but also the earlier phases of response, including such activities as building awareness and political will, providing financing, and developing policies. It examined a range of possible indicators with which to measure these phases of response in three country types – producer countries where illegal logging occurs, processing countries which import illegally sourced timber primarily for re-export, and consumer countries which are the ultimate destination of illegally sourced wood products.

A second Chatham House study in 2007<sup>7</sup> brought the long list of potential indicators and verifiers together under four major headings – attention, government policy development and implementation, private-sector policy development and implementation, and levels of illegal logging and associated trade. It looked at what lessons could be drawn from attempts to measure other problems (such as corruption), sought to collect baseline data, where possible, from a sample of five producer, two processor and five consumer countries, and examined the viability of each indicator, in terms of both feasibility and reliability. The study looked at how monitoring of the chosen indicators might be conducted in future, and made a number of recommendations for next steps.

With support from the UK Department for International Development (DFID), in 2008–09 Chatham House carried out a pilot assessment of the indicators in a sample of five countries. Adapting the methodology slightly based on lessons learned, this first full report has expanded the assessment to twelve countries. The assessment has been conducted with a view to expanding this to a broader range of countries, and repeating the exercise on a regular basis in future years.

It is important to note that this report is not a broad-based examination of the nature, causes or context of illegal logging and associated trade generally or in any individual country, nor does it examine

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6 E. Fripp, *Illegal Logging and Related Trade: The Global Response and Indicators of Change* (Chatham House, 2006), available at [http://www.illegal-logging.info/item\\_single.php?item=document&item\\_id=373&approach\\_id=1](http://www.illegal-logging.info/item_single.php?item=document&item_id=373&approach_id=1).

7 Lawson, *Illegal Logging and Related Trade: Measuring the Global Response*.

in great detail the economic and political context behind each country's response. Many specific studies already exist which examine individual aspects in individual countries in depth; rather than repeat these efforts, Chatham House has sought instead to develop, test and conduct an assessment against a set of clearly defined and standardized indicators of the response to illegal logging and associated trade, with the hope of allowing progress to be measured consistently over time and comparably between countries. Nevertheless, the report does use the assessment of the indicators to draw some tentative general conclusions and recommendations regarding the ongoing response to the illegal logging problem.

## 1.2 Methodology

### 1.2.1 Geographical coverage

This study has assessed a sample of countries – five producer countries (Brazil, Cameroon, Ghana, Indonesia and Malaysia), two processing countries (China and Vietnam) and five consumer countries (Japan, the USA, the UK, France and the Netherlands).<sup>8</sup> Although illegal logging varies by region within all producer countries, in Brazil there is a particularly strong distinction between the natural tropical forests of the Amazon, where illegal logging is a serious problem, and the largely plantation forests of the southern part of the country, where it is probably insignificant. For this reason most indicators seek to assess only the Brazilian Amazon, rather than the country as a whole.

Together these countries represent a large part of the problem. The producer countries assessed in this study represent around 40 per cent of estimated global illegal timber production in 2002;<sup>9</sup> while the consumer and processing countries examined represent around half of all direct imports of illegally sourced wood products from all affected producer countries combined.<sup>10</sup>

It should be borne in mind, however, that the countries chosen are not necessarily representative, and any changes identified cannot be assumed to have been replicated elsewhere. The producer and consumer countries examined are those which have seen the most intensive efforts to tackle illegal logging and associated trade and include many of those in which the response has been most effective. Available evidence suggests that responses elsewhere have in many cases been much more muted.

### 1.2.2 Indicators and means of verification

The indicators and means of verification used in this study have been developed by Chatham House over a number of years with input from an advisory group of experts. They do not focus solely on the end goal of mitigating illegal logging and associated trade, but instead span all the stages of the response, including intermediate steps such as raising awareness, and introducing and implementing new policies. The indicators also cover both the private and public sectors, and are designed to take account of developments in producer, processing and consuming countries. One reason for the usefulness of including steps towards the end goal is that progress in these areas is often much easier to ascertain and quantify. Caution should be taken with such assessments, however, since progress with intermediate goals does not necessarily lead to an impact in the forest.

For presentation purposes, this study is divided into four major chapters: levels of attention, government actions, private-sector actions, and levels of illegal logging and associated trade. Attention is measured using a quantitative and qualitative assessment of media coverage of the issue in all countries. The response of governments is measured in all countries using an assessment of the extent to which policies, laws and regulations judged to be necessary to tackle the problem have been successfully implemented; enforcement data are also used. In addition to these measures, in producer countries data on collection of revenues due from the forest sector are assessed and additional information is drawn from a survey, carried out by Chatham House, of perceptions amongst experts.

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8 For definitions of producer, processing and consumer countries, see Appendix A.

9 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

10 Chatham House calculation based on import-source analysis conducted by J. Hewitt.

Perceptions surveys also provide information for assessing the response of the private sector in both consumer and processing countries, while data on the take-up of voluntary private-sector initiatives for helping verify legality of wood also provide a useful indicator for all country types. Trade data and a survey of experts in both producer and processing countries are used to assess the extent to which trade may be shifting to less sensitive markets. Levels of illegal logging and trade in illegally sourced wood in producer countries are assessed using surveys of expert perceptions, estimates of imbalances between legal log supply and total timber demand, and discrepancies between trade data reported by source and destination countries. Trade data discrepancies also provide a possible indicator of illegally sourced wood imports for consumer and processing countries, but the main measure used in this report is a highly sophisticated import-source model developed by Chatham House for the project. In commenting on the results of the various indicators and drawing conclusions, Chatham House has also drawn on a broader range of information and studies, on qualitative survey responses and on input from numerous experts from various sectors.

The indicators/verifiers used to conduct the assessment are summarized in Table 1.1. A version of this table which shows the results of the assessment is included in Chapter 6 (Table 6.1).

Measuring illegal activity is particularly challenging, and many aspects of the response are also very difficult to assess. Although no set of indicators and means of verification used to measure progress in such a subject can be perfect, and some caution must therefore be exercised in interpreting the results, the Chatham House assessment has used the best tools available, and where possible has sought to develop and significantly improve established methods. The resulting analysis is the most detailed and rigorous of its kind.

Further information on the methodology, including additional details on and the limitations of the most important primary data collection and assessment methods used by Chatham House for the study (the policy assessment, perceptions surveys, wood-balance analysis and import-source analysis) is included in Appendix A, as is information on relevant definitions used. Further information on the various indicators and information sources is contained in the relevant chapters.

Table 1.1: Indicators of response to illegal logging and associated trade

	Producer	Processing	Consumer
<b>Attention</b>			
Volume of international media coverage	✓	✓	
Volume of domestic media coverage	✓	✓	✓
<b>Government Policy Development &amp; Implementation</b>			
Policy assessment	✓	✓	✓
Enforcement & revenue capture data	✓	✓	✓
Expert perceptions of government response	✓		
<b>Private-sector Policy Development &amp; Implementation</b>			
Certification & verification scheme data	✓	✓	✓
Diversion to less sensitive markets – data & perceptions	✓	✓	
Expert perceptions of progress by private sector	✓	✓	
<b>Levels of Illegal Logging &amp; Associated Trade</b>			
Imbalance between legal supply & demand	✓		
Trade data discrepancies	✓	✓	✓
Import-source assessment		✓	✓
Expert perceptions of scale of illegal logging	✓		

### ***1.2.3 Time periods***

Ideally, all indicators would be assessed for the same time period. In practice this is impossible: while perceptions surveys and policy assessments measure the situation at the time they are conducted, trade and production data, enforcement data and other information are often only available after several years. If an assessment was held back until all indicators could be related to the same time period, it would be many years out of date by the time it was published.

This study includes data from a range of baseline dates. It should be viewed principally as an assessment of the situation during the period 2008–09: the policy scores represent the situation at the end of 2008 (although the discussion includes later developments), the surveys for the five pilot countries were carried out in late 2008 and those for the additional full-phase countries in late 2009. The latest period assessed in the media analysis was 2009, but detailed analyses carried out by partners were for only the 24 months ending September 2008. Some other information, particularly the quantitative estimates of actual levels of illegal logging and trade, use data from 2007, or in some cases 2006. The assessment period is always made clear in the text and figures.

### ***1.2.4 Research partners, advisory group and peer review***

An advisory group of international experts provided valuable guidance during the development of the methodology used in this assessment. Local partner organizations or consultants were commissioned by Chatham House to assist with data collection in all producer and processing countries and some consumer countries. The study has been peer reviewed by a range of independent experts including one from each producer country examined, and the survey has also been reviewed by specialists. A list of individuals and organizations involved is provided on page xi. The information presented here is nevertheless the sole responsibility of Chatham House.

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## 2 Media Attention

The first stage in the response to the problem of illegal logging and related trade is increasing awareness; once people are aware it is important that attention is maintained. Although it should be borne in mind that increased awareness of and attention to an issue does not necessarily lead to action, it is a prerequisite for it and is therefore worth monitoring. To assess this, Chatham House has conducted a review of coverage for the issue in the news media in the twelve focus countries. In addition to providing an indicator of the scale of attention, qualitative assessment of the media coverage can give a sense of changes in the nature and phase of the response in different countries over time. The detailed review of news media also provided useful anecdotal information with which to inform the assessment of many other indicators.

A rough quantitative picture of the amount of press coverage can be gleaned from searches in media databases for articles including the phrase ‘illegal logging’ or its local language equivalent in the major newspapers in each country. Many articles identified in such searches relate to domestic illegal logging in consumer or processing countries, or mention the issue only in passing. In order to obtain a more accurate and qualitative picture of the quantity and nature of media coverage, Chatham House conducted or commissioned detailed reviews of relevant newspaper articles in the twelve producer, processing and consumer countries over a two-year period from October 2006. While such an analysis is immediately informative, it also provides a useful baseline against which to gain a clearer picture of longer-term trends during subsequent assessments of the indicators.

Overall, the media review suggests that the level of attention paid to the issue of illegal logging is falling internationally and in consumer countries, although it continues to rise in most producer countries. The nature of coverage also suggests that the response has moved forward over time, with earlier coverage focusing largely on the extent of illegal logging in producer countries, while later coverage looks increasingly at the role of processing and consumer countries and at the government and private-sector response.

The fall in media coverage in consuming countries – which appears to stem ultimately from a combination of reductions in illegal logging, a sense that the problem is now being addressed, and a shift of attention towards the role of forests in climate change – may not reflect a reduction in attention among government and private-sector policy-makers who are most crucial for the ongoing response. The momentum behind ongoing actions to tackle illegal logging may also be sufficient to ensure that any reduction in attention in terms of media coverage does little harm. Yet there may nevertheless be reason for concern. While the other indicators discussed in ensuing chapters do demonstrate an impressive and growing response and consequent reductions in illegal logging and associated trade, they also demonstrate that it continues to be a major problem. In addition, they show that campaigning by NGOs, which is closely linked to media coverage, has been a very important factor in the past in driving the response by both governments and the private sector. If the problem is ultimately to be addressed in full, it is important that attention is maintained.

### 2.1 Producer countries

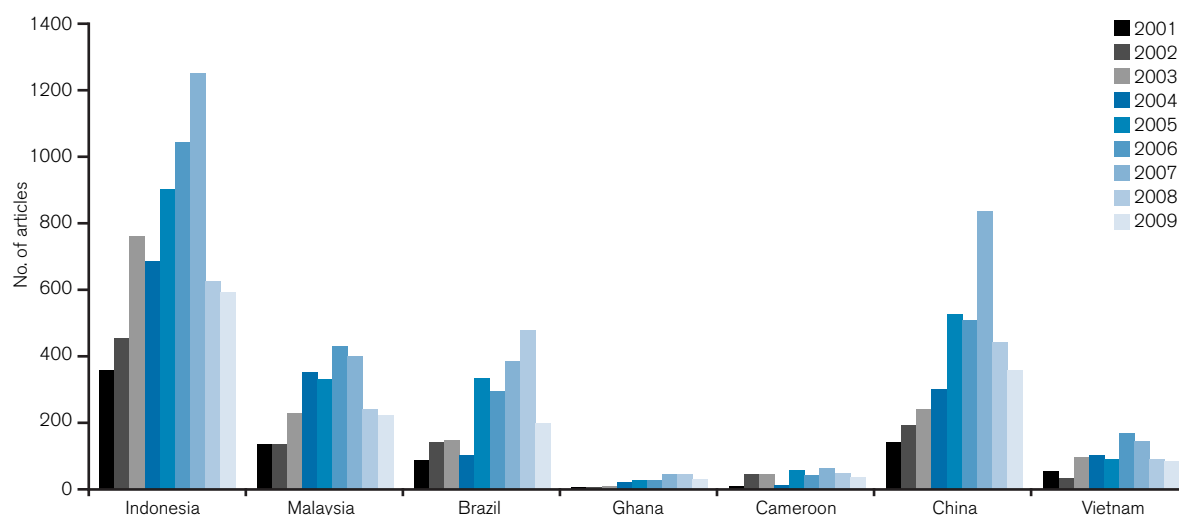
#### 2.1.1 *International media attention*

The degree of international media attention paid to the issue in the various producer countries over the years has shown some correlation with the estimated volumes of illegal wood production and trade: Indonesia has seen the most attention, while Ghana and Cameroon have seen much less (see Figure

2.1). The figures for Malaysia may be inflated slightly by stories relating to the role of the country as a destination for illegal Indonesian timber. Although it might be expected that media coverage of illegal logging in Cameroon would be much greater in the French-language media, the analysis of coverage in France (Section 2.2) does not support this.

Coverage in the foreign media of illegal logging in all of the five producer countries rose considerably during the first half of the 2000s, but is now falling. Attention regarding Malaysia peaked in 2006, that regarding Indonesia and Cameroon in 2007, and that regarding Brazil and Ghana in 2008. The late peak for Brazil coincides with the launch of very large enforcement operations which generated a lot of coverage, while the late peak for Ghana is probably due to coverage of the issue in relation to the negotiations with the European Union over a FLEGT voluntary partnership agreement (VPA – see Box 3.1 in Section 3.4.2). Attention to the problem in Indonesia may have declined in response to a reduction in illegal logging after 2005 (see Chapter 5) and a consequent shift in focus on the part of campaigning NGOs.

Figure 2.1: Volume of international English-language media coverage of illegal logging and associated trade in producer and processing countries



Source: Factiva search for news articles with phrase 'illegal logging' combined with country name in all media sources worldwide.

Note: Figures include English-language domestic media coverage, which is particularly extensive in Malaysia.

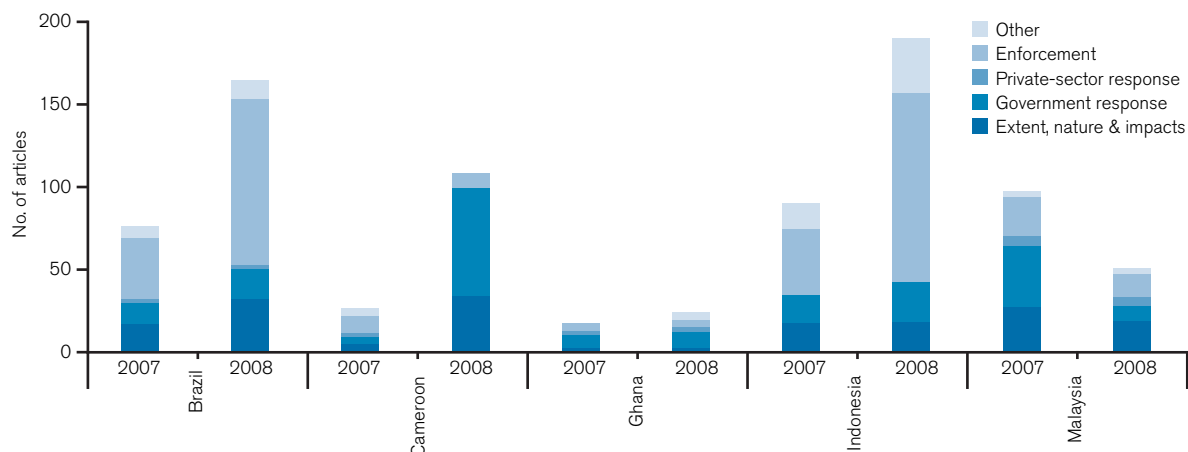
### 2.1.2 Domestic media coverage

Although international attention to illegal logging appears to be declining for all of the producer countries, domestic media coverage actually increased in 2008 compared with the previous year in Brazil, Cameroon, Ghana and Indonesia (see Figure 2.2). This appears to support the contention that not all of the decline in international attention is due to the problem being viewed as having been increasingly addressed, since such reductions might be expected to also be reflected in domestic coverage.<sup>11</sup>

Qualitative analysis of the domestic coverage sheds some additional light on trends. While other indicators suggest that illegal logging was already declining in both Brazil and Indonesia by 2007 (see Chapter 5), coverage of the issue more than doubled in both countries in 2008. Most of the increase was in stories related to enforcement, suggesting that enforcement effort has continued to increase in both countries even as the scale of illegal logging has declined. Such a contention is supported in part by government data on wood seizures and the issuance of fines (see Section 3.1.10).

<sup>11</sup> It is worth bearing in mind, however, that continued and growing domestic media attention in producer countries can stem from a form of inertia: once the media become interested in illegal logging, they may continue to cover it to the same extent even when it has been considerably reduced. This is arguably the case in the Philippines, where the issue continues to receive a lot of attention and national newspapers cover very small cases which would have been unlikely to have been noticed when the problem was at its height in the 1980s.

Figure 2.2: Quantity and nature of domestic coverage of illegal logging in producer countries, 2007–08



Source: Chatham House partner reviews of coverage in selected major newspapers in each country. Figures are for the year to 30 September. Qualitative categories are selected based on the primary nature of each article. Caution should be used with comparisons of numbers of articles between countries, since the breadth of the review varied.

Closer examination of the coverage in Indonesia shows that many of the extra articles on enforcement related to cases of corruption among forestry officials – the number of such articles increased threefold. This may explain the perceived increase in such corruption identified in the expert perceptions survey (see Chapter 5). A number of major cases were also important, including that involving Adelin Lis, whose companies were alleged to have been involved in logging US\$35 billion of illegal wood over a seven-year period. Lis was arrested while on the run in China in 2006, but was declared innocent and released by a provincial court in late 2007, prompting accusations of corruption. The decision was overturned by the Supreme Court in 2008 and Lis declared guilty, but he remains at large. The increase in enforcement stories in Brazil was largely attributable to the ‘Arc of Fire’ enforcement operation, one of the largest ever launched in Brazil against illegal logging. The operation involved inspections and seizures across the Amazon basin – more than 500 sawmills were visited, and around 600 infractions uncovered.

Coverage of illegal logging in Cameroon more than trebled between 2007 and 2008, with the bulk of the growth attributable to articles related to the government response, most of them resulting from government announcements. This increase appears to have stemmed in part from the appointment in late 2006 of a new Minister of Forests, Elvis Ngolle Ngolle, who has taken a high-profile approach to dealing with the problem.<sup>12</sup> Many of the extra stories also relate to the nascent negotiations between Cameroon and the EU over a possible bilateral agreement (FLEGT VPA) on illegal logging.

In Ghana, attention to the government response also increased in 2008 as a result of discussions with the EU on the subject, while coverage of enforcement declined (perhaps partly because attention was diverted onto the election that year). Almost all articles on illegal logging in Ghana relate to artisanal ‘chainsaw’ logging, and there is rarely any attention given to illegalities by larger companies. In Malaysia domestic coverage fell in 2008; the reason is uncertain. A large number of articles in 2007 were related to a major seizure of logs in Sabah by the federal Anti-Corruption Authority, one of the biggest such seizures in Malaysia for some years. The state authorities disputed the seizure and claimed that the logs were legal.

12 This is not a judgment on the quality of the response of the new minister to the problem, rather a comment that he has been more likely to make statements to the press about it than his predecessor.

## 2.2 Processing countries

Since the focus of this study in processing countries is in relation to their role as importers, processors and re-exporters of illegally sourced wood, media coverage of domestic illegal logging is excluded from the analysis of media attention.

International coverage of the role of China in illegal logging grew rapidly in the first half of the decade (see Figure 2.1). One particularly large increase occurred in 2005, largely as a result of attention brought about by an NGO exposé of China's role in importing and re-exporting illegal timber from Indonesia.<sup>13</sup> Although the international attention paid to China's role has fallen back since 2007, stories in the domestic media have continued to grow (Figure 2.6). Very little of the domestic Chinese coverage addresses the role of the country as an importer, however.

In the analysis of domestic Vietnamese English-language news coverage, there were almost no articles on illegal logging abroad. While Vietnamese newspapers regularly report on domestic illegal logging cases, and also on the growing volumes of timber being imported into the country, between 1999 and 2007 there was not a single article addressing the country's role in importing illegally sourced wood and thus contributing to illegal logging elsewhere. Between 1997 and 1999 there were some occasional stories stemming from work by the NGO Global Witness which exposed the import and re-export of illegal Cambodian timber, but the problem was reduced and attention quickly tailed off.

A resurgence of coverage of the subject of illegal timber imports was seen in Vietnam in 2008, however. The release of a report by the Environmental Investigation Agency in March 2008 regarding imports of illegal timber from neighbouring Laos sparked a storm of denial by the government and industry in the domestic media. This was followed later in the year by stories covering the increasing efforts having to be made by Vietnamese furniture companies to ensure the legality of imported timber, resulting from the passage in May 2008 of new laws prohibiting the import of illegally sourced wood in the US, a major market for Vietnamese wood products (see Section 3.3). These articles reported on workshops on the issue held by the verification body SGS and by the government alongside the international conservation organization IUCN. These revealed how Vietnamese wood product manufacturers had moved on from outright denial to an acceptance of the need for action, calling on the government to follow the lead of the EU by implementing an 'Action Plan' to tackle the issue.

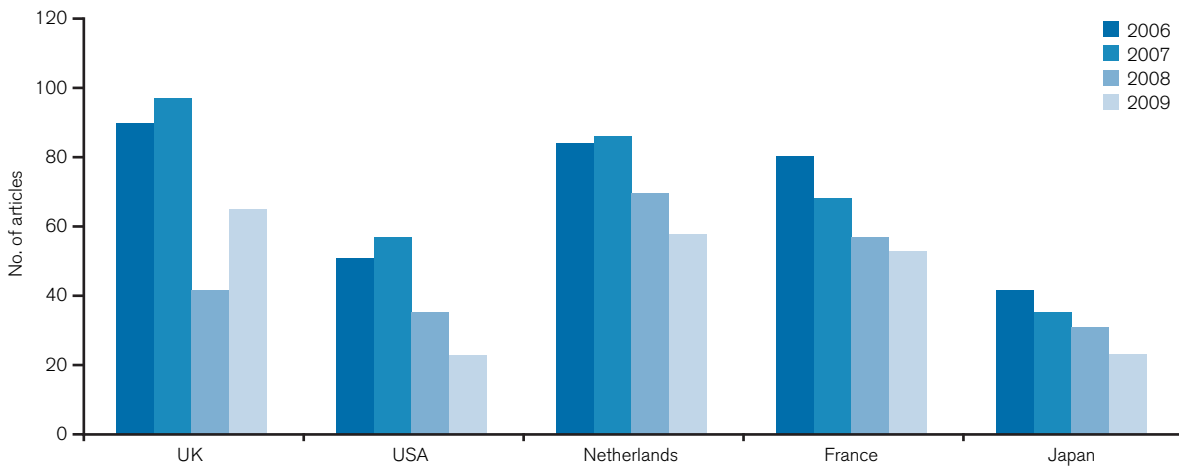
## 2.3 Consumer countries

A simple quantitative analysis of newspaper coverage of the illegal logging issue in the five focus consumer countries shows that attention has been declining across the board in recent years (see Figure 2.3). Analysis of relevant stories in major newspapers in each country shows that the subject received increased attention over the first half of the decade, reached a peak in 2005–07, and has since fallen back to the same levels seen in 2002–03.

There are a number of possible proximate and ultimate causes for the declining attention of the news media to the illegal logging issue. The most important proximate cause appears to have been a decline in the amount of campaigning work by non-governmental organizations to highlight the problem. An analysis of Greenpeace press releases on the subject, for instance, suggests the organization's attention has dropped off precipitously since 2006 (see Figure 2.4). Ultimate causes include reductions in the scale of illegal logging in a number of major source countries, including Brazil, Cameroon and Indonesia (see Chapter 5), and a shift in attention towards issues related to forests and climate change – although reduced funding for NGOs may also have played a part. The climate change factor is demonstrated by the fact that the number of forest-related stories in the global media mentioning illegal logging has fallen by about 50 per cent in the last few years, while those mentioning climate change have increased by more than 300 per cent (see Figure 2.5).

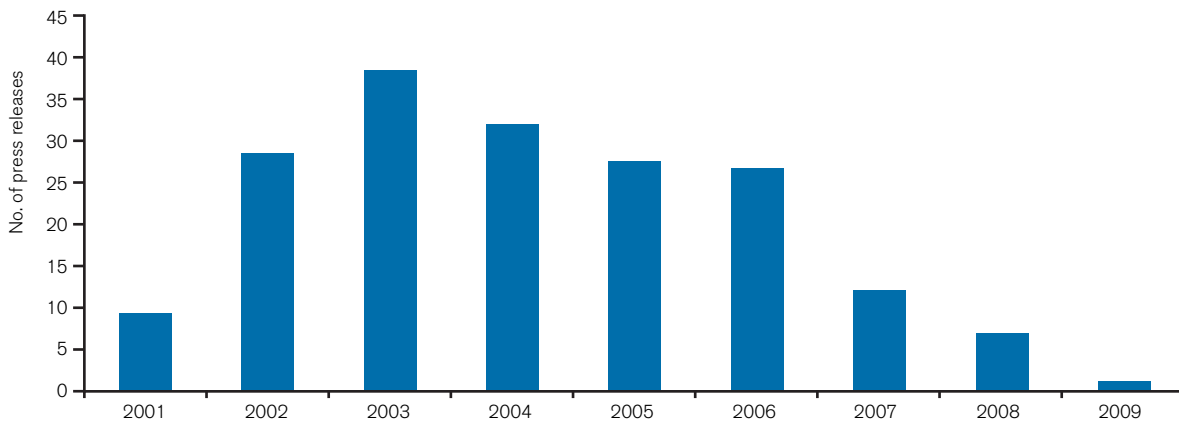
13 EIA/Telapak, *The Last Frontier: Illegal Logging in Papua and China's Massive Timber Theft* (EIA/Telapak, 2005).

Figure 2.3: Coverage of illegal logging in major newspapers in consumer countries



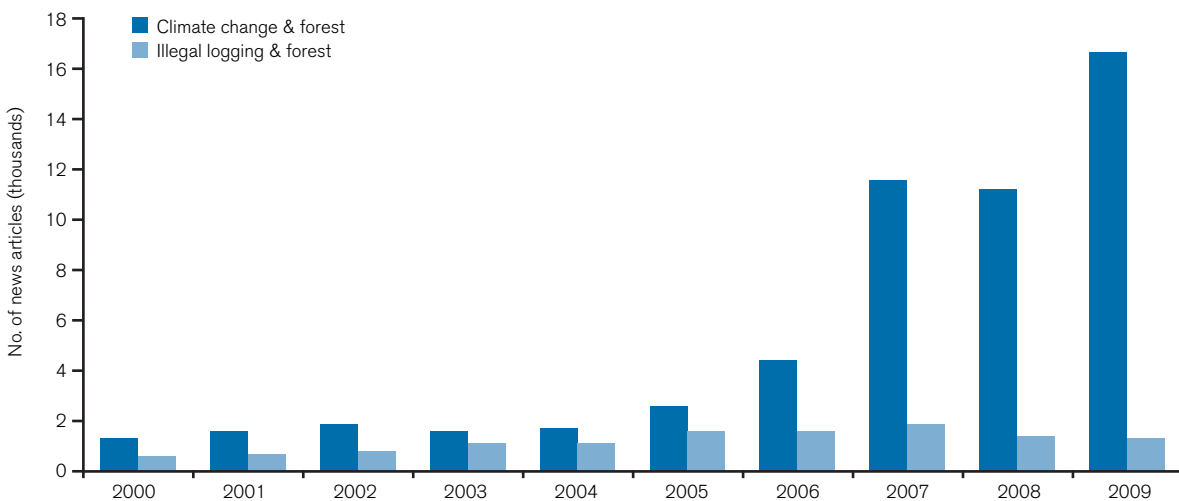
Source: Factiva search for stories including phrase 'illegal logging' or foreign-language equivalent in top ten largest circulation newspapers (top four only for Japan).

Figure 2.4: Greenpeace press releases on illegal logging



Source: Website search hits for phrase 'illegal logging' and relevant year in Greenpeace International press release pages at <http://www.greenpeace.org/international/press/releases>.

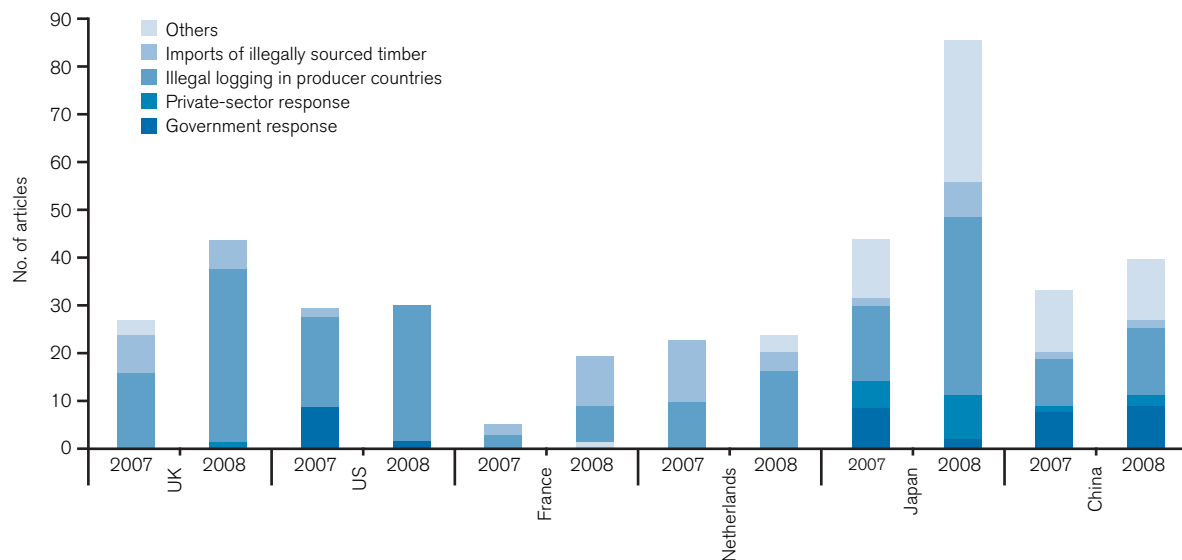
Figure 2.5: Changes in media coverage of illegal logging and climate change



Source: Factiva media database search for English-language articles in global media mentioning either the phrase 'illegal logging' or the phrase 'climate change' alongside the word 'forest'.

When the articles in major newspapers including the relevant phrase are examined in detail, and when additional searches are conducted to pick up articles which relate to the issue but do not include the precise phrase, a slightly more nuanced picture is produced for 2007 and 2008 (see Figure 2.6). This shows that real coverage of the issue in France is much lower than is suggested by a simple word search, while coverage in Japan is significantly higher. Indeed, the issue receives much less attention in the French media than in any of the other consumer countries examined.

Figure 2.6: Coverage of illegal logging in major newspapers in consumer and processing countries, 2007–08



Sources: Chatham House and Chatham House partner reviews of coverage in selected major newspapers in each country. Figures are for the year to 30 September. Qualitative categories are selected based on the primary nature of each article. Caution should be used with comparisons of numbers of articles between countries, since the breadth of the review varied.

It is important to note that a great many relevant articles have a broader focus and mention illegal logging only in passing. In most cases, the majority of articles relate to the problem in producer countries only and make no mention of the role of the consuming country as an importer of illegally sourced wood. Almost all of the articles which did mention imports stemmed from the work of NGOs. Brazil and Indonesia were the two producer countries which were most commonly mentioned.

Contrary to the apparent overall long-term picture, the detailed qualitative analysis suggests a slight increase in coverage in the UK in 2008, largely as a result of the coverage of efforts to tackle illegal logging and deforestation in Brazil. Coverage of imports did decline, and there were no specific case studies in the media in the second year. In the US, most of the coverage mentioning the country's role as an importer related to the development and implementation of the new Lacey Act amendment prohibiting the import and sale of illegally sourced wood; the enforcement crackdown in Brazil also drew a great deal of attention. There were just five newspaper articles mentioning illegal logging in the major French newspapers in 2007; coverage did increase in 2008, however, thanks to attention to a WWF report on illegal timber imports in Europe.

There were a number of stories in the Dutch media in 2007 noting increases in timber prices for hardwoods, which were attributed to increased enforcement against illegal logging in source countries. There was a perhaps surprisingly large amount of relevant media attention in Japan, compared with the other four consumer countries. A significant increase in 2008 was due mostly to coverage of a number of international environmental conferences, although the use of a Japanese satellite in detecting illegal logging also drew a lot of attention.

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## 3 Government Policy Development and Implementation

This chapter examines government policy development and implementation in producer, consumer and processing countries.

The state of each country's policy development was measured against a framework of policies judged to be important (see Section A2.1 of Appendix A for more on the methodology). Chatham House researchers and partners used a range of primary and secondary sources to conduct the assessment, including direct contact with relevant government officials and other experts, as well as published reports and news media. In addition, enforcement data (in all countries) and revenue capture data (in producer countries) was collected from a range of sources, analysed and incorporated into the country assessment. The expert perceptions survey (see Section A2.2 of Appendix A) also provided information for producer countries.

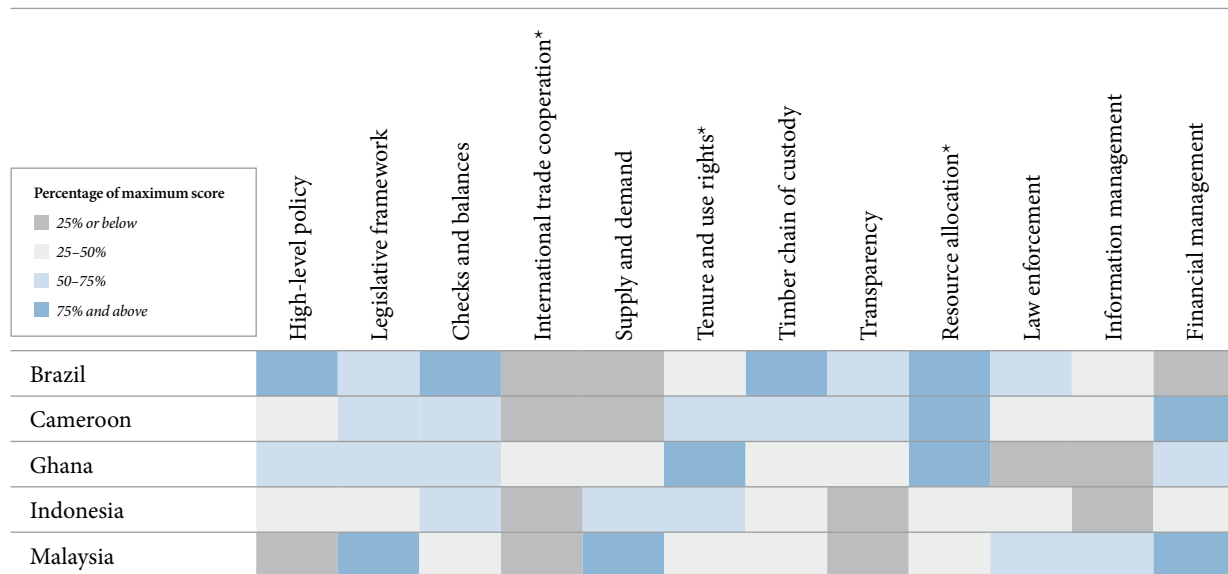
### 3.1 Producer countries – policy assessment

If producer countries are to be effective in preventing, detecting and suppressing illegal logging, they need to have the right measures in place and these must be properly implemented. First and foremost, the response needs to be coordinated and planned and laws need to be coherent and harmonized, with tenure and property rights clear and well protected. Checks and balances on government procedures need to be in place and forest-related government information needs to be well organized and transparent. Methods for allocating rights to harvest and process timber need to be well designed. Robust systems to monitor legal harvesting and track legal wood through supply chains are essential, as is effective use of available techniques to improve enforcement.

Chatham House has assessed the performance of the five producer countries studied against a list of detailed policy questions which address the major areas mentioned above (for more on the policy assessment and scoring methodology see Section A2.1). The results for the five focus countries across the twelve major policy headings are presented in Figure 3.1. This diagram uses a simple colour-coding system, which assigns different colours/shading based on the scores. Overall, the assessment showed that, while there have been many improvements in recent years, the producer-country government response remains poor in many important areas. Two areas of particular importance which were weak across all countries were the management of forest-related information and the use of best practice in law enforcement. Transparency and systems for tracking legal wood are also very poor in a number of countries.

Brazil scored the highest of the five countries in many important areas of the government response, thanks to a major overhaul of laws, policies and regulations during the last five years. The country is particularly strong in relation to high-level policies, timber tracking, resource allocation and transparency. The effects of this improved response can be seen in evidence of significant reductions in illegal logging (see Chapter 5). Although there have also been some improvements in a few areas in Cameroon and Indonesia, the policy response of both governments remains quite poor overall; the apparent fall in illegal logging seen in both countries does not appear to have been the result of improved regulation. Many areas of the regulatory response in Ghana are currently under review under the auspices of the recently signed VPA with the EU, and significant improvement from a relatively low baseline can therefore be expected. The policy results for Malaysia were poor in a number of important areas. Although the level of illegal logging is estimated to be relatively low, improvements are needed if it is to be eliminated.

Figure 3.1: Country summary performance by major policy area



Source: Chatham House assessment (see Section A2.1 of Appendix A and subsections 3.1.1– 3.1.12 for further explanation).

Note: Shading has been allocated according to each country's total score under each major heading as a percentage of the possible maximum – scores of 25% or below are dark grey, those between 25% and 50% light grey, those between 50% and 75% light blue and those above 75% dark blue. In the creation of the percentage figures, existence, design and implementation have been weighted equally, and each sub-question under each major heading has also been weighted equally.

\* In calculating overall percentage scores, all policies and sub-policies have been treated equally, although some are arguably more important than others. This lack of weighting means, among other things, that the overall percentage scores for international trade cooperation give a poorer impression of the situation than is fair (and do not therefore capture differences well), while those for tenure and use rights and for resource allocation give a more generous impression than they should.

### 3.1.1 High-level policy arrangements

Establishing certain high-level policy initiatives and arrangements can help a country to understand the causes and extent of illegal logging in its territories and plan and coordinate its response in a transparent and inclusive manner. The initiatives examined here include: reviewing the causes and severity of illegal logging; putting in place a national action plan to tackle the problem; setting up processes for high-level coordination of action across relevant government departments; and establishing consultation processes for multi-stakeholder involvement in developing policy and legislation to tackle illegal logging.

In summary, Brazil scores relatively well on high-level policy arrangements, having conducted a comprehensive review and revision of such procedures in 2006. Malaysia,<sup>14</sup> on the other hand, scores quite poorly, because the assessment suggests that the government does not see illegal logging as being serious enough to warrant the measures mentioned. Ghana scores better than either Cameroon or Indonesia, largely because an official review of the illegal logging problem has been conducted.

The Brazilian government examined the scale, nature and causes of illegal deforestation during the development of its 2004 action plan on controlling deforestation, although it is not clear to what extent this review looked at illegal logging. Reviews of the problem have been carried out in Cameroon by the independent monitor, but not by the government itself.<sup>15</sup> In Ghana, an initial review was carried out in 1994, and in 2001 studies supported by the UK government developed a quantitative database on the extent of illegal logging. Other reviews followed in 2005 and 2007.

14 The three major regions of Malaysia – Peninsular Malaysia, Sabah and Sarawak – have different laws and regulations. For the purposes of the policy assessment, the situation was assessed and scored separately in each, then a rough average score across the three regions used.

15 Attribution of the credit for work carried out by the Independent Observer of Forest Law Enforcement and Governance in Cameroon is a difficult issue for the analysis. While the observer works with and is contracted by the government, and therefore credit for its activities might arguably be attributed as part of the government response, it was engaged as a result of strong pressure from international donors, who also fund it.

Table 3.1: Policy scores for high-level arrangements

Producer countries <i>High-level policy arrangements</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Official review of illegal logging problem	2	0	2	0	0	4	n/a	4	n/a	n/a	3	n/a	3	n/a	n/a
National action plan	2	2	0	2	0	4	3	n/a	3	n/a	3	3	n/a	3	n/a
Coordination process for relevant govt depts	2	0	2	2	2	3	n/a	3	3	3	3	n/a	1	2	3
Multi-stakeholder consultation processes	2	2	2	1	0	4	3	5	2	n/a	4	3	5	2	n/a

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

There are national action plans to tackle illegal logging in place in Brazil, Cameroon and Indonesia. However, Indonesia's plan, set out under ministerial decree,<sup>16</sup> only addresses the problem of illegal logging broadly and does not appear to show recognition of the *modus operandi* of illegal loggers or processors. The effectiveness of Cameroon's plan – the 2005 National Strategy Plan for Forest and Fauna Control – to tackle illegal logging is hampered by a lack of resources and insufficient will among many in the bureaucracy. Brazil's 2004 action plan is part of a broader action plan for reducing deforestation. Although Ghana has no overall plan, more coordination of action may result from its VPA process.

High-level coordination processes have been established in Brazil (2004), Indonesia (2005), Malaysia (circa 2008) and Ghana (2009). Brazil's inter-ministerial committee has high-level representatives from 12 ministries, including the cabinet. All the main relevant sectors are represented, but the representatives may not be fully empowered to instigate action in their departments. In Indonesia, the 2005 Presidential Instruction on Illegal Logging established a formal process under the Coordinating Ministry for Politics, Law and Security. Malaysia established a National Task Force on Illegal Logging in 2008 or 2009, although its activity and scope were not made public.

Relevant multi-stakeholder processes have existed in Brazil for some years, and the development of the 2006 law on public forests included extensive consultation. Other focus producer countries have set up such processes more recently, often in response to EU requirements regarding negotiation of VPAs. Processes set up under VPAs are difficult to assess, since they vary greatly in the breadth of VPA-related issues which they address, the extent of stakeholder involvement, the attention given to their viewpoints, and the extent to which it is likely that the government concerned will continue the process beyond the negotiation stage or extend the principle to broader forest policy development and implementation. In Ghana, for instance, multi-stakeholder engagement under the VPA has been extensive and the evidence suggests that the government is committed to continue and expand the principle.<sup>17</sup> In Malaysia, meanwhile, multi-stakeholder engagement within the VPA negotiations has been more limited, and NGOs have been much less satisfied with the conduct and progress of the consultations.

### 3.1.2 Legislative framework

Maintaining a coherent and unambiguous legislative framework in the forest sector is fundamental to enabling and promoting good forest governance. Incoherence and ambiguity may generate confusion

16 SK. 456/Menhut-VII/2004.

17 It appears that the consultation processes in Ghana for a World Bank initiative to reduce greenhouse gas emissions from deforestation and forest degradation aims to build on those used during the VPA negotiation process.

among those responsible for managing resources effectively and fairly, and can allow illicit practices to flourish. The study sought to assess the extent to which forest legislation and regulations in focus producer countries were internally coherent and unambiguous, and the extent to which they are harmonized with other laws affecting forests, such as those relating to land rights and mining.

It proved quite difficult to score countries precisely and consistently on these relatively general questions. Certainly, incoherence and ambiguity in legislation were found to be features of all countries studied. The situation appears to be somewhat less acute in Malaysia, and worst in Indonesia. The situation is improving in most countries, however, often as a result of work being carried out within the context of voluntary partnership agreements with the EU.

Forest legislation and regulation in Brazil have become clearer and less ambiguous in recent years, including as a result of the detailed review and revisions carried out in 2006. Conflicts still exist, however, including between state and federal laws. The state of Santa Catarina (not part of the Brazilian Amazon), for instance, recently approved its own State Forest Code, which is now being questioned by the Federal Supreme Court for contradicting articles of the National Forest Code. In Malaysia, the problem is relatively slight, although there are some difficulties with conflicts between federal and state-level policies.<sup>18</sup> In Ghana and Cameroon, incoherence and ambiguity exist in the legislative framework, although not to a severe degree. In Cameroon, for example, some gaps exist with respect to user rights in permanent forest, since a decree, expected since the adoption of the 1994 Forest Law, has yet to be issued. In addition, contradictions exist between articles governing the financial obligations of logging companies.

Table 3.2: Policy scores for coherence and consistency of legislative framework

Producer countries <i>Legislative framework</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Forest legislation and regulation coherent and unambiguous						3	3	3	2	4					
Forestry laws consistent with other laws affecting forests						3	2	3	1	4					

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

The problem of incoherence and ambiguity in Indonesia's forest-sector legislation is severe, with numerous overlapping laws and regulations. A 2003 World Bank report found that some forestry regulations are so complex or contradictory as to be nearly 'impossible to meet'.<sup>19</sup> A new definition of legality for timber developed recently, however, has helped to clarify the currently ambiguous and contradictory situation, and thereby facilitate law enforcement and reduce corruption.

In Ghana, an implementation plan has been put in place as part of the FLEGT VPA process to move from existing to new legal standards. This process is designed to address obsolete, disjointed and inconsistent laws and to introduce new legislation to implement evolving policies. In order to manage the process effectively and efficiently, it is divided into two tiers: first, regulatory changes are planned within one year of the signing of the new VPA on issue areas that do not require extensive legal reform; second, a longer time-frame of three to five years has been set for changes that will require extensive consultations and are more challenging to resolve.

18 H. Mohd Shahwahid, 'Forest Certification in Malaysia', paper presented at the Symposium on Forest Certification in Developing and Transitioning Societies: Social, Economic, and Ecological Effects, Yale School of Forestry and Environment Studies, Connecticut, USA, 10–11 June 2004.

19 World Bank, *Combating Corruption in Indonesia* (World Bank, 2003); B. Jarvis and M. Jacobson, *Incentives To Promote Forest Certification in Indonesia* (Jakarta: IFC Pensa, 2006).

In most of the producer countries examined, major conflicts continue to exist between forest laws and other laws, and this poses a serious problem for efforts to improve forest law enforcement. In Brazil, conflicts between forest laws and land tenure laws are a serious issue. Those seeking recognition of tenure in the Brazilian Amazon must provide proof of 'occupation', and having deforested land counts as proof, while having sustainably managed standing forests does not. Environmental laws, on the other hand, state that those given tenure of a forest area are not permitted to clear more than 20 per cent – in other words, while land laws encourage forests to be cleared in order to gain tenure, forest laws then come into effect which require the protection of forests under tenure which have already been destroyed. In both Cameroon and Indonesia there are conflicts between forest and mining laws – large areas of forested land are being licensed for opencast mining (which naturally requires the forest to be destroyed) despite being nominally protected from clearing under the forest regulations. Indonesia also has conflicts between forestry and agriculture regulations, particularly in relation to oil palm plantation development. Regulatory inconsistency in Indonesia has been compounded by conflicts between central, provincial and district level regulations.

However, positive action is being taken to address this issue since governments have recognized these conflicts and are working to improve the situation. In Brazil, for instance, the government is currently working with stakeholders to find a way to harmonize the forest and land tenure legislation.

### **3.1.3 Checks and balances**

In order to ensure that governments are held accountable and are acting effectively and with probity, appropriate checks and balances are required. These can include provisions for protecting the right of the public to mount legal challenges against forest management decisions or practices and failures by governments to apply forest law. They can also include penalties for corruption by government officials; parliamentary committees (or equivalent) with formal oversight over the national government forest service and associated agencies; and a system through which relevant government departments and agencies are subject to monitoring of their performance, including investigations of allegations of corruption. Such provisions may also include putting in place national independent forest monitoring systems (IFMs).

The focus producer countries presented a mixed picture on the subject of checks and balances. While rights for the public to challenge government decisions in the courts exist in most countries, they are rarely used, and when they are success is rare. Stiff penalties for corruption are included within either forest or other law in all countries, but cases are quite rarely brought, little information is available on them, and, where it is, full penalties are often not applied. The situation regarding oversight of government management of forests is better; most countries have a high-level oversight body, normally some form of parliamentary committee, and in Ghana and Brazil these committees have been quite proactive. Each country's forestry agency is subject to monitoring by one or more monitoring bodies, either internal or external or both. However, in general these bodies have not been seen to perform adequately. Only Cameroon has a national IFM in place.

In Cameroon, rights exist under both forest law and administrative law for the public to challenge government decisions related to forest use, but this right is rarely exercised because the public is not aware of it and because of the costs involved in bringing cases to court. In Ghana, although there is no right specified under forest legislation, the constitution provides the public with the right to challenge government decisions in the courts. This provision was used twice in 2007 by timber companies to challenge decisions of the Forestry Commission, including once where the commission had used its discretion to allow a bid for a harvesting licence from a company which failed to meet pre-qualification requirements.

In Indonesia, as in Ghana, the right of the public to challenge government decisions is not found specifically in forest laws, but rather in broader legislation, in this case a class action mechanism.<sup>20</sup> This law provides communities with the right to bring suits concerning environmental damages that have a negative impact on them. However, in practice, class action suits are often thrown out of court and there

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20 Class action suits are addressed in the Supreme Court's decision PERMA No. 1 of 2002. The class action mechanism has been permitted since Law 23/1997 on the Environment.

Table 3.3: Policy scores for checks and balances

Producer countries <i>Checks and balances in regulations</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Right of public to make legal challenge	2	2	2	2	1						3	2	3	2	n/a
Penalties for staff for corruption	2	2	2	2	2	5	3	5	4	4	2	1	2	2	3
Committee with oversight over forest service	2	2	2	2	1	4	4	4	4	2	4	4	5	3	4
Internal forestry agency audits with public results	1	2	1	2	1	4	3	2	3	4	4	1	2	2	3
Independent forest monitoring system	1	2	1	0	0	3	4	3	n/a	n/a	4	4	n/a	n/a	n/a

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

are no successful cases related to forest management that the project partner is aware of. In Malaysia, the Sabah Forest Enactment includes provisions for the public to challenge decisions, but no equivalent is included in forest laws in Peninsular Malaysia or Sarawak. The study was not able to obtain information on public rights to challenge forest decisions in Brazil.

Penalties for corruption exist in all countries, but are weakly implemented. In Brazil, penalties are severe and a number of recent arrests and imprisonments of corrupt forest officials were noted in the media review, but enforcement weaknesses and a lack of familiarity with the relevant regulations among judges mean full penalties are often not applied. In Cameroon, penalties for government officials exist under both forest law and criminal law, but it appears that implementation of these laws is weak since no case of public prosecution has been found. Strong penalties exist in Ghana but are also rarely applied; instead, internal disciplinary measures are used.<sup>21</sup> However, under a new law on financial losses to the state some highly placed officers and ministers have been imprisoned. This indicates that there are ways to enforce probity among staff. Stiff penalties for government officials exist in Indonesia (not specific to the forestry sector), but are rarely applied.<sup>22</sup> In Malaysia, generic anti-corruption laws exist and include strong penalties, but few logging-related cases have been brought and so it is difficult to judge the extent to which these penalties are effectively applied. In April 2008 the Malaysian Anti-Corruption Agency (ACA) announced that it was giving special attention to illegal logging,<sup>23</sup> and there have been a number of reports of arrests of corrupt forest officials in Peninsular Malaysia in recent years, although none from Sabah or Sarawak.

In Brazil, formal oversight of the forest service is provided by a Commission of the House of Representatives and a standing committee. They have sufficient seniority to deal with the issues appropriately, meet regularly and appear to be proactive. In Ghana a 'Parliamentary Select Committee on Lands and Forestry (PSCLF)' has been in operation since 1993. Actions taken by the committee indicate that it is proactive; it has effectively harmonized annual budgets and has influenced parliament to take a position in requiring timber operators to pay Timber Rights Fees, a significant step in forest policy

21 Ghana's Criminal Code prescribes penalties of imprisonment for 'abuse of office for private benefit'. There are also provisions under Act 547 and LI 1649 enacted in 1997 for custodial sentences for convicted forest officers for corrupt practices without the option of a fine.

22 The situation may improve as a result of the recent strengthening of the national anti-corruption commission, the KPK.

23 'ACA will be more aggressive in combating corruption – DG', *Bernama*, 17 April 2008; the ACA has since been renamed the Malaysian Anti-Corruption Commission (MACC). MACC announced an initiative on illegal logging in early 2009 ('MACC gets tough on environmental criminals', *New Straits Times*, 28 January 2009).

reforms. The project partner notes that the committee has also played a major role in shaping the VPA and spearheading its ratification process through parliament.

In Indonesia, a parliamentary commission has formal oversight over the Ministry of Forestry and associated agencies, but, although powerful, it has not been very effective in improving the response to illegal logging. In Malaysia no forestry-specific parliamentary committee exists on this issue, but the federal Auditor General, the federal parliament's Public Accounts Committee and the state-level public accounts committees sometimes provide an equivalent function. In 2009 the Auditor-General released a report about governance in Sarawak which was highly critical of the forestry authorities.<sup>24</sup>

Of the five countries, two – Cameroon and Indonesia – have internal inspectorates within their forestry agencies. Indonesia's Ministry of Forestry has an 'Inspectorate General' tasked with monitoring corruption, but little information is available with which to judge its effectiveness. The ministry also has an internal performance review system in place, but this is viewed as largely ineffective. All countries also have national-level generic bodies tasked with investigating corruption, and these sometimes examine corruption in the forest agencies. In Ghana, for instance, the Serious Fraud Office and Bureau of National Investigation have occasionally investigated possible corruption cases within the Forestry Commission. Information on individual cases is rare in all countries, making an assessment of implementation difficult. Newspaper articles regarding corruption cases being brought against forest officials do appear relatively often in Brazil and Indonesia, and occasionally in Malaysia. In Cameroon, there are no known cases brought against staff for corruption. This suggests that the internal and external inspectorate functions are not working well.

Of the countries studied, only Cameroon has a national independent monitor of forest law enforcement and governance, in place since 2000. The state of Pará in Brazil has also established a formal system of independent monitoring of forest operations, using remote sensing, with the NGO IMAZON. Although the system is not national and is less well designed than that in Cameroon, it nevertheless encompasses around half of all timber production in the Brazilian Amazon. Although it is unlikely to match the broader form of monitoring seen in Cameroon, independent monitoring of a legality assurance system is being developed in Ghana as part the country's VPA commitment.<sup>25</sup>

### 3.1.4 International trade cooperation

The assessment of trade-related measures taken by producer countries in cooperation with destination countries looked at whether formal trade arrangements had been negotiated with major destination countries which include direct measures to prevent illegal trade, and whether systems had been set up between such countries to enable rapid exchange of information between enforcement agencies about shipments of suspect timber.

Although Memoranda of Understanding (MoUs) relating to illegal logging have been agreed in the past between producer and consumer countries, and the issue mentioned on the sidelines of some free trade agreements, such arrangements do not include formal measures to prevent illegal trade. Although some credit should be given to producer, processing and consumer countries which make statements about tackling illegal logging at international forums and which agree MoUs, such statements and commitments vary in value, and meaningful follow-up actions have often been quite limited. For this reason, the Chatham House policy assessment looked only at the formal trade-related measures noted above.

Thus far the only arrangements which include direct measures are the licensing schemes planned under the EU's FLEGT VPAs (see Box 3.1 in Section 3.4.2). Ghana is the only focus country which at the time of writing had signed such an agreement,<sup>26</sup> and is therefore the only country to score maximum marks for whether a measure is actually in place on this question. At the time of writing, Cameroon had concluded negotiations but had yet to ratify its VPA, while Indonesia and Malaysia were engaged

24 Report of the Malaysian Auditor-General, *Aktiviti Kementerian/Jabatan/Agensi dan Pengurusan Syarikat Kerajaan Negeri Sarawak*, Year 2008, pp. 68–91.

25 All VPAs will require independent monitoring of the systems they implement to assure the legality of their exports to the EU. These aim to audit and report on the functioning of the systems, rather than on specific cases of illegality.

26 The agreement was signed in November 2009.

in formal negotiations; all three countries therefore receive a partial score.<sup>27</sup> It is too early in all cases to judge implementation, since no FLEGT licensing scheme is yet operational. Scores for design are also only possible once the scope is agreed – the VPA with Ghana scores very well, since the licensing scheme will include all types of wood product and will apply to all exports, not only those destined for EU member states.

Table 3.4: Policy scores for international trade cooperation

Producer countries <i>International trade cooperation</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Formalized trade or customs arrangements	0	1	2	1	1	n/a	n/a	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
System for sending and receiving enforcement alerts	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

None of the producer countries has a formal system for exchanging enforcement information with destination countries.<sup>28</sup> Until very recently this was understandable since no consumer countries had legislation in place with which to act against suspect shipments. With the recent Lacey Act amendment and the imminent European Union due diligence requirements (see Section 3.4.2), it will become increasingly important that such arrangements are put in place.

### 3.1.5 Ensuring a balance between supply and demand

A major driver of illegal logging in many countries in the past has been a mismatch between the legal supplies of timber and the demands of the domestic processing industry. All of the producer countries examined have mills with primary processing capacity far in excess of legal log supplies (see Section 5.1.2 for more on wood balance). Theoretically, imports should be able to plug any such gap, but this is often economically unfeasible, even in a zero-tariff environment. One crucial method by which governments can try to prevent a mismatch is by refusing to issue or renew licences for mills which cannot demonstrate that they have access to sufficient supplies of legal logs (from either domestic supplies or reasonably priced imports) for them to operate.

Table 3.5: Policy scores for managing supply and demand

Producer countries <i>Supply and demand of legal timber</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Sawmill permitting system requires evidence of legal supply	0	0	2	2	2	n/a	n/a	n/a	4	4	n/a	n/a	1	1	4

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

<sup>27</sup> Formal negotiations began in Malaysia in January 2007 and in Indonesia in March 2007.

<sup>28</sup> Although Indonesia and Malaysia have made commitments to improve customs cooperation with major trading partners under the East Asia-Pacific FLEG process (see Section 3.3.4).

Our assessment found that while all countries have permitting systems for primary wood-processing facilities, none are using these effectively to ensure demand matches legal supply. The Brazilian and Cameroonian permitting systems do not include any relevant provisions, although it might be argued that other relatively strong control measures (such as independent monitors and sophisticated chain-of-custody systems) should help ensure that only legal logs can enter the mills that do exist. Indonesia and Ghana do have relevant provisions within their mill licensing systems, but these are very poorly implemented in practice. Malaysia was scored relatively well by the project partner on this question, but any systems which exist cannot be fully effective, because primary processing capacity continues to massively exceed legal supply.<sup>29</sup>

### 3.1.6 Tenure and use rights

In order for governments, companies, communities or individuals who own or use the land to be able to manage their property and the resources on it, it is necessary for the country to have in place a range of measures to govern tenure and use. These measures need to ensure that property and use rights and tenure arrangements are clearly defined, documented and secure (including those of indigenous and local communities).

This section of the study assesses the state of tenure and use rights by examining whether property and use rights and tenure arrangements are set out on publicly accessible maps (and/or equivalent geographic information system (GIS) electronic data) and demarcated at ground level; whether there are formalized mechanisms in place for resolving conflicting or overlapping property rights; and whether there are formalized mechanisms in place for accommodating customary rights in law and regulations.

It was not possible to narrowly define the policy questions related to tenure in a standardized way. The chosen questions were therefore open to varied interpretation and as a result it has proved difficult to draw conclusions with complete confidence. While Brazil scores well on many other major headings, it scored poorly on tenure and use rights; Ghana, on the other hand, scored relatively well. Indonesia has all three policies in place, but these are very poorly designed and implemented. The picture is mixed but generally poor in Cameroon and Malaysia. This aspect of government response has proved more intractable than many others, with relatively few improvements in recent years seen in the focus countries. There are also fewer improvements under way.

Table 3.6: Policy scores for tenure and use rights

Producer countries <i>Tenure and use rights</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Property, use rights and tenure arrangements on maps	0	2	2	2	0	n/a	2	4	1	n/a	2	1	3	1	n/a
Formalized mechanisms for resolving property rights	1	2	2	2	1	2	3	4	2	4	n/a	3	4	2	3
Formalized mech's for accommodating customary rights in law	1	1	2	2	2	4	3	4	2	4	n/a	2	4	2	2

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

<sup>29</sup> Sawmill capacity in 2000 was reported as a total of 40 million cubic metres, while annual production is around 22 million cubic metres (WWF Malaysia, *Overview of Forest Law Enforcement in East Malaysia* (WWF Malaysia, 2001)). Some large mills have been mothballed since then, but there is still a very large discrepancy. Chatham House partner data on this question were incomplete, but showed that mills in Peninsular Malaysia were operating at only 25 per cent of capacity in 2007.

Tenure and use rights mechanisms in Brazil have in the past been relatively poor, and this has traditionally been both a major cause of illegal logging and a major impediment to both the government and the private-sector response. The lack of clarity over legal land title, for instance, has held back voluntary private-sector efforts to independently verify legality (see Chapter 4), something which is likely to become an increasingly serious problem in the face of mounting demands in consumer countries for evidence of legality.

The law in Brazil does not require property titles to be set out on publicly accessible maps and demarcated on the ground. Rural Activity Licences (which are required for harvesting) issued to land-owners are set out on maps and required to be demarcated but are often geographically vague and it is common for different licences to overlap (although the extent of this problem varies from state to state within the Amazon). Although the information is publicly available on request for a fee, it is often difficult to obtain and is not available as GIS data. The mechanisms which currently exist for resolving conflicting or overlapping property and use rights are very poorly implemented and only apply to areas greater than 10,000 hectares.

The Brazilian government has recognized the importance of tenure issues in illegal logging and deforestation, however, and is developing or implementing many improvements. A new national computerized system for recording GIS data on property rights is being discussed and new mechanisms for resolving conflicts are under development. Customary tenure rights are formalized within the new 2006 Law for the Management of Public Forests and other recent decrees, although it is too early to assess implementation. Already, a much larger area of the Brazilian Amazon now has a clear tenure system, compared with the situation ten years ago.<sup>30</sup>

The situation regarding tenure and use rights in Cameroon shows need of improvement. Although use and tenure arrangements are required to be set out on publicly accessible maps, the system is poorly designed and very poorly enforced. As is the case with a number of the countries studied, the courts provide a mechanism for resolving conflicts over property, but there is also a 'Consultative Commission on Land' at the level of administrative divisions, and at the village level traditional mediation bodies are also recognized. Some customary rights are included in environmental law.<sup>31</sup> In land tenure law, customary rights can be applied in some circumstances, unless they conflict with statutory law. However, according to the Chatham House project partner, the system is poorly implemented in the field.

The situation in Ghana regarding tenure and use arrangements appears to be somewhat better. Tenure and use arrangements are required to be set out on publicly accessible maps. Although implementation is constrained by a lack of capacity within the relevant agencies, since 2004 a World-Bank-assisted project has been partly addressing this. In Ghana, conflicting property rights are dealt with by the courts, and this mechanism works quite well. The courts in Ghana have also provided a mechanism for formalizing customary rights over land. In a precedent-setting case in 2004, the Supreme Court overturned a formal title and upheld the customary rights over a piece of land. However, in Ghana, forest laws continue to conflict with customary arrangements in several areas.

In Indonesia, although there are relevant requirements across the three areas studied, design and implementation are poor. Although regulations require land use rights to be clearly defined on maps and demarcated on the ground, they do not require these maps to be publicly accessible, and in practice the requirements are rarely followed. Forest concession boundaries, for instance, are supposed to be clarified through a process of formal gazetting, but this rarely occurs. There are no formal mechanisms for resolving conflicts in land classification between forestry and mining, and these can often only be resolved through the direct intervention of the president. A system is being developed by the Ministry of Public Works to solve these conflicts, but it remains to be seen what effect it will have. The Indonesian Ministry of Agriculture issued a regulation in 1999 which allows for customary community land rights to be formally recognized and for any conflicts to be settled, but the mechanisms do not apply to some

30 Personal communication, Beto Verissimo, IMAZON, May 2010.

31 This law holds that in the absence of a written general or specific rule of law on environmental protection, the identified customary norm of given land, accepted as more efficient for environmental protection, shall apply. Article 9(f) of the 1996 Environmental Law.

forms of land tenure, such as *Hak Ulayat* (customary land rights), and are very poorly implemented. A government working group on tenure has been established to examine such problems, but has limited influence on policy.

Requirements exist throughout Malaysia for statutory property rights (i.e. alienated titled land) and logging licence areas to be clearly defined in maps and demarcated on the ground. Although maps of titled land can be obtained on request, this information is not available for the boundaries of logging concessions or traditional and customary land (see Section 3.1.8 for more on poor transparency in Malaysia).

Conflicts over property and use rights are handled by the courts in Malaysia. Indigenous people in Peninsular Malaysia, Sabah and Sarawak have taken authorities and logging firms to court on numerous occasions to resolve conflicts between customary rights and the logging licences issued to companies. Although there is a large backlog of cases, some judgments have been made in favour of claimants. In addition to the civil courts, Village Development and Security Committees (JKKK) also help address conflicts, and in Sabah and Sarawak the Native Court system is also used. Customary rights are enshrined in state and national legislation in Malaysia. Relevant conditions are also included in logging licences and forest management plans. However, these rights are poorly recognized in practice in state-level regulations and policies and are poorly implemented. This is why an increasing number of cases end up before the courts.

### **3.1.7 Timber-tracking systems**

Illegal loggers can only profit if the timber they have taken can also be transported, processed and exported or sold. To try to ensure this does not occur, most producer countries have systems in place which are meant to document legally harvested logs, ensure that revenues are captured on them and also ensure that illegal timber cannot enter the supply chain. In practice, such control systems are often very poor. To be most effective, it is important that the system encompasses the entire supply chain and is well integrated, that tamper-resistant document systems such as barcodes are used, and that the system is computerized, fully networked, and enables reconciliation of timber volumes at different points in the chain. To ensure good governance, it also helps if an independent monitor or agency is employed to implement or oversee the system and that the public is given access to the information.

Overall, the assessment found that focus producer-country timber-tracking regulations were generally weak. Brazil has recently introduced a very impressive and sophisticated system, although it still has teething problems. Cameroon has a system in place, but it is very poorly implemented. Indonesia has a complex system but one which has serious flaws; while the systems currently in use in both Ghana and Malaysia are poorly designed. Major improvements are currently being developed in Indonesia and Ghana, and gradual changes are also being made in Malaysia; the improvements in Indonesia and Ghana are being driven in large part by the requirements of the Legality Assurance Systems to be set up under the voluntary partnership agreements with the EU which these countries have agreed or are currently negotiating.

In Brazil, a highly sophisticated tracking system has recently been designed and implemented, beginning in 2006. The document of forest origin (DOF) system is an internet-based system with a centralized database at IBAMA (the Brazilian Institute of Environment and Natural Resources). Some states in Brazil have developed their own tracking systems, but it is mandatory for them to be integrated with the federal DOF system. The system has extensive reconciliation procedures. Volumes at origin and destination must match; and volumes processed at mills must not exceed volumes authorized in sustainable forest management plans. Likewise, information at state and federal level (IBAMA's National Registry) must match. Tamper-resistant documentation is also used, although, owing to the newness of the system, some improvements are still in the process of being implemented. It has a strong computer system, but again implementation is not yet complete as integration with state systems is ongoing. The computer system is also not without its flaws – in 2008, for instance, it was discovered that logging companies had hacked into the database and adjusted data, allowing 1.7 million cubic metres of illegal logs from the state of Pará to be laundered.<sup>32</sup> Since the system is publicly accessible on the internet it provides a unique level

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32 'Computer hackers are helping illegal loggers destroy the Amazon rainforest!', Mongabay.com, 12 December 2008.

of transparency and enables unofficial independent monitoring to occur. In addition, IMAZON performs independent monitoring in Pará state. As is possible with any new systems of this nature, there have been some difficulties in ensuring it is rolled out everywhere. The elements outlined above indicate that it has been designed well, although it is still open to some fraudulent behaviour, but system managers are working to resolve these issues.<sup>33</sup>

Table 3.7: Policy scores for timber-tracking systems

		Existence (0–2)					Design (0–5)					Implementation (0–5)				
		Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
<b>Producer countries</b> <i>Timber chain of custody, transport and tracking</i>																
System to verify the origin of timber		2	2	2	2	2	4	3	4	2	4	4	3	3	2	4
System design	Independent monitoring procedures	1	2	0	0	0	3	4	n/a	n/a	n/a	4	4	n/a	n/a	n/a
	Reconciliation systems	2	0	2	0	0	4	0	3	n/a	n/a	3	n/a	2	n/a	n/a
	Tamper-resistant documentation procedures	2	2	0	1	2	4	3	n/a	2	2	3	2	n/a	1	1
	Computerized systems	2	2	2	2	1	4	3	2	1	3	3	2	2	0	3

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above.

Full versions are included in Appendix B.

Cameroon's system has a strong formal independent monitoring component,<sup>34</sup> but is weak across its other constituent parts. In 2008 the independent observer concluded that '*in its current configuration, the timber inspection system along transport routes is not uniform and lacks effectiveness*'.<sup>35</sup> The system does not track back to the stump – logs are often first marked many kilometres from the location of harvesting. The system also does not allow for easy reconciliation, and export volumes are rarely checked against licensed production volumes. Although the transport documents include some tamper-proofing measures, they are not sufficient to prevent counterfeiting. More timber transportation permits are often issued to logging companies than are required, and unused permits are not recovered; this has allowed companies to launder illegal logs into the system.<sup>36</sup> Although information on permits issued is theoretically available using the SIGIF computerized information system, checkpoint officials have no access to the data, and erroneous and incomplete data entry has made it unusable.<sup>37</sup> The situation is showing signs of improvement, however. A new and more sophisticated timber-tracking system, including an expanded and improved version of SIGIF, is currently being developed in the context of the VPA being negotiated with the EU.<sup>38</sup>

33 For instance, the DOF system managers are currently working on improving the way volumes authorized in a sustainable forest management plan (SFMP) are linked to the initial DOF.

34 Resource Extraction Monitoring (REM) is currently acting as the Independent Observer of Forest Law Enforcement and Governance, while Swiss company SGS operates a Log Export Verification Programme.

35 Resource Extraction Monitoring, *Independent Monitoring Cameroon: Progress in Tackling Illegal Logging in Cameroon. Annual Report March 2007–March 2008* (REM, 2008).

36 Ibid.

37 Ibid.

38 T. Fometé and P. Cerutti, *Verification in the Forest Sector in Cameroon, Country Case Study 11* (Overseas Development Institute, 2008).

Ghana's tracking system is manual and paper-based, and does not include strong tamper-resistant documentation procedures. It also suffers from delays in verification, leakage and inefficiency. There is no independent monitoring and the current level of computerization is limited. However, actions carried out in the context of the VPA are likely to improve the system across the board: an electronic tracking system, which includes barcodes, will improve reliability of data and levels of transparency over volumes and values. It should also improve the overall efficiency of the system. The electronic system will probably allow for reconciliation and include tamper-resistant documentation procedures. In addition, the computer system will be networked and an independent monitor will be put in place.

Indonesia has a complex document system in place for monitoring timber legality through production, transport, processing and export. Different legal origin documents are issued for logs from different sources, and for timber going for export the whole system is overseen by an industry-run agency known as BRIK,<sup>39</sup> which works closely with officers from customs, the Ministry of Forestry and the Ministry of Trade and includes procedures to reconcile inputs and outputs.<sup>40</sup> Further down the supply chain some computerized methods are used, but the system relies fundamentally on the original legal log origin/transport licence. These are paper licences, and although they are now printed by the national currency authority and recently revamped versions include extra tamper-resistant measures, many more are printed than are needed, and they very often fall into the wrong hands or are corruptly misused. BRIK's processes have also been the subject of criticism and, as an industry-run body, its independence has also been questioned by NGOs.<sup>41</sup> A new online computerized system for managing the legal origin documents is currently being rolled out, but capacity to implement it effectively is lacking. At the moment there is no independent monitoring and the system and data are not accessible to the public for scrutinizing.

The various regions of Malaysia all have timber-tracking systems for logs, but these are partly paper-based and do not generally track back to stump. Additional procedures track movements of processed products but are not well integrated. Implementation of the different log tracking systems in use in the different parts of Malaysia varies; none of the systems are fully computerized and there is no independent monitoring or public access to data. Although the data generated are monitored to ensure revenues are paid, analysis is seldom carried out to try to detect other illegalities, and the current design of the systems limits the extent to which they could be used in this way. In all parts of Malaysia, primary processing mills are required to provide input/output returns; these are currently only analysed as a means of detecting illegality in Peninsular Malaysia, however. Sarawak has piloted a more advanced computerized chain-of-custody system which does go back to the stump, but has yet to roll it out across the state and it is not clear whether it intends to. Until recently the Malaysian authorities have not seen any need to change the existing paper-based mechanisms. Some improvements may be needed to meet the minimum standards for legality assurance systems mooted under the VPA currently under negotiation.

### **3.1.8 Transparency**

Transparency and accountability in governmental processes are considered to be fundamental features of good governance. They allow the actions of those who have authority over or ownership of resources to be scrutinized, thereby minimizing the risk of negligent or corrupt behaviour and providing the public and investors and, for some countries, donors with confidence in the processes.

This section examines whether there are provisions in law requiring public access to a range of specific types of information and data which are key to making the forest sector transparent. The assessment investigates the level of transparency required under law, including whether information is required to be available on request or whether it is published automatically. It also examines the extent to which the provisions are adhered to. The assessment allows for scores for implementation to be given in instances where information is made available by government agencies, despite there being no legal requirement to do so.

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39 Badan Revitalisasi Industri Kehutanan – Forest Industry Revitalization Body.

40 BRIK Presentation at Illegal logging conference, December 2007 – <http://www.goho-wood.jp/event/event5/a5.pdf>.

41 See for instance, 'BRIK – A Flawed Approach', *Down to Earth*, No. 60, February 2004.

Unless the procedures and responsibilities regarding forest management are clear and transparent, it is impossible for the public to know what information to seek or how to interpret it. The assessment therefore began by looking at whether a single document is available in each country which outlines key procedures and responsibilities and associated documentation. Beyond this, the study looked at transparency of information in three broad areas: allocation of rights to harvest (such as the rules for auctioning of licences); documents relating to operation of harvesting licences (such as concession maps and harvesting plans); and information relating to forest crimes (enforcement data).<sup>42</sup> Assessment of implementation of the latter was informed by the study's own attempts to obtain such data and is discussed in that section.

Table 3.8: Policy scores for transparency

Producer countries		Existence (0–2)					Design (0–5)					Implementation (0–5)				
		Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
<i>Transparency</i>																
Institutional – public document describing roles, responsibility and controls		0	0	0	1	0	2	3	3	2	n/a	2	2	2	1	n/a
Resource allocation	Rules for resource allocation processes	2	2	2	1	0						4	4	5	1	n/a
	Dates for allocation processes to be held	2	2	2	0	1	5	5	5	n/a	3	5	5	5	n/a	3
	Results of resource allocation processes	2	2	2	0	0	5	5	1	1	n/a	5	5	3	1	n/a
	Summary data on harvest, processing and int'l trade	2	0	0	0	0	5	n/a	n/a	1	n/a	5	3	n/a	3	5
Resource use	Location of concessions, ownership and contacts	2	2	2	0	1	5	3	3	1	3	5	3	3	1	2
	Concession licences, inventories and harvest plans	2	0	0	0	0	5	n/a	1	n/a	0	5	3	3	1	1
	Environmental & social impact assessments	2	2	2	2	0	5	5	3	5	1	5	5	3	3	3
Enforcement	Data on forest crimes	0	0	0	0	0	1	n/a	n/a	0	1	1	3	3	2	3
	Disposals of confiscated wood	0	0	0	0	0	1	n/a	n/a	1	1	1	3	3	1	3

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

3. Existence and design scores relate to whether written regulations or policies require the relevant information to be transparent; implementation scores indicate whether it actually is transparent. In some instances information is available even where this is not required – in such cases a score is given for implementation even where the score for existence may be zero.

42 Assessment of implementation of transparency requirements regarding enforcement and harvesting data was aided by Chatham House's own experience in trying to obtain such information for assessing other indicators.

Overall, Brazil scored very well on transparency, both on the existence of relevant transparency requirements in law and on their design and implementation. Ghana and Cameroon often lack relevant requirements but provide a lot of information despite this, while transparency in Indonesia and Malaysia is generally very poor. None of the producer countries have produced and published single clear documents outlining all procedures, responsibilities and relevant documents. Copies of licences, maps, and management and harvesting plans relating to areas where logging is permitted are very rarely publicly available, yet are often essential if the public is to be able to identify and alert authorities to cases of illegal logging.

In Brazil, the 2006 Law on the Management of Public Forests was designed around the principle of transparency and includes strong measures, usually requiring information to be published as a matter of course, rather than just accessible on request. These measures have been generally well implemented. Rules, dates and results of resource allocation processes are published on the internet, and laws and regulations also stipulate open access to concession contracts, forest inventories and forest management plans. Since the first logging concessions on public land are only now being implemented, it is difficult to know for certain how well these requirements will be implemented in future, but the early signs are very good.

Though some data are published in IBAMA reports, Brazilian laws do not require enforcement data to be published, and a review for this study found that many key data were inaccessible. It is possible that the new Brazilian Forest Service may choose to publish additional data on the web portal for forest information which is currently under development. Brazilian regulations do not allow for seized timber to be auctioned; it is supposed, instead, to be donated to worthy causes.<sup>43</sup> Data on such disposals are not required to be published and are not easily available.

The situation in Cameroon is more mixed but there are requirements for information to be published in several of the selected areas, and in some of those that are not specified in law information is nevertheless published. As with Brazil, rules for resource allocation processes are required by law to be available and this provision is fully complied with. Dates for such processes and results are required to be published under broad legislation on public tendering and this is fully complied with. Information is published by MINFOF (Ministry of Forestry and Wildlife) through newspapers and the radio.

Locations of logging concessions and details of licensees are required to be available in Cameroon under environmental law and can generally be obtained on request, although requests are sometimes refused. No laws or regulations require logging licences, forest management plans or annual harvesting plans for concessions to be publicly available, although information is sometimes available on request through special authorization from a senior official. Environmental Impact Assessments are required to be made publicly available and they are generally published automatically and easily accessible.

As in Brazil, there is no law requiring publication of enforcement data. The Ministry of Forests does publish some forest crime data and related issues in the newspapers and on its website, as part of the agreement between the government and the independent observer. No data are provided, however, on rates of detection, prosecution, and conviction.

In Ghana the overall level of transparency is similar to that in Cameroon. But the details of which types of information are required to be published differ slightly. Here, rules and dates for resource allocation procedures are required to be published and this is fully complied with.<sup>44</sup> Provisions on the results of these procedures are less clear, but the importance of this issue has been noted and is included in policy reform goals. Since 2003 the Forestry Commission has adopted procedures that are designed to ensure transparency in the management of competitive bidding; both the process and results, at least, between 2003 and 2007 have been displayed electronically for public viewing. Ghanaian law also requires concessions to be gazetted after they have been awarded. This gazette contains information about location,

43 There have been serious problems with disposing of seized timber in this way, partly because it can be difficult to find enough suitable beneficiaries. While prosecutions are ongoing and until a destination is found, the timber remains under the control of the perpetrator of the crime, and it occasionally 'disappears' before it can be disposed of (P. Barreto, M. Mesquita and H. Mercês, *A Destinação dos Bens Apreendidos em Crimes Ambientais na Amazônia* (IMAZON, 2008)).

44 Ref: LI 1649 and LI 1721.

maps and ownership details and is available (albeit for a fee) to the general public. However, owing to the amount of information, these gazettes can be considerably delayed. The law is unclear on the matter of concession contracts and harvesting plans, but they are generally available on request.

As with all other countries studied, there are no requirements in Ghana for enforcement data to be published. Infractions are nevertheless reported on a monthly, yearly and annual basis by the Forestry Commission (though the reliability of the data is questionable – see section below on enforcement data). Similarly, information on confiscated timber is also published.

In Indonesia there are few requirements for transparency, little information is available in the absence of such requirements, and those requirements which do exist are poorly implemented. A general law on the right of the public to access government information was passed in 2008,<sup>45</sup> but it is unclear to what extent this imposes requirements for transparency about specific categories of forest-related information. Forestry-specific transparency requirements are broadly lacking.

There are no regulations requiring transparency of resource allocation procedures or results; although some outcomes are published in newspapers, the information is very limited. A list of all concessions and plantations granted by the Ministry of Forestry can in theory be requested from the Directorate General of Production Development, but there are no provisions in law governing the public availability of information on the location and ownership details of concessions, nor on concession contracts and plans. Although some information on the location of concessions can be accessed via the internet, it is often inaccurate, incomplete and updated irregularly. Annual harvest plans for individual concessions are issued locally and are difficult to access, even for the central Ministry of Forestry in Jakarta. Indonesian regulations do require that environmental impact assessments are made available, although this provision is not fully implemented, partly because the local authorities responsible often lack the necessary resources.

In Malaysia, there appears to be relatively limited transparency in terms of both provisions in law and practice. The matter is somewhat complicated by the differences between states. Only Sabah has comprehensive transparency requirements relating to rules, dates and results of processes for the allocation of rights to harvest, although publication of dates for allocation procedures is also required in Peninsular Malaysia.

Other than a requirement for information about the owner of a harvesting licence to be provided by posting its company name on a signboard at the entrance to the concession, there are no requirements in any part of Malaysia for information about concession maps, locations, ownership or contact details to be made available, and such information is generally difficult to obtain. Most states (with the exception of Sabah) have no requirements for the publication of harvesting plans or forest management plans; such information is generally treated as secret and reaches the public domain only very rarely, such as via court cases regarding indigenous land rights claims. There are no requirements in law for relevant environmental impact assessments to be made publicly available, although these documents are usually accessible in all three parts of Malaysia and occasionally include other relevant information such as concession locations, maps and ownership details.

### ***3.1.9 Allocation and management of rights to harvest***

It is important that the process by which governments allocate rights for timber harvesting on public land is structured in a way that helps to prevent illegal logging. The study examined whether the allocation of such rights involves open, competitive bidding; whether it includes a procedure for excluding inappropriate bidders (such as companies with a record of illegal logging); whether it involves procedures for consulting with and obtaining consent from local communities; and whether the resulting contracts also include measures to try to protect and improve livelihood opportunities for local forest-dependent people.

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45 Law No. 40/1999 on the Press and Law No. 14/2008 on Public Information Transparency give the public right of access to such information.

Table 3.9: Policy scores for allocation and management of rights to harvest

Producer countries <i>Allocation &amp; management of rights to harvest</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
Pre-qualification process to exclude inappropriate bidders	2	2	2	0	2	4	4	4	n/a	4	4	4	3	n/a	4
Competitive award process	2	2	2	2	1	4	4	4	2	n/a	4	4	2	2	1
PIC or stakeholder consultations for local communities	2	2	2	2	0	4	3	5	1	n/a	4	3	4	1	n/a
Measures to protect and develop forest-based livelihood opps	2	2	2	2	2	4	4	3	2	2	4	3	3	2	2

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

Overall, Brazil has recently implemented very good systems, while Cameroon has reasonably strong competitive bidding systems but relatively poor social measures. In Ghana, specifications in the regulations or procedures cover all the areas studied but are in general not implemented adequately. There have been some recent improvements in Indonesia, but measures here and in Malaysia are generally poor, relative to the other countries examined.

Brazil's 2006 Law for the Management of Public Forests includes comprehensive procedures for competitive and transparent bidding for logging licences (including exclusion of inappropriate bidders), and for prior consultation with communities.<sup>46</sup> Although the procedures have only recently been put into practice, indications so far are that they are also being well implemented. In developing these procedures, the Brazilian government worked closely with NGO and industry stakeholders and studied best practice around the world. At the moment it is too soon to say how effective these new procedures might be in further reducing illegal logging in the country, but they certainly serve as a strong example for other countries.

In Cameroon, there are quite comprehensive procedures in place across all areas studied, but with variable levels of implementation. The pre-qualification process and competitive award process appear to work well.<sup>47</sup> The award process involves representatives from the international donor community, civil society and the independent observer, but it does not apply to all logging titles.

Implementation of community consultation procedures and measures to protect communities' livelihood opportunities in Cameroon receives only an average score. Consultations have the format more of information dissemination meetings than platforms for debate among stakeholders. In addition, although gazetting (which includes consultation) should occur before any logging commences, it is reported to be common practice to start logging operations prior to the completion of the gazetting process. The 1994 forest law provides for the protection and development of livelihood measures for local communities in concessions. Articles specifically mention the type of social facilities to be built for the benefit of local people (such as roads, health centres, school, and bridges). But although this system therefore seems to contain some positive features, in practice it is not well implemented.

In Ghana, there also appear to be quite comprehensive procedures in place across the four areas studied. However, many measures are significantly undermined by the regular use of discretionary powers by senior officials which allow these procedures to be ignored. Competitive award processes are

46 Law for the Management of Public Forests (11.284/2006).

47 Pre-qualification procedures are mandated under Article 64 (2, 3, 4) of the 1995 Decree on the Modalities of Forest Regime; The competitive award process is based on Article 47 of the 1994 law; see also Articles 51, 63 and 64 of the 1995 decree.

specified in Ghanaian regulations and procedures,<sup>48</sup> but of 56 ‘Timber Utilization Contracts’ forwarded for parliamentary ratification in 2006 only six had resulted from competitive bidding.

Pre-qualification processes include requirements for a variety of information to be submitted relating to ownership, full payment of forest levies and tax, and statements of timber rights.<sup>49</sup> However, although such information could be used to scrutinize applications, it has not been used for this purpose, at least during 2006–08. In addition, despite the presence of relevant legislation, discretion has at times been exercised in the pre-qualification stage and non-compliant candidates have been admitted.

Community consultation procedures are provided for by regulation in Ghana and are implemented reasonably well.<sup>50</sup> Although measures to protect and develop forest-based livelihood opportunities are not included in concession contracts, they are contained in broader regulations governing licensees. A Resource Management Support Centre (RMSC) within the Forestry Commission has the responsibility to enforce these requirements but has capacity constraints.<sup>51</sup>

In Indonesia, a pre-qualification process is lacking – there are no known screening criteria which prevent inappropriate bidders such as firms run by criminals or known lawbreakers from applying for licences. A competitive award process has been in place since 2004; in 2008 it was changed from a simple ‘auction’ judged only on price to a more sophisticated system similar to that in Brazil, which assesses proposals against a number of criteria.<sup>52</sup> The design of the new process, however, was given a low score by Chatham House’s partners, who considered that the complexities and lack of transparency allow discretion and undermine impartiality. Procedures for consulting communities prior to issuance of logging licences do exist in Indonesia but are very poorly designed and implemented;<sup>53</sup> they certainly do not amount to anything close to ‘prior, informed consent’. Similarly, requirements for licensees to help ensure livelihood opportunities are included in regulations, but these are poorly designed and very poorly implemented and enforced. Benefits can be negotiated away, and site visits and reviews carried out by the project partner indicate that livelihood programmes are only being implemented in some affected villages, and, where they are implemented, they provide uneven benefits.

Pre-qualification procedures for excluding inappropriate bidders exist in all parts of Malaysia and are judged by Chatham House’s partner to be well adhered to. Sabah was judged to have a partially competitive award process for allocating licences to harvest, but Peninsular Malaysia and Sarawak have no such process. Nowhere in Malaysia does the law require stakeholder consultations to be carried out with local communities prior to the issuance of logging licences, although in Peninsular Malaysia most of the permanent forest estate<sup>54</sup> is certified under the national Malaysian Timber Certification System (MTCS), which has a standard that includes requirements for prior informed consent as well as requirements relating to livelihood opportunities. Sabah and Sarawak sometimes include requirements in logging licences for companies to consult with local communities in relation to the details of how logging is carried out (such as locations of logging roads and log ponds) and to help ensure livelihood opportunities, but these requirements are usually vague and seldom adequately implemented and enforced.

### **3.1.10 Institutional and operational factors in law enforcement**

In general this study has found that there is significant scope for improvement in all focus producer countries with regard to policies and regulations designed to improve forest law enforcement – which include dissuasive

48 Regulations (10)–(13) of LI 1721.

49 LI 1721 in Regulation 9(1).

50 LI 1649. Monthly Forest District Office Reports/Forestry Commission, Regional Quarterly Reports.

51 The Resource Management Support Centre (RMSC) uses the Forest Commission’s ‘Manual of Procedures’ (MoP) which includes prescriptions on community rights and livelihood opportunities, access to non-timber forest products for local communities, as well as on environment and ecology.

52 The auction system in effect from 2004 to 2007 was mandated by Ministerial Regulation No. P15/Menhut-II/2004. This regulation was replaced by Ministerial Regulation No. P20/Menhut-II/2007, Ministerial Regulation No. P61/Menhut-II/2007, and in 2008, by Ministerial Regulation No. P12/Menhut-II/2008.

53 Soon after being issued, regulations require timber concessionaires to complete a formal process of gazetting, agreeing boundaries in cooperation with local communities. Studies have shown that only 15 per cent of Indonesia’s timber concessions have been gazetted as required (C. Fay, M. Sirait and A. Kusworo, *Getting the Boundaries Right: Indonesia’s Urgent Need to Redefine its Forest Estate*. Southeast Asia Policy Research Working Paper, No. 25 (World Agroforestry Centre (ICRAF) Southeast Asia, 2001)).

54 Other timber comes from state land in the process of conversion to non-forest use, or from tree plantations.

Table 3.10: Policy scores for institutional and operational factors in law enforcement

		Existence (0–2)					Design (0–5)					Implementation (0–5)				
		Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
<b>Producer countries</b> <i>Institutional &amp; operational factors in law enforcement</i>																
Penalties proportionate and dissuasive							4	3	4	4	4	2	2	1	2	2
Coordination systems in place for different agencies involved in enforcement		2	1	0	1	2	4	2	n/a	1	4	4	1	n/a	n/a	3
Forest officials/law enforcement staff sufficiently resourced							2	2	1	2	2	2	2	2	1	1
Training non-forest	Training judges and prosecutors											2	2	2	2	0
	Training customs officials											2	2	0	2	3
Information gathering tools	Remote sensing systems											5	3	1	0	3
	In-the-field investigatory tools (e.g. NGOs, informants)											4	1	1	3	3
	Material flow analyses (analysing discrepancies)											2	2	2	0	0
	Log-tracking and checkpoint systems (data analysis)											2	2	2	2	4

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

penalties, proper coordination of relevant agencies, sufficient resources and training, and the effective use of available tools for intelligence gathering and analysis. Within the limits of this baseline status, Brazil and Malaysia scored slightly better overall than the other countries, while Ghana did particularly badly.

Enforcement cannot be effective unless sufficiently dissuasive penalties are actually imposed on offenders. While the policy analysis suggested that most countries already have reasonably proportionate and dissuasive maximum penalties in their laws, and in some cases these have recently been raised, implementation of these penalties was considered to be quite poor across the board. Although regulations typically include penalty maxima, they have no equivalent minima, and in many cases there are provisions for offences to be ‘compounded’, whereby an agreement is reached between the offender and the authorities for a payment to be made, in exchange for which prosecution is dropped. In Ghana, for instance, the law allows for assets used in the commitment of an offence (such as chainsaws, trucks and bulldozers) to be forfeited, but judges very rarely order this to occur. More often than not, this means that where successful cases are eventually brought the penalties actually levied are not proportionate or dissuasive. In Cameroon, the independent observer noted that fines are often reduced by as much as 60 per cent in out-of-court settlements; consequently, while the sanctions prescribed by law may be dissuasive on paper, in practice they are not, since the reductions can make illegality financially profitable for loggers.<sup>55</sup>

The analysis also showed that in most of the producer countries, the regulations and procedures do not ensure that the monetary penalties defined in law keep up with inflation. Maximum fines are usually defined in core legislation (which is rarely reviewed) in terms of actual amounts. In Cameroon, for instance, such penalty maxima have not been updated since 1994. It may be useful to consider using a system, currently prevalent in Europe, of referring to levels defined in a generic schedule which can be easily updated. Where penalties are defined in terms of timber values (such as a fine for illegally harvesting a given volume of trees being defined as a certain multiple of the value of the logs produced, with standard values given for different species), these are also often not kept up to date.

Familiarity with forest-related issues can improve the judiciary's ability to understand and treat forest cases properly. Similarly, training customs officials in licensing arrangements for timber products will facilitate their apprehending illegal shipments. However, this assessment found that there is generally a low level of training for judges across the countries studied (particularly in Malaysia), and customs agencies are not sufficiently trained or kept up to date (especially in Ghana).

In Indonesia a lack of information created apparent initial confusion among customs officials when the ban on exports of rough sawn timber was introduced in 2004. Some specific training on forest laws is now provided to judges and prosecutors in Indonesia, though it is infrequent.<sup>56</sup>

In Brazil, relevant agencies involved in enforcement were judged to be coordinating well (see information in the section on enforcement data below on inter-agency operations), though it is not clear whether formal systems exist that ensure this. Some relevant systems do seem to exist in each of the major regions of Malaysia, although it is unclear how well connected they are or whether all relevant agencies are represented. In Indonesia, while there is an agreement in place for coordination between the Ministry of Forestry, the police, the Attorney General's office, the judiciary and the customs department, there is no systematic cooperation among these agencies and no formal procedures have been developed. No formal systems exist in either Cameroon or Ghana and coordination is considered to be very poor in both countries.

In the view of country partners, the resources<sup>57</sup> available for forest officials and law enforcement personnel to detect and suppress forest crime remain insufficient in all countries covered by this assessment. The example of Indonesia, however, where human resources within the Ministry of Forestry have actually been falling even as enforcement has improved (see Figure 3.3), demonstrates that reducing corruption and using existing resources more effectively can in some instances be more important than increasing capacity.

If any enforcement resources are to be used effectively, it is essential that producer-country governments make good use of intelligence analysis tools to identify possible illegalities and to help in targeting fieldwork. These include remote sensing systems, in-the-field investigatory tools (such as confidential diagnostic surveys, informants and NGOs), and data analyses (such as comparing legal log inputs and timber product outputs for major mills, examining discrepancies in import/export data, and analysing patterns in data from log-tracking systems).

Overall this study has found that producer countries make very limited use of these methods. In Brazil, systems for using satellite imagery for identifying illegal logging are now well advanced. Malaysia's National Task Force on Illegal Logging instructed the various state forestry authorities to establish remote sensing systems for detecting illegal logging in 2006.<sup>58</sup> Peninsular Malaysia's system was launched in 2008, and Sarawak was reported to be developing a system in 2007,<sup>59</sup> although it is unclear if it has become operational. In Cameroon the methodology has been used by the independent monitor, although it is not in systematic use by the authorities themselves. In Ghana remote sensing is only used very rarely and capacity is low; in Indonesia, by contrast, the authorities have plentiful remote sensing data and capacity but appear to have no appetite to use these for enforcement purposes.

56 A training programme was facilitated by USAID in North Sumatra in 2007: <http://hariansib.com/2007/07/25/as-latih-32-jaksasumbagut-tangani-kasus-illegal-logging-terorisme-pencucian-uang>.

57 Relevant resources include budgets; numbers of staff; communications; transport; equipment; salaries; as well as training in understanding of regulatory framework and knowledge of techniques for monitoring and enforcement.

58 Personal communications between Chatham House project partner (TRAFFIC) and Malaysian government officials.

59 Sarawak Timber Industry Development Corporation (STIDC), Annual Report 2007 (STIDC, 2007) p. 9.

Little use of is made of material flow analyses in Brazil, Cameroon and Ghana, and no use appears to have been made of this tool in Malaysia or Indonesia. However, such analyses may be employed in the future in Brazil as a result of implementing the DOF system. In Indonesia, while the potential has been shown for forest officials to interrogate log shipment documents in order to detect possible smuggling, the Ministry of Forestry does not do so.<sup>60</sup> Although all the countries studied have chain-of-custody systems of some kind, none of them appear to analyse the data systematically in order to identify illegal activities. But again, in Brazil, the new computerized DOF chain-of-custody system was designed to allow this kind of analysis and, once it is fully implemented, the system could be used in this way.

### Enforcement data

As well as looking at enforcement capacity, this study also attempted to gather baseline and trend data on enforcement activities.<sup>61</sup> Partners were asked to source data for the two most recent years.

Although commonly used, data on enforcement (such as amounts of timber seized or fines levied) can be quite poor indicators of trends in levels of illegal logging or enforcement response. While an increase in seizures could indicate that illegal logging is being reduced by greater enforcement effectiveness, it could conversely be a sign that more illegal logging is taking place (with more illegal timber available to be seized). Indeed, there are cases where seizure volumes have increased as a result of growing corruption among local officials, whereby timber is seized and then auctioned back to the original owner as a means of capturing a cut. This pattern resulted in record seizure figures in the Brazilian state of Pará in 2000, for instance. Of much greater potential usefulness are ratio data, such as the percentage of illegal logging cases successfully prosecuted or the percentage of fines actually collected. Conclusions can also be drawn with greater confidence where trends in enforcement data are supported by information from other indicators (such as perception surveys and wood-balance measures of illegal logging, and reviews of relevant policies, as well as anecdotal information).

Some baseline or trend data are available in most countries, but the information is rarely comprehensive and the most useful forms of data with which to calculate ratios are very often missing. More systematic data collection and dissemination by enforcement agencies would aid monitoring and improve enforcement efforts. Overall, the data support the conclusion that there have been significant improvements in enforcement response in Brazil, Cameroon and Indonesia in recent years and that these have led to reductions in illegal logging (see Chapter 5); they also show, however, that while detection has improved in these countries, follow-up (such as prosecutions, convictions, and issuance and collection of fines) remains poor.

Some relevant information for Brazil is provided in statistical reports published by IBAMA, but the most useful data are absent. IBAMA does collect relevant data, and occasionally information reaches the public domain via seminar presentations and media articles, but transparency is relatively poor. Data are also spread over a number of different departments and agencies. Some relevant data are included on IBAMA's internal SICAFI information system, and are intended to be made available as part of the publicly accessible, comprehensive, internet-based forest information portal currently under development.

While the number of individual fines issued by IBAMA remained much the same at around 6,200 per year between 2003 and 2007, the total value increased more than eightfold over the period, from less than US\$100 million to more than US\$800 million (see Figure 3.2). This reflects a change in tactics, with the agency increasingly focusing on major, coordinated enforcement operations against the largest companies.

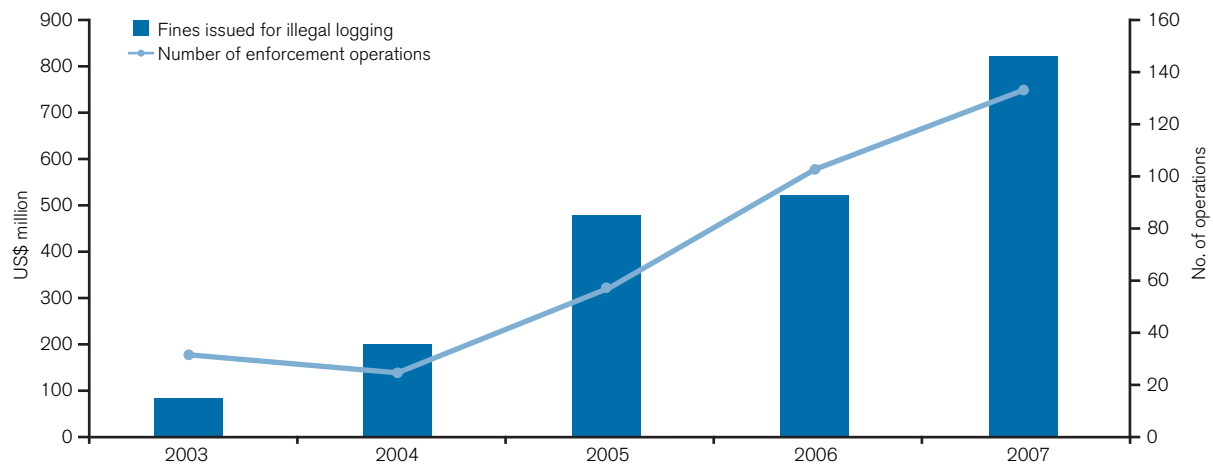
60 D. W. Brown and F. Stolle, *Bridging the Information Gap: Combating Illegal Logging in Indonesia* (World Resources Institute, 2009).

61 Data sought by this project included total volume of timber seized during year (cubic metres); total value of timber seized during year; number of fines issued during year; details of largest five illegal logging cases during year (volume, value, location, typology, etc.); total value of fines issued during year; total value of fines collected during year; numbers of illegal logging cases initiated during year; numbers of illegal logging cases prosecuted/completed during year; numbers of custodial sentences issued during year; and numbers of mill or harvesting licences revoked for illegal logging during year.

The available data also suggest a recent increase in seizures: between 2003 and 2006, in the Amazon region, IBAMA seized an average of 202,000 cubic metres of logs and sawn timber per year,<sup>62</sup> while seizures during two major enforcement operations in the first half of 2008 suggest an increased annualized rate of 252,000 cubic metres.<sup>63</sup> While impressive, this still represents at most around 5 per cent of estimated illegal timber production.<sup>64</sup> The increase in fines and seizures reflects a massive increase in the resources expended on enforcement by relevant agencies in Brazil in recent years. In 2003 the Brazilian government carried out 32 enforcement operations involving around 400 officers mostly from IBAMA; in 2007 they conducted 134 operations involving more than 3,000 officers, including large numbers from the police and army.<sup>65</sup>

While the value of fines issued has been increasing dramatically, collection rates have traditionally been very poor. Information on individual illegal logging cases is accessible on the internet through websites operated by the Federal Court, but the data are not aggregated and so cannot easily be analysed. An analysis by the NGO IMAZON of a sample of cases in the state of Pará between 2001 and 2004, however, found that only 2.5 per cent of fines issued had been collected, while at the time of the study in 2008 the local IBAMA office in Pará had 1,025 outstanding illegal logging cases, of which 93 per cent were at least two years old, and some were more than twenty years old.<sup>66</sup> It appears that this poor record may be due to the fact that the resources expended on case management and prosecution have not kept up with those spent on field enforcement.

Figure 3.2: Enforcement data for Brazil, 2003–07



Source: Fine data – IBAMA (SICAFI system, query on 24 January 2008), Brazilian real values converted to US\$ using exchange rates on 31 December of relevant year; Enforcement operation data – IBAMA, 2008 statistical report, *IBAMA em números*.

In Cameroon, data are available both directly from government reports and from the work of the independent observer. Although detailed time-series data are not available, the independent observer has noted a number of improvements in recent years, including an increase in the percentage of areas where logging is licensed which are inspected each year (from 26 per cent in 2006 to 45 per cent in 2007), and a reduction in the percentage of such areas where infractions are detected during inspections (from 22 per cent during 2001–04 to 4.5 per cent during 2005–07).

While such data indicate that the amount of illegal logging in Cameroon has fallen dramatically (something supported by other indicators – see Chapter 5), performance in terms of prosecuting those

62 Based on data presented by the IBAMA Director for the Protection of the Environment during a national seminar in August 2007.

63 IBAMA seminar presentation, 2008.

64 See wood-balance estimates of illegal timber production in Brazil in Section 5.1.3. Using wood-balance estimates based on IBGE data suggests a possible seizure rate of 4.8 per cent, while using those based on DOF data suggests a rate of 1.7 per cent.

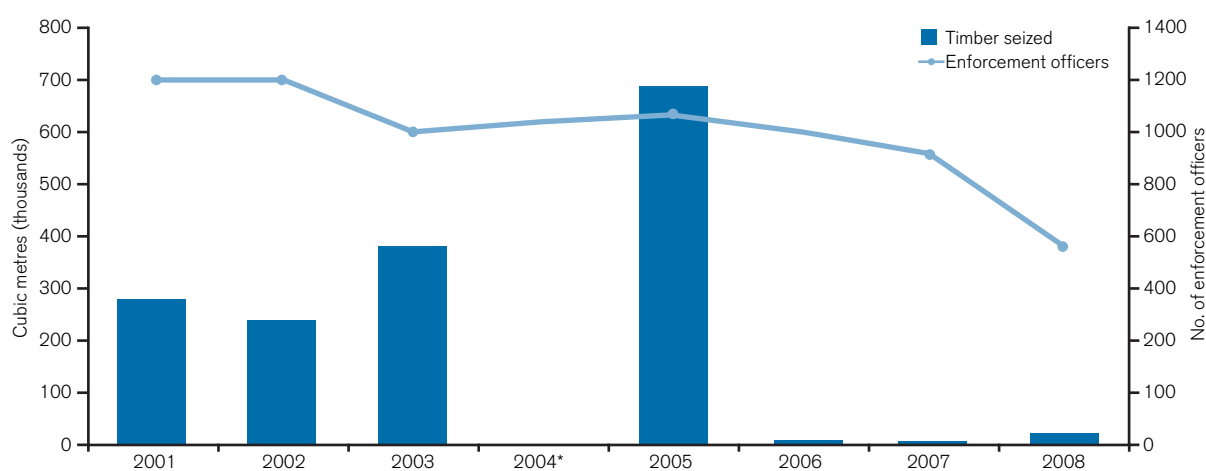
65 IBAMA, 2008 statistical report, *IBAMA em números*.

66 Barreto et al., *A Destinação*.

cases which are identified remains quite poor. Only 39 per cent of fines due were collected in the year to February 2008, although this did represent an improvement on the rates seen in 2006 and earlier, which were typically less than 20 per cent.<sup>67</sup> MINFOF's own information, meanwhile, shows that only 7 per cent of cases went to court in 2007 – although this figure may be an underestimate resulting partly from poor data management.<sup>68</sup>

As Figure 3.3 shows, in Indonesia, Ministry of Forestry data show seizure volumes increasing almost threefold between 2002 and 2005, before falling back dramatically in 2006 and remaining at a low level since then; but the changes do not correlate with the number of enforcement officers within the ministry, which has been falling steadily for some years.<sup>69</sup> Although changes in data collection methods may be a factor, other indicators (including wood-balance analysis – Section 5.1.3) and anecdotal information suggest that the increase in seizures up to 2005 was the result of increased enforcement effectiveness, while the fall since may reflect a significant decrease in illegal logging.

Figure 3.3: Indonesian Ministry of Forestry enforcement data, 2001–08



Source: Ministry of Forestry annual Forestry Statistics of Indonesia reports; note that seizure volume figures are for logs and sawn timber combined, and are not converted to roundwood equivalent.

\*Note: Seizure volume data for 2004 were unavailable.

Other data are only available for the most recent years and are more difficult to interpret. The number of illegal logging cases reported by the Ministry of Forestry in 2007 was 476 – a 73 per cent decrease on the previous year. As well as reflecting a continued drop in illegal logging activity, this reduction in cases may also stem in part from an apparent reduction in enforcement effort following a surge during 2005–06. Indonesia's National Police appear to be playing an increasingly important role in supporting the efforts of the Forestry Ministry in detecting and preventing illegal logging: press reports indicate that the police confiscated more than 900,000 cubic metres of timber in the first seven months of 2007 – more than the Ministry of Forestry reported as having been seized during the whole of the peak year of 2005. It is uncertain how reliable these figures are, however, and unfortunately comparable data for earlier periods are not available. If the police figures are accurate, comparison with wood-balance estimates of illegal logging suggests that the seizure rate is now very high, with around one in ten illegal logs being caught.

67 MINFOF's own published data for 2007 indicate a much lower fine collection rate (just 1 per cent) than that recorded by the independent observer. The difference is thought to stem from poor reporting and data and information management within MINFOF.

68 Based on the fact that MINFOF data for fines collected is much lower than that recorded by the independent observer (see footnote above).

69 This fall may have been counterbalanced to some extent by the increased involvement of the police and military in forest law enforcement. No figures are available with which to measure this, however.

Table 3.11 : Illegal logging cases and conviction rates in Indonesia, 2007

Cases	Total <sup>a</sup>	
National Police, 2007 <sup>b</sup>	No. of cases of illegal logging	1,439
	No. of suspects	1,717
	No. of these cases that led to convictions	350
	Percentage of cases resulting in convictions	24%
Ministry of Forestry, 2007 <sup>c</sup>	No. of cases of illegal logging	467
	No. of cases under investigation	353
	No. of cases progressing to court	179
	Percentage of investigated cases going to court	51%
	No. of these cases that led to convictions	132
	Percentage of court cases resulting in convictions	74%
	Percentage of illegal logging cases resulting in convictions	28%

Note: It is possible that many cases were completed the following year, in which case the percentages may underestimate success rates. In the absence of time-series data, this is difficult to assess.

a. Since the MoF and National Police cases are both from 2007 there may be some double-counting of the number of cases reported. The number reported by the police is likely to be more inclusive (and much larger) than that reported by MoF, as eventually cases from MoF would be handed over to the police. As an overall indicator, the police numbers are therefore more meaningful. The MoF numbers are still a useful indicator, as they may reveal changes in the politics of enforcement in the future.

b. *Republika*, 2 January 2008; *Koran Tempo*, 18 September 2007

c. Directorate-General of Forest Protection and Nature Conservation (PHKA), 'Results from forest security – illegal logging 2006 and 2007', 2008, unpublished.

As in Brazil, while data appear to show an improved response in terms of field enforcement – detection and seizure – follow-up remains poor. In 2007, only 24 per cent of National Police cases and only 28 per cent of Ministry of Forestry cases resulted in convictions (see Table 3.11). Since no data for conviction rates for previous years were available, trends could not be ascertained. No data could be obtained on the payment of fines.<sup>70</sup>

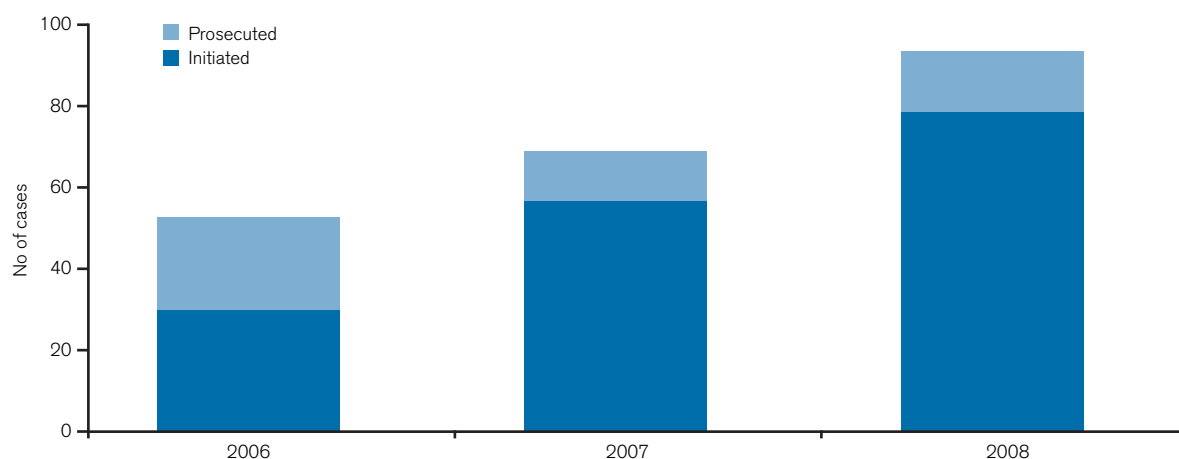
In Ghana relevant enforcement data are available neither centrally nor in published reports, but were manually collected and collated from individual regional forestry offices for this study.

The analysis shows that the number of fines issued for illegal logging increased by 60 per cent between 2006 and 2008, while volumes of timber seized also rose, from 78,500 cubic metres in 2006 to 98,500 cubic metres in 2008. Given the mixed and uncertain picture from the perceptions survey and wood-balance analysis, it is difficult to ascertain to what extent this increase can be attributed to improved enforcement or increased illegal logging. Although more fines are being issued and more timber seized, the value of the timber seized has actually fallen, as has the total value of the fines issued. The reduced seizure values are due to an increased proportion of lower-value species and to the growth in importance of chainsaw lumber produced by small-scale loggers for the domestic market as a proportion of overall wood seized.

The analysis shows that while the number of illegal logging cases initiated in the courts increased dramatically from thirty in 2006 to almost eighty in 2008, prosecutions have failed to keep up (see Figure 3.4), as cases are backing up in the face of an overloaded judicial system, being rejected or being dropped. The problems in processing cases are due in part to lack of clarity in the systems of forest management, and also a lack of capacity within the Forestry Commission to contest legal arguments. Disputes over compartment boundaries or technical requirements often cause the commission to lose cases. Faced with these problems, officials are increasingly using discretionary powers to dispose of cases (such as through compounding procedures). This may be one reason why average fines have fallen by a third over the period.

<sup>70</sup> Reportedly, MoF's Directorate General of Production Forestry (Bina Produksi Kehutanan, BPK) collects some data relating to fines issued by the forestry police, but these were not made available.

Figure 3.4: Illegal logging cases in Ghanaian courts, 2006–08



Source: Data collected and collated from Forestry Commission regional offices by Chatham House partner.

As in Cameroon, it is difficult to assess trends in ratios of fines received against fines due because sums due in one year may be recorded as received in following years. Nevertheless, the data do demonstrate that the collection rate is generally very high, averaging around 94 per cent between 2006 and 2008. Fines issued for illegal logging in Ghana are very low, typically only around 5–7 per cent of the value of the timber seized, and are actually falling in real terms since they are not being amended to keep track with depreciation. Overall, while the data suggest enforcement effort has improved in Ghana in recent years, small and depreciating fines as well as difficulties with prosecuting cases are hampering the effectiveness of this response. There is a risk that field officers will become disillusioned as a result.

In Malaysia, enforcement data are collected and published separately by the forestry departments in Peninsular Malaysia, Sabah and Sarawak. Data availability is best for Sabah and poorest for Sarawak, where it has worsened in recent years.<sup>71</sup> The volume and number of seizures and cases in Malaysia are much smaller than in the other producer countries examined. Less than 80,000 cubic metres of timber were seized in 2007, a tiny proportion of the overall licensed production from natural forests of around 22 million cubic metres.

Numbers of cases and volumes of timber seized were much smaller in Peninsular Malaysia than in Sabah and Sarawak (see Figure 3.5), perhaps reflecting a relatively lower rate of illegal logging. Between 2006 and 2008, the number of illegal logging cases detected in Sarawak increased by more than 150 per cent. A small increase was also seen in Sabah in 2007 and in Peninsular Malaysia in 2008 (not shown in Figure 3.5).<sup>72</sup> The only state for which longer time-series data were available is Sabah, where no clear trend is discernible, although cases, seizures and fines peaked in 2002/2003 and have been somewhat lower since. It is possible that the increases in cases and seizures may be one driver behind the establishment of the National Task Force on Illegal Logging circa 2008; however, the task force may also have helped create the more recent increases in seizures by improving enforcement, including the increased use of remote sensing to detect illegalities.

Malaysia has much higher rates of successful prosecution than other producer countries examined, with around 60–70 per cent of cases resulting in convictions.<sup>73</sup> Rates have been falling in recent years, however, in both Sabah (from 85 per cent in 2004 to 57 per cent in 2007) and Peninsular Malaysia (from

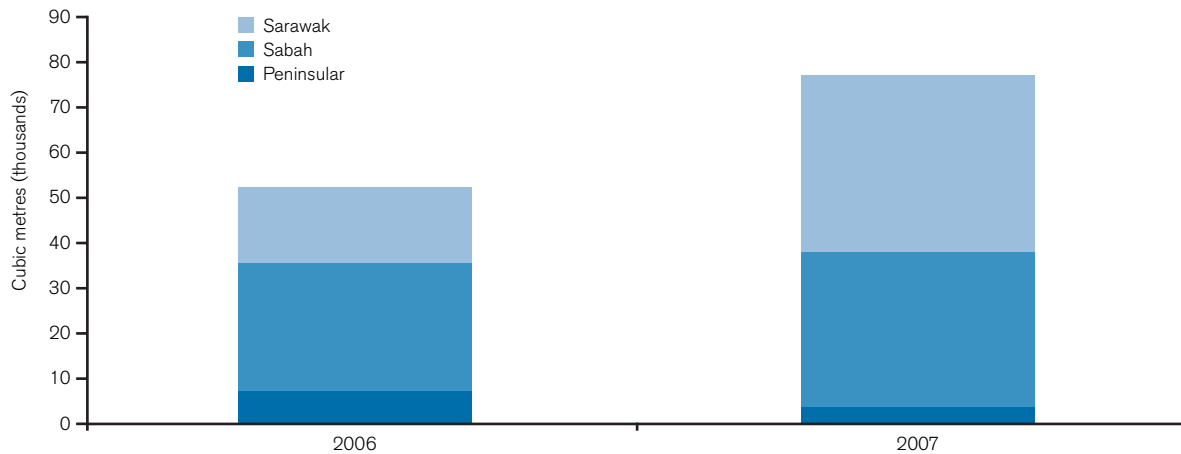
71 Annual reports with some relevant data used to be published by the Sarawak Forestry Department, but have been discontinued. Data used here were obtained from a recent report by the federal Auditor General's office.

72 The Deputy Minister of Natural Resources and Environment in Peninsular Malaysia recently noted that the ministry had detected a rise in illegal logging between 2006 and 2008 ('Four forestry officers caught by MACC – Kurup', *Bemama*, 14 October 2009).

73 Based on data from Peninsular Malaysia and Sabah – no data were available for Sarawak.

88 per cent in 2006 to 67 per cent in 2008). The only state for which data are available on fines issued for illegal logging is Sabah, and no data are available with which to assess the rate of collection in any part of the country.

Figure 3.5: Timber seizures in Malaysia, 2006–07



Sources: Sabah and Peninsular Malaysia Forestry Department Annual Reports; Malaysian Auditor General's report on forestry in Sarawak, 2009.

### 3.1.11 Information management

The study examined whether each country has an up-to-date and accurate information management system in place through which relevant government agencies can access data related to forest enforcement and management. This would facilitate the government's management of resources, and reduce opportunities for illicit activities. Such a system could include elements such as forest inventories; remote sensing imagery and harvest permits and licences; forest management plans; a centralized repository of maps; transportation documents; and processing licences and records. It should also allow agencies to share information with one another.

In general, focus producer countries did very poorly on this subject, although Brazil, Cameroon, Ghana and Indonesia are all working to develop new and improved systems. Poor data management and transparency were demonstrated during the project, since many pieces of key data needed to assess various indicators were unavailable or unreliable. If producer countries are to be able to effectively prevent, detect and suppress illegal logging, it is essential that information management is improved.

In Brazil, a comprehensive, sophisticated and synthesized, computerized information management system is under development. This will incorporate an extensive range of forest-related information, including, *inter alia*, logging contracts, maps, inventories, forest management plans, DOF transport permits, remote sensing information, data on payment of fees, and enforcement-related information. The system is designed to be accessible to the public via the internet, and a special department at the new Brazilian Forest Service has been tasked with its development and implementation. A new and apparently quite comprehensive system is also under development in Ghana, prompted by the FLEGT VPA, although it is too early to provide scores for design and implementation (a Forest Information Management (FIM) system set up in 2005 looks primarily at financial information, so the scores given are for the new system being developed which is much more comprehensive).

In Indonesia, the same problem persists as with the non-use of available tools for identifying illegal activities (see Section 3.1.10): although the Ministry of Forestry has the capacity to develop, implement and operate such an information management system, this has not occurred. The project partner notes that one reason for this may be that few members of staff in the ministry appreciate how such a system (and the sharing of such information) could contribute to better governance.

Table 3.12: Policy scores for information management

Producer countries	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
<i>Information and data management</i>															
Up-to-date, accurate information management system	1	2	1	0	1	4	2	n/a	n/a	3	n/a	0	n/a	n/a	3

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above.

Full versions are included in Appendix B.

In Cameroon, a Computerized Forest Information Management System (SIGIF) for collating information and data related to forest management and control has been in place inside the forest administration since 1998, and this was complemented in 2005 by a Computerized Forest Infractions and Litigation Management System (SIGICOF) for tracking illegal logging cases. The systems do not include all forms of relevant information and have been poorly implemented, however, and are not linked with other relevant ministries, such as Justice or Finance. REM, Cameroon's independent observer, has noted that incomplete and erroneous data entered into SIGIF have made it dysfunctional and unusable.<sup>74</sup> An expanded and improved version of SIGIF is currently being developed within the context of the voluntary partnership agreement with the EU.

In Malaysia, the three regions of Peninsular Malaysia, Sabah and Sarawak all have some form of computerized information management system, but these are not integrated nationally and none are of the same level of sophistication as the system being developed in Brazil.

### 3.1.12 Financial management

Loss of revenue due from timber harvest rights can be a significant problem in many producer countries. This can be addressed by maintaining systems to monitor revenue collected from utilization of forest resources against revenue owed, as well as procedures for investigating discrepancies. In addition, regular financial audits of the forest administration (with findings which are publicly available) can help promote accountability, identify problems and ensure action is taken to address them.

Malaysia has a well-implemented system for investigating discrepancies in revenue collection, since the government accords a high level of priority to this aspect of the forest sector. In Cameroon, the independent observer noted in 2007 the failure of the authorities to cross-check data on declared volumes (included in the SIGIF system operated by MINFOF) with data on taxed volumes (monitored by the Forestry Revenue Programme – PSRF – in the Ministry of Finance) in order to identify tax evasion; a year later this had not improved (see discussion below on data availability).<sup>75</sup> Neither Indonesia nor Brazil has such a system, although in Brazil the establishment of one may become part of government strategy as the forest information system is developed and expanded.

Financial audits of the forest administration are carried out in all countries except Brazil. The quality of design and implementation of these audits varies, however. Cameroon and Malaysia are reported by the project partners to have relatively high levels of implementation, while in Ghana it is considered low. In Indonesia the audits were scored poorly on both design and implementation. The National Audit Board (BPK) carries out an annual audit and gives follow-up recommendations to the Ministry of Forestry. Forest administration audits occur but the full findings are not publicly available.<sup>76</sup> In Cameroon, some economic and fiscal audits of the forestry sector have taken place, but the latest results from 2006 have

74 REM, *Progress* (2008).

75 Ibid.

76 Some investigation results are published on a website, but the information is incomplete and not up to date: [www.bpk.go.id/doc/ikhtisar/2005ii/APBN/Bab14-Dephut.pdf](http://www.bpk.go.id/doc/ikhtisar/2005ii/APBN/Bab14-Dephut.pdf).

Table 3.13: Policy scores for financial management

Producer countries <i>Financial management</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia	Brazil	Cameroon	Ghana	Indonesia	Malaysia
System for monitoring revenue due/received & investigate discrepancies	1	2	2	0	2	n/a	3	3	n/a	5	n/a	3	3	n/a	5
Audit of the forest administration	0	2	2	2	2	n/a	3	4	2	4	n/a	4	2	2	4

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above.

Full versions are included in Appendix B.

not been validated by the ministry and are thus not publicly available.<sup>77</sup> In Ghana, although the scope of the audit can be comprehensive, its regularity is low owing to a lack of capacity. Audit reports are not publicized.

### Revenue capture data

In addition to analysing financial management through the assessment of relevant policies, the study also sought to collect revenue-related data. While actual amounts of revenue will naturally vary from country to country, some indication of the amount of tax avoidance (a form of illegal logging) and some measure of the effectiveness of financial management can potentially be garnered from examining ratio data – including the ratio of amounts invoiced against amounts due (based on actual harvest volumes recorded), and the ratio of amounts paid against amounts invoiced.

In general, the necessary data were almost never available in focus producer countries to calculate these ratios reliably and see how they might have changed over time. In Brazil, it seems the institutional capacity is not yet sufficient to collate and make available this information, although some detailed data may also be considered confidential. According to environment agency IBAMA, more data on the total amount of fees collected by the different government bodies will be made available in future. In Malaysia, even though such information is probably collated by the government, there is no public access to disaggregated forest-sector-level data. Even if data were available they might not provide a useful indicator: the project partner considered it very likely that rates would be very close to 100 per cent, since systems were quite advanced and enforcement was heavily focused on maximizing royalty payments.

Data with which to calculate ratios were available for Cameroon, Ghana and Indonesia, but in most cases the raw data were too poor for confident or useful conclusions to be drawn from the results. In Indonesia, the calculation appears to show that more revenue was collected than was actually owed, a finding which does not appear to be due to collection of overdue payments from earlier years but instead seems to stem from decentralization and data-sharing problems between central, provincial and district level authorities and between different departments within the Ministry of Forestry. In Cameroon, analysis of available data suggests that in 2007 almost 98 per cent of revenues due were collected, which seems to indicate that the revenue recovery system is largely effective (see Table 3.14). There are numerous problems with the raw data, however. Revenue is collected and recorded by the Ministry of Finance, while data on licensed harvest volumes are held by the Ministry of Forests, and cooperation and data-sharing between the two has generally been poor. In several cases, for instance, the Ministry of Finance is not aware of some of the harvesting licences issued by the Ministry of Forests, and thus those titles are

<sup>77</sup> In 2005, an audit of the Forestry Revenue Programme (Programme de Sécurisation des Recettes Forestières, PSRF) took place, but was not widely disseminated. Internal controls do take place at the Ministry of Finance, but are not made public.

not included in estimations by the Ministry of Finance. It is therefore likely that the difference between what should be paid and what is paid is actually more than the available data suggest. It is possible that impending implementation of a legality assurance system as part of the FLEGT VPA may lead to increased data exchange and the interconnection of recording systems between different government bodies, and allow more reliable assessment of revenue capture to be carried out in future.

Table 3.14: Estimated revenue collection rate in Cameroon, 2007

Tax	Due (est) (US\$ m)	Paid (US\$ m)
RFA	33.3	32.9
TA	12.0	12.6
SET	8.6	7.2
ED	No estimation made	6.5
ES	No estimation made	1.8
Total (not including ED and ES)	53.9	52.7
Difference in revenue owed to collected (excluding ED and ES)	1.2	
Percentage of revenue uncollected	2.1%	

Note: US\$ figures calculated from CFA at 2007 exchange rates.

Source: Analysis by Chatham House partner. The main taxes are the annual forestry royalty (Redevance Forestière Annuelle, RFA), the felling tax/taxe d'abattage (TA) (on the volume of the harvested timber), the sawmill-entry tax (SET) on the volume entering the sawmill to be processed, and export taxes, which are made up of exit duties (ED) and the export surtax (ES) on the exported volumes of logs. Estimations for the ED and ES are unavailable and are therefore not included in the percentage-recovered calculation.

Before 2005, Ghana used an antiquated, manual stumpage-billing system, which enabled timber operators to accrue very large stumpage arrears with the government, and, as a consequence, in 2003 the revenue collection rate stood at just 60 per cent. However, after some US\$1.5 million was invested in a Forest Information Management (FIM) system in 2005, the collection rate rose to 100 per cent, and has since remained at that level.<sup>78</sup> This provides a demonstration of the benefits that can be gained from investment in adequate financial management systems. In order to improve the revenue collection and reporting system further, the Forestry Commission is planning to collect stumpage fees at export and carry out reconciliation of property mark accounts. The VPA process should also promote further strengthening of monitoring.

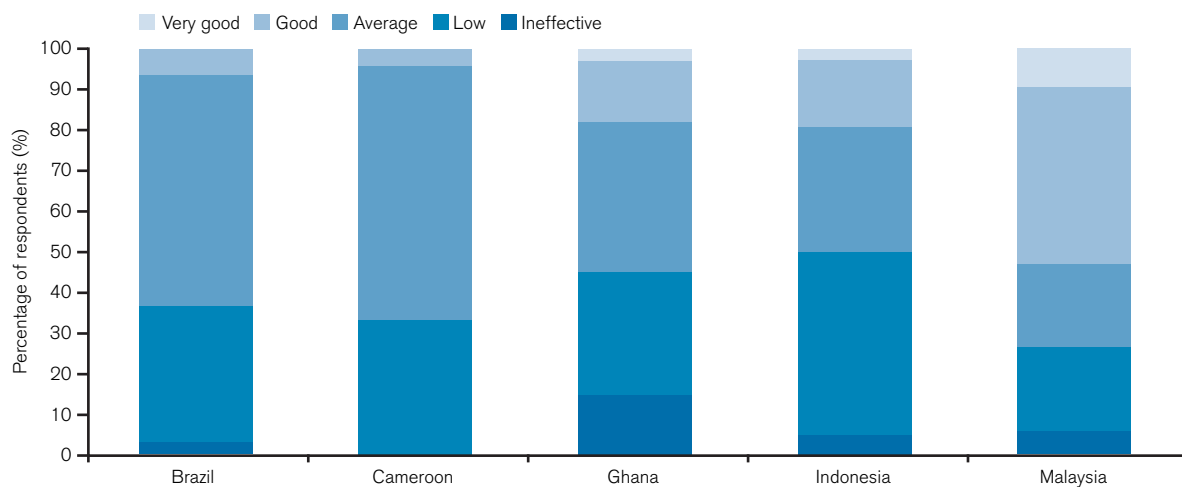
### 3.2 Producer countries – expert perceptions survey

Respondents taking part in the expert perceptions survey (including from government, the private sector, NGOs, academia and the donor community – see Section A2.2 of Appendix A for more information on the survey methodology) were asked to rank the effectiveness of the overall response of government to the problem of illegal logging in their country, and the change in this response over the last year (2009 for Brazil, Ghana and Malaysia, 2008 for Indonesia and Cameroon).

A majority of respondents in all countries rated the government response to illegal logging as average or better, although a large minority in Brazil, Cameroon, Ghana and Indonesia felt the response to have been poor (see Figure 3.6). Overall, the results show the response in Cameroon to have been judged relatively bad and in Malaysia relatively good, with Brazil, Ghana and Indonesia in between. This general pattern is retained when government responses are removed from the analysis.

<sup>78</sup> G. Birikorang, 'Public Revenue Analysis', unpublished, 2008. It should be noted that while the systems are helping ensure stumpages charged are collected, this does not necessarily mean that all stumpage fees which should be charged are charged. Stumpage fee rates are supposed to be reviewed quarterly to reflect changing log prices, but this has not been done since 2004.

Figure 3.6: Expert perceptions of overall effectiveness of government response to illegal logging



Source: Chatham House illegal logging expert perceptions survey.

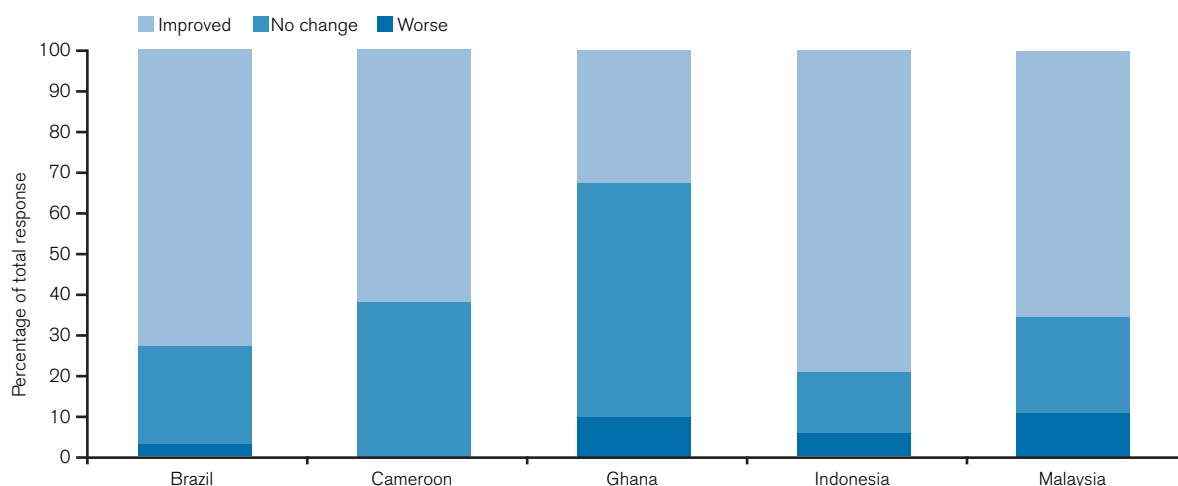
The quite negative judgments of the government response in Brazil and Cameroon run counter to other evidence which suggests significant reductions in illegal logging in both countries (see Chapter 5), while for Brazil the perceptions also seem to run counter to the relatively good scores the country received on the policy assessment (see Section 3.1.1). It seems that in both Brazil and Cameroon many experts believe that, while there have been reductions in illegal logging, relatively little credit for this can be laid at the door of the government. Such a judgment seems a little unfair for Brazil, although in Cameroon other evidence (including anecdotal information, information from other indicators and qualitative survey comments) suggests that much of the improvement has been driven by demand-side measures and the work of the independent monitor. The fact that Malaysia is judged most positively suggests that at least some of the reason for the relatively low level of illegal logging seen in the country can be attributed to an effective government response.

Though the baseline was in most cases low, a majority of survey respondents in Brazil, Cameroon, Indonesia and Malaysia did feel that the government response to the illegal logging problem had improved at least slightly during the last year, and very few respondents in any producer country thought things had worsened (Figure 3.7). In Ghana, the majority of respondents felt things were largely unchanged. Given that a year is not a long time in which to effect significant changes, and given that the policy assessment and other indicators suggest that many improvements in government response had already occurred in many of the producer countries prior to the year in question, it is particularly impressive that the sense of improvement should be so marked. Although perceptions varied slightly between the three major respondent groups, a majority of NGO/other<sup>79</sup> respondents in Brazil, Cameroon and Indonesia also felt there had been some improvement. In Malaysia, the majority of these respondents felt things were largely unchanged.

Respondents were also asked to assess the relative importance of different possible impediments to an effective government response, and were asked to judge how each had changed over the last year. The issues considered were political will; combating corruption and promoting transparency and accountability; strength and coherence of laws, policies and regulations; quality of information management (data collection and accessibility); enforcement capacity; and enforcement effectiveness.

<sup>79</sup> Includes experts from NGOs, international governmental organizations, research organizations, academia and the donor community. NGO experts represented the greatest proportion of respondents under this category in all countries.

Figure 3.7: Expert perceptions of change in government response during last year



Source: Chatham House illegal logging expert perceptions survey.

Note: 'Last year' relates to a different period for pilot countries, because the surveys were conducted earlier: for Cameroon and Indonesia, it relates roughly to the year to October 2008, while for Brazil, Ghana and Malaysia it relates to the year to September 2009.

Overall, respondents felt all aspects were of some importance in all countries (Figure 3.8). A relatively poor response in combating corruption and promoting transparency was felt to be among the most important aspects of the illegal logging problem in all countries. This is supported by the policy assessment, which found relevant regulations were very often missing or badly designed and implemented. Enforcement effectiveness was also considered particularly important.

In Brazil, Cameroon and Ghana, strength and coherence of laws was considered on average slightly less important than aspects such as enforcement and combating corruption. For Brazil, this matches other evidence which shows that strong, well-designed new laws and regulations have recently been put in place, and that the focus is now on implementation. In Indonesia, by contrast, the problem of weak and incoherent laws was felt to be more important than in many other countries. This corresponds with the low score and findings in the policy assessment, which noted numerous overlapping laws and regulations. Although other indicators have shown very significant improvements in law enforcement in Brazil and Indonesia, many experts feel further progress is still needed to improve capacity and effectiveness.

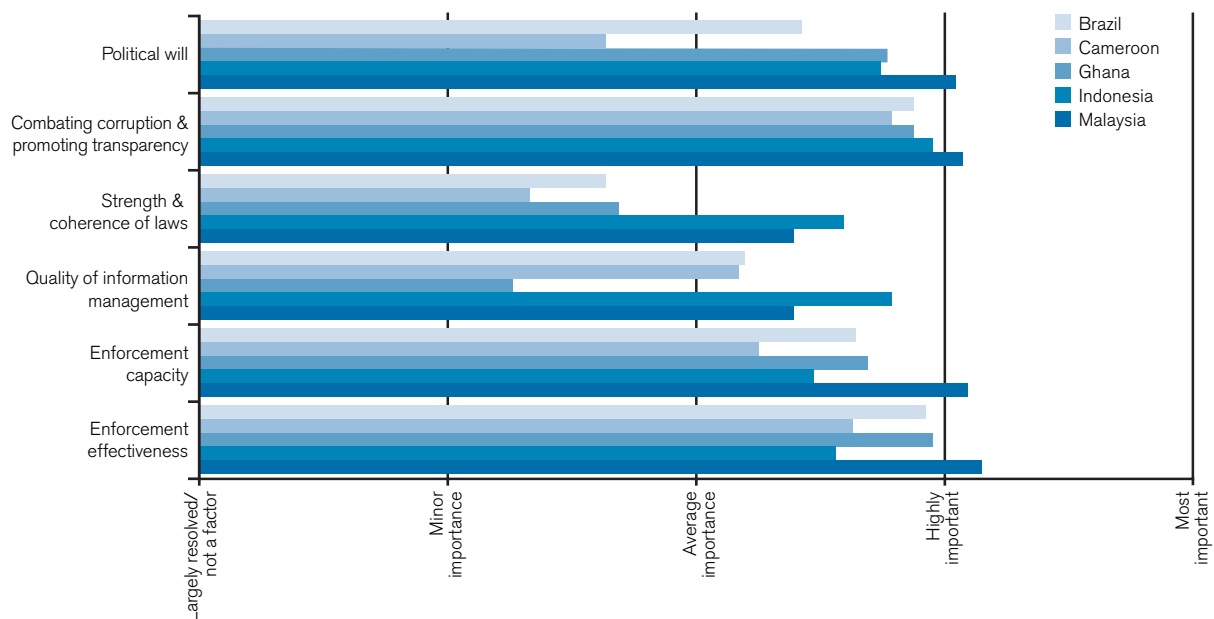
In Malaysia, political will was considered by many to be a highly important impediment to progress in tackling illegal logging, while in Cameroon it was generally considered on average to be of somewhat lower importance relative to other aspects. This may be because, as identified in the policy assessment, the Malaysian government does not consider the problem of illegal logging to be a high priority (since the rate is relatively low), while in Cameroon improvements in government response – including the independent monitor of law enforcement and governance – have often been implemented regardless of levels of political will as a result of strong leverage from international donors.

In Indonesia, quality of information management was perceived on average to be quite important. This is borne out by findings in the policy assessment which revealed that an adequate information management system was not in place. By contrast, this issue was considered to be of less importance in Ghana. However, Ghana also does not have an adequate information management system, although one is likely to be set up under the VPA process (see Section 3.1.11), which may explain why survey respondents did not feel this was such a pressing issue.

With regard to how the situation had changed in the last year, respondents in each country felt on average that there had been little change or a very small improvement in all areas (see Figure 3.9). Enforcement capacity and enforcement effectiveness showed the least improvement overall, while political will and combating corruption and promoting transparency showed the most improvement.

The most marked response recorded was in efforts to combat corruption and promote transparency in Indonesia – 87 per cent of respondents felt there had been an improvement in the last year. However, the effectiveness of the perceived improvement in addressing these issues is called into question by the results of survey questions on the extent of corruption among forest officials, police and the judiciary: as many or more respondents felt the situation had been getting worse as felt it was improving. The policy assessment did not identify any particular improvements in relevant regulations and found transparency remained poor, so it appears the perceived improvement in government response may stem instead from improved enforcement against individual corrupt officials. This is supported by the media review (Section 2.2). A large majority of respondents in Indonesia also felt that there had been an increase in political will, as did a significant majority in Malaysia.

Figure 3.8: Average expert perceptions of relative importance of different impediments to effective government response



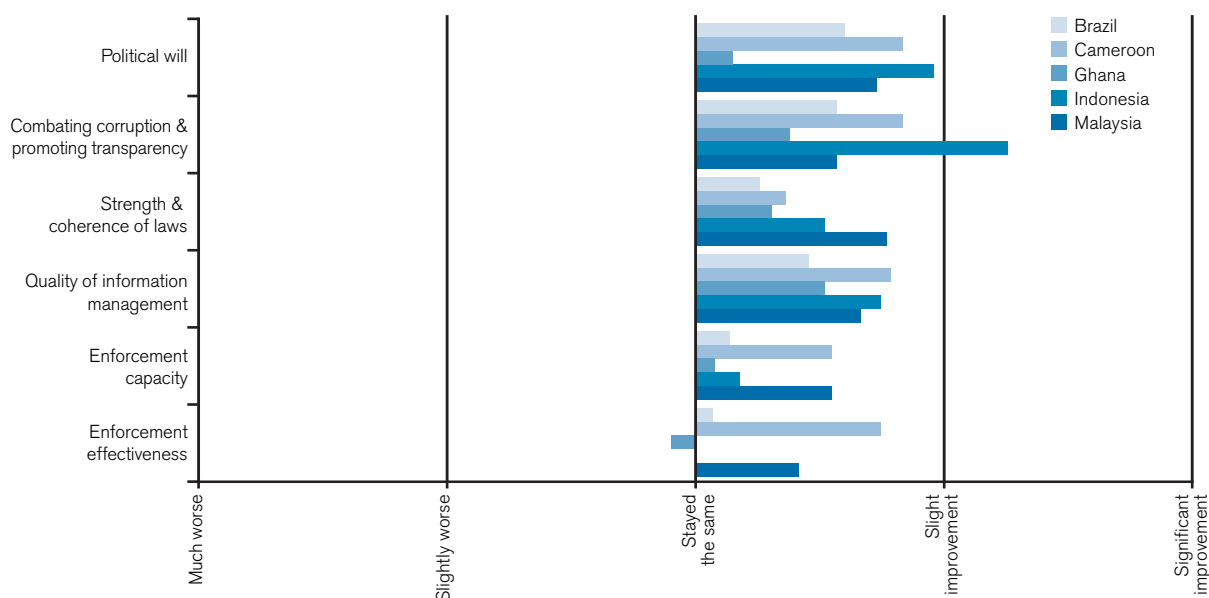
Source: Chatham House illegal logging expert perceptions survey.

Note: Overall average is calculated from separate averages for the three categories of respondent (government, private sector, NGO/other).

The only area where more respondents felt the response was worsening rather than improving was enforcement effectiveness in Ghana – although the majority felt the response was unchanged. In all countries a significant minority felt the response to be worsening in relation to both aspects of enforcement. The response in terms of improving capacity and effectiveness of enforcement was felt to be greatest in Cameroon, something possibly explained by the work of the independent monitor and perhaps also by the drive to recruit many more foresters in recent years.<sup>80</sup> The only other areas where a significant numbers felt things might be worsening were in relation to political will in Ghana and combating corruption in Malaysia.

<sup>80</sup> Under the Forest Sectoral and Environment Programme, large numbers of new foresters have been recruited in the last three years. There were initial problems with the payment of salaries for these new recruits, which though now resolved may have influenced the perceptions of respondents in late 2008 when the Cameroon survey was conducted.

Figure 3.9: Average expert perceptions of changes in different aspects of government response in past year



Source: Chatham House illegal logging expert perceptions survey.

Note: Overall average is calculated from separate averages for the three categories of respondent (government, private sector, NGO/other).

### 3.3 Processing countries

As noted in Chapter 5, more than half of the illegally sourced wood material estimated to have been imported by the five focus consumer countries combined in 2008 arrived via third-party processing countries such as China, an increase from just 15 per cent in 2000. Because of longer and more complex supply chains, it is more difficult for buyers in consumer countries such as the USA to guarantee the legality of wood products which have been manufactured in third countries from timber harvested elsewhere, and if the trade in illegally sourced wood is to be successfully tackled it is crucial that action is taken by processing-country governments.

Although both China and Vietnam source some timber domestically and have been taking measures to address challenges relating to their own forests, the majority of the wood used by the large manufacturing industries in both countries is imported, and this study is concerned with actions they have taken to address their role as *processors* of imported timber.

Although the baseline was very low, the assessment shows that there has been progress in both countries. Both governments have now studied the problem and possible solutions to some extent. All relevant Chinese government agencies are now engaged, rather than just the State Forestry Administration as in the past; China's 2006 Memoranda of Understanding (MoU) on the issue with Burma (Myanmar) has been much more meaningfully implemented than its earlier MoU with Indonesia from 2002. Under the agreement with Myanmar, China even has some experience of implementing new laws to help prevent imports of illegally sourced wood. Vietnam has recently established a FLEGT working group to explore options for action, and China is examining the possibility of developing a national legality verification system for timber imports. Pressure from consuming-country governments concerned about the potential for processing countries to undermine their efforts to tackle imports of illegally sourced wood products has been a key factor in driving the improved response seen in recent years, though NGO campaigning work has also played an important part.

The two governments still lag behind the consumer and producer countries studied in their response, however, and the actions taken so far have had limited practical impact on volumes of imports of illegally sourced wood.

Although Chapter 4 of this report shows that there has been significant progress on the part of the private sector in Vietnam in cleaning up supply chains, and some limited initial progress in China,

these actions have been taken in response to demand-side drivers and not because of any domestic government policy response. Similarly, while Chapter 5 shows that estimated imports of illegally sourced wood by both countries have been declining recently, policy responses by the Chinese and Vietnamese governments have not been a causal factor.

### 3.3.1 High-level policy

As in producer and consumer countries, this study considers the response of processing-country governments in terms of high-level policy – whether the problem of import of illegally sourced wood has been studied, whether an action plan to tackle it has been produced, whether mechanisms to coordinate the response across different branches of government have been established, and whether non-government stakeholders are engaged.

Table 3.15: Policy scores for high-level arrangements

Processing countries <i>High-level policy arrangements</i>	Existence (0–2)		Design (0–5)		Implementation (0–5)	
	China	Vietnam	China	Vietnam	China	Vietnam
Official review of illegal wood product import/consumption problem	1	1	3	n/a	3	n/a
National action plan	0	0	n/a	n/a	n/a	n/a
Coordination process for relevant govt depts	2	0	3	n/a	3	n/a
Multi-stakeholder consultation processes	1	0	4	n/a	3	n/a

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

In 2008, the Chinese government commissioned the Chinese Academy of Forestry (CAF) to conduct analysis on the country's role in importing illegally sourced timber and the impacts of this trade on China's forest industry. The study provided the basis for policy development and international negotiations but it was not available to the public and it is unclear how comprehensive it was, although it is reported not to have included any detailed analysis of the possible scale and source of illegally sourced wood product imports. In 2006–07, the World Bank sponsored an overarching assessment of Forest Law Enforcement and Governance in Vietnam, which included the country's role as an importer. As with the Chinese study, the findings of the study have not been made public so it is impossible to say how thoroughly and effectively it examined the scale and nature of imports of illegal wood. In addition to this, in 2009 the European Commission funded a study to examine possible FLEGT-type arrangements between the EU and Vietnam. The study, which involved Vietnamese government officials and was jointly agreed between the Commission and the Vietnamese government, included an examination of trade flows for Vietnam's timber imports, including those from 'high-risk' countries. The report from the study is likely to form the basis of further discussions on FLEGT between Vietnam and the EU.

Neither China nor Vietnam has a national action plan to tackle illegal timber imports. Vietnam does not have processes in place for high-level coordination of action on illegal logging and associated trade or multi-stakeholder consultations on the issue.<sup>81</sup> China, however, does have a task force for combating illegal

81 It is possible that measures carried out to implement REDD mechanisms may increase levels of stakeholder consultation, but perhaps not specifically related to formulating or implementing policy on illegal logging in source countries.

logging and associated trade, which was established in 2007. It includes representatives from all the relevant ministries: the State Forest Administration (SFA), Ministry of Commerce, Ministry of Foreign Affairs, and the General Administration of Customs of China (GACC). It meets when relevant issues arise, or when joint actions are needed. In the same year, China formed a high-level consultation committee concerning illegal logging and associated trade. The committee comprised academics and trade representatives, and NGOs were also consulted, though only when the government felt it was necessary. The committee did not consider the country's role in imports of illegal timber, but rather the environmental performance of Chinese companies overseas, which, while important, is not the focus of this study.

### 3.3.2 Legislation and regulations on illegally sourced timber

Beyond the standard requirements (common to all countries) for Certificates of Origin for all imports and for phytosanitary (pest control) certificates for certain types of timber imports, China and Vietnam do not yet have general legislation (i.e. legislation which applies to all source countries) in place to prevent the import of illegally sourced timber, nor is either country currently planning to implement such legislation. Neither government has carried out or commissioned an analysis of the potential for use of existing legislation in preventing imports, although an independent study of China's laws was conducted in 2004.<sup>82</sup> It is unclear whether the 2007 World-Bank-sponsored study on Forest Law Enforcement and Governance in Vietnam mentioned in Section 3.3.1 examined the issue of the legal basis for action against imports of illegal wood.

Table 3.16: Policy scores for legislation and regulations on illegally sourced timber

	Existence (0–2)		Design (0–5)		Implementation (0–5)	
	China	Vietnam	China	Vietnam	China	Vietnam
<b>Processing countries</b>						
<i>Legislation and regulations on illegally sourced timber</i>						
Analysis of existing legislation and regulations	0	0	n/a	n/a		
Enactment of additional legislation	0	0	n/a	n/a	n/a	n/a

Notes: 1. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

2. Although China has some formal trade measures in place to try to prevent imports of illegal timber from Burma (Myanmar), these do not apply to other countries and do not qualify for a score.

Following the signing of a Memorandum of Understanding between Myanmar and China in early 2006 which committed China to 'only allow in timber [from Myanmar], which has been lawfully licensed',<sup>83</sup> in May 2006 the Yunnan provincial government implemented new regulations designed to prevent the import of illegally sourced timber from Myanmar into China.<sup>84</sup> Among other things, the decree required all importers to obtain an import certificate from the Provincial Bureau of Commerce, which would only be issued on submission of documentation issued by Myanmar officials demonstrating the legal origin of the timber. These new procedures only apply to imports from one source country into one Chinese province, however. While they have served to help reduce illegal log imports across the Myanmar–China border by 70 per cent between 2005 and 2008, there is evidence that importers are able to bypass the new controls by paying bribes or forging Burmese documents.<sup>85</sup>

82 The Nature Conservancy, *Legal and Institutional Arrangements in China to Prevent the Import of Illegal Wood*, December 2004.

83 Chinese Ministry of Foreign Affairs, Mandalay Consulate, 2006, from: <http://mandalay.mofcom.gov.cn/aarticle/sqfb/200602/20060201501574.html>.

84 'Interim Measures to Manage Timber and Mineral Cooperation between Myanmar and Yunnan Province', 11 May 2006.

85 Global Witness, *A Disharmonious Trade: China and the Continued Destruction of Burma's Northern Frontier Forests* (Global Witness, 2009).

Although an ongoing study of a possible legality verification scheme for timber imports funded by the UK government has received support from the Chinese State Forestry Authority, it is not yet certain what form any such system might take and it is unclear whether its implementation would receive support from the SFA and other relevant ministries. The possibility has been mooted that the Chinese authorities might pass regulations requiring the presentation of legality licences for shipments of timber from countries which have set up legality assurance systems for all exports under the remit of a FLEGT voluntary partnership agreement with the EU. If such a requirement were put in place, it might serve to increase dramatically the potential impact of such systems in preventing illegal logging and associated trade. This might provide the crucial legal basis for seizing shipments of illegal timber from countries such as Indonesia, the lack of which has prevented effective enforcement cooperation thus far (see Section 3.3.3). No formal commitment has yet been made, however.

### 3.3.3 Enforcement – policy and data analysis

In Vietnam, no training specifically focused on dealing with illegal timber imports is provided. The Vietnamese General Department of Customs stated that in its understanding there had been no timber seizures for either imported or exported timber by the customs department owing to a lack of capacity and also a perceived lack of importance regarding illegal timber in relation to other illegal activities. The department did indicate, however, that this perceived lack of importance was changing, and that seizures in the future were possible given sufficient capacity for enforcement. It also stated that, even if seizures had been made, the data would not be likely to be made available outside the customs department.

Table 3.17: Policy scores for enforcement arrangements

	Existence (0–2)		Design (0–5)		Implementation (0–5)	
	China	Vietnam	China	Vietnam	China	Vietnam
<b>Processing countries</b>						
<i>Institutional &amp; operational factors in law enforcement</i>						
Training for customs on existing timber import controls	1	0				

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

Several other government departments and sources were contacted but also had no information. It appears that no seizures of illegal wood of species listed on the Convention on International Trade in Endangered Species (CITES) or other illegal imports occurred during 2006–08. The only seizure known to have occurred in the past was a barge of illegally exported Indonesian logs, which were temporarily seized at Hai Phong port in August 2003 following a request from the Indonesian government; it was later released to the owners without charge, apparently owing to the lack of a legal basis for the seizure. Given increased efforts in terms of capacity-building (for example, training in timber identification skills, and understanding of the law), it is likely that enforcement could be improved, especially as several enforcement agencies in Vietnam, including customs, have stated that they would welcome such training. Efforts have been made recently by several NGOs in Vietnam, including TRAFFIC, to help increase the capacity of enforcement agencies, including customs and the Forest Protection Department.

In China, some training on timber inspection and wood identification is provided, and further training is being discussed. From 2006, staff at Zhangjiagang port, which is the largest port for the import of tropical timber, have been given biannual training by the China Timber Distribution Association (CTDA) together with CAF. The new declaration requirements under the US Lacey Act (see Section 3.4.2) spurred discussions on further training on timber verification, and on species identification. As with Vietnam, enforcement in China can be improved through more capacity-building and some efforts have

already been made by NGOs and partner countries to this end, in particular with customs. Customs have indicated that they are interested in collaborating with other trade-partner countries in improving their statistical system and sharing trade data with one another.<sup>86</sup>

The Chatham House project partner in China reported similar difficulties in obtaining enforcement data. Small seizures of CITES-listed ramin wood were made in China in 2002 and in 2006 but none appear to have occurred since.<sup>87</sup> Media reports also reveal there to have been a number of small-scale seizures of illegal timber smuggled into China from Myanmar and Laos, including one of 4.66 tonnes of red fir in December 2007. The legal basis for the seizures from Myanmar appears to be additional import regulations put in place by the Yunnan provincial government in May 2006 in response to NGO reports about large volumes of illegal timber crossing the border between the two countries. In 2002 the Indonesian authorities formally alerted their Chinese counterparts about a shipment of illegal logs en route to Wenzhou Port; another alert regarding a shipment of illegal Indonesian logs was sent in 2005. In both cases the Chinese authorities released the shipments, apparently lacking legal grounds for continuing to hold them.

Research conducted in 2004 suggested that while – as elsewhere – no general prohibition on imports of illegally sourced wood existed in China, the fact that many shipments of smuggled logs were being misdeclared on arrival could provide a legal basis for action.<sup>88</sup> Since then, the Chinese authorities have made a number of major seizures and prosecutions of timber importers for misdeclaration, although these cases appear to have been motivated by a desire to avoid paying import taxes on wood which may well have been harvested legally. The most common practice involves submitting a declaration with a lower volume and/or value than the actual amount of the product in question, or providing a false declaration of the wood species (by declaring a lower wood grade or less valuable species). One large case in Guangdong province in early 2006 involved 52 companies and imports valued at almost US\$30 million. Eleven individuals were eventually prosecuted for tax evasion. Given the legal basis, such seizures indicate that Chinese customs are capable of prosecuting large and complex timber smuggling cases.

The only information available about enforcement in China and Vietnam stems from occasional media reports and the work of NGOs. If systematic monitoring and analysis is to be conducted in future, both countries will need to improve the collection and transparency of relevant data.

### 3.3.4 International trade cooperation

Neither China nor Vietnam yet has any formal trade arrangements in place with major source countries designed to prevent imports of stolen timber. However, both countries were parties to the East Asia Forest Law Enforcement and Governance ministerial declaration (Asia-FLEG) in 2001, and since then have established non-binding Memoranda of Understanding (MoUs) on illegal logging and associated trade with a number of trade partners. China's early MoU with Indonesia in 2002 appears to have led to few significant outcomes so far, but a later agreement with Myanmar in 2006 resulted in more concrete action. In 2008, Vietnam signed an MoU with Laos. High-profile exposés by campaigning NGOs were important drivers of these most recent agreements. The value of such agreements has been limited, however. A report released in 2009 showed that trade in illegal timber between Myanmar and China continued, albeit at a much lower rate than previously,<sup>89</sup> while a recent study on the trade between Laos and Vietnam concluded that *'illegal extraction of timber from Laos, and its export to Vietnam, continues to receive a high degree of implicit support by both governments'*.<sup>90</sup> Customs agencies from both countries continue to attend regional workshops on improving cooperation to prevent trade in illegally sourced wood products, but progress has been slow, and very few shipments have been halted (see Section 3.2.2 above).

86 For example, under the US–China Bilateral Forum on Combating Illegal Logging and Associated Trade, 2008, these two governments agreed to share trade data for all wood products.

87 SC57 Doc. 37 (Rev. 1), Annex 1: National Report of Implementation of Ramin's CITES Listing in China, 2008, <http://www.cites.org/eng/com/sc/57/E57-37.pdf>.

88 The Nature Conservancy, *Legal and Institutional Arrangements*.

89 Global Witness, *A Disharmonious Trade*.

90 Forest Trends, *Timber Markets and Trade Between Laos and Vietnam: A Commodity Chain Analysis of Vietnamese-driven Timber Flows*, (Forest Trends/DFID, 2010), p. 3.

Table 3.18: Policy scores for international trade cooperation

	Existence (0–2)		Design (0–5)		Implementation (0–5)	
	China	Vietnam	China	Vietnam	China	Vietnam
<b>Processing countries</b>						
<i>International trade cooperation</i>						
Formalized trade or customs arrangements with major trading partners	0	0	n/a	n/a	n/a	n/a
Formalized system in place for sending and receiving enforcement alerts	0	0	n/a	n/a	n/a	n/a

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

Both Vietnam and China have shown increasing engagement in recent years with destination countries for exports of wood products. A China–US MoU on combating illegal logging was signed in May 2008, formal mechanisms for ongoing discussion on the issue have been set up between China and the US, UK and EU, and the country is also involved in discussions with Japan and Australia on the topic. In Vietnam, meanwhile, the Ministry of Agriculture and Rural Development signed a decision in November 2009 to establish a task force for overseeing implementation of joint work with the European Union on Forest Law Enforcement, Governance and Trade. These measures are being driven by the development of new legislation in various consumer countries to prevent the import and sale of illegally sourced wood products. None of these agreements and processes so far involves binding trade measures, however.

Neither Vietnam nor China has any formalized procedures in place with source countries for alerts to be sent, received and acted on regarding shipments of illegal timber en route. Since 2001, both countries have been involved in the East Asia-Pacific FLEG process, which included discussion of the establishment of such systems, but this has not been followed up. Both countries nominated individual contact points on the issue of illegal logging, but these were officials concerned with local forestry matters with no powers regarding imports. When urgent messages have been sent in the past by the Indonesian authorities to both China and Vietnam about illegal timber shipments, authorities in both countries were unable to prevent the shipments entering the country (see Section 3.2.3 above).<sup>91</sup> Although the lack of general legislation prohibiting imports of illegally sourced wood in both countries precludes action being taken in many cases and might arguably make an enforcement alert system moot at present, case studies have shown that in some circumstances there often is a limited legal basis to halt shipments based on falsification of paperwork and other general customs rules.<sup>92</sup>

### 3.3.5 Procurement policies

Vietnamese law does require mandatory environmental impact assessments for government building projects which apply to timber used,<sup>93</sup> but does not have a specific policy in place on timber purchases. The Vietnamese Ministry of Agriculture and Rural Development has collaborated on a recent study into to sustainable public procurement (SPP) preparedness in Vietnam with reference to the timber industry, however, which concluded that a timber procurement policy would be beneficial for the country's wood industries and recommended that the government work with European donors to implement one.<sup>94</sup> It is not yet clear if the Vietnamese government will take up this recommendation, so no partial score can be given to indicate that a policy is under development.

Given the very large likely scale of government wood purchasing in China, the enactment and implementation of a strong procurement policy requiring evidence of legality and/or sustainability of the kind seen in some European countries could have a very large impact on the illegal logging problem

91 EIA/Telapak, *Stemming the Tide: Halting the Trade in Stolen Timber in Asia* (EIA/Telapak, 2005).

92 Ibid.

93 Law on Environment Protection No. 52/2005/QH11, November 2005.

94 IISD/Greenfield Consulting, *Sustainable Public Procurement Preparedness Assessment in Vietnam: A Reference to the Timber Industry*, (IISD, 2009).

in the countries from which China sources timber. The Chinese government did issue a government procurement policy relating to timber products in October 2006 which is mandatory on central and provincial purchasing of some processed wood products such as flooring or furniture, but this looks only at the environmental impact of the manufacturing process, and does not relate to the legality or sustainability of harvesting – and as such it does not justify a score.<sup>95</sup>

Table 3.19: Policy scores for government procurement

	Existence (0–2)		Design (0–5)		Implementation (0–5)	
	China	Vietnam	China	Vietnam	China	Vietnam
<b>Processing countries</b> <i>Procurement policy</i>						
Public procurement policy – existence and implementation	0	0			n/a	n/a
Level of adherence required (e.g. voluntary, mandatory)			n/a	n/a		
Cover all wood products, including paper			n/a	n/a		
Independent certification/verification schemes minimum requirement			n/a	n/a		
Assistance for government purchasers (advice, guidance, training, etc.)			n/a	n/a		
Implementation systematically monitored and assessed			n/a	n/a		

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

### 3.4 Consumer countries<sup>96</sup>

There are a number of policy options which consumer countries can use to address their role in tackling illegal logging. Foremost among them are those that directly tackle their ‘demand-side’ drivers of trade. Imports of illegal timber can be prevented, deterred or minimized by putting import controls in place. Trade agreements with trading partners can be forged which include measures to identify and bar illegal timber. Consumer-country governments can adopt policies to purchase only legal timber, which as well as directly addressing their own supplies can have a wider knock-on effect on the market. As this study shows, these policies and legislative instruments can be designed in different ways, each with its own advantages and limitations.

Of course, the total effect of import controls, trade agreements and procurement policies depends on the volume of trade a market has with countries where illegal wood and wood products may be produced. However, although the volume of imports from higher-risk areas may be proportionally small compared with that of total timber imports or trade in general, each initiative can have a significant direct impact and help to create a trend towards greater legality in the trade and promote better enforcement and sector reform in producing countries. These policies may also prompt the private sector to take action in addressing its role. The extent to which this is occurring is looked at more closely in Chapter 4, but is touched on here where relevant.

This section primarily examines target consumer countries’ legislation for import controls, international engagement through trade agreements, enforcement actions and procurement policies. To effectively plan

95 M. Simula, *The Pros and Cons of Procurement: Developments and Progress in Timber Procurement Policies as Tools to Promote Sustainable Management of Tropical Forests*. ITTO Technical Series Report No. 34 (ITTO, 2010).

96 As with processing countries, the study is not concerned with domestic timber production in consumer countries (which in some cases is considerable), but with the effect their government policies can have on imports of illegally sourced wood products and levels of illegal logging in producer countries.

and coordinate a country's response, however, certain high-level policies are likely to be needed. The section begins by examining how and to what extent such policies are in place.

All the consumer countries assessed have shown considerable improvement over the last few years in the government response to illegal logging and associated trade. The three European countries have implemented relatively well-designed procurement policies, and are major supporters of efforts at the EU level initiated since 2004, which include strong bilateral initiatives with affected producer countries as well as measures under development to prevent imports of illegally sourced wood products. While the US has no relevant national procurement policy and scores less well than the European countries on international engagement, it is the first country in the world to enact a general prohibition on the import and sale of illegal timber. This is a major step which is having a large impact around the world. The response in Japan has been less impressive than in the other four countries: although a procurement policy is in place it has significant design weaknesses, while no moves have yet been made to enact laws to prevent imports of illegal wood.

### 3.4.1 High-level policy arrangements

Table 3.20: Policy scores for high-level arrangements

Consumer countries <i>High-level policy arrangements</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US
Official review of illegal wood product import/consumption problem	2	0	0	0	1	n/a	n/a	n/a	n/a	2	3	n/a	n/a	n/a	2
National action plan	2	0	0	2	2	3	n/a	n/a	4	2	3	n/a	n/a	5	4
Coordination process for relevant govt depts	0	2	2	2	2	n/a	4	5	5	4	n/a	3	5	5	4
Multi-stakeholder consultation processes	2	2	2	2	2	4	3	4	5	3	4	3	4	5	3

Notes: 1. Highlighted scores are particularly uncertain and may be inappropriate.

2. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

In order to help build the case for action and inform the response, it is important for consumer-country governments to understand the probable scale, nature and sources of imports of illegally sourced wood products, and the effect these may be having on driving illegal logging in producer countries. Of the consumer countries studied, only the French government directly commissioned a review to assess such market activities.<sup>97</sup> The review was carried out in 2004 to inform the development during the same year of a government action plan to promote legal exploitation of tropical forests, tackle imports of illegal timber and improve forest governance. Other countries in this assessment have relied on reviews conducted by other organizations, conducted limited reviews themselves, or both. The US government was able to rely on a very comprehensive assessment commissioned by a US forest industry body in 2004,<sup>98</sup> although it also carried out some limited reviews in related areas. The results of the industry study – which also showed how illegal logging and associated trade were having a negative impact on the domestic US wood industry – played an important role in building the political consensus leading to the prohibition on import and sale of illegally sourced wood in 2008. Both the Japanese and Dutch governments carried

97 Carried out by CIRAD (Centre de coopération internationale en recherche agronomique pour le développement), the French agricultural research agency.

98 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

out some limited non-systematic reviews in related areas.<sup>99</sup> The UK has funded broader research work by NGOs and others on illegal logging, which has included some analysis of UK imports of illegally sourced wood; the information produced has served to inform policy in this area.<sup>100</sup> The US example demonstrates the value of carrying out comprehensive assessments, but also shows that it is not essential that these are conducted or commissioned by governments themselves. A detailed assessment is lacking for Japan and could help to drive improvements in the government and private-sector responses, both of which have lagged behind the other consumer countries examined.

Once governments have become aware, to a greater or lesser extent, of the detrimental effect their markets may be having on the problem of illegal logging, and also of the positive impact of effective demand-side measures, they may be expected to form a plan to address the problem systematically and comprehensively.

Some consumer countries have developed action plans which focus specifically on illegal logging; others, such as France, deal more broadly with tropical forests but include specific initiatives focusing on illegal logging.

The UK formulated a comprehensive action plan in 2002, led by the Department for the Environment, Food and Rural Affairs (DEFRA) and the Department for International Development (DFID), specifically addressing illegal logging. The plan was developed with input from a wide range of other relevant government agencies. It linked research into the scale and nature of illegal logging and associated trade with the development of demand-side measures, in particular the government public procurement policy, inputs into developing the EU FLEGT action plan, and influencing the timber trade; it was also connected with plans put in place under the 2002 MoU with Indonesia. In the US, the President's Initiative Against Illegal Logging (PIAIL) served as a framework action plan from 2003 to 2008. Although the PIAIL's stated goal was limited to assisting producer-country actions (as opposed to advancing domestic actions),<sup>101</sup> it did contribute to the development of a variety of trade-related measures with domestic consequences.<sup>102</sup>

France's action plan, approved in April 2004, relates to tropical forests in general and not specifically to illegal logging but does include a wide range of relevant measures, including support for the European Union's work on forest law enforcement, governance and trade, support for forest certification and verification systems and the introduction of a procurement policy. However, the bilateral actions outlined for tackling illegal logging in producer countries are focused quite narrowly on working with industry and promoting certification, rather than taking a broader approach which would include working with government and other stakeholders to improve governance. The plan and review have had moderate levels of implementation; although a procurement policy was introduced (in 2005) and there have been some bilateral efforts to promote certification in producer countries, these efforts are also quite narrow in scope and the procurement policy was slow to be implemented.

In the Netherlands, the focus has traditionally been on promoting sustainable rather than legal timber, consequently there is an action plan and several measures focused on this broader area, but not specifically on illegal timber. Nevertheless, certain measures focused on sustainability may still have a significant impact on the illegal timber trade if they contain relevant components and are effectively implemented. The Japanese government does not appear to have a formal action plan in place.

For France, the Netherlands and the UK many key actions, including trade-related measures, have to be coordinated at the EU level because they are officially designated as EU competencies. In 2003 the EU published a comprehensive plan with many measures aimed at tackling illegal logging. The EU Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT) includes negotiation of voluntary partnership agreements with timber-producing countries combined with capacity-building assistance; consideration of options for additional legislation to prohibit the import of illegal timber to the EU

99 For example, the Dutch Ministry of environment (VROM) has checked the percentage of sustainable timber on the Dutch market; in Japan, the Forest Agency engaged in a review process which considered the green procurement policy and included intergovernmental consultations with producer countries.

100 Including reports produced by the Environmental Investigation Agency/Telapak and others.

101 'The goal of the initiative is to assist developing countries to combat illegal logging, the sale (including for export) of illegally harvested timber products, and corruption in the forest sector' – US Department of State, *Presidential Initiative Against Illegal Logging: A 4-page introductory brochure on the Presidential Initiative Against Illegal Logging*, US Department of State Publication 11072 (Department of State, 2003).

102 Personal communication, David Brooks, USTR.

more broadly (both of these measures are discussed in more detail below); encouragement for voluntary industry initiatives and government procurement policies aimed at purchasing only legal products; and encouragement for financial institutions to examine flows of finance to the forestry industry. The EU action plan is considered to be the most ambitious set of measures adopted by any country or group of countries to date.<sup>103</sup> However, individual member states may still take a more or less proactive role in promoting, supporting, and implementing elements of this plan, as well as unilateral measures they deem worthwhile, within the scope of their competence as EU member states.

High-level and ongoing coordination among all departments and agencies relevant to addressing illegal logging forms a fundamental part of designing and/or implementing policy on illegal logging. All consumer countries studied have such a process in place. They are similar in terms of the departments and agencies involved, but differ slightly in terms of how they are run. The relevant departments or agencies involved typically include foreign affairs, justice, trade, forestry or agriculture, customs, finance, development and environment. In some cases, such as in the UK, a core group of key interested departments lead while other departments are called on when an issue which is relevant to them is under consideration. Some countries opt for regular meetings, while others use ad hoc meetings. In addition to the country-specific structures noted below, the UK, France and the Netherlands also coordinate action at an EU level, through formal meetings of the EU Working Party on Forests and an informal FLEGT ad hoc working group.

In the UK, an inter-departmental working group on forest law enforcement, governance and trade was formed in 2002 to help develop the country's action plan on the issue. DFID takes the lead on development cooperation and many technical issues, while DEFRA has responsibility for government procurement policy, domestic forestry and EU policy. The Foreign & Commonwealth Office and other agencies, such as customs, the Forestry Commission and the National Wildlife Crime Unit, attend as required. Initially, the group met on a regular basis but this has changed to ad hoc meetings in order to deal with specific issues.

In the US, the White House Council on Environmental Quality provided overall coordination during development of the PIAIL in 2003. Since then, specific activities were developed and guided through established policy coordinating structures involving relevant federal departments and agencies. As part of the implementation of the Lacey Act amendment prohibiting the import and sale of illegal wood (see Section 3.4.2), a specific inter-agency coordinating committee has been established, in which all relevant agencies are involved.<sup>104</sup> In Japan, a formal coordination process including all relevant government departments was established in 2002 by legislators of the ruling Liberal Democratic Party, apparently in response to the G8 commitments on the subject made that year.<sup>105</sup> The body was apparently disbanded when the LDP lost power in 2009, and it is unclear whether it has been replaced. The coordination process now used in the Netherlands initially focused on broader issues, but now concentrates on timber. France does not appear to have a specialized coordination body, though coordination on implementation of EU FLEGT initiatives is arranged under a broader umbrella group.

In most cases, the processes which exist seem to have sufficient authority, include a full range of relevant agencies, and consider all aspects of the government response, including design and implementation. The UK group initially considered only planning and conceptual activities for FLEGT and procurement policy but now also discusses operational aspects. Similarly, the process in the Netherlands has considered issues such as implementation of procurement policy, FLEGT, and import and sale of illegally harvested timber.

As in producer countries, consumer-country government policies are likely to work best if they involve all relevant stakeholders to ensure that all views are adequately represented. Consequently it is good practice to set up processes for multi-stakeholder involvement in developing and implementing relevant policies and legislation. For any such processes to be fully effective, the government must actively seek opinions, make sure all relevant stakeholders are represented and genuinely consider the full range of views.

103 D. Brack, *Controlling Illegal Logging: Consumer-Country Measures* (Chatham House, 2010).

104 Including State Department, Department of Justice, Trade Representative, Forest Service, Department of Agriculture, Department of Interior (Fish and Wildlife Service), Customs and Border Protection (CBP) and others.

105 The Team for the Examination of Measures to Protect the Global Environment from Worldwide Illegal Logging and Associated Trade was chaired by senior LDP legislators, and attended by a (usually small) number of other legislators. Invited participants included government officials from all relevant departments and a few representatives from industry and NGOs.

All consumer countries studied have some kind of stakeholder consultation process in place, although the quality of design and implementation varies and is difficult to assess.

There was no formal consultation process in the development of the US PIAIL, though there has been informal ad hoc engagement of stakeholders in policy development before and since, including in relation to the US–Indonesia and US–China Memoranda of Understanding. Such informal consultations have been supplemented by periodic, more formal consultations through federal advisory committees, and a more recent formal process to provide briefings related to the implementation of the amended Lacey Act.<sup>106</sup>

In the UK, the Whitehall Forestry Group of relevant government departments meets regularly with private-sector and NGO representatives, and additional procedures for influencing policy include submissions to the UK Parliament’s Environmental Audit Committee (which occasionally examines the government’s response on the subject) and mandatory public consultations on individual new policies and regulations. The government also holds ad hoc face-to-face consultations with stakeholders on various issues, often at ministerial level, and since 2002 has funded six-monthly Illegal Logging Stakeholder Update meetings organized by Chatham House, which have provided a forum for discussion among government, private-sector and NGO stakeholders from many consumer, processing and producer countries.

In the Netherlands, ad hoc consultations between stakeholders and the Ministry of Agriculture and Foreign Affairs have taken place (for example, on FLEGT and consideration by the EU of options for additional legislation to control imports of illegally harvested timber), as have roundtables on timber with parliament, among other processes; these consultations have included a broad range of stakeholders. In France, the National Working Group for Tropical Forests (NWGTR), set up in 2004, consults widely through meetings and internet consultations and involves all stakeholders. It is reported to have been active and is considered to be quite influential. The Project to Promote a Comprehensive Response to Illegal Logging has performed a comparable function in Japan.<sup>107</sup> At the European Union level, the Commission has also conducted wide-ranging formal stakeholder consultation on key policy developments, including the due diligence regulations relating to the import and sale of illegally sourced wood that are currently under development.

### **3.4.2 Legislation and regulations on illegally sourced timber**

Until recently, no consumer country anywhere in the world had legislation in place which prohibits the import or sale of wood products which were illegally sourced.<sup>108</sup> In the absence of such laws, even if a producer-country government were to send a formal alert about a shipment of wood which was known for certain to have been harvested or exported illegally, there would probably be nothing that consumer-country authorities could do to prevent it entering the country and being sold. Though other actions can help, addressing this legislative gap is one of the most crucial measures which consumer countries can take to address their role in illegal logging. Such measures can be designed in several different ways and the consumer countries studied differ significantly in the approaches they have taken.

In summary, the US scores well since it is the only focus country with relevant legislation in effect at the time of writing. France, the Netherlands and the UK receive partial scores for new laws, since EU VPA licensing arrangements and due diligence requirements are currently being developed. Japan scores poorly in this crucial area of policy.

106 For all of these processes, notification of the public and requests for comments are done through the US Federal Register.

107 The Project to Promote a Comprehensive Response to Illegal Logging, initiated by the Forestry Agency, acted as an open multi-stakeholder process to provide input into the policy, although it was not intended as such. Committees commissioned under the project included representatives from the private sector, NGOs and academics.

108 All consumer countries studied here have ratified the Convention on International Trade in Endangered Species (CITES) and are implementing its provisions, but only a tiny percentage of wood products in trade is covered by the convention, and it therefore has a minimal impact on preventing trade in illegally sourced wood (see Section 3.4.3). In addition, in most consumer countries general trade legislation can potentially be used against shipments of illegal wood in certain specific circumstances, such as where origin has been misdeclared. It has also been suggested that legislation regarding the handling of stolen goods may apply in some countries.

Table 3.21: Policy scores for legislation and regulations on illegally sourced timber

Consumer countries <i>Legislation and regulations on illegally sourced timber</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US
Analysis of existing legislation and regulations	0	0	2	2	2	n/a	n/a	4	5	2					
Enactment of additional legislation	1	0	1	1	2	2	n/a	2	2	4	n/a	n/a	n/a	n/a	n/a

Notes: 1. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

2. France, the Netherlands and the UK are given a partial score for existence of additional legislation, based on the EU due diligence regulation currently in the process of being enacted. Scores for design of this regulation are based on the current European Commission draft.

3. The study considered that the US Lacey Act amendment was enacted too recently for a score for implementation to be assessed.

Before implementing new legislation, consumer countries first need to establish the need for new legislation and inform the design, by analysing the potential of existing laws to prevent the import and sale of illegally sourced wood. The French government did not carry out such a review, but analysis of French legislation was undertaken by NGOs. The Netherlands did carry out a review in 2006,<sup>109</sup> but it was quite limited in scope and did not contain any recommendations regarding additional trade-related legislation. The UK government commissioned a systematic study in 2006, which recommended that additional legislation was needed.<sup>110</sup> The UK government accepted this recommendation, but concluded that any new laws would need to be enacted at the EU level. Although some limited analysis was conducted and relevant information sought from various stakeholders, the US government did not carry out a formal review of existing legislation or of options for additional legislation prior to the enactment of the Lacey Act amendment. To date, the Japanese government has not conducted a review of existing regulations, has not explored options for or enacted additional legislation, and as far as could be ascertained is not in the process of doing so.

Trade matters are a European Union mandate, so efforts by the governments of the UK, France and the Netherlands to pass additional legislation have largely been focused at the EU level.<sup>111</sup> The European Union enacted additional legislation in 2005<sup>112</sup> which empowers members states' border control agencies to prevent unlicensed timber from producer countries which have signed bilateral VPAs (see Box 3.1) from being imported, although the legislation will not become operational until the first legality assurance system is up and running in a partner country.

The European Union's FLEGT action plan also recognized that VPAs alone could not prevent illegal timber entering the EU. Not all timber-producing countries were expected to sign agreements; the agreements which were signed might not cover all types of wood product; and the bilateral controls could be circumvented by trading via – or processing in – third countries.<sup>113</sup> The plan therefore instructed that additional legislative options for controlling imports of illegally harvested timber into the EU should be considered, with a recommendation ready by the end of 2004. The process has been much slower than

109 *EU FLEGT Initiative: Analysis of national legislation of relevance to excluding illegal timber from EU markets Netherlands Study* (2006), Ministry of Justice, Ministry of Agriculture, Nature and Food Quality based on research by Public Prosecutor's Office. [http://www.illegal-logging.info/item\\_single.php?it\\_id=308&it=document](http://www.illegal-logging.info/item_single.php?it_id=308&it=document).

110 See in particular D. Brack, K. Gray and G. Hayman, *Controlling the International Trade in Illegally Logged Timber and Wood Products* (Chatham House, 2002); D. Brack, *EU FLEGT Initiative: Analysis of National Legislation of Relevance to Excluding Illegal Timber from EU Markets – UK Study* (Chatham House, 2006).

111 An additional independent initiative to put in place UK legislation similar to the US Lacey Act amendment has been launched within the UK parliament, but is not supported by the government.

112 Council Regulation (EC) No. 2173/2005 of 20 December 2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community.

113 Some of these problems will be partly mitigated if partner countries, as first-movers have done, license all their timber exports regardless of destination. This could also help to promote the spread of the VPA system beyond direct trade between the partner countries and the EU.

expected, and it was not until October 2008 – four years later than planned – that the European Commission finished the process of analysis and consultation and made a formal proposal. The Commission rejected a general prohibition on the import or sale of illegally sourced timber of the kind now enacted in the US (see below) and instead proposed a system of minimum requirements for ‘due diligence’ by all operators placing timber or wood products (whether imported or domestically harvested) on EU markets.

### BOX 3.1: Action by the European Union: the FLEGT action plan and voluntary partnership agreements

The EU's Action Plan on Forest Law Enforcement, Governance and Trade (FLEGT) was initiated in 2002 and adopted in 2003. It sets out a series of actions needed to tackle illegal logging and the associated international trade in illegally produced timber products. It comprises seven basic elements: support for timber-producing countries; activities to promote trade in legal timber; promoting ethical public procurement policies; support for private-sector initiatives to promote corporate social responsibility; safeguards for financing and investment; use of existing legislative instruments or adoption of new laws to support the plan; and addressing the problem of conflict timber.

The first key initiatives of the FLEGT action plan were the adoption in December 2005 of a mandate for the European Commission to negotiate on behalf of the EU voluntary partnership agreements (VPAs) with timber-producing countries, and a regulation to empower member states' border control authorities to control the import of timber products from those countries. VPAs aimed to support the establishment of control systems in partner countries to provide assurance that timber products had been legally produced, including the licensing of exports to the EU, while committing the EU not to allow import of any product included in an agreement unless it was covered by a valid licence. These initiatives addressed the first two elements of the action plan. Although the exact content of individual VPAs is negotiated with each country, in addition to establishing legality assurance systems (LAS) for timber destined for export to the EU, the VPA process also involves capacity-building, support for improvement of producer-country regulations and governance, independent monitoring and multi-stakeholder participation.

Formal negotiations are now under way or have been concluded between the EU and eight timber-producing countries, four of which – Ghana, Cameroon, Indonesia and Malaysia – are target countries of this study.<sup>a</sup> These eight countries account for 20 per cent of estimated imports of illegally sourced wood products by the UK, 37 per cent by France and 39 per cent by the Netherlands.<sup>b</sup> Negotiations with Ghana were concluded in September 2008 and its VPA was ratified in November 2009; negotiations with Cameroon were concluded in January 2010. It is expected that some time will be needed after entering VPAs for partner countries to prepare systems to assure the legality of their timber exports and to license them, and the first FLEGT-licensed products are not expected to flow before December 2010.

In addition to providing a legal basis for EU member states to prevent illegally sourced wood being imported, the VPA approach has the added advantage of creating a means of distinguishing between legal and illegal timber. Another major benefit of VPAs is that they also encourage and support the implementation of new and improved regulations and procedures in producer countries (many examples are included in the producer-country policy assessment in Section 3.1).

a As of March 2010, the others were Republic of Congo, Liberia, Central African Republic, and Gabon. Several other countries have indicated their interest in starting negotiations.

b Figures for 2008, based on Chatham House import-source analysis; see Chapter 5.

In early 2010 the proposed due diligence regulation was under consideration by the EU.<sup>114</sup> Studies have noted possible flaws with the due diligence approach<sup>115</sup> and it has been criticized by many NGOs. The European Parliament is in favour of strengthening the current draft by adding provisions that would prohibit making illegally harvested timber available at any point in the supply chain within the EU. Some member states also favour such a prohibition on first placing timber products on the market, though not its extension beyond the first point in the supply chain. The final form of the regulation – expected in late 2010 – will be the result of negotiations between the European Parliament and the Council of Environmental Ministers of member states. A two-year interval may follow during which details for implementation of the legislation will be developed and operators affected by it will have time to prepare for its coming into force.

While France, the Netherlands and the UK have – through the EU – been exploring legislation to prevent the import and sale of illegally sourced wood since 2002, eight years later such timber continues to arrive on their shores unhindered. The US government, by contrast, did not begin serious consideration of the option until 2007, yet by the middle of 2008 new laws had been enacted and come into effect. This was achieved through an amendment to the Lacey Act, an existing piece of legislation which made it an offence to import, export, handle or sell wildlife or wildlife products sourced in violation of domestic or foreign laws. Prior to the recent amendment, the Lacey Act only covered plants native to the US which are listed as endangered under US or international law; the amendment expanded the scope of the act in relation to plants, thereby providing a broad legal basis for action against imports of illegally sourced timber and wood products.<sup>116</sup> The amendment was supported by NGOs in coalition with the domestic timber industry, which appreciated that cheap imports of illegally sourced wood were undermining its competitiveness. The US Congress passed the Lacey Act amendment in May 2008. In addition to making it an offence to import, handle or sell illegally sourced wood products, the amendment also seeks to aid implementation and enforcement through a requirement for importers to submit a declaration which must contain the scientific name of the species and the name of the country in which the plant was harvested.<sup>117</sup>

The Lacey Act amendment is in many ways very strong and very thorough. The core offences apply to trans-shipments as well as imports, to all types of wood product, and to a broad range of predicate offences in the country of origin. The penalties for violations of the Lacey Act amendment depend on the level of intent and due care, but are in all cases serious. In the most extreme cases, criminal penalties, including custodial sentences, can be applied. Goods can be forfeit whatever the circumstances.

Some have argued that the Act's effectiveness may be weakened by the potentially high level of expense and resources required to identify crimes and carry out prosecutions. The US authorities have been very successful over the years, however, in bringing cases related to animals taken in violation of foreign laws, and the first enforcement actions related to possible breaches of the amendment have already taken place.<sup>118</sup> It is true that wood products often have much longer supply chains than other products covered by the act, making implementation more difficult. In any case, even if the risks of prosecution are low the severe penalties and the potential brand damage and lost business involved are likely to mean most companies strive to abide by the law.

Chatham House's indicators have already identified positive effects of the Lacey Act amendment in terms of the response of producer and processing-country governments and the private sector (see Sections 3.1–3.3 and Chapter 4).

114 Proposal for a Regulation of the European Parliament and of the Council laying down the obligations of operators who place timber and timber products on the market ([http://ec.europa.eu/development/icenter/repository/flegt\\_timber\\_proposal\\_oct08.pdf](http://ec.europa.eu/development/icenter/repository/flegt_timber_proposal_oct08.pdf)).

115 Brack, *Controlling Illegal Logging*.

116 The scope of the amended Lacey Act does not cover food crops, common cultivars, scientific specimens or plants to be planted or remain planted.

117 The declaration requirements do not apply to all products and are being gradually phased in.

118 Though not until 18 months after the Amendment came into effect and only as a result of information from field investigations in the source country conducted by NGOs. The case involves the import of timber from Madagascar by the company Gibson Guitars ('U.S. Seizes Wood Under New Law to Fight Illegal Logging', EIA press release, 19 November 2009).

### 3.4.3 Enforcement – policy and data analysis

Prior to comprehensive controls on import and sale such those recently adopted in the US and impending in the EU, potential enforcement activities against illegally sourced wood in consumer countries have largely been limited to species of timber listed under the Convention on International Trade in Endangered Species (CITES). Only four significant commercial timber species are currently listed under CITES, however, representing less than 0.5 per cent of primary wood products in international trade.<sup>119</sup> The level of enforcement activity is therefore relatively limited, and the data set is too small to allow any conclusions to be drawn with regard to each country's enforcement effort or effectiveness (available data for consumer countries are summarized in Table 3.22).

Table 3.22: Significant seizures of CITES-listed timber and wood products in consumer countries studied, 2006–07

Country	Year	Wood species	Origin	Quantity	Unit	Type specimen
France	2006	Mahogany	Nicaragua	437	no.	'stack of planks' (= un 'plot')
		Agarwood	unknown	106	kg	Agar wood roundwood
		Afrormosia	Ivory Coast	2000	no.	Parquet sheets
	2007			None		
Netherlands	2006	Ramin	Indonesia	120	m <sup>3</sup>	Doors
	2007	Ramin	unknown	1	m <sup>3</sup>	
		Ramin	Indonesia	22	m <sup>3</sup>	Plinths and crates
United Kingdom	2006	Brazilian rosewood	Brazil	46	kg	Wood planks
		Mahogany	Mexico	21.6	tonnes	Logs
	2007	Ramin	unknown	20000	no.	Tassels
		Ramin	unknown	2184	no.	Doll's house miniatures
United States	2006	Ramin	Indonesia	68	m <sup>3</sup>	Wood products
		Ramin	Malaysia	1	m <sup>3</sup>	Wood products
		Mahogany	Honduras	1826	m <sup>3</sup>	Plywood
	2007	Brazilian rosewood	Brazil	20	kg	Sawn wood
		Ramin	Malaysia	1823	no.	Wood products
		Mahogany	Ecuador	32	m <sup>3</sup>	Sawn wood

Source: Personal communications with relevant government officials in countries concerned.

Note: The table does not include very small seizures and those of non-wood products such as seeds and medicinal items. There were no relevant seizures in Japan during the period.

In future, implementation of new broad-based legislation to tackle the import and sale of illegally sourced wood such as that recently enacted or under development in the US and European Union should provide more useful data with which to assess the enforcement response in consumer countries. To enable such assessments it is important that relevant data (on such things as training, inspections, seizures and prosecutions) is properly collected and made available by the relevant agencies.<sup>120</sup>

In addition to collecting available enforcement data, the policy assessment part of this study has also examined whether sufficient training is provided by focus consumer countries for customs officials to help them implement existing or planned legislation designed to prevent imports of illegal wood. Although most information relates only to CITES and is relevant to only a small percentage of trade,

119 S. Lawson, review of Chen Hin Keong, *The Role of CITES in Combating Illegal Logging – Current and Potential* (TRAFFIC International, 2006), in *International Forestry Review*.

120 Although, as is the case in producer countries, it is hard to draw conclusions from enforcement data in isolation (since a rise or fall in numbers of seizures could either stem from increased effectiveness of enforcement activity or increased illegal actions, or any preventive effect), such data is nevertheless valuable, especially if combined with other analysis.

the response of consumer-country governments with regard to the implementation of CITES listings of timber species (many of which have been listed primarily to prevent illegal trade) might provide a proxy indicator of how well they might implement broader legislation if and when it is put in place. Although this assessment has looked only at training, in future it would probably be worthwhile developing a broader set of policies against which to assess new legislation. Aspects to be assessed might include whether new laws encompass all wood products, or whether they apply to imports from all countries.

Table 3.23: Policy scores for enforcement arrangements

Consumer countries <i>Institutional &amp; operational factors in law enforcement</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US
Training for customs on existing timber import controls	1	0	1	2	2										

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

All consumer countries studied have provided some guidance and training to customs officials to assist them in enforcing CITES listings of timber species, though the quantity and quality of this training varies.

The UK provides regular training related to enforcement of CITES timber listings for customs officials (the UK Border Agency) and the police, including species identification and relevant trade patterns. Technical support is provided to enforcement agencies by the Royal Botanical Gardens at Kew. The training has been focused on officers based at ports with significant levels of trade in relevant timber and wood products. It is expected that an adapted version of the existing training on CITES and timber may be able to be used for training relating to FLEGT licensing schemes. Some relevant officers already have a working knowledge of the processes involved and it is expected that formal familiarization with FLEGT licensing procedures will occur during 2010.

In Japan, there is no specific training for customs officials about implementing CITES controls on timber, though NGOs have translated and distributed guidance documents produced by other governments. Customs officers in the Netherlands are not given specific training in identifying high-risk timber, although some training relating to timber listings is included within broader CITES training programmes. This also appears to be the case in France.

FLEGT VPA licensing schemes will affect imports across the EU, and some centralized training and guidance is likely to be needed. In late 2009 the European Commission conducted some awareness-training with customs officials from member states, including representatives from the UK, Netherlands and France. Also at the EU level, in 2006 the Commission provided €2.4 million of funding for an International Tropical Timber Organization (ITTO) project which aims to improve the implementation of CITES timber listings, including providing support and training to enforcement officials in key trading countries.

In the US, training is provided on CITES-timber-listing implementation to customs officials at all major ports. Plant inspection officers of the US Department of Agriculture's Animal and Plant Health Inspection Service (USDA APHIS) work with customs officials to implement controls, are periodically provided with additional training on wood identification and are also able to send samples to the USDA Forest Service Forest Products Laboratory (FPL). Additional training relevant to both CITES and Lacey Act implementation is provided to customs officers through the Department of Justice and the ongoing training programmes of the Department of Homeland Security.

### 3.4.4 International trade cooperation

While action at home is crucial, it is also important that consumer-country governments engage with producer and processing countries to help tackle illegal logging and associated trade. All of the consumer countries examined have declared commitments to tackling illegal logging at international forums, including at the G8, at FLEG regional ministerial conferences, and at meetings of the International Tropical Timber Organization and the United Nations Forum on Forests. The UK, US and Japan have all signed Memoranda of Understanding with some producer and processing countries. Such declarations and commitments are important, but the main value lies in the actions such commitments imply, and the extent of meaningful follow-up varies considerably. For this reason, in assessing policy scores on this issue for consumer and processing countries, Chatham House has focused on quite a narrow range of actions: forms of international engagement which seek to prevent flows of illegal timber directly through concrete customs and trade measures.

The policy list assessment examined formalized trade or customs arrangements between consumer countries and their major trading partners, and looked at systems for receiving enforcement alerts regarding illegal shipments in transit. As with the assessment on enforcement above, such arrangements are of limited value unless complemented by relevant legislation in consumer countries with which to implement controls at the border. As also noted above, such legislation exists or is being implemented in the US, France, the Netherlands and the UK, but does not yet exist in Japan.

Table 3.24: Policy scores for international trade cooperation

Consumer countries	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US
<i>International trade cooperation</i>															
Formalized trade or customs arrangements with major trading partners	1	0	1	1	1	5	n/a	5	5	3	n/a	n/a	n/a	n/a	3
Formalized system in place for sending and receiving enforcement alerts	1	0	1	1	1	n/a	n/a	n/a	n/a	4	n/a	n/a	n/a	n/a	n/a

Notes: 1. Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

2. The EU countries receive a partial existence score for formalized trade agreements based on the FLEGT VPAs which are mostly under negotiation; partial scores on enforcement alert systems also reflect the likelihood that equivalent measures will be created within VPAs and associated legality assurance systems. The US receives partial scores for both policy questions based on the arrangements included under FTAs and TPAs; in the case of the enforcement cooperation and alert measures included in the agreement with Peru, it was not possible to assess implementation.

France, the Netherlands and the UK have been among the most actively engaged member states in helping negotiate EU FLEGT voluntary partnership agreements (VPAs) with producer countries (see Box 3.1 for more on FLEGT and VPAs, including current status). The UK, which, with its 2002 Memorandum of Understanding with Indonesia, was the first consumer country in the world to sign a formal agreement with an affected producer country, has helped to lead the FLEGT VPA concept, in particular in developing regulations and principles for negotiation. The UK has also provided the bulk of the support for the development of the VPAs with Ghana, Indonesia and Liberia, and has been involved in negotiations with Malaysia. France has supported the VPA processes in Cameroon, Congo-Brazzaville and Gabon, and the Netherlands has co-supported the process in Malaysia. Although precise details will vary from country to country and it is too early to assess implementation, the fundamental VPA concept is well designed, including not only international trade measures but also many other valuable aspects, including capacity-building, support for improvement of producer-country regulations and governance, independent monitoring and multi-stakeholder participation.

The US has included obligations relating to effective enforcement of environmental laws in a number of free trade agreements (FTAs) negotiated with affected countries and regions during the last few years.<sup>121</sup> Although they provide a useful potential framework and forum for cooperation, most such agreements make no specific references to forest governance, illegal logging or associated trade and exclude laws related to timber harvesting.<sup>122</sup> The 2006 US–Peru trade promotion agreement (TPA) went much farther, however, including laws relating to forest management and incorporating a ‘forest governance’ annex. The agreement established a Sub-Committee on Forest Sector Governance, and is the closest thing the US government has to the level of ongoing engagement seen with partner countries under the EU VPAs.<sup>123</sup> The development of such forums is likely to be important in aiding the implementation by the US of the new prohibition on the import of illegally sourced wood.

None of the consumer countries examined have established formalized systems or procedures with source countries whereby they can receive and act on enforcement alerts regarding suspect shipments. For France, the Netherlands and the UK, it is likely that the implementation of EU VPAs and associated licensing systems and controls may provide a framework for the exchange of information, including relevant contact points, although more work would be needed than is currently envisaged if this is to develop into something substantial. Although it does not fully constitute an enforcement alert system as defined by Chatham House, the US–Peru TPA does require the Peruvian authorities, on request, to investigate whether suspect shipments of timber arriving in the US were legally harvested and traded, and empowers US customs to deny entry to such shipments unless and until satisfactory evidence of legality is obtained.<sup>124</sup> Such measures may help the US with implementation of new border controls.

Japan does not have formalized trade arrangements or enforcement alert systems in place, and, as far as could be ascertained, is not in the process of developing any. Although the action plan on illegal logging agreed between Japan and Indonesia in 2003 suggested an alert system could be used, there does not appear to have been any progress on this issue. Unless Japan moves forward with legislation on the import and sale of illegally sourced wood products, such systems and arrangements would be of little value.

### 3.4.5 Procurement policies

The public sector can be a major purchaser or specifier of timber for a variety of purposes including construction, furniture and paper.<sup>125</sup> Disposable material, such as shuttering and construction hoarding, is also a major element of construction projects. By requiring verified or certified timber for its purchases, consumer-country governments can have a significant direct and indirect impact on the level of demand of such products, and thereby aid the elimination of illegally sourced wood from supply chains. A 2006 report examining the impacts of procurement policies suggested that government procurement can achieve market leverage of up to 25 per cent of the market (compared with about 10 per cent for direct purchases) when the wider indirect effects are included.<sup>126</sup> Studies have also shown that demand for verified products is lower in those countries without procurement policies, as well as those which have them but do not appear to implement them systematically.<sup>127</sup> The policy assessment examines whether relevant procurement requirements exist in each focus consumer country, and how well implemented any such requirements are. It also examines a number of different aspects of the design: whether the policy

121 Including with Singapore (important as a transit point) (2003), Chile (2003), Central America and the Dominican Republic (2004) and Peru (2006).

122 The definition of ‘environmental law’ is in all cases except Peru restricted (for laws potentially relevant to timber) to laws the ‘primary purpose of which is the protection of the environment through the protection or conservation of wild flora or fauna, including endangered species, their habitat, and specially protected natural areas; the Chile and CAFTA FTAs also *specifically exclude* laws ‘the primary purpose of which is managing the commercial harvest or exploitation of natural resources’.

123 The two governments held their first bilateral discussions in February 2010, at which they established an Environmental Affairs Council to examine conservation issues including forest governance (‘U.S. Peru talk environmental conservation’, *UPI*, 19 February 2010).

124 United States – Peru Trade Promotion Agreement, April 2006, Annex 18.3.4: Annex on Forest Sector Governance, paras 7–14.

125 Brack, *Controlling Illegal Logging*.

126 M. Simula, ‘Public Procurement Policies for Forest Products – Impacts’, presentation to UNECE/FAO Policy Forum on Public Procurement Policies for Wood and Paper Products and Their Impacts on Sustainable Forest Management and Timber Markets, 5 October 2006, available at: [http://www.unece.org/trade/timber/docs/tc-sessions/tc-64/01\\_Simula.pdf](http://www.unece.org/trade/timber/docs/tc-sessions/tc-64/01_Simula.pdf).

127 Forest Industries Intelligence (FII), *EU Market Conditions for ‘Verified Legal’ and ‘Verified Legal and Sustainable’ Wood Products* (Timber Trade Federation, 2009).

is mandatory, whether it covers all wood products, whether implementation is systematically monitored, whether assistance is supplied to government purchasers and whether the policy requires independent evidence for sustainability or legality.

Table 3.25: Policy scores for government procurement

Consumer countries <i>Procurement policy</i>	Existence (0–2)					Design (0–5)					Implementation (0–5)				
	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US	France	Japan	Netherlands	UK	US
Public procurement policy – existence & implementation	2	2	2	2	0						2	2	4	4	n/a
Level of adherence required (eg voluntary, mandatory)						5	5	5	5	n/a					
Cover all wood products, including paper						4	4	4	5	n/a					
Independent certification/ verification schemes minimum requirement						2	1	4	4	n/a					
Assistance for government purchasers (advice, guidance, training, etc.)						3	2	3	5	n/a					
Implementation systematically monitored and assessed						1	2	3	3	n/a					

Note: Scores have been assessed against fuller and more detailed versions of the policy questions than the short-form versions presented in the table above. Full versions are included in Appendix B.

All the consumer countries assessed, with the exception of the US, have put a national public procurement policy regarding timber and wood products in place during the last seven years.<sup>128</sup> These policies vary, however, in terms of their level of implementation and the extent to which they meet all the ideal aspects of design. The main differences lie in the extent to which the schemes rely on strong and well-defined criteria (such as those provided by independent certification or verification schemes) and the level of assistance offered to government purchasers. Overall, the UK and Netherlands policies were judged to have somewhat better design and implementation than the policies in France and Japan.

All the focus countries which have procurement policies demand mandatory adherence to it by central government, although the Netherlands and France allow some limited exceptions to all or part of the standard where no compliant supplies exist for a given product.<sup>129</sup> While the French policy initially only covered tropical timber products, it has since been amended. All the policies now include all wood products including paper and furniture. As far as Chatham House was able to determine, however, the UK policy is the only one to include wood used temporarily (such as hoardings or plywood shuttering) and make specific reference to recycled wood.

Although most make reference to acceptable schemes, none of the policies *require* wood to be independently certified as sustainable or verified legal under an established scheme in all cases; the policies in the Netherlands and the UK, however, have very strict standards for evidence which are difficult to meet any other way. Both countries also assess certification and verification schemes against

128 The UK policy was first implemented in 2003, those in the Netherlands and France in 2004, and that in Japan in 2006. The French and UK policies have been revised on more than one occasion.

129 In the Netherlands, the policy requires sustainable wood, but allows for a lower level of legality where no sustainable supplies are available. In France, in these circumstances the policy allows for wood which does not meet either the legality or sustainability standards (Simula, *Pros and Cons*).

minimum standards.<sup>130</sup> Lower standards apply in France for wood which does not fall under a recognized scheme, although some form of independent evidence is required. Japan's is the only policy which does not require third-party verification of alternative evidence – something which is considered a minimum baseline in almost every other country with a policy in place.<sup>131</sup> Allowing for self-verification opens the Japanese system up to potential abuse, something that may be compounded by generic definitions of legality and sustainability which are open to interpretation.

Whatever the standards written into a procurement policy and whatever its breadth of coverage, it is critical that it is well implemented, and for this to occur it is important that good guidance is provided to government purchasers and that implementation is systematically monitored. After significant initial difficulties with implementation of its 2003 policy, in 2005 the UK established a permanent and independent advice service, the Central Point of Expertise on Timber (CPET), which runs training courses and has its own website and dedicated helpline.<sup>132</sup> CPET has been very effective in improving implementation, and in 2009 the Dutch government commissioned Probos, a consultancy firm, to provide a similar service in the Netherlands. No such service exists in France or Japan, although there have been occasional workshops and some ad hoc assistance in both countries.

In the UK, the policy requires monitoring, but does not insist that it should be systematic. Early reporting requirements were too poorly implemented to be of much value and were dropped. Since then, CPET has monitored the implementation of the procurement policy through case studies rather than through systematic monitoring or assessment processes. The UK is so far the only one of the four countries to have published a comprehensive survey of policy implementation.<sup>133</sup> CPET is also researching and piloting possible methods for more systematic monitoring which may be introduced in future. In the Netherlands, the policy requires systematic monitoring to take place at regular intervals, but currently relies on self-reporting by individual government departments; as in the UK, this has proved ineffective since many fail to report or do so inaccurately. Improvements to the monitoring methodology are being planned. There is no systematic monitoring in France, and this has served to constrain the impact of the policy,<sup>134</sup> but a one-off assessment of implementation and possible measures to improve it is now under way.<sup>135</sup> Annual reports on policy implementation have to be submitted to the Ministry of Environment in Japan, but is not clear how well this requirement is followed or how accurate a picture it provides of implementation.

In the absence of reliable monitoring data, it is challenging to assess, with any degree of accuracy, how well the policies are being implemented. A 2009 study by the consulting firm PricewaterhouseCoopers judged that the Netherlands and the UK were among the seven 'best performing' EU member states on wood procurement, and found that the UK had the highest level of implementation in the EU in terms of minimum legal requirements, with 89 per cent of building projects and 93 per cent of furniture purchases using wood from verified legal sources. The figures for the Netherlands were somewhat lower (60 per cent and 56 per cent).<sup>136</sup> Surveys of timber suppliers in the Netherlands and the UK have shown that government procurement policies have had a major impact on the overall market in both countries, with this impact intensifying during the last 18 months.<sup>137</sup>

The French policy is generally considered to be less effectively implemented and initial results of the implementation review under way in late 2009 suggested that progress had been hampered by lack of awareness and by purchasers delaying initial implementation in expectation of revised rules which were passed in 2006.<sup>138</sup> Private-sector surveys suggest that impacts of the French policy on the

130 France has also committed to doing the same (Simula, *Pros and Cons*).

131 Simula, *Pros and Cons*.

132 CPET is operated by the private consultancy ProForest.

133 FII, *EU Market Conditions*.

134 *Ibid.*

135 Simula, *Pros and Cons*.

136 FII, *EU Market Conditions*.

137 *Ibid.*

138 Research by Alison Hoare for Chatham House, December 2009.

market have shown some signs of an increase in recent months, although they remain well below those seen in the Netherlands and the UK.<sup>139</sup> Official Japanese government data suggest almost 100 per cent implementation, although a recent independent survey found that only 63 per cent of respondents were fully implementing the policy.<sup>140</sup> The Japanese policy was quite swiftly implemented across the country, but this is partly because it is less stringent and therefore relatively easy to abide by.<sup>141</sup> There is little evidence about the impact of the Japanese policy, but regardless of design or implementation this can be expected to be smaller than for the other focus consumer countries, because government purchasing accounts for only 2–3 per cent of overall wood consumption, much lower than the 10–20 per cent seen in the EU countries.<sup>142</sup>

Although there is no federal procurement policy on timber purchasing in the US, some states and municipal bodies have relevant policies in place. Most of them have focused on rules and regulations relating only to building and construction, and many use a simplistic approach such as avoiding all use of tropical wood regardless of provenance. A 2008 plan issued by New York City, for instance, aims to eliminate all use of tropical hardwoods. The option of instead specifying independently certified tropical wood was rejected on the basis of availability, cost and possible contravention of another City law which prohibits procurement policy from pursuing ‘social goals’.<sup>143</sup>

It could be argued that the implementation of the 2008 Lacey Act amendment prohibiting the import of illegally sourced wood means that procurement policies specifying legality are no longer necessary in the US, since such wood should not be able to enter the country at all. How easily the new prohibition can be implemented and enforced remains to be seen, however, and stronger procurement policy could help improve this by increasing demand for verified legal wood. It might also allow the government to establish criteria for assessing evidence of legality, providing useful guidance to all importers.

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139 FII, *EU Market Conditions*.

140 IGES, 2009, unpublished.

141 Simula, *Pros and Cons*.

142 Ibid.

143 Ibid.

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## 4 Progress by the Private Sector

This study provides both baseline and trend data from a range of indicators relating to the response of the private sector to the problem of illegal logging and associated trade.

First, results from the expert perceptions survey provide some initial baseline indicators of private-sector action in focus producer and processing countries, and on expectations of the importance of the illegal logging issue in future. Next, the study examines trends in take-up by companies in consumer, processing and producer countries of systems and services designed to help ensure the legality and sustainability of timber supplies.

This chapter also examines to what extent information on timber prices can be used to measure the response to illegal logging, by looking at how far they are perceived to have changed as a result of supply constraints resulting from enforcement. Finally, the chapter attempts to assess, using both the expert perceptions survey and trade-data analysis, whether, and to what extent, timber producers and traders are avoiding increased controls and demands in consumer countries by shifting trade towards less sensitive markets (see definition in Appendix A).

In summary, the various indicators suggest that private-sector efforts to address the problem of illegal logging and associated trade have seen considerable growth across all countries examined, and that this growth has continued and is in most cases accelerating in the most recent two years. Although it is difficult to determine which drivers are the most influential, it appears that early, key demand-side drivers such as government procurement policies and consumer concerns fed by NGO campaigning activity are now being overtaken in importance by recent or impending trade-related legislation in the US and Europe, and by producer countries' own efforts.

There is much still to be done. Areas where there is most scope for improvement include timber flowing from producer to consumer countries via third-party processing countries; the actions of relatively small companies in all country types; and companies in producer countries supplying less sensitive domestic or foreign markets. For some producer countries, there are limits to how much additional benefit further demand-side measures enacted by sensitive foreign consumer countries can be expected to achieve; in Ghana, a dramatic shift in trade towards less sensitive markets over the last eight years may actually be reducing the potential impact of demand-side measures. It is therefore increasingly important that broader actions are improved. The example of Brazil has shown how producer-country government procurement policies can be a useful driver of action in the domestic market. If they are designed to include all timber production (rather than only exports destined for member states), the legality assurance systems being proposed in a number of producer countries under the EU voluntary partnership agreements could also be crucial.

### 4.1 Expert perceptions of private-sector response

#### 4.1.1 *Producer countries – overall private-sector response*

In order to investigate the overall level of private-sector action in each producer country, this project asked all survey respondents the extent to which they considered different types of company in their country to have taken action against illegal logging.<sup>144</sup> They were also asked to assess to what extent companies had improved their response during the last year. Respondents were asked to give separate

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<sup>144</sup> The possible responses ranged from 'unaware of problem or unaware of international or national concern about it', to 'aware of the problem', 'under some pressure to act', 'taken some action already' and 'action widespread in sector'.

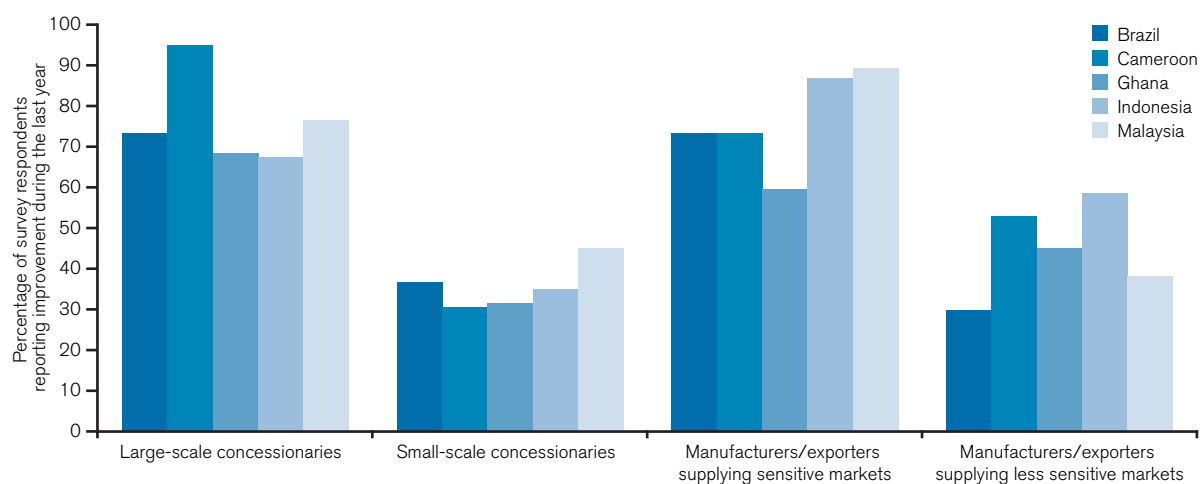
views on large and small concessionaires, and on manufacturers/exporters supplying sensitive and less sensitive markets.

Overall, the picture was very positive – for almost all types of company in almost all countries, the majority of respondents felt there was at least some pressure to act, and a majority of respondents in all countries felt that large concessionaires and companies supplying sensitive markets had improved their response to illegal logging during the last year. In general, large-scale concessionaires and companies supplying sensitive markets were felt by respondents to have taken more action than smaller-scale concessionaires and companies supplying less sensitive markets – perhaps indicating the disproportionate effect of demand-side measures and the ability of larger companies to take advantage of economies of scale in improving their performance. Respondents in Ghana highlighted the impact of demand-side measures on improvements in the industry, as well as government action, but also noted the relative lack of action in relation to the domestic market, which proportionally is becoming an increasingly important driver of overall illegal logging.

More than three-quarters of respondents in Brazil, Cameroon, Ghana and Indonesia felt that large concessionaires (in Brazil this includes large privately owned forest management units) had either taken action on illegal logging or were at least under some pressure to act, while more than 70 per cent of respondents in all countries felt that manufacturers/exporters supplying sensitive markets had either acted or were under pressure to do so. The survey suggests that the private-sector response in Malaysia has been more muted than in the other producer countries, although a majority still felt that large concessionaires and those supplying sensitive markets were at least under pressure to act. This muted response reflects the fact that only 14 per cent of Malaysia's exports are destined for the sensitive markets from which demand-side pressures are emanating (see Section 4.3.2); it may also be a reflection of the fact that illegal logging is not seen to be as severe a problem in Malaysia as it is elsewhere (see Section 5.1.1).

The weakest areas overall were the apparent response of companies in Cameroon and Malaysia supplying less sensitive markets, where more than two-thirds of respondents felt companies were either unaware of the problem of illegal logging and associated trade or aware of it but under no pressure to act. With 86 per cent of Malaysia's exports destined for such markets, this lack of demand-side pressure presents a serious problem. Although Cameroon is much more geared towards sensitive markets, the perceived lack of pressure on those supplying less sensitive markets may see progress reach a ceiling once companies supplying sensitive markets have already taken action. The progress towards a FLEGT voluntary partnership agreement seen in Cameroon since the survey was conducted may help overcome this limit, if it includes extending a legality assurance system to all production and trade.

Figure 4.1: Perceptions of survey respondents in producer countries on action by the private sector during the last year



Source: Chatham House illegal logging expert perceptions survey.

In the most recent year, the majority of respondents in all countries felt that large concessionaires and companies supplying sensitive markets had shown some improvement (see Figure 4.1). Particularly strong signals of improvement were detected in relation to actions by large concessionaires in Cameroon and by companies in Indonesia and Malaysia supplying sensitive markets. The perception of action by large concessionaires in Cameroon is supported strongly by the recent growth in legality verification and sustainability certification in the country (see Section 4.2.1). In most cases the majority of respondents felt that smaller concessionaires and companies supplying less sensitive markets had shown no improvement in the last year, although a significant minority felt there had been some improvement. Very few thought the situation had got worse. The best response recorded by companies supplying less sensitive markets was in Cameroon and Indonesia, which may reflect improved general enforcement.

Among the areas of greatest potential for future development suggested by the survey are small-scale concessionaires in Indonesia and companies supplying less sensitive markets in Ghana and Brazil. In all these areas, a large majority of respondents felt that companies had not yet taken action but were nevertheless already under some pressure to do so.

#### ***4.1.2 Producer and processing countries – more detailed aspects of private-sector response***

The expert perceptions survey also included some additional questions focused on specific aspects of the private-sector response in producer and processing countries. In contrast to the general questions discussed in Section 4.1.1, which were answered by all respondent groups, these were designed solely for private-sector respondents. Particular caution is required in interpreting the results of these questions for producer countries, because the sample size of private-sector respondents was very low.

#### **Customer demand**

The number of customer enquiries regarding legality of timber supplies provides a useful indicator of the private-sector response. The survey examined how many such enquiries had been received by company respondents in producer and processing countries and how this had changed in the previous year. Company respondents in Cameroon and Brazil reported that customers commonly make such enquiries, while in Indonesia it was considered to be a rare occurrence. An upward trend was noted by the majority of respondents in most producer countries (Brazil, Indonesia and Malaysia) and by all respondents in Cameroon. The results from Cameroon may reflect its long-standing ties with the European market where demand-side drivers have been strong, while in Brazil the recent US import legislation may be driving demand. The relatively low baseline in Indonesia may reflect the greater importance of less sensitive markets for wood-product exports.

There was a clear contrast between the two processing countries surveyed. The vast majority of respondents in China said that such enquiries happened rarely or never. In contrast, most respondents in Vietnam reported that questions of this nature are made commonly or often. Companies in China said there had been only a small or no increase in the past year, while in Vietnam the majority reported a significant or small increase in these demands. It is likely that implementation of the US Lacey Act amendment banning imports of illegally sourced wood (see Section 3.4.2) was a key factor in driving this recent growth. Chinese companies appeared to be operating in an environment in which there are fewer drivers of demand for verified or certified timber than in Vietnam. This may reflect the greater importance of the domestic market in China, but may also reflect the fact that Chinese wood-product exporters have faced less exposure by NGOs in the last decade than their counterparts in Vietnam. However, other indicators, such as the growth in FSC (Forest Stewardship Council) chain-of-custody certification (see Section 4.2.2), suggest an increasing number of Chinese companies are nevertheless feeling the need to demonstrate progress on legality and sustainability.

#### **Verification and certification**

The willingness of companies to try to achieve certification of sustainability or verification of legality of timber production (see Box 4.2 and Box 4.4 for a description of these processes) depends, in part, on how

much it would cost to set up and run the systems necessary to meet the required standards. Companies may try to evaluate system start-up and maintenance costs against potential price premiums obtainable for certified and verified products or, in cases where there are strong demand-side drivers, such as import controls and procurement policies, the cost of being excluded from supplying such markets in future.

The survey conducted by this project asked some companies which were already supplying verified or certified timber how much additional cost they had incurred in order to be able to do so (in terms of raw materials and control systems). The survey also asked some that do not currently supply such products how much they expected it would cost to do so. In Indonesia, expected and actual costs were well matched. However, insufficient responses prevented conclusions from being drawn in any of the other producer countries surveyed.<sup>145</sup>

With regard to processing countries, in China three-quarters of companies surveyed expected additional raw material costs of 1–10 per cent; while one-quarter expected 11–20 per cent. Sixty per cent of those that already supplied such timber reported additional costs were indeed between 1 per cent and 10 per cent; however 30 per cent said that they incurred no additional costs. A similar trend was observed with regard to internal controls. This indicates that while companies' perceptions are largely accurate there is a tendency to overestimate the potential costs. In the absence of strong customer demand or import controls in trading partner countries, such mistaken perceptions may form an unnecessary barrier to growth in the take-up of voluntary verification and certification schemes. Even in cases where such demand or controls exist, there is a risk that companies may choose to shift their trade elsewhere, if it appears a cheaper option. In Vietnam the results were too widely spread to discern any pattern.

### **Industry association actions**

Industry associations can play a significant role in encouraging or driving their members to address problems of timber legality in their supply chains. There are a number of measures that associations can put in place to do this, some of which can be made more or less stringent. Codes of conduct can be adopted. If associations wish to do so, they can strengthen this measure by making adherence to it a condition of membership and can also monitor performance against the code. Associations can also provide guidance to their members regarding legality of timber supplies and related market and policy developments.

This project undertook to ask a small selection of industry associations in each producer and processing country questions on their activities in this area. Five industry associations were surveyed in China. Of these, three were preparing codes of conduct relating to legality of timber and noted that adherence to these codes would be a requirement for membership. The other two did not have a code. Only one of the three considered that they would include a formal means of determining members' levels of adherence. However, two associations said they would suspend companies for failure to adhere while the other had a 'requirement to correct' consequence. All five said they provided guidance regarding legality of timber supplies and related market and policy developments, and four noted there had been an increase in the number of requests for such guidance in the last year. As with the rise in FSC chain-of-custody certification in China, these results indicate that there is a growing awareness and interest in addressing timber legality and sustainability issues in the Chinese industry associations surveyed.

In Malaysia, five out of six associations surveyed do not have codes of conduct. However, half of these do provide guidance to their members, which shows there is some limited action on this issue. Of the four associations surveyed in Ghana, only one provides guidance, and had noted a slight increase in demands for this information over the last year. The one industry association surveyed in Brazil was preparing a code of conduct but adherence to this code would not be a requirement for membership. In addition, there would be no formal means of determining members' levels of adherence, nor any consequences for failing to adhere. The association did, however, provide training and/or guidance, and had noted a significant increase in demand for such guidance over the past year.

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<sup>145</sup> One French-owned company operating in Central Africa interviewed for a recent study noted that while legality verification will incur costs, such costs were expected to be compensated for by efficiencies resulting from better forest management.

### Box 4.1: Progress by industry associations in consumer countries

In consumer countries, industry associations can also play a role in driving progress on legality and sustainability issues, and there is some information already available with which to measure progress. According to the Timber Trade Action Plan's (TTAP) regular review of trade associations in the EU, binding environment-related timber codes have been introduced by these bodies in several European countries, including France, the Netherlands and the UK, although associations in the three countries are at different stages of development and implementation.<sup>a</sup> Codes in these countries, as well as some others, require members to trade in verified-legal timber as a minimum obligation. While all the codes studied in the pan-EU report state a preference for sustainable products, those in France, the Netherlands and the UK require a stepwise approach to buying verifiable sustainable timber. Those in France and the Netherlands also have timelines for achieving targets for this goal. Associations in these three countries, alone of the EU countries studied, also require systematic monitoring of members' compliance and have systems for third-party auditing. The trade associations in these countries are estimated to encompass between 60 and 90 per cent of all timber imports.

- a The Timber Trade Action Plan (TTAP) and the European Hardwood Federation (UCBD) are trying to promote information exchange on these policies and to develop a set of standard tools for procurement across the EU (FII, *EU Market Conditions*).

### Relative importance of legality demands and other drivers

In addition to being asked about their own experiences, private-sector respondents were also asked for their general opinions on how important legality and sustainability demands might be relative to other drivers such as tax and tariff levels in the competitiveness of the wood-product industry in their own country and worldwide over the next five years.<sup>146</sup>

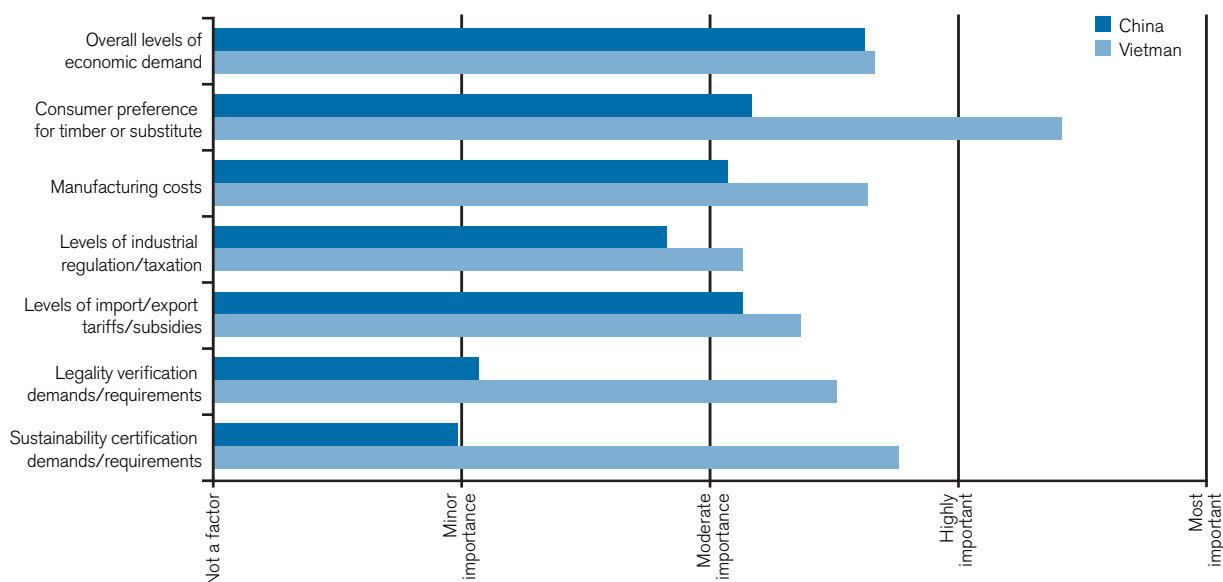
Overall, 95 per cent of survey respondents in the five producer countries believed that legality demands will be a factor in the competitiveness of their industry over the next five years, and 46 per cent felt it would be a highly important factor – more important than sustainability demands, levels of taxation, tariffs and subsidies, or consumer preferences for timber or substitutes. Legality demands were considered overall to be the third most important driver after general economic demand and manufacturing costs. Legality demands were expected on average to be a slightly more important driver than demands for certified sustainable timber in all countries. This broad pattern does mask some important differences, however. In Brazil and Malaysia, both legality and sustainability concerns were considered to be generally less important than in the other three producer countries. In Malaysia this perception is likely to relate to the large share of production destined for less sensitive overseas markets, while in Brazil it might relate to the similarly large share destined for the relatively insensitive domestic market.

The results for the two processing countries surveyed showed a marked difference (see Figure 4.2). Chinese companies generally considered that legality and sustainability demands would be only relatively minor drivers of the competitiveness of the industry in future (15 per cent of manufacturer-exporter companies did not think legality would be of any importance at all), whereas in Vietnam both were considered very important. In Vietnam, unlike in all other countries surveyed, sustainability demands were also expected to be slightly more important than legality demands. The difference may stem in part from the fact that the Vietnamese industry is more geared towards sensitive overseas markets; it may also stem from the strong awareness of legality and sustainability issues among Vietnamese companies resulting from many years of NGO campaigning in relation to garden furniture exports. The lack of

<sup>146</sup> The full list of possible drivers provided were: overall levels of economic demand; consumer preference for timber or substitutable products; manufacturing costs; levels of industrial regulation/taxation; levels of tariffs/subsidies; timber legality demands; and certified timber demands.

concern about legality shown by Chinese private-sector survey respondents is likely to prove a serious impediment to tackling the role of China as an importer, consumer and re-exporter of illegally sourced wood. It is likely that in the near future both recent and imminent general import controls in the US and EU may help push legality up the agenda.

Figure 4.2: Private-sector perceptions in China and Vietnam of the importance of different drivers in global competitiveness of national timber industry in the next five years



Source: Chatham House illegal logging expert perceptions survey.

## 4.2 Commitments and implementation by timber companies

In order to help ensure that they are not involved in handling stolen wood, timber processors, traders and retailers need to explore their supply chains and obtain evidence that the timber they buy is legally sourced. Companies involved in harvesting timber, in turn, need to be able to demonstrate that they are doing so legally. Although companies can choose to attempt this themselves, most choose to utilize the services of the many independent companies and schemes which have been established to help achieve this goal. The initial drive towards the growth of these schemes was the consumer demand for certified sustainable timber, but in recent years growing concerns over timber legality have also become an important driver. The established schemes examine legality as a small part of an overall assessment of sustainability, yet in response to demand-side drivers on illegal timber, many companies are now seeking such broader certification primarily for the assurances it can provide on legality; growth in the uptake of these schemes can therefore provide an indicator of the response to illegal logging. Obtaining full certification for sustainability can be a relatively long process, however, and is more than is required to meet some new demand-side measures. Recognizing this, a number of schemes have recently been established which allow companies to obtain independent verification of legality without the sustainability component.<sup>147</sup> Growth in these schemes also provides a useful indicator of private-sector response. For the purposes of this study, time-series data have been obtained from a number of sustainability certification and legality verification schemes with operations in focus producer, processing and consumer countries, and also from schemes offering advice and assistance to companies seeking to be verified or certified. Further information on the different schemes and services examined is included in Boxes 4.2, 4.3 and 4.4.

<sup>147</sup> Although such verification schemes are more limited in that they do not assess sustainability, the assessment of legality is often more rigorous than that undertaken during full certification.

### Box 4.2: Sustainability certification schemes

Forest certification involves the establishment of sets of principles and criteria for ensuring sustainable forest management, against which independent auditors assess forest management units controlled by specific companies and issue certificates to those companies which meet the requirements. All certification schemes include a fundamental set of requirements specifying that companies operate legally, although they also include much more extensive sets of requirements to ensure that they operate sustainably and with respect for local people. To ensure that buyers can be confident that uncertified wood does not enter the certified supply chain, certification schemes also certify the chain-of-custody (CoC) procedures of companies wishing to be able to manufacture, trade and sell certified wood. However, many companies which obtain such certification may actually use little or no certified timber.

The main scheme which has so far certified a significant amount of forest in tropical countries is that of the Forest Stewardship Council (FSC). FSC also includes a separate 'controlled wood' standard for non-FSC-certified wood used alongside FSC-certified wood in FSC mixed-source products. Although less stringent than the main standard, the controlled wood standard requires, among other criteria, that such wood must be legally sourced. In addition to international schemes such as FSC, there are a number of national certification schemes, including the Malaysian Timber Certification Scheme (MTCS). In late 2009 a revised MTCS standard was accredited by another international system, PEFC. Indonesia's national certification system is Lembaga Ecolabel Indonesia (LEI). To date, FSC, MTCS and LEI are the only forest management certification schemes to have certified natural forests in the producer countries which this study examines.

Overall, the data show strong and steady growth in demand for these services, with a growing volume and percentage of timber supply chains being 'cleaned up'. The demand-side measures in consumer countries aimed at tackling illegal logging and associated trade discussed in the previous chapter appear to be driving this growth, and the data suggest that growth is accelerating. There remains wide scope for improvement, however, with the majority of production and trade remaining unverified or uncertified. Until recently the main ultimate drivers behind the growth in these services were government procurement policies and the ethical concerns of individual customers of major retailers (usually influenced by NGO campaigns). Comprehensive and legally binding requirements either recently implemented (the US Lacey Act amendment) or imminent (EU due diligence requirements – see Section 3.4.2), however, are likely to increase dramatically the demand for the services of these schemes, and there is already some evidence of this effect in relation to the US. It will be interesting to note in future how these important international policy developments affect trends in the uptake of these schemes.

It should be borne in mind that while independent sustainability certification and legality verification are normally undertaken in response to demand-side measures and can therefore provide a good indicator of the effectiveness of those measures, problems do exist with these systems and timber harvested from such areas cannot be guaranteed to be entirely legal. The lowest level of verified legal origin (VLO) involves no assessment of a company's actual harvesting practices, while even the higher levels of verified legal compliance (VLC) and full certification fail to address some legality issues such as the process by which logging licences were issued. Audits of certified and verified companies sometimes uncover serious abuses. FSC-certified (Forest Stewardship Council – see Box 4.2) tropical forests in a number of countries

have had their certifications suspended owing to evidence of illegal activity.<sup>148</sup> Audits of some FSC chain-of-custody certified companies in Vietnam and China have exposed fraudulent behaviour,<sup>149</sup> and evidence suggests that many companies with FSC chain-of-custody certification are misleading their buyers into believing that all their products are certified when in fact they handle no FSC timber at all.<sup>150</sup>

#### 4.2.1 *Producer countries*<sup>151</sup>

Recent data show a significant increase in the area of forest certified as sustainable or verified as legal in Cameroon, Indonesia and Malaysia over recent years (see Figure 4.3). This growth is accelerating, with the bulk of the new area added in 2008 and 2009, the most recent years assessed.

One exception to the recent growth seen in producer countries is Brazil. Although there is quite a large area of natural forest FSC-certified for timber production in Brazil, most of this area was certified a number of years ago, before demand-side measures on illegal timber began to take effect. This area actually declined slightly between 2006 and 2009.<sup>152</sup> No legality verifications have yet occurred in Brazil. The Forest Trust (TFT – see Box 4.3), which has an office in Brazil, has noted that there are a number of constraints on the growth of legality verification in Brazil, including the complicated regulatory situation many forest managers are in regarding land tenure issues, and the fact that local NGOs have criticized Verification of Legal Origin standards as being too limited to be of much value.<sup>153</sup> The fact that a large proportion of timber produced in Brazil is destined for the domestic market is likely also to have reduced the impact of export-country demand-side measures. TFT does note, however, that timber producers in Brazil supplying the domestic market have recently been under increasing pressure to demonstrate legality of supplies which are intended for use in construction related to the football World Cup in 2014 and the Olympics in 2016.<sup>154</sup> Both the US and EU remain important markets for Brazilian hardwood exports (see Section 4.3.2), and it is also possible that the recent Lacey Act amendment and imminent EU due diligence requirements (Section 3.4.2) will spur growth in certification and verification in the country.

Ghana has also shown little positive effect in this regard. As of the end of 2009, there were no forests certified sustainable or verified legal in the country.<sup>155</sup> Ghana is also the only one of the focus producer countries where the TTAP industry initiative (see Box 4.3) is not operating. Between 2004 and 2009 WWF's Global Forest and Trade Network (GFTN – see Box 4.3) did sign up six companies in Ghana responsible for managing a total of around 0.4 million hectares, however, and the latest data suggest that all have established that their timber is of known, legal origin (according to WWF's definition) and are 'progressing towards' certification. One possible reason for the limited growth of legality verification and sustainability certification in Ghana in recent years may be the dramatic shift in exports towards less sensitive regional markets (see Section 4.3.2). Now that a FLEGT VPA (see Box 3.1 in Section 3.4.2) has been signed by the EU and Ghana, a legality verification system will soon be put in place, and this may negate to an extent the motivation of companies in the country to seek voluntary audits of their forests.

148 Such as Barama's FSC concession in Guyana, now suspended.

149 Personal communication, ASI staff, 2007.

150 EIA/Telapak, *Behind the Veneer: How Indonesia's Last Rainforests are Being Felled for Flooring* (EIA/Telapak, 2006); personal communication, Jago Wadley, EIA, 2010. This evidence relates only to Malaysia. It is probable that this occurs to a similar extent in other countries examined, but no equivalent studies have been carried out.

151 Although data are available for the number of manufacturing companies in producer countries which have obtained chain-of-custody certification for handling sustainable or legally verified wood or have had 'gap assessments' carried out by TTAP, in producer countries this growth is dependent upon and linked to the availability of certified or verified raw materials. The analysis for producer countries therefore focuses only on the area of certified or verified forest in each country.

152 A number of large privately owned forests lost their certification between 2006 and 2009, although it is unclear whether this was because the certification had been allowed to expire or because it had been suspended.

153 F. Guiera, 'Issues and challenges faced by suppliers on their way towards legality verification: Brazil', presentation for TFT, 8 October 2009.

154 Ibid.

155 One small area achieved FSC certification in early 2010, but this was a teak plantation and not natural forest.

### Box 4.3: Assistance providers

The process of achieving legality verification and sustainability certification can be complex, and various initiatives have been set up to help support and advise companies wishing to achieve these goals and to clean up supply chains. Ultimately these service providers aim to encourage companies to obtain full verification or certification, and when this is achieved this will be reflected in the data collected on these services. The service providers also collect data on the numbers of companies, areas of forest and volumes of timber which have yet to achieve full verification or certification but are nevertheless working towards it. Such data can give an early indication of likely future growth. Information in this study is drawn from three service providers.

The Timber Trade Action Plan (TTAP) is a European Commission co-funded private-sector initiative developed by the British, Dutch and Belgian Timber Trade Federations (TTF) and run by The Forest Trust (TFT). Through TTAP, TFT assists the members of participating TTFs and their suppliers (in producer and processing countries) in demonstrating that their timber is legal. The first step in the process is a 'gap assessment' designed to identify areas of work to be achieved to meet all of the legality standards of that country. An action plan is then implemented to address each element, after which the unit (forest, sawmill, trader, etc.) can be third-party verified.

In addition to implementing the TTAP initiative, TFT works independently with logging companies and factories in producer and processing countries to improve practices towards FSC certification or establish systems of legal verification and chain of custody. The Global Forest and Trade Network (GFTN) run by WWF is an organization of companies involved in harvesting, processing and trading timber in producer, processing and consumer countries. WWF advises and encourages member companies to increase the proportion of timber flows through various stages of verification, from unknown source, through known licensed source (legal origin) to full certification and aims to link producer members with consumer members.

The area of FSC-certified forest in Cameroon increased fivefold in 2008, with the inclusion of two new and very large concessions to add to the first which was certified in 2005.<sup>156</sup> Legality verification has also seen rapid growth in Cameroon in recent years, and includes significant areas now verified to the more stringent level of 'verified legally compliant'. Much of the forest area verified legal in 2006 had obtained FSC certification by 2009. All told, around 37 per cent of Cameroon's licensed production forests is now verified legal or certified sustainable. Although a large percentage of the growth has been in areas verified only as legal, it is possible such areas may yet progress to full sustainability certification, as has already occurred in the past. Given that many of the remaining concessions are focused on exports to less sensitive markets,<sup>157</sup> there may be limits to how much more verification and certification can grow in the country.

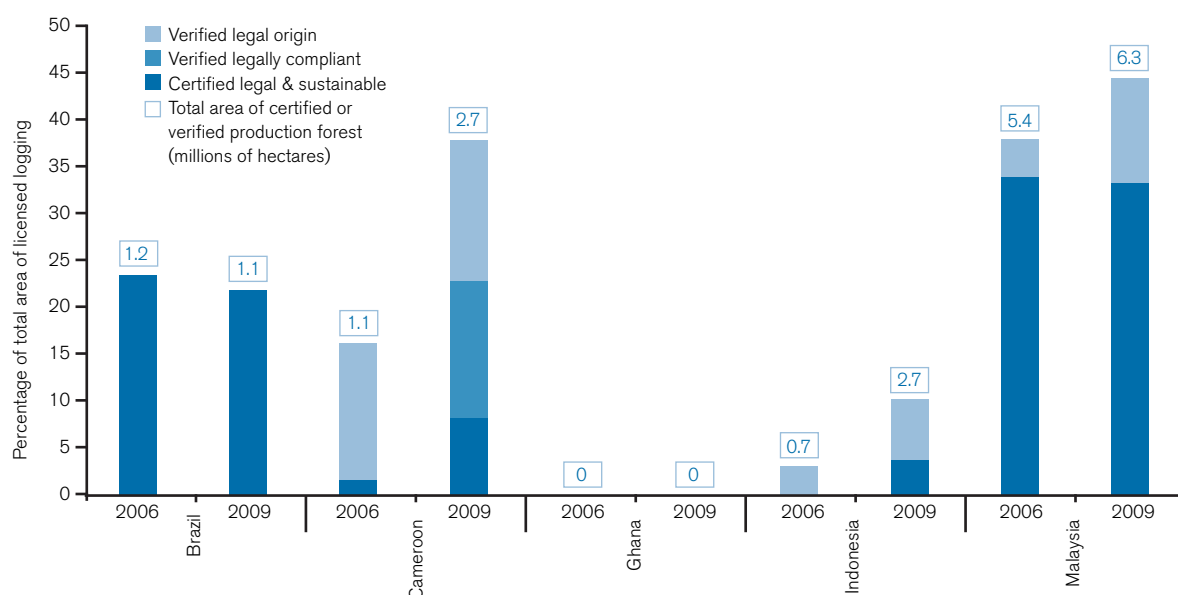
The area of FSC-certified or legality-verified forest in Indonesia increased more than threefold between the end of 2006 and the end of 2009. This followed a previous large increase in FSC-certified area during 2006. Two additional large areas were FSC certified in 2007, but this was partly offset by the suspension of the FSC certification of PT Intracawood, which had been certified the previous year. An audit had identified numerous major problems with the logging operations in the Intracawood concession, including the fact that part of it was being cleared for a timber plantation. Aside from the FSC-certified

<sup>156</sup> A fourth concession was certified in 2007 but was suspended a year later after numerous major irregularities were discovered during an audit.

<sup>157</sup> Trade data show 67 per cent by volume of exports to sensitive markets in 2008; assuming that all of the production from the 37 per cent of forest area certified or verified is destined for such markets, the majority of the production from the remaining production forests must be for export to less sensitive markets (see Section 4.3.2).

area, one large concession and a number of small community-based forest management areas have also been certified in Indonesia under the national Lembaga Ecolabel Indonesia (LEI) scheme. Most of the overall growth in certified/verified area in Indonesia in recent years has come from areas being verified legal, and all of this growth happened in 2009 – 1.7 million hectares in Papua, Kalimantan and Sumatra were verified legal during the year by SGS and Smartwood. Currently all such areas are verified only to the minimal VLO standard, which does not examine the legality of actual harvesting practices, though a significant minority is verified by Smartwood, whose standard requires the company to progress towards FSC. A large portion (0.6 million hectares) of the forest verified as legal is also an area being cleared for a timber plantation, with the salvaged logs consumed by a major pulp mill. While this wood may be legal, it certainly is not sustainable. Between 2006 and 2009, the percentage of Indonesia's production forests which is certified or legal-verified grew from 3 per cent to 10 per cent. Further rapid growth can be expected, since at the time of writing a further 0.8 million hectares were working towards verification/certification with TFT.

Figure 4.3: Certified sustainable forest and verified legal natural production forest in producer countries, 2006 and 2009<sup>a</sup>



Sources: FSC, MTCC/PEFC, LEI, SGS TLTV, SW VLO/VLC, BV OLB.

Note: For an explanation of the terms 'verified legal origin' (VLO), 'verified legally compliant' (VLC) and 'certified sustainable', see Box 4.4.

<sup>a</sup> Figures are for areas recorded as certified or verified at the end of the relevant year (except for FSC, where figures are for October of each year).

Figures for plantation forest or mixed natural-plantation forest are excluded, as are those for forests which are only certified for production of non-timber forest products. The figures for certified forest in Malaysia are more than 95 per cent MTCC/PEFC. The figures for certified forest in Brazil and Cameroon are all FSC – although Brazil has a national certification scheme, it has yet to certify natural forests for timber production. The majority of the certified forest in Indonesia is also FSC. Where an area is certified/verified under more than one verification/certification in a given year, the area is only displayed for the higher standard.

Malaysia has the largest area of certified or verified forest of the five producer countries. Of the certified forest, more than 95 per cent is certified under Malaysia's own national system, MTCS. Some of this area has now also received endorsement under the international PEFC scheme as forests have been reassessed to a new MTCS standard modified in 2002 to meet PEFC requirements. Most of the MTCS forest area was certified in 2002–03, and almost all of it is in Peninsular Malaysia. The area of MTCS-certified forest actually declined slightly between 2006 and 2009, as the certificate for the only MTCS-certified forest in Sarawak – Samling's Sela'an Linau FMU – expired; Samling has not sought to renew the certification to the new MTCS standard. In contrast to MTCS, the area of FSC-certified and VLO legal-verified forest in Malaysia has increased considerably during the last three years. As in Indonesia, most of the growth in legal verification occurred during the last year.

Since most of Peninsular Malaysia's permanent forests<sup>158</sup> are already MTCS-certified (which is often accepted as proof of legality), the growth in legality verification has occurred elsewhere, with Smartwood verifying 1.3 million hectares in Sabah and SGS verifying 0.3 million hectares in Sarawak. As in Indonesia, some of the legality verifications have been controversial. Almost all of the natural forest area verified by SGS in Sarawak is licensed for clearance for a timber plantation, and the area is also the subject of land rights claims.<sup>159</sup> Forty-four per cent of Malaysia's 'permanent forest' is now either certified or verified legal. As in Indonesia, the growth in legality verification in Malaysia looks set to continue; in early 2010 a further 0.6 million hectares were verified by Smartwood in Sabah, and a further 0.3 million hectares in the same state were being helped towards verification/certification by TFT and GFTN. One of the areas which had been VLO-verified by Smartwood in Sabah was also, in early 2010, the first area of natural forest in any of the five producer countries to obtain FSC controlled-wood certification (which includes an assessment of certain limited aspects of legality).

In addition to certification and verification of forests and GFTN membership, as part of the Timber Trade Action Plan (TTAP – see Box 4.3), TFT has also been active in all of the producer countries, with the exception of Ghana. There has been steady progress (see Table 4.1), but it has been much slower than originally envisaged; when the five-year programme was started in 2005 it was expected that 350 gap assessments would have been conducted in the four focus countries (Indonesia, Cameroon, Malaysia and Gabon) by February 2010, whereas by the end of 2009 only 64 had been completed in total in Indonesia, Cameroon and Malaysia.

Table 4.1: Timber Trade Action Plan (TTAP) progress in cleaning up supply chains in producer and processing countries, 2007–09

		No. of gap assessments			No. of action plans implemented			No. of nodes third-party verified			No. of supply chains third-party verified		
		2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
<b>Producer</b>	Brazil	0	4	12	0	0	8	0	0	0	0	0	0
	Cameroon	10	15	22	3	10	10	0	0	5	0	0	5
	Ghana <sup>a</sup>												
	Indonesia	9	14	18	3	10	14	0	1	5	0	1	3
	Malaysia	13	15	24	9	15	15	2	10	14	0	3	10
<b>Processing</b>	China	0	6	14	0	2	6	0	0	0	0	0	0
	Vietnam <sup>a</sup>												

Source: Personal communication, TFT.

Note: The first step in the TTAP process is an evaluation ('gap assessment') of each 'node' (production unit in a supply chain), which results in an 'action plan' detailing what needs to be done in order to meet legality standards, establish a chain of custody and obtain independent third-party verification. The ultimate aim is for all nodes in a supply chain to be verified.

<sup>a</sup> TTAP does not currently work with any companies in this country.

#### 4.2.2 Consumer and processing countries

Data on the numbers of companies in consumer and processing countries obtaining chain-of-custody certificates to enable them to handle certified and verified wood can provide an indicator of the extent of the private-sector response in these countries, as can information on the numbers of companies which have reached certain stages in the TTAP, GFTN or TFT processes aimed at eliminating illegal timber from supply chains. The figures for companies obtaining FSC chain-of-custody (CoC) certification are an imprecise indicator, however, because FSC CoC-certified companies do not necessarily handle FSC timber. Indeed, there is strong reason to believe that many of the companies which have obtained FSC CoC

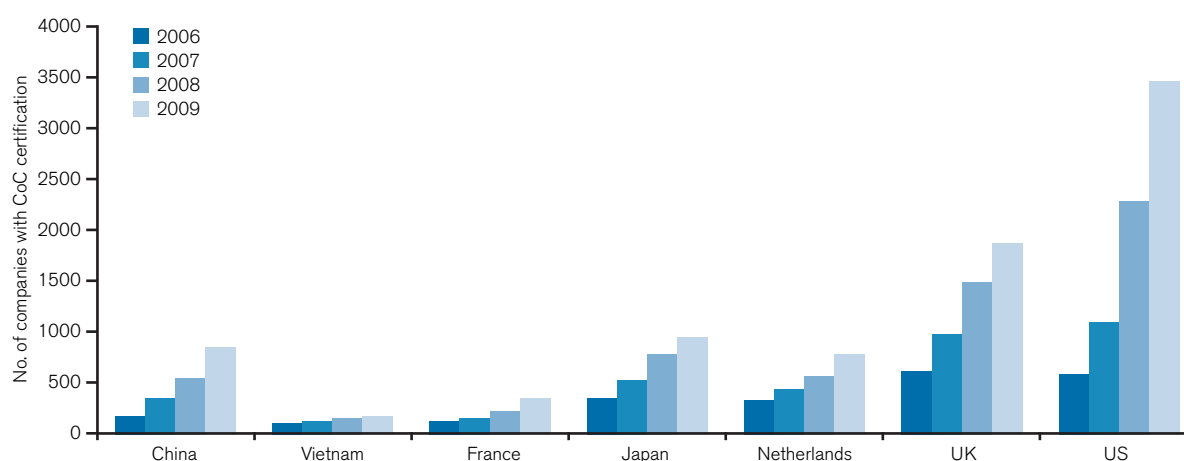
158 This excludes so-called 'state land' forest, which is destined to be converted to other uses.

159 Earthsight Investigations report, 2009, unpublished.

certification in recent years handle no FSC timber at all,<sup>160</sup> and that some are deliberately using the CoC certification as a means of misleading buyers regarding the legality and sustainability of their products.<sup>161</sup>

All of the focus consumer and processing countries examined have seen significant and in many cases accelerating growth in the number of companies with FSC CoC certification over the last three years (see Figure 4.4). The UK and the Netherlands now have the greatest numbers of companies with FSC CoC certification in relation to the size of their markets, while France and Japan have far fewer. This is consistent with the pattern of media attention and government policy developments seen in Chapters 2 and 3, which showed France and Japan to be lagging behind the UK and the Netherlands in the response to the illegal logging problem. The rate of growth peaked in 2007 in China, Vietnam, Japan and the UK, and growth is now decelerating. This may be because most of the companies that focused on supplying products to the most high-profile brands in the most sensitive countries have now already been certified; it may also be a result of companies seeking to avoid extra costs in the face of the tough economic climate. France saw particularly strong growth in 2008, most likely related to the FSC certification in that year of large areas of forest in Cameroon, Congo-Brazzaville and Gabon – all countries with particularly strong trade ties with French-speaking Europe. The dramatic acceleration in the growth in FSC CoC certification in the US in 2008 and 2009 can probably be attributed to the Lacey Act amendment prohibiting imports of illegally sourced wood products.

Figure 4.4: Number of companies in processing and consumer countries with FSC chain-of-custody certification, 2006–09



Source: FSC database.

Note: Although many chain-of-custody certificates have also been issued under PEFC, very little natural tropical forest has been certified under the scheme, so FSC is considered a better indicator.

The strong growth in Vietnam may be attributable in part to the attention brought about by a major NGO exposé in 2008<sup>162</sup> which, along with demand-side measures such as the US Lacey Act amendment, led to increasing concerns being expressed by buyers in Europe and the US (as recorded in the survey carried out in late 2008). Until 2007 the growth had been slow in Vietnam, following an initial burst in the late 1990s in response to earlier NGO reports. While growth in the past had been restricted to garden furniture, the recent growth has seen action spread to other sectors of Vietnam's wood-product export industry. WWF's GFTN was launched in Vietnam in 2006 and has shown steady growth, with a total wood consumption of around 0.4 million cubic metres of roundwood equivalent covered by the end of 2009.

160 Between 2007 and 2009 the number of FSC chain-of-custody certificates worldwide doubled, while the area of FSC forest only increased by about 30 per cent: there cannot feasibly be enough FSC-certified timber being produced to supply all of the FSC CoC-certified companies. Of ten FSC CoC-certified GFTN member exporters in China at the end of 2009, only five had actually sold any FSC timber in the last year.

161 EIA/Telapak, *Behind the Veneer*; personal communication, Jago Wadley, EIA, 2010.

162 EIA/Telapak, *Borderlines: Vietnam's Booming Furniture Industry and Timber Smuggling in the Mekong Region* (EIA/Telapak, 2008).

All of the companies which have joined so far have been linked to the garden-furniture manufacturing industry, however, and already had very high proportions of FSC-certified or plantation-grown wood use.

While the rate of growth of FSC CoC certification in China has been impressive in recent years, much of the growth may simply stem from the rapid growth in the industry as a whole and the increasing role of Chinese companies as an importer of timber and manufacturer and re-exporter of wood products. The number of companies with CoC certification in China remains very small relative to the size of the industry. WWF's GFTN programme has been active in China since 2005 and has seen steady growth, with mainland-Chinese GFTN manufacturer members encompassing 5.7 million cubic metres of roundwood use by the end of 2009. The majority of the companies and 95 per cent of the wood use thus far involved in the programme relates to wood flooring for export to the US, Europe and Australia, a trade from China which has been the particular target of NGO campaigning activity, and this is likely to have been the main driver. Although some of the companies have been GFTN members for five years, and most of the manufacturer members are FSC CoC-certified, the majority still sell no certified timber at all, and those which do use very little.<sup>163</sup> Almost 70 per cent of member production remains from unknown (and therefore possibly partly illegal) sources.<sup>164</sup>

#### Box 4.4: Legality verification systems

In response to a range of demand-side measures on illegal logging, and the fact that obtaining full certification of sustainability can be a long and difficult process, a number of companies with experience of certifying forest concessions against sustainability standards now offer a service to independently verify forest concession areas against a narrower standard focusing only on legality. Each company has developed its own generic standards against which to measure this; specific standards for each country often then also have to be developed on the basis of the generic standards.

The largest suppliers of legality verification currently operating are SGS, the Rainforest Alliance's Smartwood programme, and Bureau Veritas (BV). All have adopted a two-step legality verification approach. Although precise definitions vary, the first step (typically called 'verification of legal origin' or VLO, or sometimes just 'verification of origin') is very limited and generally seeks only to confirm that timber originated in a particular forest concession and that the company logging there has the necessary licences and permits to do so. The second step (typically called 'verification of legal compliance' or VLC) is much more rigorous, requiring evidence of compliance with regulations governing harvesting and other operational matters. It is often only during this second stage that the verification will involve any field inspections of actual logging operations. Whichever level or standard the verification of legality is for, as with sustainability certification the assessment also involves assessing each company's chain-of-custody procedures, which are meant to ensure that verified and unverified wood are kept separate.

Most demand-side regulations (such as procurement policies or FLEGT VPA licensing schemes) require at least the equivalent of a typical VLC standard to be achieved, and in some cases have more rigorous requirements. Smartwood's legality verification system explicitly recognizes that it can only be a first step, and requires companies which are VLO- or VLC-verified to also be progressing towards full certification. The SGS (known as TLTV) and BV (known as OLB) systems do not include such a requirement, although the companies offer services to companies wishing to move up to full sustainability certification.

<sup>163</sup> Of 14 mainland-Chinese manufacturer-exporter members of GFTN at the end of 2009, ten had FSC chain-of-custody certification, but only five of these had sold any certified wood in the last year.

<sup>164</sup> Data supplied by GFTN; as of October 2009, 5.2 million cubic metres were of unknown source out of a total of 7.6 million cubic metres.

TTAP, which has also been working with companies in China involved in exporting to Europe, has made some progress (see Table 4.1) but has also encountered significant difficulties. Recent reports have noted that a lack of necessary skills, intense competition, market fragmentation, complex supply chains, a price-focused business culture and an insensitive domestic market are all serving to seriously impede efforts to exclude illegal wood from supply chains in China.<sup>165</sup>

No companies in Japan, Vietnam or China have yet obtained chain-of-custody certification for handling legal-verified timber, suggesting that the drivers for the growth in legality verification have until now been coming solely from Europe and the US (most likely driven by existing procurement policies and the impending due diligence legislation) and that legality verification has yet to affect indirect imports. Twelve companies in France are now handling verified-legal wood, four in the Netherlands and just one in the UK. This proportion reflects the fact that all of the companies are trading legality-verified wood from French-speaking Central Africa and have integrated operations in the region and their home countries. It appears that the recent growth in legality verification seen in Malaysia and Indonesia (see Section 4.2.1 above) has been driven primarily by buyers in Australia, particularly those sourcing merbau wood from Papua in Indonesia, where illegal logging came to strong prominence in 2005.

Neither France nor Japan has a WWF GFTN programme, and this may reflect the slightly weaker demand-side drivers in place in both countries compared with the UK, the Netherlands and the US (see Section 3.4). The UK's GFTN scheme is very old; most large companies joined many years ago and the easiest gains have already been made. Nevertheless GFTN data show that the proportion of timber used by these companies which is at least of known, licensed source did rise very slightly in the last year, from 65 per cent to 68 per cent. The GFTN scheme in the US saw significant growth during 2008–09, possibly driven in large part by the 2008 Lacey Act amendment prohibiting the import and sale of illegally sourced wood products (see Section 3.4.2). Walmart, the world's largest single buyer of timber and wood products, with 5 million cubic metres of roundwood equivalent wood use, joined the scheme in 2008, as did a number of giant companies involved in producing, processing, consuming and selling paper and paper products. By the end of 2009, 45 per cent of the wood used by US GFTN members was at least of known, licensed source, up from 21 per cent two years earlier.

### 4.3 Timber prices and trade patterns

#### 4.3.1 Enforcement efforts and price response

Previous assessments by Chatham House of indicators of the response to illegal logging have included an assessment of the extent of and changes in price premiums for certified or verified timber. These assessments revealed that the available data are very sparse, however, and unreliable as an indicator.<sup>166</sup> An earlier study by Chatham House also examined whether prices for all timber products might provide a useful indicator of the effectiveness of the response to illegal logging: studies had shown that the volumes of illegal timber in trade were large enough to be depressing global prices by as much as 16 per cent,<sup>167</sup> and if the supply of such illegal timber were reduced it was hoped this might be reflected in increased prices. Although the study found very strong evidence that dramatically reduced flows of illegal timber from Indonesia in 2005 had had a marked effect on prices of certain timber products in China, in general it found that timber prices were a poor indicator, because they are affected by too many other factors which serve to mask any response to reductions in illegal logging.<sup>168</sup>

Instead of seeking to use timber prices themselves as an indicator in this regard, Chatham House has instead sought to draw on the expert perceptions surveys conducted in producer and processing countries.

<sup>165</sup> FII, *EU Market Conditions*, p. 19.

<sup>166</sup> S. Lawson and L. MacFaul, *Illegal Logging and Related Trade: 2008 Assessment of the Global Response (Pilot Study)* (Chatham House, 2009).

<sup>167</sup> Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

<sup>168</sup> Lawson and MacFaul, *Illegal Logging and Related Trade*.

Private-sector experts in these countries were asked to judge whether timber prices had changed, and if so whether they believed this was due (at least in part) to changes in the amount of illegal timber available.<sup>169</sup>

Although dramatic recent price changes due to the global economic slowdown had served to confuse the picture, the survey results nevertheless showed that in every producer country except Malaysia more than half (between 50 per cent and 77 per cent) of respondents who expressed an opinion<sup>170</sup> felt that levels of illegal logging were a factor in determining timber prices. This tallies with information regarding the extent of illegal logging in the various countries. A simple majority of respondents in Brazil (44 per cent), Ghana (56 per cent) and Indonesia (42 per cent) felt that prices had increased in the last year as a result of increased enforcement reducing supplies, a conclusion supported in Brazil and Indonesia by other indicators which indicate increased enforcement and reduced illegal timber production. In Cameroon the situation was less clear, with as many respondents feeling prices had fallen because of increased illegal logging as felt they had increased because of increased enforcement. This could be because the bulk of the reduction in illegal logging in Cameroon appears to have occurred much earlier.

In Vietnam, a clear majority of respondents who expressed an opinion (63 per cent) considered that prices had risen as a result of enforcement efforts in source countries. Vietnam is a major importer of Indonesian timber, and the crackdown seen there since 2005 is likely to have been a factor in this response. It is possible that increased enforcement on both sides of the border between Laos and Vietnam in response to a high-profile exposé in 2007 may also have influenced prices. In China, the picture was more confused, with roughly as many respondents feeling prices had fallen owing to increased illegal logging in source countries as felt the opposite to be the case.

#### **4.3.2 *Diversion to less sensitive markets***

There is a danger that the potential impact of demand-side measures to prevent consumption of illegally sourced wood products being taken in key consuming countries such as the European Union and the US could be undermined by companies in affected producer countries shifting trade in response towards other markets where such measures are not yet in place. Trade may shift to less sensitive consuming countries, such as India, South Korea or Japan, but could also shift towards intermediate processing countries such as China and Vietnam, since many demand-side measures either do not apply to such countries (such as FLEGT VPAs) or are difficult to apply (such as private-sector voluntary measures or efforts to abide by Lacey Act provisions) because of the complexity of supply chains. When buyers in the UK began to phase out imports of plywood from Indonesia in 2003 in response to pressure over their potentially illegal provenance, for instance, they began sourcing from China instead. Yet the increased Chinese plywood production was fed by increased imports of timber from Indonesia. The net effect was not to reduce the amount of illegally sourced timber being exported from Indonesia, but to shift the direction of trade.

In order to assess the extent to which demand-side measures may be being undermined by such shifts in trade, Chatham House has drawn on two indicators. The first is an assessment of the proportion of exports from focus producer countries which are destined for sensitive and less sensitive markets and how these have changed over time, based on trade data (see Figure 4.5).<sup>171</sup> It is possible, however, that trade patterns may change for other reasons.<sup>172</sup> On this basis, Chatham House also sought information from the survey of experts in producer and processing countries, whereby respondents were asked to assess whether trade had shifted to less sensitive markets and, if so, why this had occurred.

<sup>169</sup> In producer countries, this question was asked of government and NGO/other respondents, in addition to private-sector respondents. Although it was more likely that private-sector respondents would feel able to answer, other experts are also likely to have some understanding, and could choose to answer 'don't know' if appropriate.

<sup>170</sup> These figures and those elsewhere in this paragraph are based on a proportion of those respondents who expressed an opinion, and exclude those who stated that they did not know enough to respond.

<sup>171</sup> Data analysis was conducted by James Hewitt for Chatham House. In the analysis, the US, Canada, Australia, New Zealand and Europe were considered 'sensitive' markets, while all others were considered 'less sensitive'. More on the definitions used and the reasoning behind them is provided in Appendix A in Section A1.3.

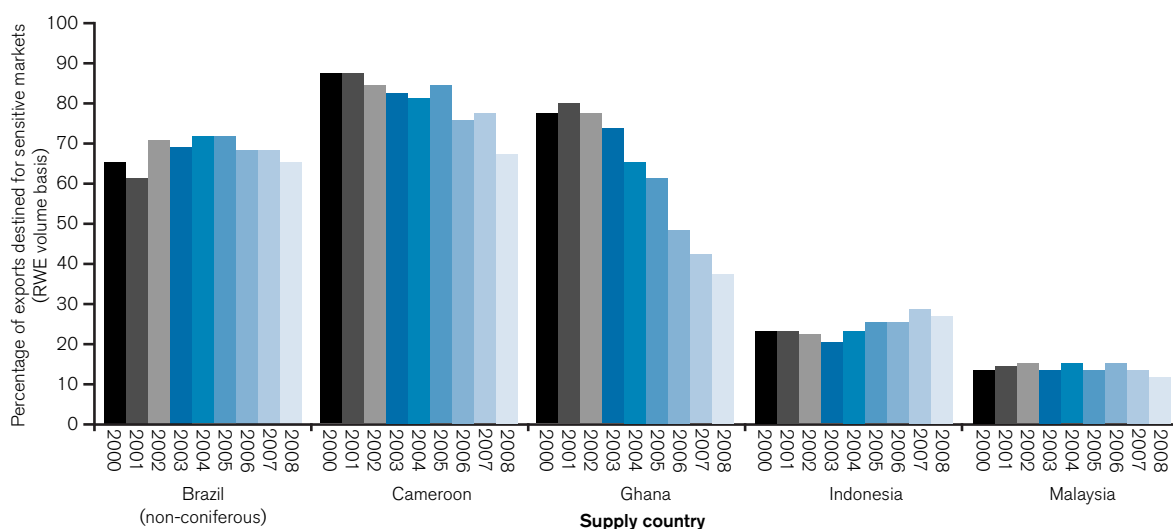
<sup>172</sup> For instance, trade may shift to less sensitive consumer countries or to less sensitive domestic markets in processing countries such as China if overall demand in these markets is growing faster than that in sensitive markets.

### Producer countries

The share of Brazil's exports of tropical timber<sup>173</sup> exported to sensitive markets is now the highest of any of the focus producer countries (72 per cent). This proportion rose during 2000–05 but has declined somewhat since. A majority of survey respondents in Brazil thought there had been a shift to less sensitive markets, of which almost all felt this was owing to sensitivities. One respondent noted that any desire to direct trade towards less sensitive markets was the result of the growing difficulty in producing timber of verified legal origin over the last few years, owing to confusions in the regulatory environment, particularly in relation to land tenure. Certainly the proportion exported to the US fell considerably in 2008, the year that new laws banning imports of illegally sourced wood took effect, although this could be due to the disproportionate effect of the global recession on the US compared with other markets. The revised 2006 laws and the associated 'paradigm shift' in Brazil towards a new system of concession-based forest management has only changed the situation marginally because concessions have yet to be implemented in significant numbers. The area of certified natural forest has stagnated in consequence, but trade may grow towards sensitive markets in the future when these issues are resolved.

Although the proportion of Cameroon's exports destined for sensitive markets (67 per cent) remains much higher than some of the other producer countries examined, trade from the country did see a marked shift towards less sensitive markets over the last few years. The principal new buyers involved have been in Asia, where China, Taiwan and Vietnam have become the largest importers of Cameroonian logs. Though the majority of survey respondents felt that the shift towards less sensitive markets had not resulted from demand-side measures on illegal logging, this shift does still have implications. With almost half of Cameroon's forest concessions now certified or verified (see Section 4.2.1 above) and the timber from them most likely destined for sensitive markets, the implication is that almost all of the timber from the remaining concession area is now destined for less sensitive markets. This may make additional gains in Cameroon much harder to come by.

Figure 4.5: Changes in proportion of exports from producer countries destined for 'sensitive' markets



Source: Trade data (various country sources), analysed by J. Hewitt for Chatham House. For the purposes of the analysis the US, Canada, Australia and Europe were considered 'sensitive' markets, while all others were considered 'less sensitive'.

Note: For Brazil, only data for non-coniferous wood exports have been analysed, in order to attempt to focus down on natural forest timber from the Amazon basin as opposed to trends in exports of timber from plantation forests elsewhere in the country.

173 Because the majority of Brazil's exports are of non-tropical timber from plantations where illegal logging is not considered to be a problem, only the proportion of tropical timber exports was examined; for other countries the proportions are for all timber.

The share of exports from Ghana destined for sensitive markets has fallen dramatically over the last few years, from 80 per cent in 2001 to a low of 37 per cent in 2008. This has been driven by a decline in exports to Europe and a very large increase in exports to neighbouring countries in West Africa, particularly Nigeria, the main destination for exports of Ghanaian plywood. The survey respondents seemed to be unaware of this shift, with a majority believing trade to have either remained static or shifted towards more sensitive markets. There is independent evidence to suggest that the shift may be due primarily to the recent exhaustion of timber species in Ghana which are attractive to buyers in sensitive markets,<sup>174</sup> and there is certainly little evidence to suggest that increased efforts to control illegal logging and associated trade have been a driver. This shift towards less sensitive markets, however, could in part account for the fact that Ghana has lagged behind the other producer countries in independent certification and verification. It may also hinder the potential effectiveness of the FLEGT VPA and associated licensing scheme.

Relative to Brazil and the two African countries, Indonesia has a traditionally very low (around 20–25 per cent) proportion of exports destined for sensitive markets. A large majority of survey respondents in Indonesia felt that there had been a shift in recent years towards less sensitive markets, and most of these believed this to have been due at least in part to increasing sensitivities elsewhere. The trade data, however, contradict this perception, showing a slight increase in the proportion of trade by volume towards sensitive markets, and an even more significant increase in terms of value. Overall exports from Indonesia have declined to all destinations in recent years, however, so this change in proportion largely represents the fact that exports to Asian markets have fallen slightly faster than those to the EU and US. This difference may stem in part from the increasingly well-enforced bans on exports of logs and sawn timber, which are traditionally exported mainly to less sensitive Asian markets.

The vast majority of Malaysia's exports are destined for less sensitive markets, with only around 12 per cent (by volume) destined for North America, Australasia and Europe in 2008. The proportion has remained unchanged over the last eight years. This overall proportion masks major differences between the different parts of Malaysia, however, with Peninsular Malaysia slightly more closely connected to sensitive markets and Sarawak much less so. In 2008, less than 4 per cent by value of Sarawak's exports were destined for Europe or the US. In this regard it is perhaps unsurprising that the only MTCS-certified concession in Sarawak recently expired and renewal is not being sought; it is more surprising, however, that a number of major concessions have recently obtained VLO legality verification.

### Processing countries

Analysis of trade data for Vietnamese timber and wood product exports shows that the proportion of exports destined for more sensitive countries has remained relatively steady in recent years, though there was a slight fall in 2006, the last year for which trade data are available.<sup>175</sup> The relatively subtle changes in actual trade patterns are reflected in the survey, with private-sector survey respondents in Vietnam divided as to whether there had been no shift, a shift towards sensitive or a shift towards less sensitive markets. About a third of respondents nevertheless felt that there had been a shift to less sensitive markets and that this was due to increasing concerns about legality and sustainability of wood supplies in the more sensitive markets. Analysis of Vietnamese raw timber *import* data also shows a slight shift towards countries where illegal logging is less prevalent, which may also reflect efforts by Vietnamese wood-furniture manufacturers to clean up their supply chains in response to increasing concerns being shown in sensitive markets to the issue of illegal logging.

In China, although 44 per cent of private-sector survey respondents felt there had been no shift in trade in either direction (towards sensitive or less sensitive markets), a majority (51 per cent) felt that there had been a shift in trade recently towards less sensitive markets, with sensitivity being at least a minor driver of this change.

174 J. Mayers et al., *Assessment of Potential Impacts in Ghana of a Voluntary Partnership Agreement with the EC on Forest Governance* (IIED, 2008).

175 Trade data for Vietnam are only available in terms of value and not quantity (weight or volume), which could serve to confuse the picture. The data referred to here were collected by Chatham House for the pilot version of this report.

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## 5 Levels of Illegal Logging and Associated Trade

The previous chapters show that attention to the problem of illegal logging and associated trade (as measured by media coverage) has increased across the board over the last decade – although it has dropped slightly in the last year. It also seems that governments in producer countries and consumer countries are beginning to enact and implement some of the policies which are needed to tackle the problem, at least in this study’s focus countries. Private-sector initiatives are expanding rapidly as well. While progress indicating early phases of a response is clearly being made in the focus countries, much remains to be done. But these steps are only means to an end, and uncertain ones at that.

An important question remains: are these responses (or other factors) actually having a measurable effect in reducing illegal logging and associated trade, thereby contributing to the ultimate purpose of protecting forests and the livelihoods of people dependent on them? This chapter attempts to answer this question.

Assessing actual levels of illegal activity is very difficult and can be imprecise. Traditionally, attempts to measure quantitatively the level of illegal logging in producer countries and the trade in illegally sourced timber through processing countries and into consumer countries have drawn on three methodologies: wood-balance modelling, trade data discrepancies and import-source analysis. All three methods have problems, but they are the best tools available, and Chatham House has sought where possible to improve them. To bolster these methods, this study has commissioned expert perceptions surveys in the focus producer and processing countries, and has also drawn on qualitative, anecdotal information. Where multiple indicators concur about the direction – and to a lesser extent the degree – of change, it is argued that some reasonably confident conclusions can be drawn.

### 5.1 Producer countries

#### 5.1.1 *Expert perceptions survey*

The expert perceptions survey asked respondents a number of questions about the overall extent of illegal logging in their country, the relative extent of different aspects of the problem, and how these are perceived to have changed over time. They were also asked about the importance of illegal logging and broader illegalities as drivers of deforestation<sup>176</sup> and negative impacts on society, relative to other drivers such as legal logging and forest clearance.

#### **Illegal logging versus other drivers of forest loss**

Although this study focuses on illegal logging, this is just one driver of forest degradation and loss. It is also important to understand how the relative importance of other potential drivers changes over time; it is possible, for instance, that if illegal logging declines, other drivers may become relatively more important and therefore worthy of greater attention. The perceptions survey therefore sought to obtain baseline data on the perceived importance of illegal logging in terms of forest loss and negative impacts on society.

Survey respondents, on average, did not see illegal logging, compared with legal drivers (clearance for agriculture and industrial logging), as the most important cause of forest loss in any of the five producer countries. However, in most countries they saw it as a reasonably important cause of forest loss.

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<sup>176</sup> The survey asked only about the role of illegal logging as a contributor to eventual forest loss; in future surveys Chatham House intends to amend the question to also address forest degradation.

There was a reasonable correlation between perceptions of the importance of illegal logging as a cause of forest loss and the overall extent of the problem itself. Brazil was the exception to this – illegal logging was considered to be much more extensive than in the other four countries, yet was considered relatively less important compared with legal industrial logging as a cause of forest loss.

Legal clearance for agriculture was seen as the most important cause of forest loss and of negative social impacts in both Indonesia and Malaysia. In Indonesia, illegal logging was seen as of roughly the same importance as legal clearance, but it was seen as considerably less important in Malaysia. In both countries, legal clearance is likely to refer mainly to clearance for oil palm and plantation forests. One private-sector respondent in Malaysia commented that licences for forest clearance for plantations had been issued by different states in an uncoordinated manner and without proper long-term planning. In Indonesia, improvements in enforcement and governance seen in the last few years and the apparent fall in illegal logging may have led to plantation crops regaining centre stage in the forest debate. This is reflected in recent attention in the news media and on the part of NGOs. Anecdotal evidence also suggests that, faced with increased enforcement, companies are increasingly turning to clearance licences as a means to gain access to valuable timber resources.<sup>177</sup>

As noted earlier, illegal logging as defined in this study is generally confined to illegal harvesting of trees for use as timber for commercial use (and associated downstream illegalities, such as illegal transportation). Such logging, however, is only one aspect of the problems associated with broader forest governance, although it has received the bulk of international attention. There is some anecdotal evidence from the Philippines and Indonesia that, when direct illegal logging becomes more difficult and when legal logging is reduced in the face of dwindling forest resources, companies seeking to source timber cheaply may turn to less direct illegal methods in order to obtain access to wood, including corruptly obtaining licences for mining or oil palm cultivation as a cover for timber extraction.<sup>178</sup> As in the question above, it is also possible that other aspects of illegal logging (such as small-scale logging by local communities) may become relatively more important as other issues such as large-scale illegal logging are tackled, and it is therefore important to attempt to monitor this.

The results show that, while illegal industrial logging is seen as reasonably important in all countries (though somewhat less so in Malaysia), other forms of illegality are already seen as equally – and in some cases more – important drivers of both forest loss and associated negative social impacts. In Brazil, illegal logging for mining and illegal community tree-cutting were both felt on average to be more important than illegal industrial logging. Illegal clearance for tree crops was seen on average by respondents as a slightly more important driver of forest loss in Malaysia than other forms of illegal forest-related activity including illegal commercial logging. Illegal clearance for tree crops and illegal logging associated with mining were seen on average by respondents in Indonesia as being of roughly equal importance with illegal industrial logging. This may not have been the case had the survey been conducted five or ten years ago, before the significant fall in illegal logging in the country documented elsewhere in this report.

### **The extent of the illegal logging problem**

Respondents in each country were asked their views on the extent of the illegal logging problem, by choosing from five options, each representing a range of percentage of illegal logging as a proportion of total harvest. The resulting data were used to produce a quantitative average estimate of the perceived extent of illegal logging (see Figure 5.1). This method assumes that the exact perception of each respondent of the extent of illegal logging lies in the middle of the chosen range (e.g. that those selecting 50–75 per cent felt the true figure to be 62.5 per cent), which may not be true; if instead the actual percentage intended by each respondent is assumed to be at the bottom or top of the chosen range (e.g. 50 or 75 per cent using the same example), then ranges of possible average values can be calculated. Figure 5.1 shows the average percentages for each country and each respondent group, with error bars indicating the possible range.

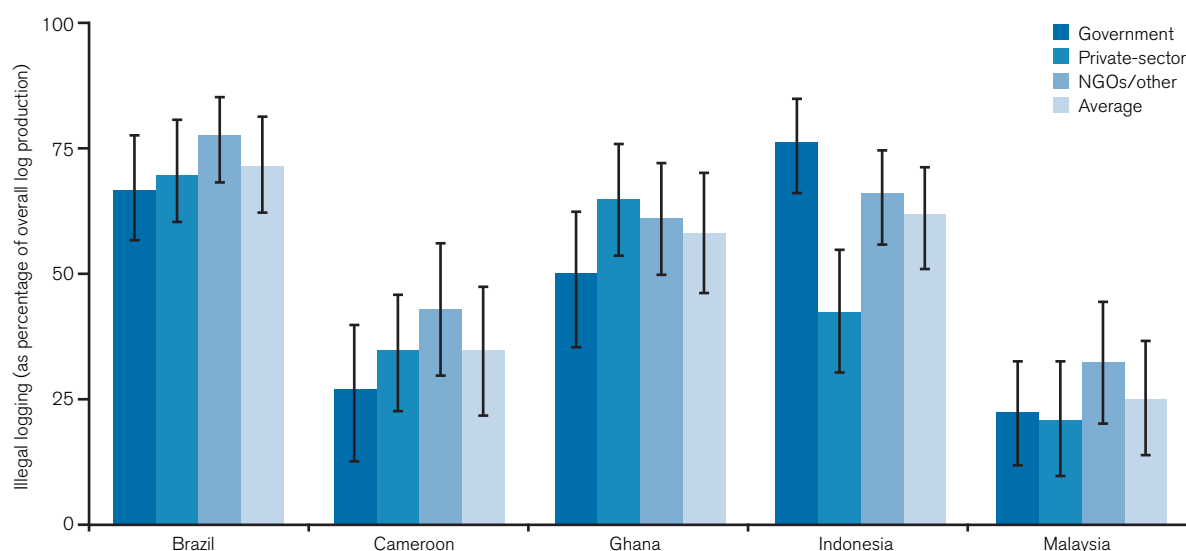
<sup>177</sup> EIA/Telapak, *Up for Grabs: Deforestation and Exploitation in Papua's Plantations Boom* (EIA/Telapak, 2009).

<sup>178</sup> Companies traditionally involved in timber harvesting which also have subsidiaries involved in agriculture and mining are often also increasingly shifting to the latter industries because they give better returns on investment.

In general, NGO respondents judged the extent of illegal logging to be greater than government respondents, but the differences were relatively small and almost all respondent-type averages fell within the error bounds of the overall average for each country.<sup>179</sup>

The results suggest that illegal logging represents about 70 per cent of harvesting in the Brazilian Amazon, 60 per cent of harvesting in Ghana and Indonesia, 35 per cent in Cameroon and 25 per cent in Malaysia. For Cameroon, Ghana and Malaysia these figures match quite well with the quantitative estimates produced through wood-balance modelling (see Figure 5.2).<sup>180</sup> In most cases the estimated percentage derived from the survey is somewhat higher than that derived from wood-balance modelling, which is what would be expected, given that wood-balance modelling measures only the extent to which apparent actual harvest exceeds legal allowable harvest. The exception to this rule is Ghana, but this might be explained by the three-year separation between the wood-balance and survey assessments, during which there is some evidence that improvements may have occurred.

Figure 5.1: Estimated extent of illegal logging problem based on perceptions of survey respondents



Source: Chatham House expert perceptions surveys.

NB: The averages shown here mask the considerable variation in opinions seen among respondents in each respondent group and in each country. It should be noted that there was quite a wide range of views about the extent of the illegal logging problem among respondents in Brazil, Ghana and Indonesia, whereas respondents in Malaysia and Cameroon were in closer agreement.

The actual average perception of the extent of illegal logging in Malaysia is likely to be lower than the calculated average of 25 per cent. This is because the lowest option given in the survey was for less than 20 per cent, and qualitative comments suggest that many respondents believed the real figure to be much less than half this number (as assumed by the mid-point average). A better reflection of the actual average perception of the extent of illegal logging may therefore be closer to the lowest end of the range of error, i.e. 13 per cent. While this is the lowest rate of the countries examined, it is still considerably higher than the existing official studies suggest (less than 1 per cent<sup>181</sup>). This may be because (as also suggested by other survey questions and by recent anecdotal data<sup>182</sup>) a large proportion of illegal logging in Malaysia involves illegalities inside licensed areas by licensees. These are not included in official reports on illegal logging and enforcement and have therefore not been adequately captured in previous assessments.

179 With the exception of Indonesia, where government respondents were much more negative and industry respondents much more positive than average about the extent of the problem – although this may be an unreliable result as there were very few government respondents.

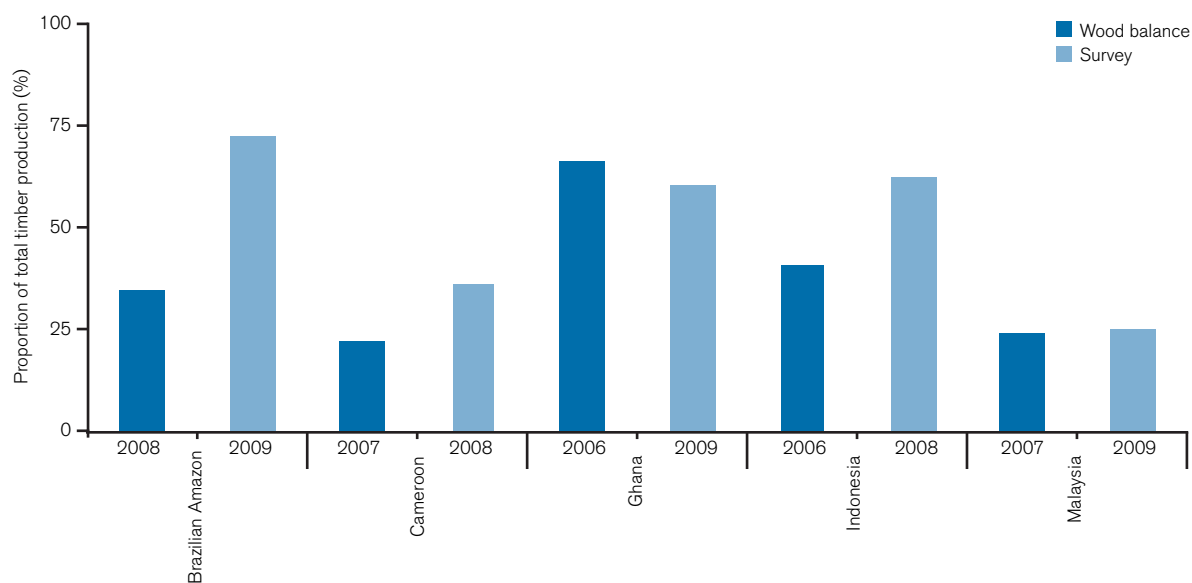
180 See Section 5.1.2 on wood-balance modelling for information on the source of the data shown in Figure 5.2.

181 TRAFFIC International, *Report on Forest Law Enforcement and Governance in Malaysia in the Context of Sustainable Forest Management*, paper prepared for the Government of Malaysia for submission to ITTO at the 37th Session of the International Timber Trade Council, 13–18 December 2004.

182 Report of the Malaysian Auditor-General, 2008, pp. 68–91; Earthsight Investigations field investigation report, 2009, unpublished.

There was quite broad agreement among surveyed experts of all respondent types that illegal logging is now less prevalent in both Cameroon and Indonesia than is commonly suggested in the media and elsewhere (see media review). This is supported by evidence (elsewhere in this survey and by other indicators) of considerable improvements in the government response and a consequent decrease in illegal logging in both countries in the last few years, which may not yet have been fully appreciated by the media or the broader policy community.

Figure 5.2: Comparison of estimates of the extent of illegal logging measured by survey and wood-balance modelling (year measured varies)



Source: Chatham House expert perceptions surveys; Chatham House wood-balance assessments (see Section 5.1.2).

Note: Wood-balance figure for Brazilian Amazon is that derived from IBGE rather than DOF data and there is strong reason to believe it may be misleadingly low (see Section 5.1.2).

The average perception of the proportion of logging which is illegal in Brazil (60–80 per cent) is much higher than the wood-balance estimate shown in Figure 5.2 (34 per cent); this may be due in part to the problems encountered with the wood-balance assessment in Brazil, which mean that the figure shown is likely to be a considerable underestimate. It is also possible that perceptions of the scale of illegal logging may not yet take into account recent improvements in enforcement. On the other hand, recent detailed assessments by the NGO IMAZON of a sample of logging licences in the Brazilian Amazon suggest that illegalities occurring within the legal production volumes – which a wood-balance cannot capture – remain very high and in the region of the percentage captured by the survey.<sup>183</sup>

## The nature of illegal logging

### *Types of illegal logging*

Survey respondents were asked to judge the relative importance of different aspects of illegal logging, including logging by concessionaires, logging by unlicensed companies, artisanal logging, illegal sawmilling and smuggling, and illegal logging-related corruption.

183 A. Monteiro and C. Souza Jr, *Satellite Images for Evaluating Forest Management Plans* (IMAZON, 2006), <http://www.illegal-logging.info/uploads/Imazonsatelliteimages1106.pdf>. The study found that of 'active' licence areas – those where licensed logging was actually occurring – in 65 per cent of cases the company concerned was logging an area larger than that which had been permitted. An even higher percentage of active logging licence areas showed this or some other form of illegality (such as logging prior to or following authorization, or clearance following logging).

In Brazil illegal logging by unauthorized companies was seen on average by survey respondents as more important than illegal logging by concessionaires (or other timber rights holders); the same was true to some extent in Indonesia. This may reflect a disproportionate enforcement effort targeted at licence holders<sup>184</sup> in Brazil and Indonesia, and perhaps also the disproportionate impact on legal licence holders of demands being made by those to whom they supply, which are likely to be the more sensitive markets domestically and abroad.

Illegal artisanal logging<sup>185</sup> was generally believed to be significantly more important in the two African countries than in the other producer countries, and in Cameroon it is now considered to be one of the most important contributors to the overall problem – considerably more important than illegal logging by licensed concessionaires. This reflects the differences in the timber sector in Africa as a whole (where artisanal logging for domestic use is common) from that in Asia and Latin America (where more developed economies have resulted in domestic markets being served by logging companies and sawmillers operating in the formal sector). The relative importance of artisanal logging in Cameroon also reflects the effective reduction in illegal logging by concessionaires in recent years reflected elsewhere in this survey and in wood-balance analysis.

Corruption is seen by respondents on average as being a more important part of the illegal logging problem in Indonesia than in the other countries, particularly in terms of corruption among the judiciary. Corruption was seen on average as the most important aspect of illegal logging in Indonesia, and was also seen as particularly important in Cameroon. This is also reflected in the survey responses on the recent developments in the problem, with corruption in Indonesia and Cameroon among the only aspects in any of the sample countries felt by significant numbers of respondents to be getting worse in recent years. The importance also closely tallies with general perceptions of corruption in the sample of producer countries, as measured by the Transparency International Corruption Perceptions Index.

Smuggling (illegal export) of timber is seen to be much more important in Indonesia than elsewhere. In both African countries, by contrast, smuggling was seen as the least important aspect of illegal logging and associated trade. This reflects the fact that, in Cameroon, there is an independent monitor in place checking the legality of timber exports, while exports from both Cameroon and Ghana have traditionally been more geared towards sensitive markets where consumers, retailers, NGOs and governments have demanded proof of legality (see Section 4.3.2 on sensitive market share). It also reflects the greater geographical difficulties of preventing smuggling among the many islands of the Indonesian archipelago, compared with the restricted numbers of ports from which timber can feasibly be exported in the two African countries. It may also relate to the log and sawn timber export bans in Indonesia, which have made smuggling more obvious and brought more attention to it from the media and NGOs.

#### *Different types of illegal harvesting by licence holders*

Respondents were also asked to judge the relative importance of different types of illegal harvesting by licence holders, including cutting protected species, logging undersize trees, logging outside licence areas and in protected areas, and logging in prohibited areas within a concession, such as on steep slopes and near rivers. In general, all forms of illegality were felt to be relatively important in most countries and differences were not very significant within or between countries.

In Brazil, respondents felt that logging outside allocated areas was a particularly prevalent form of illegal activity by logging companies. Given the considerable resources which have reportedly been invested in satellite monitoring in Brazil in recent years, it is perhaps surprising that such an aspect, which is relatively easy to detect, is still felt to be so common – though it may be the fact that it is increasingly commonly detected and reported on that has created the heightened perception. One influential study by IMAZON, looking at data from 2007–08, did publicize evidence of extensive logging outside allocated

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184 'Licence holders' as used here includes licences to harvest on private land, as well as concession licences.

185 Artisanal logging generally encompasses non-industrial logging to supply local needs. This includes the so-called 'chainsaw' logging practised in West Africa and elsewhere, where logs are roughly sawn into lumber in the forest. Some production from this activity may find its way into the formal trade.

areas, although the preliminary results of a 2009 follow-up analysis suggest that such logging has decreased significantly since.<sup>186</sup>

In Cameroon, average responses suggest that the most common illegality by logging companies is to extract more timber from a given area than is permitted. Logging in breach of community rights was also found to be a relatively important aspect of the illegal industrial logging problem in Cameroon, much more so than any other country. These results may reflect that these problems are among the more challenging for an independent monitor to investigate. They suggest that it would be wise for the Cameroon IFM to pay particular attention in future to breaches of community rights obligations by logging companies.

Illegal logging in protected areas was felt to be a relatively limited problem in Cameroon, Ghana<sup>187</sup> and Malaysia, contrasting with Indonesia, where it was felt to be one of the most prevalent forms of illegal logging. This impression in Cameroon is supported by the data on illegal logging in a sample of major national parks collected during the pilot phase of this project. Illegal logging in protected areas is relatively easy to detect, and with an independent monitor in place is much less likely to occur. In Malaysia many protected areas were heavily logged and most high-value trees extracted before they were gazetted. In Indonesia, by contrast, in Sumatra and Kalimantan protected areas are among the last places where significant stands of large high-value trees can be found, and this, combined with the large number of protected areas and a particularly poor governance environment, has led to greater incursions relative to other countries. The pilot study assessment found that illegal logging in national parks in Indonesia has fallen dramatically in recent years, however.

Most forms of illegal harvesting by licence holders were felt to be of less importance in Malaysia than in other countries, reflecting the overall impression from other survey questions and other indicators that illegal logging is less prevalent in Malaysia than elsewhere. The exception is illegal logging in prohibited areas within licence areas (such as on steep slopes or within river buffers), which was felt to be of roughly equal importance in Malaysia and in other countries. This may reflect the fact that such illegal harvesting is much more difficult to detect than more blatant breaches such as logging outside boundaries or in protected areas, and that while a better forest governance situation in Malaysia may be effectively preventing the more blatant illegalities, logging in prohibited areas has proved a more intractable problem. This perception is supported by, and may even have been caused in part, by a recent Malaysian Auditor General's report, which found evidence of widespread illegal logging on steep slopes and by riverbanks within concessions in Sarawak.<sup>188</sup>

### Change over time

On average, the experts who responded to the Chatham House survey felt that the situation had improved very slightly or, at worst, stayed the same, in all the focus producer countries during both the last year and the last five years (see Figure 5.3 – note that these periods are relative to late 2008 for Cameroon and Indonesia, and late 2009 for Brazil, Ghana and Malaysia). As would be expected, the survey showed a slightly stronger indication of improvement over the longer five-year timescale in most countries. The most significant improvements measured by the survey were in Indonesia and Brazil. The average for Ghana was lower, since a large minority of respondents felt things may have stayed the same or worsened.

The averages are strongly supported by the fact that in all countries the average perceptions of all respondent types, including NGOs/others,<sup>189</sup> were that the situation had either remained the same or very slightly improved. None of the NGO/other respondents in Brazil or Indonesia believed the situation had worsened, and a large majority felt things had improved to some extent.

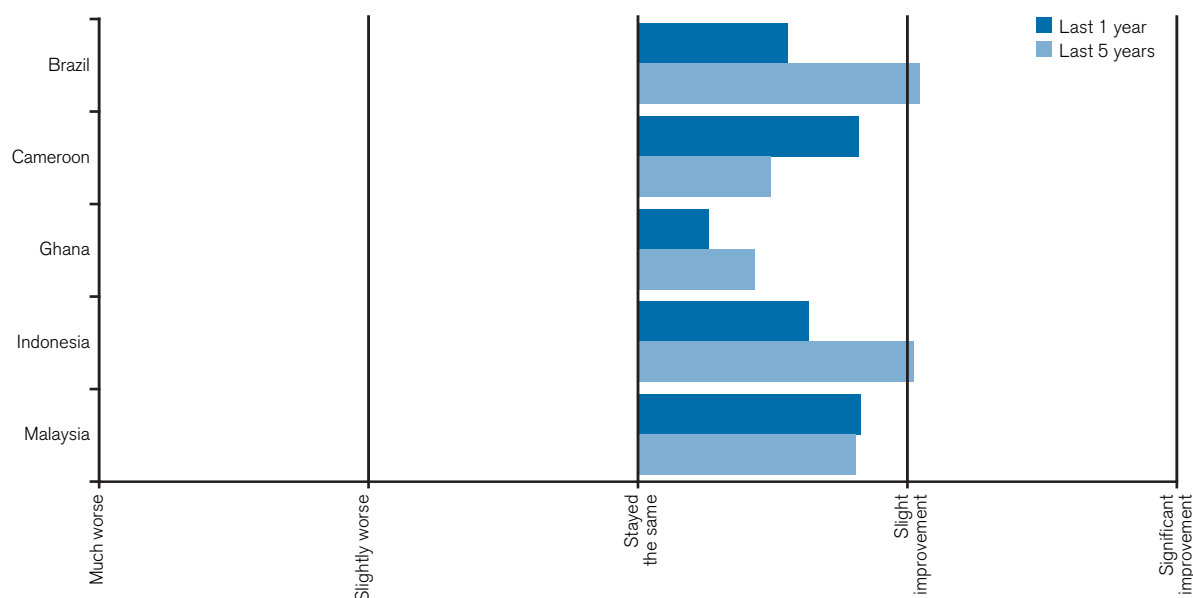
186 Personal communication, Beto Verissimo, IMAZON, April 2010.

187 A recent case in which the Ghanaian Forestry Commission approved logging in an area in Ghana's Western region classified as a Globally Significant Biodiversity Area, allegedly in violation of legal principles (personal communication, Forest Watch Ghana), came to light after the survey was conducted, too late to have affected measured perceptions.

188 Report of the Malaysian Auditor-General, 2008, pp. 68–91. The Sarawak authorities disputed the accuracy of some of the findings in the report.

189 'Other' respondents included those from intergovernmental organizations, research institutes, academia and the donor community.

Figure 5.3: Average perceptions of surveyed experts of change in illegal logging in the last one and last five years



Source: Chatham House illegal logging expert perceptions survey.

Notes: 1. 'Last one year' and 'last five years' are relative to late 2008 for Cameroon and Indonesia and late 2009 for Brazil, Ghana and Malaysia.

2. Overall average is calculated from separate averages for the three categories of respondent (government, private sector, NGO/other).

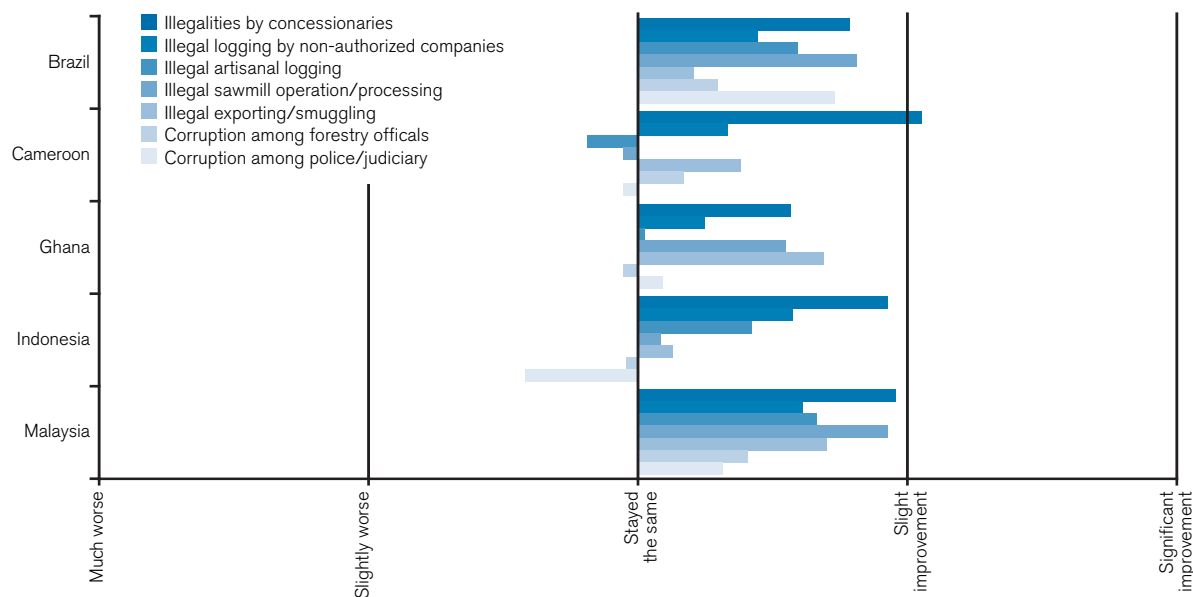
These perceptions fit well with other evidence, including wood-balance estimates of illegal logging, which suggest a strong reduction in illegal logging in Brazil, Cameroon and Indonesia in the last few years. Indicators of the response to illegal logging dealt with in previous chapters show improvements in attention, government response and voluntary response by the private sector in these countries, which can be expected to have contributed to these perceived improvements in the level of illegality. Improvements in consumer and processing countries which this study has measured may also have had an impact. The more mixed picture in the other indicators from Ghana also meshes well with the less positive results from the survey.

The sense given by the survey of improvements in Malaysia in both the last year and the last five years is less easily understood in reference to other indicators. It is possible that the average was skewed slightly by generous assessments from government respondents, something suggested by the fact that the difference between the views of this group and NGOs/others was much greater in Malaysia than in other countries.

Survey respondents were also asked to judge how different aspects of the illegal logging problem had changed over the last year. Most aspects in most countries gave averages which suggested that the aspects had either remained the same or very slightly improved (see Figure 5.4). The lowest averages related to corruption in Cameroon and Indonesia, in each of which a large majority (70–75 per cent) of respondents felt the situation had failed to improve, and around a third felt it had actually worsened to some extent. Corruption is often the most difficult aspect of illegal logging to tackle, and may possibly have been encouraged in Cameroon and Indonesia by crackdowns on outright illegal logging; where enforcement is greater, logging companies have more reasons to resort to bribery to avoid the consequences, and corrupt officials have more leverage to extract such bribes.<sup>190</sup> Such an analysis is supported by the fact that, in Indonesia, corruption among the police (who are responsible for most seizures – see Section 3.1.10) is thought to have worsened more than that among forestry officials.

190 In one example from West Kalimantan, a district illegal-logging task force was found to have colluded with local timber mafia, enabling them to launder illegal timber by having it seized and then buying it back cheaply at rigged auctions (DFID, *Crime and Persuasion: Tackling Illegal Logging, Improving Forest Governance* (DFID, 2007)).

Figure 5.4: Average perceptions of surveyed experts of changes in different aspects of illegal logging during the last year



Source: Chatham House illegal logging expert perceptions survey.

Note: Overall average is calculated from separate averages for the three categories of respondent (government, private sector, NGO/other).

The strongest suggestion of possible improvement based on the perceptions of those responding to the survey related to illegalities by concessionaires in Cameroon, Indonesia and Malaysia. In all countries, the situation was judged on average to have improved less for illegal artisanal logging and illegal industrial logging by companies without licences. It is likely that this reflects the fact that large concessionaires are most exposed to sensitive export markets, where government policy and private-sector voluntary initiatives are providing increasing drivers to reduce illegality (as documented in the previous chapters).

### 5.1.2 Wood-balance estimates of illegal logging

Wood-balance modelling is the most common method used to quantify illegal logging in producer countries. In its simplest form, the method compares the legal supply of timber (officially permitted logging and legal imports) with actual consumption (domestic consumption and exports); the extent to which real consumption outstrips legal supply can be used as a measure of the volume of illegal timber being cut and of the percentage of logging which is illegal.

There is no standardized methodology and, in the past, various methods have been used in different countries and even within countries, partly because of variations in the availability of raw data. This makes comparisons between published studies from different countries and different years very difficult to make with any degree of confidence. Although wood-balance modelling is a useful tool and can provide strong evidence of the likely extent of illegal logging at different points in time, there are also some general problems with the methodology which should be borne in mind. The most important is that wood-balance modelling only measures illegal logging in excess of the licensed harvest (outright, unlicensed illegal logging) and does not account for illegalities related to legally sanctioned timber production (such as where a company fails to pay taxes due on the timber it harvests, or where a company is licensed to cut a certain volume of one species but instead illegally cuts the same volume of a different species). Wood-balance modelling also does not capture timber which is illegally cut and smuggled abroad, although such smuggled timber can sometimes be quantified using trade data discrepancies instead (see Section 5.2.2).

In an attempt to standardize wood-balance assessments and provide for comparisons over time and between countries, Chatham House commissioned country partners to source or estimate a range of

input data (such as figures for licensed harvest and exports) with which to construct new assessments for this study for the most recent two years for which data were available. Although constraints meant it did not prove possible or practical to use identical methodologies in all of the focus countries (so, for instance, domestic demand/consumption was based in some cases on mill consumption and in other cases on per capita wood product consumption), these improved assessments, combined with past assessments by third parties, allow some conclusions to be drawn regarding the scale of illegal logging in each country and the extent of any possible reduction in response to efforts to tackle the problem.

### Brazil

No previous attempts to assess the extent of illegal logging in Brazil using wood-balance modelling have been made. The vast majority of log production in Brazil is plantation timber from the southern states, where illegality is not considered to be a major issue, and where any such illegality would not be impacting on the efforts to protect natural forests. For this reason, a wood-balance analysis which looked at the entire country and all of timber production would not be particularly helpful. Instead, a wood balance is needed for the states of the Brazilian Amazon where the bulk of natural forest is located and where illegal logging is a recognized problem. Standard wood-balance methods, using such factors as total domestic consumption, imports and exports, cannot provide such an estimate.

The Brazilian NGO IMAZON has developed a system for estimating the total volume of timber being harvested in the Brazilian Amazon, using surveys of volumes consumed by mills in major production centres in the region. These figures, which are available for 1998, 2004 and 2009, provide a reasonable estimate of the total consumption of timber from the surrounding forests. A comparison between this figure and the total licensed harvest for the region could potentially provide quantitative figures for the extent to which demand exceeds supply, and therefore the possible scale of illegal logging.

One potential problem with this method relates to IMAZON's own estimates, which are extrapolated from a sample (albeit a large one – 32 per cent of mills in 2009). The main problem, however, relates to the figures for the total licensed harvest. Two sets of figures are available, but both have significant flaws. Data from the Brazilian statistical agency, IBGE, are consolidated from figures for production drawn from numerous individual municipalities, and are likely to encompass some forms of unlicensed production. These figures are therefore likely to significantly *overstate* licensed production, and wood-balance analysis based on them is likely to *understate* illegal logging. Data drawn from the Brazilian national chain-of-custody wood-tracking system, DOF, are less likely to capture volumes in excess of those licensed for harvest, but are likely to exclude those parts of the licensed harvest that are illegal in other ways (such as where a licensee illegally cuts higher-value protected trees instead of an equivalent volume of less valuable trees licensed for harvest). The DOF system, which is still new, also does not yet integrate data from some important production states as well as it should. For these reasons DOF data are likely to significantly *understate* licensed production, and wood-balance analysis based on them is likely to *overstate* illegal logging.

Using the different sets of data gives very different pictures of the extent of illegal logging in the Brazilian Amazon. Using IBGE data suggests that around a third of logging is in excess of licensed volumes, while using DOF data suggests that 95 per cent of production may be illegal (see Table 5.1). The nature of the issues with the source data and the balance of available evidence from elsewhere (including the expert perceptions survey) suggests the real figure may lie somewhere in between.

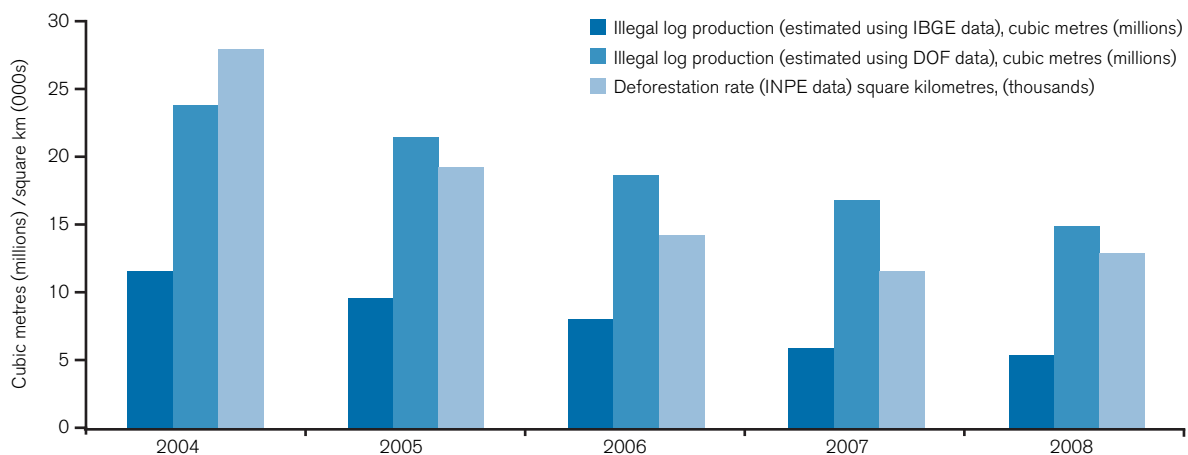
Table 5.1: Wood-balance estimates of unlicensed timber production in the Brazilian Amazon in 2008 using different sources of data for licensed production

	Volume (m <sup>3</sup> million)	Percentage of total harvest
IBGE	5.3	34%
DOF	14.7	95%

Note: Demand data for 2008 used in the calculation of these figures is estimated from the trend between 2004 and 2009.

Although DOF data are only available for 2006–08 and the IMAZON data for 1998, 2004 and 2009, it is possible to extrapolate missing data points using the trends seen between dates and the relationship between DOF volumes and IBGE volumes, and extend the analysis back in time with both data sets. The DOF data suggest a steady and very high percentage of illegality, while the IBGE data suggest a steady fall from a peak in 2000–01. Both methods, however, indicate that the volume of illegal harvest has declined significantly, particularly since 2004 (see Figure 5.5). This reflects a general decline in the overall volume of harvesting in the Amazon, legal and illegal, which in turn has also run parallel with a decline in deforestation (also shown on Figure 5.5, different scale).

Figure 5.5: Estimates of illegal timber production in the Brazilian Amazon compared with rates of deforestation (legal and illegal), 2004–08



Sources: IBGE, DOF, IMAZON, INPE.

A decline in overall logging in the Amazon has stemmed from a number of drivers, including an increased supply of timber from plantations in southern Brazil, substitution of timber by other materials such as aluminium, and, in 2008, the overall global economic slowdown. However, a reduction in illegal logging – as evidenced by Chatham House’s survey of experts, this wood-balance assessment and plentiful anecdotal studies – is certainly a factor. There are many other reasons behind the reduced level of deforestation, but the relationship between selective logging and subsequent deforestation – particularly as a result of increased access via logging roads – is well established.<sup>191</sup> It can therefore be reasonably safely concluded that reduced illegal logging in the Brazilian Amazon has helped stem the destruction of the Amazon’s forests.

### Cameroon

The most frequently quoted estimates of illegal logging in Cameroon are derived from wood-balance modelling which are very out of date. A simplified form of wood-balance assessment has been used in Cameroon, which compares only the licensed legal concession production with exports (in roundwood equivalent) – cutting for the domestic market is not included. Such a simplification is possible because there is a clear division in logging in the country, with production from large concessionaires largely destined for export, while most timber from small-scale logging is destined for the domestic market.

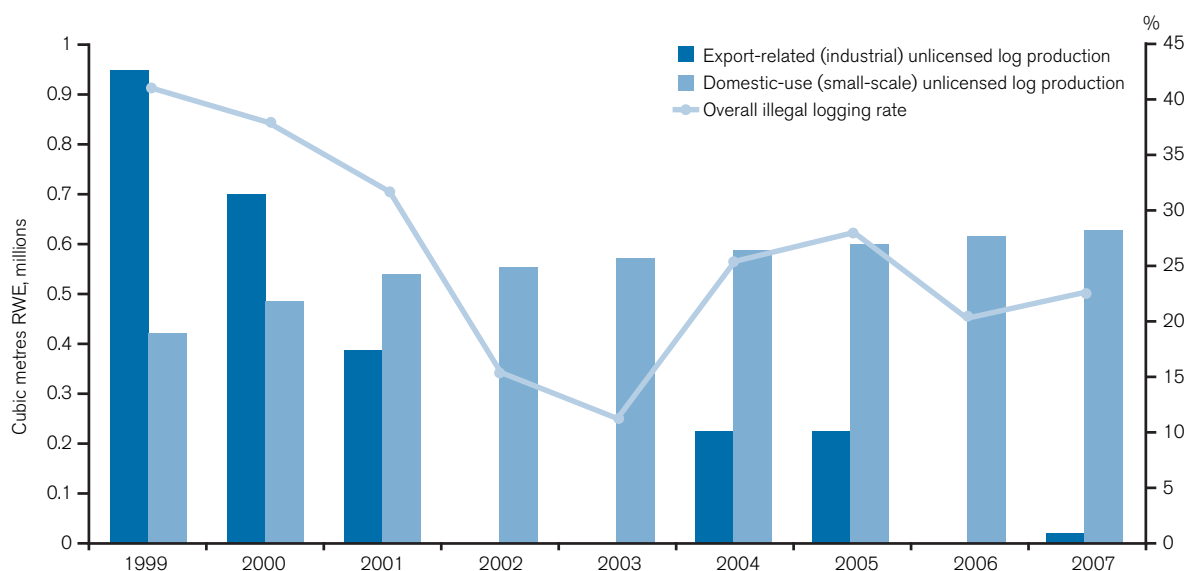
An analysis of this kind found that, in 1999, as much as 33 per cent of the timber being harvested by large concessionaires for export was illegally sourced – almost 1 million cubic metres per year.<sup>192</sup> The

<sup>191</sup> See for instance Asner et al., ‘Condition and Fate’.

<sup>192</sup> P. O. Cerutti and L. Tacconi, ‘Forests, Illegality, and Livelihoods: The Case of Cameroon’, *Society and Natural Resources* Vol. 21, No. 9 (2008), pp. 845–53. The actual illegal percentage quoted in the paper for 1999 was 48.5 per cent, but this was calculated by comparing the estimate of illegal production with the legal production, rather than as a percentage of total production (legal plus illegal).

analysis has been repeated every year since using the same methodology. This showed that discrepancies between licensed harvest and exports had fallen to zero by 2002 and, after picking up, fell back to near zero again in 2006 and 2007 (see Figure 5.6).

Figure 5.6: Estimates of illegal logging volumes and rates in Cameroon, 1999–2007



Source: Chatham House wood-balance analysis, adapted from Cerutti and Tacconi, 2008.

This suggests that relatively little outright illegal logging (i.e. in excess of licensed volumes) is now occurring in major concessions, or at least that any such timber is not being exported. However, importantly, the analysis does not account for illegalities within the licensed harvest, such as failure to pay taxes and fines, cutting higher-value species than licensed, or cutting trees below legal diameters. It is important to bear in mind that a logging company can increase profits significantly by a wide range of illegal means without harvesting timber in excess of the licensed volume. The findings of the independent monitor in recent years attest to the prevalence of these sorts of illegalities.<sup>193</sup>

Alongside the wood-balance assessment, the analyses of illegal logging in Cameroon conducted over the past ten years have also included an estimate for the part of illegal harvesting which this simplified balance model excludes – small-scale unlicensed log production for the domestic market. One-off estimates of the volume of timber being consumed in the domestic market were published in 2000 and 2002, based on extrapolation from limited surveys in a small number of cities.<sup>194</sup> The most recent study concluded that around half a million cubic metres of logs were being cut illegally each year to feed the domestic market;<sup>195</sup> this figure has not been updated since, although new studies had just been completed and were awaiting publication at the time of writing. For the purposes of this study, the domestic consumption in 2002 is assumed to have increased in line with population (though not also with growth in per capita GDP).

Combining the two estimates for domestic and export-related illegal logging suggests that the overall rate of illegal logging (defined as production in excess of licensed volumes) in Cameroon has fallen from a peak of 41 per cent in the late 1990s to 22 per cent of production in 2007, entirely as a result of changes related to industrial-export-related logging. This rate tallies quite closely with the estimate produced by the perceptions survey, which is somewhat higher (35 per cent, with a range of 22–47 per cent), as would

193 REM, *Independent Monitoring Cameroon*, annual progress reports, 2005–2008.

194 CIRAD, *Audit économique et financier du secteur forestier au Cameroun: rapport final* (CIRAD, 2000); D. Plouvier et al., *Etude du sous-secteur sciage artisanal au Cameroun* (Ministry of Environment and Forests, Cameroon, 2002).

195 Plouvier, *Etude du sous-secteur sciage artisanal au Cameroun*.

be expected since perceptions are likely to encompass a broader range of illegalities. Although the scale of the decline in illegality (around 46 per cent) may be overstated by the wood balance, other indicators (including the perceptions survey) and anecdotal information (including reports of the independent monitor) strongly support the contention that illegal logging in Cameroon has dramatically declined in recent years.

## Ghana

Little previous work has been carried out in the past to conduct an overall wood-balance assessment for Ghana. What estimates have been produced have tended to focus only on attempting to measure the scale of chainsaw lumbering for the domestic market. One estimate, presumably derived from a wood-balance assessment, was quoted by a Ghanaian Minister to a FLEG workshop in 2003, in which it was stated that *'1.7 million cubic metres (almost 50 per cent) of all timber harvested in the country are illegally felled'*.<sup>196</sup>

A new wood-balance assessment, conducted for Chatham House by country partners, provides estimates for illegal logging in the country for 2005 and 2006, the most recent years for which the necessary data are available (see Table 5.2). These suggest that illegal logging represented 65 per cent of total consumption in 2006, a figure which tallies quite well with the estimate produced by the perceptions survey (59 per cent, with a range of 47–70 per cent).<sup>197</sup>

Table 5.2: Ghana wood-balance analysis  
(all figures millions of cubic metres RWE unless stated)

	2005	2006
Imports	0.7	0.7
Legal production	1.0	0.9
<b>TOTAL SUPPLY</b>	1.6	1.5
Exports	1.2	1.2
Domestic consumption	2.7	3.1
<b>TOTAL DEMAND</b>	3.9	4.3
Discrepancy	2.3	2.8
Discrepancy %	59%	65%

As in Cameroon, in Ghana there is quite a clear distinction between the formal industry (mostly for export) and the informal industry ('chainsaw' logging, mostly for domestic use). All chainsaw logging is illegal, and this logging is a major contributor to the overall estimates of illegal logging in the wood balance. A more detailed look at the figures, however, suggests that there is also a significant amount of illegal timber being used in the formal sector and being exported. To begin with, the volume of exports (measured in roundwood equivalent) exceeds the formal legal production by 25 per cent. A validation of legal timber programme (VLTP) fiscal study in 2005, however, established that the formal industry consumes considerably more timber than just that which is exported – nearly 1.6 million cubic metres of roundwood. This suggests that around 38 per cent of the timber consumed by the formal industry is illegal. Overall, then, the figures suggest that the formal industry is responsible for around 26 per cent of illegal logging in Ghana, with the remainder made up of illegal chainsaw lumber processed outside the formal sector and consumed domestically.

196 S. K. Nketiah, A. Wieman and K. O. Asubonteng, proceedings of a Focus Group Discussion on 'Chainsaw Lumber Production: A Necessary Evil?' (Ghana: Tropenbos International, 2004).

197 It should be noted that this analysis and the resultant estimate assumes that all licensed logging is legal; in fact question marks have been raised over the legality of many of the licences under which 'legal' logging is currently occurring in Ghana. A study by Forest Watch Ghana in 2004, for instance, found that 94.6 per cent of the logging area was improperly licensed (Forest Watch Ghana, 'Ghana loses €900 billion (\$100 million dollars) annually from uncollected timber rights fees!', *Daily Graphic*, Accra, 1 October 2004).

The wood-balance assessment for 2006 suggests a significant increase in illegal logging in Ghana on the previous year (from 59 per cent to 65 per cent). These percentages, in turn, represent an increase on the estimate quoted in 2003 (50 per cent), though that estimate is likely to have used a different methodology so cannot be directly compared. The apparent increase in illegal logging between 2005 and 2006 is driven primarily by an increase in domestic consumption which could not be met by increased legal production or imports. This increased domestic consumption has in turn been driven by government development programmes and a boom in the building industry, reflecting broader GDP growth. Thus the apparent increase in illegal logging cannot be ascribed to a decline in efforts to tackle the problem (though such a decline also cannot be ruled out). It is possible that the effects of any such efforts may have been overwhelmed by the broader demand-supply problems.

Nevertheless, there is evidence to suggest that Ghana has made increased efforts to tackle illegal logging in the years since 2006 – as suggested by the perceptions survey – and it is possible that subsequent wood-balance assessments will pick this up. The survey also suggests that the overall illegal logging problem may have been reduced in the most recent few years. With this in mind, and considering the relatively small number of data points, the wood-balance figures available are insufficient to allow changes in illegal logging in Ghana to be quantified reliably over time.

### Indonesia

The most frequently quoted estimate of the rate of illegal logging in Indonesia (73 per cent) was derived from a wood-balance assessment conducted for 1998.<sup>198</sup> Although almost a decade old, this statistic remains in common use, and has been used to calculate illegal timber imports into the EU as recently as 2008.<sup>199</sup> A number of other similar assessments have been undertaken in the years since, and in 2008 Chatham House commissioned a similar study for the most recent year for which data were then available (2006). Caution should be exercised in examining the precise pattern, since the various studies used different methodologies.

With this in mind, however, the general picture certainly seems quite clear, and is supported by a number of other indicators, including the perceptions survey and an assessment of illegal logging in a sample of national parks conducted for the pilot version of this study. It suggests that the volume of illegal timber being cut in Indonesia has fallen dramatically in the last few years, since a peak around 1999/2000 (see Figure 5.7). The percentage illegal logging rate peaked slightly later, perhaps because the legal cut was being reduced at the same time that illegal logging was falling. The figures suggest that, by 2006, following the major countrywide enforcement operations launched by the Indonesian government in 2005, the illegal logging rate had fallen from a peak of over 80 per cent to as low as 40 per cent. Meanwhile estimated illegal timber volumes had fallen by as much as 75 per cent over a six-year period. These figures contrast with the Indonesian government's own more optimistic estimate that illegal logging had fallen by 80 per cent in just one year between 2005 and 2006.<sup>200</sup>

It is worth reiterating that this estimate is only of outright illegal harvesting – it does not account for illegalities related to the allocated cut, which may even have been increasing at the same time as outright illegal logging levels have been falling. As with the wood-balance assessments for all of the producer countries, it is also possible that the unlicensed cutting may exceed that suggested by the analysis, since some trees licensed for harvesting in one part of the country may be being left standing, which would allow an equivalent volume not licensed for cutting elsewhere to be illegally logged without affecting the wood balance. For these reasons, the estimates can be expected to understate the true level of illegality, though on the other hand the analysis may also overstate illegal logging by failing to capture some forms of legal supply.<sup>201</sup>

It is also important to bear in mind that the decline in apparent illegal logging in percentage terms has been driven to a large extent by an increase in the supply of timber from licensed clearance for

198 N. Scotland et al., *Roundwood Supply and Demand in the Forest Sector in Indonesia*, ITFMP report no. PFM/EC/99/08 (Jakarta, Indonesia, 1999).

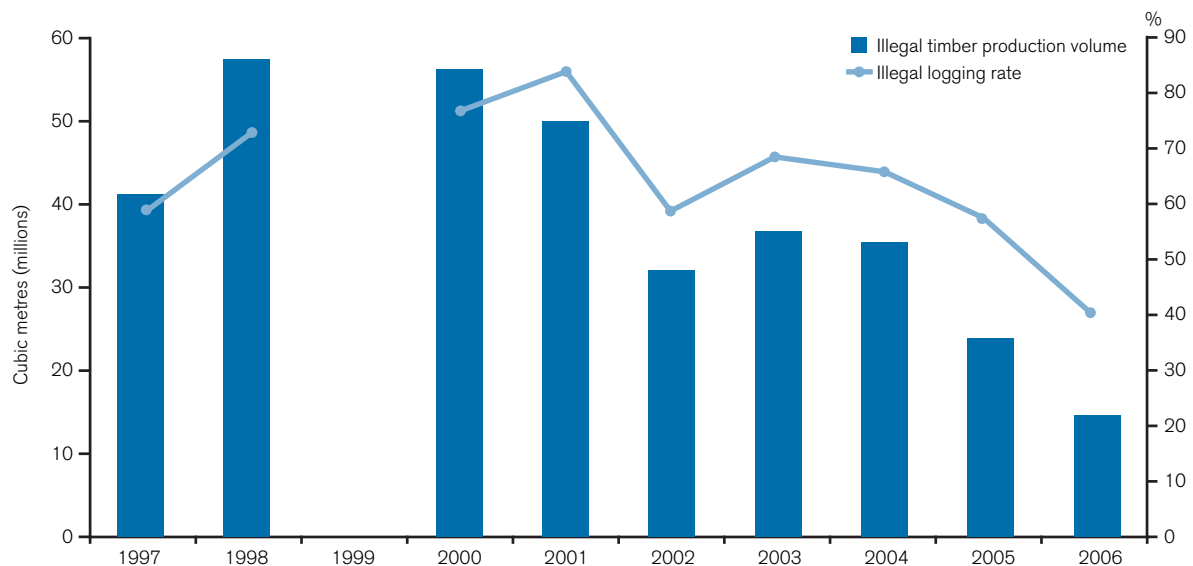
199 P. Hirschberger, *Illegal Wood for the European Market* (WWF, 2008).

200 'Forestry Minister: Illegal Logging Expected to be Stopped by 2009', *Antara*, 4 January 2006.

201 One major issue is timber from clearance for plantations. Although the supply data used in the analysis include timber cut under IPK clearance licences issued by the Ministry of Forestry, some plantation companies which do not have such licences claim that they have been given written confirmation from district forest officials that they do not need them.

agricultural plantations, and the supply from timber plantations often established at the expense of native forests. Although the volumes from such sources count towards the total 'licensed' harvest in the analysis, there is evidence to suggest that such licences may have been issued illegally in many cases<sup>202</sup> and there may be other forms of illegality involved (such as tax avoidance). The extension of such activity also serves to counteract to a large extent the benefits of a fall in illegal logging in terms of reducing overall deforestation; Indonesia may therefore not see the same correlation between reduced illegal logging and reduced deforestation as Brazil.<sup>203</sup>

Figure 5.7: Wood-balance estimates of illegal logging in Indonesia, 1997–2006



Sources: Scotland et al., *Roundwood Supply* (data for 1997 and 1998); L. Tacconi, K. Obidzinski and F. Agunget, *Learning Lessons to Promote Forest Certification and Control Illegal Logging in Indonesia* (Center for International Forestry Research, 2004) (data for 2000 and 2001); NRM-MFP-BAPPENAS, *Forest Futures Scenario Analysis* (NRM-MFP-BAPPENAS, 2004) (data for 2002); Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets* (data for 2003); Human Rights Watch, *'Wild Money': The Human Rights Consequences of Illegal Logging and Corruption in Indonesia's Forestry Sector* (Human Rights Watch, 2009) (data for 2004 and 2005); Lawson, *Illegal Logging and Related Trade* (data for 2006). The 2009 Human Rights Watch study also provided estimates for 2003 and 2006, both of which are slightly higher than those from the studies used for those years in Figure 5.7.

Note: different methodologies were employed by each of the above studies, so caution is required in comparing results between studies.

According to one recent study, the wood-balance 'gap' and implied illegal logging in Indonesia fell even further in 2007 and 2008, largely owing to a very sudden and dramatic increase in the officially reported supply of timber from plantation forests. The reliability of the plantation forest production figures for these years has been questioned, however, and the resultant wood-balance figures may therefore be inaccurate.<sup>204</sup>

## Malaysia

The only previous wood-balance analysis for Malaysia was conducted in 2002, using data for the previous year.<sup>205</sup> The analysis concluded that 29 per cent (7.8 million cubic metres) of Malaysian timber consumption and exports could not be accounted for by legal domestic production and imports in 2001, and suggested that this timber had 'in all probability' been acquired illegally – through either timber theft or smuggling from abroad. Using updated data from the same source and applying the same methodology, in 2007 this study extended the analysis to 2004 and 2005 (see Table 5.3).

202 EIA/Telapak, *Up for Grabs*.

203 Deforestation figures reported by Indonesia to FAO do show a significant decline in average deforestation during 2000–09 compared with the previous decade, but this encompasses periods of higher and lower illegal logging so a correlation cannot be assumed; annual deforestation data have only been published by the Ministry of Forestry for 2000–2005, prior to the major reductions in illegal logging seen in recent years.

204 Human Rights Watch, *'Wild Money'*.

205 D. W. Brown, 'Memo to Interested Parties: Estimate of Malaysian Consumption of Illegal Timber' (unpublished), September 2002, amended June 2006.

The extended analysis suggested that the discrepancy had dropped slightly in 2004, largely owing to an increase in the annual legal cut, and had then increased in 2005, as a result of increased exports and a reduction in legally registered imports. There were numerous problems with the methodology used in these analyses, however, as recognized in the original paper. Particular potential problems were raised over the exclusion of rubberwood production, and the use of non-standard conversion factors to roundwood equivalent, among other shortcomings.

Table 5.3: Previous wood-balance analyses for Malaysia

Year	Discrepancy (m <sup>3</sup> millions)	Discrepancy (%)
2001	7.8	29
2004	6.3	22
2005	7.9	26

Source: David W. Brown, September 2002 (amended 2006); extrapolated by Chatham House to 2004 and 2005 using the same technique for data from USDA FAS GAIN report, *Malaysia Solid Wood Products Annual 2005, 2006*.

An additional study, published in 2004, stated that overall demand in Malaysia tallied quite closely with legal supply, supporting a conclusion that domestic illegal logging in Malaysia was very low, at an estimated 5 per cent.<sup>206</sup> The study claimed to have conducted a wood-balance assessment but did not provide any data or details, making it impossible to assess.

For the current study, a new analysis was conducted for the years 2006 and 2007, using full and detailed production, export and import data supplied by Chatham House partners. Owing to incomplete and confusing official consumption figures and the danger of double-counting, domestic consumption of all wood products was instead estimated using existing per capita wood product consumption rates and population figures.<sup>207</sup> These methods served to overcome some of the main drawbacks identified with the earlier analyses. To the extent possible, the figures include all sources of production (including timber from rubberwood and other tree plantations), and all types of import, export and consumption (including wood furniture and pulp and paper). The analysis gives figures which are similar (in percentage terms) to those produced by the earlier analyses for 2001–05. In 2007, the study shows that estimates of total demand for timber in Malaysia appeared to exceed the estimates of legal supply by 9.7 million cubic metres, possibly suggesting that up to 22 per cent of the timber consumed was being supplied from unknown sources. These numbers represented a slight decline from the previous year (see Table 5.4).

Earlier studies have suggested that a significant proportion of any wood-balance discrepancy might be accounted for by imports of illegal Indonesian timber; were this the case, the implied rate of domestic illegality in Malaysia would be reduced. However, while there is plentiful evidence that quite large volumes of illegally sourced Indonesian timber were entering Malaysia a number of years ago<sup>208</sup> (estimated in one study at 1.8 million cubic metres in 2002<sup>209</sup>), anecdotal data suggest that they have fallen dramatically since 2005 owing to increased controls on both sides of the border.<sup>210</sup> A 2006 report indicated that the intensity of timber-smuggling from Indonesia between 2000 and 2003 had reached 10 million cubic metres annually – mainly including 3–4 million cubic metres from Kalimantan and Sumatra, which would have been destined mainly for Malaysia – but had since declined by over 70 per cent.<sup>211</sup> In addition,

206 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

207 Consumption rate of 0.48 cubic metres per capita (drawn from consumption graph published by Jaakko Poyry Consulting (2005) – <http://www.forest-prod.org/internationaltrade06vroege.pdf>); population figures from World Bank.

208 See for instance EIA/Telapak, *Timber Traffickers: How Malaysia and Singapore are Reaping a Profit from the Illegal Destruction of Indonesia's Tropical Forests* (EIA/Telapak, 2003); EIA/Telapak, *Profiting from Plunder: How Malaysia Smuggles Endangered Wood* (EIA/Telapak, 2004).

209 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

210 EIA/Telapak, *The Last Frontier*.

211 K. Obidzinski, A. Andrianto and C. Wijaya, *Timber Smuggling in Indonesia: Critical or Overstated Problem? Forest Governance Lessons from Kalimantan* (Center for International Forestry Research, 2006).

the majority of the timber involved, though possibly illegal at source, was entering Malaysia legally and can be expected to have been accounted for in official import statistics.

The figure of 22 per cent is similar to the estimate of the extent of illegal logging in Malaysia drawn from the expert perceptions survey (25 per cent, with a range of 14–37 per cent).<sup>212</sup> Overcapacity of the primary wood industries in Malaysia is certainly large,<sup>213</sup> and in other countries this has served to drive significant illegal logging. Yet plentiful other evidence indicates that outright illegal logging in excess of licensed harvest (the kind measured by wood balance) is rare in Malaysia – in the region of 1–5 per cent.<sup>214</sup> The obvious inaccuracies of the wood-balance method – such as conversions to roundwood equivalent, and rough estimates of domestic use – might account for some of the apparent discrepancy, but cannot plausibly account for all of it. One possibility is that timber from legal clearance of areas classified as ‘stateland’ rather than ‘permanent forest’ may not be being captured fully in published log production data.<sup>215</sup> The data nevertheless certainly seem to support the contention from the survey that illegal logging in Malaysia may be more prevalent than earlier thought.

The new data show a slight decline between 2006 and 2007, and the percentage figures are also somewhat lower than those estimated by the earlier studies. However, the great differences in the methodologies, and the question marks raised above about how accurately such modelling may be representing illegal logging in Malaysia, mean there is insufficient data to conclude anything quantitatively about the extent to which illegal logging may have declined in the country in recent years, as is suggested by the survey.

Table 5.4: Malaysia wood-balance analysis  
(all figures millions of cubic metres RWE unless stated)

	2006	2007
Production	22.6	23
Imports	11.7	10.8
<b>TOTAL SUPPLY</b>	<b>34.3</b>	<b>33.8</b>
Exports	32.4	30.8
Domestic consumption	12.5	12.7
<b>TOTAL DEMAND</b>	<b>44.9</b>	<b>43.5</b>
Discrepancy	10.6	9.7
Discrepancy %	24%	22%

### 5.1.3 Summary conclusions – impacts on end goals

Using the wood-balance analyses described above, extrapolating from trends to cover a full time period from 2000 to the end of 2009, it is possible to estimate the volume of timber which may have been prevented from being cut through the reduction of illegal logging documented in Indonesia, Brazil and Cameroon over the last ten years. The calculation compares the estimated actual illegal cut in each year with the illegal cut in the peak year in each country, then sums the differences, creating an estimate of the actual amount of illegal timber cut against that which would have been cut if illegal logging had continued at the peak rate for the entire period.

This analysis suggests that the illegal harvesting of around 350 million cubic metres of timber may have been avoided during 2000–09, compared with what could have occurred had illegal logging continued

<sup>212</sup> The survey estimate can be expected to be slightly higher, since the survey captures more forms of illegal logging.

<sup>213</sup> The capacity of Malaysian primary wood processing industries assessed by Chatham House partners for this study was 33.3 million cubic metres in 2007, compared with a legal supply of logs for domestic processing of only 18.5 million cubic metres.

<sup>214</sup> See Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*; Chatham House partner reports; expert perceptions survey results for questions 9, 10, 12 and 13; TRAFFIC, *Report on Forest Law Enforcement*.

<sup>215</sup> Although logging of 'state land' forests is under the control of the various State Forest Departments, and removal passes and other documentation are required for the resulting logs, so the data from these departments should capture such harvesting.

at peak estimated rates (see Table 5.5). Assuming that most of this timber was harvested selectively at a relatively low intensity per hectare rate,<sup>216</sup> this suggests that around 17 million hectares of forest may have been protected from degradation during the last decade through reduced illegal logging, an area larger than England and Wales and more than twice the net forest loss estimated by FAO to occur each year worldwide.<sup>217</sup> Based on estimates of the carbon lost during low-intensity legal logging in tropical forests,<sup>218</sup> this would in turn equate to around 1.2 billion tonnes of carbon dioxide, equivalent to 22 per cent of UK emissions over the same ten-year period.<sup>219</sup>

Table 5.5: Estimates of total reduction of illegal logging, and associated impacts

	Years of reduced illegal logging	Reduction m <sup>3</sup> million	Equiv ha million	Equiv CO <sub>2</sub> e (tonnes million)	Revenues saved (\$ million)
Indonesia	2002–2009	289	14.5	1012	5433
Brazil	2001–2009	49.5	2.5	173	931
Cameroon	2000–2009	6.6	0.3	23	124
<b>TOTAL</b>		<b>345.1</b>	<b>17.3</b>	<b>1208</b>	<b>6488</b>

Source: Analysis of wood-balance estimates of illegal harvest (see text for further explanation).

Important note: The figures for potential revenue saved assume the timber is cut legally instead, in which case the figures for forest prevented from degradation and those for associated carbon saved would be negated. These additional revenues could also only be immediately captured if legal logging were increased to unsustainable levels.

Of course, it is possible that some or all of the forest concerned would have been logged legally instead, or may be logged in the future. This certainly appears to have been the case to some extent in Indonesia, where legal cuts have increased as illegal logging has fallen; it is less evident in Brazil and Cameroon. If the forest was logged legally instead, the estimates for forest saved from degradation, and the associated estimates of carbon saved, would be negated. On the other hand, if all of the timber were logged legally instead, either now or in future, then the governments concerned may potentially benefit to the tune of around US\$6.5 billion in additional revenues,<sup>220</sup> more than twice what the world spent in 2005 in aid for primary education.<sup>221</sup> There is some evidence that these additional revenues are already being captured – the Indonesian statistical bureau, for instance, estimates that forestry contributed around US\$4 billion to GDP in 2007, up from US\$2.4 billion in 2004.<sup>222</sup> It is worth bearing in mind, however, that these potential additional revenues cannot immediately be captured from the timber which was previously being illegally logged without increasing legal logging to levels well beyond that which is sustainable; as such it would be unwise in the long term for countries which have successfully reduced illegal logging to increase legal logging proportionately in order to reap the financial benefits.<sup>223</sup>

216 20 cubic metres of logs per hectare. Illegal logging is likely to be more selective than logging under a formal management plan.

217 Food and Agriculture Organization, *State of the World's Forests 2009* (FAO, 2009), estimates a net loss of 7.3 million hectares of forest per annum worldwide during 2000–05.

218 One study found that during *legal* selective logging in the Brazilian Amazon at a similar intensity (30 cubic metres of timber extracted per hectare), 19 tonnes of carbon were lost over a 30-year logging cycle, equivalent to 70 tonnes of CO<sub>2</sub> (F. E. Putz et al., 'Improved Tropical Forest Management for Carbon Retention', *PLoS Biology* Vol. 6, No. 7, 15 July 2008). In the absence of specific figures for the carbon lost during *illegal* logging, this 70-tonne legal logging figure is used as a rough average; in any individual case the carbon intensity of illegal harvesting of 20 cubic metres of timber may be considerably higher or lower, depending on the type of logging and the nature and condition of the forest.

219 United Nations Statistics Division, Millennium Development Goals indicators: Carbon dioxide (CO<sub>2</sub>) emissions, thousand metric tons of CO<sub>2</sub> (collected by CDIAC). Figures for 2007–09 estimated by Chatham House based on figures for previous years.

220 Assuming no taxes are paid on timber harvested in excess of licensed harvest, and a total tax rate for all countries of US\$18.8 per cubic metre, a figure for Indonesia calculated by Chatham House partners for this study.

221 EFA, *Reaching the Marginalized: EFA Global Monitoring Report 2010* (UNESCO Publishing/Oxford University Press, 2010), p. 227.

222 <http://www.bps.go.id/sector/nra/gdp/table1.shtml>.

223 Where previous harvesting has been excessive, it may be impossible to increase legal harvesting proportionately, since there may already be insufficient timber resources remaining.

While these are the best estimates which are likely to be possible, there are of course potential sources of error. The wood balances used for the countries concerned have some problems, as outlined in Section 5.1.2, though it ought to be noted that while the two different wood-balance methods for the Brazilian Amazon reach very different conclusions on the scale and percentage of illegal logging, they nevertheless produce similar estimates for the volume of timber prevented from being illegally logged.<sup>224</sup> The carbon estimates may be overstated, since much forest will have been logged legally instead. The estimates also assume that timber produced from logged forests is immediately converted to CO<sub>2</sub> when in fact this will occur over an extended period of time.<sup>225</sup>

On the other hand, there are also reasons to believe that the estimates may be conservative. The analysis assumes that illegal logging results only in forest degradation, while there is plentiful evidence to show that illegal logging is often the first and most critical step towards forest clearance.<sup>226</sup> If we were to assume that all the forest which was prevented from being illegally logged would ultimately have been saved from destruction, the estimate of carbon emissions prevented increases by an order of magnitude, to 14.6 billion tonnes<sup>227</sup> – more than half the amount which is emitted through human action worldwide each year.<sup>228</sup> Even this figure may be conservative, since it uses average global estimates of carbon stored in tropical equatorial forests, whereas studies suggest virgin tropical forest in Indonesia may hold almost double this amount.<sup>229</sup> It also does not include the potential release of below-ground carbon, which in Indonesia is a major source of CO<sub>2</sub>, as much of the forest is on deep peat which dries out when exposed and subsequently decomposes or burns. The reduced levels of illegal logging may also have had broader, indirect impacts on carbon dioxide emissions from forests: studies have shown, for instance, that by depressing timber prices, illegal logging has been key in preventing the spread of reduced-impact-logging (RIL) methods for legal harvesting,<sup>230</sup> the implementation of which could potentially reduce the global carbon emissions from deforestation and forest degradation by 10 per cent.<sup>231</sup> The estimate of revenues potentially saved is also very conservative, since it does not include additional revenues saved as a result of a reduction in tax avoidance on timber harvested within the annual legal cut. Given the broad swathe of evidence suggesting reduced illegality of all kinds in the three countries concerned, these revenues can be assumed to have been considerable.

The estimate also only relates to the three countries for which this study has been able to document and attempt to quantify illegal logging over time – countries which in 2002 were estimated to account for only about 40 per cent of global illegal timber production.<sup>232</sup> Although the available evidence suggests that these three countries have seen the largest and most effective reduction in illegal logging, this total does not capture the effects of the strong efforts that have also been made elsewhere.

#### 5.1.4 *The causes and costs of observed reductions in illegal logging*

##### **Causes**

As noted in the country sections above, not all of the apparent decline in illegal logging in Brazil, Cameroon and Indonesia can be attributed to direct efforts to tackle it. In some areas, forest exhaustion

224 Using IBGE data produces an estimate of 49.5 million cubic metres, while using DOF data gives a figure of 52.4 million cubic metres. The lower of the two estimates is included in the table above and in the analysis.

225 The standard approach in carbon trading systems is to assume that the carbon stored in logs is released upon harvest.

226 See for instance Asner et al., 'Condition and Fate'.

227 Total average above-ground biomass carbon in wet tropical forest is 231 tC/ha (average across seven studies) which equates to 845.46 tCO<sub>2</sub>/ha. (Source: H. Keith, B. G. Mackey, and D. B. Lindenmayer, 'Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests', *Proceedings of the National Academy of Science*, Vol. 106, No. 28, 14 July 2009). Note that this figure would be partly offset by carbon captured in agricultural plantation crops grown on deforested land.

228 Global emissions in 2006 were estimated to be 28.4 billion tonnes: <http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=749&cid=>.

229 One study in lowland tropical forest in East Kalimantan gave a figure of approximately 435 tonnes of carbon, equivalent to 1592 tonnes of CO<sub>2</sub> per hectare; see Keith et al., 'Re-evaluation of forest biomass', cited in [http://news.mongabay.com/2009/0717-forest\\_carbon.html](http://news.mongabay.com/2009/0717-forest_carbon.html).

230 P. Durst and T. Enters, 'Illegal Logging and the Adoption of Reduced Impact Logging', paper presented at the Forest Law Enforcement and Governance: East Asia Regional Ministerial Conference, Denpasar, Indonesia, 11–13 September 2001.

231 Putz et al., 'Improved Tropical Forest Management'.

232 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*; this study estimated total illegal timber production worldwide to be 131 million cubic metres in 2002, of which 50.3 million were from Indonesia and Brazil, and a further 4 million from Central and West Africa. Based on our wood-balance figures, we have assumed that Cameroon accounted for around 0.6 million cubic metres of the African regional total.

has probably been a factor in reducing harvest volumes, both legal and illegal; this is certainly the case in some areas of Indonesia, though less so in the other countries. In the most recent couple of years, the global recession and resultant falls in timber prices have also served to reduce both legal and illegal harvesting, although this effect is too recent to explain much of the fall observed in illegal logging. Broad improvements in general governance are likely to have played a major part in Indonesia (see Box 5.1 on the relationship between corruption and illegal logging).

Overall, however, there is strong evidence to suggest that increased efforts by both producer and consumer countries have been an important driver. Awareness-raising by NGOs has been a particularly important factor in driving improvements in enforcement in Indonesia, independent monitoring and private-sector initiatives driven by importers have been key in reducing illegal logging in Cameroon, and improved regulations and enforcement have been important in Brazil.

Table 5.6: Drivers of reduced illegal logging in Brazil, Cameroon and Indonesia

Cause	Major driver	Minor driver
<i>Efforts by producer countries</i>		
Increased enforcement in producer countries	Brazil Indonesia	Cameroon
Legal, regulatory and policy changes in producer countries	Brazil	
Introduction of independent monitoring*	Cameroon	Brazil
Awareness-raising by NGOs*	Brazil Indonesia	Cameroon
<i>Efforts by consumer countries</i>		
Legal, regulatory and policy changes in consumer countries (and consequent private-sector initiatives)*	Cameroon	Indonesia
<i>Changes not directly related to efforts to reduce illegal logging</i>		
General improvements in governance environment	Indonesia	Brazil
Exhaustion of timber resources		Indonesia
Increased supply of legal timber from plantation forests	Indonesia	
Global economic slowdown		Brazil

Source: Assessment by Chatham House based on indicators and available anecdotal data.

\* Awareness-raising by NGOs has been a driver in both producer and consumer countries; other causes recorded above as efforts by producer countries have in some cases been driven in part by influence brought to bear by consumer countries (particularly independent monitoring and associated increased enforcement in Cameroon).

## Costs

In Chatham House's pilot version of this study, data were collected on forest governance aid provided by consumer countries.<sup>233</sup> Although the indicator was dropped for the full assessment owing to data collection difficulties, information was obtained for the US, UK and the European Union. Additional data for spending by the ITTO and other international organizations were collected during an earlier phase.<sup>234</sup> Drawing on these data, and on estimates of additional spending by the producer countries concerned and by the private sector, it is possible to estimate that a maximum of somewhere in the region of US\$1 billion–US\$3 billion may have been spent during the last decade on efforts to prevent illegal logging in the three countries in which reductions have been assessed.

If we assume a scenario whereby timber prevented from being illegally logged has been legally logged instead and full revenues captured on it, this suggests that for every dollar invested in reducing illegal

233 Lawson and Macfaul, *Illegal Logging and Related Trade: 2008 Assessment of the Global Response*.

234 Lawson, *Illegal Logging and Related Trade*.

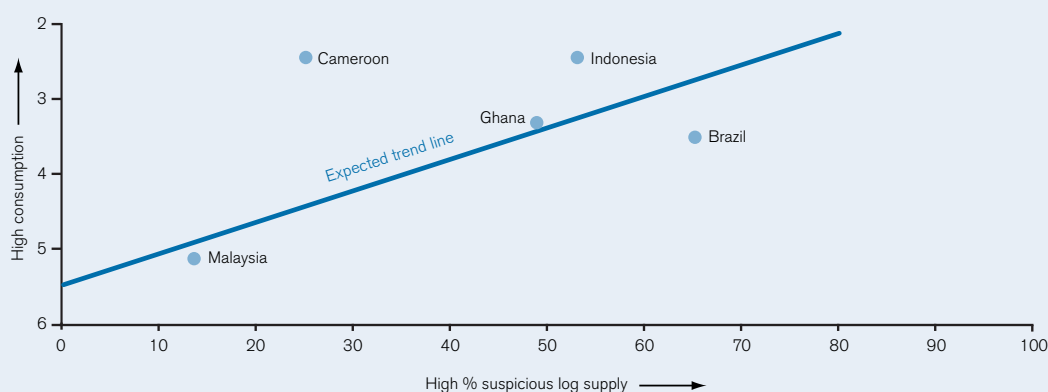
logging, between US\$2 and US\$6 in additional revenue may be brought into the exchequers of the countries concerned. On the other hand, if we assume a scenario whereby legal logging is not increased in step with reductions in illegal harvesting, this suggests that the price of carbon emissions reductions achieved may have been between US\$0.07 and US\$2.48 per tonne.<sup>235</sup> This compares with recent market prices for carbon in the EU Emissions Trading System of around US\$18 per tonne, and expected carbon prices under REDD of US\$4–US\$10 per tonne.<sup>236</sup>

These estimates, like the quantitative estimates of illegal logging which underpin them, are also very approximate. As explained in the section above on causes, it cannot be assumed that all or even most of the reduction in illegal logging which appears to have occurred in the countries concerned stemmed from the increased efforts being made in consumer and producer countries to tackle the problem. Yet there can be little doubt that the efforts made have been a factor, and whatever the true rate of return and carbon cost, there can also be little doubt that investing in tackling illegal logging is a highly cost-efficient way in which to help protect forests and the climate and to increase revenues in developing countries.

### Box 5.1: The relationship between corruption and illegal logging

Previous studies have shown a close relationship between illegal logging and broader governance in producer countries, although no causal relationship or direction has been proven.<sup>a</sup> A comparison of overall rates of corruption (as measured by the Transparency International Corruption Perceptions Index, or CPI) in the survey years of 2008 and 2009 with the estimates of illegal logging produced by the survey shows an approximate relationship for four of the five producer countries, the exception being Cameroon, where illegal logging is lower than would be expected given the state of broader governance (see Figure 5.8).

Figure 5.8: Relationship between corruption and illegal logging in focus producer countries



Source: Transparency International CPI scores; Chatham House Illegal Logging Expert Perceptions Survey.

Note: Malaysia survey estimate of illegal logging is a low-end estimate, all others are mid-point estimates. For methodology and rationale behind the use of a low-end estimate for Malaysia, see Section 5.1.1.

235 Low end of range assumes low end of range of government spending and high end of range of carbon emissions prevented; high end assumes the opposite.

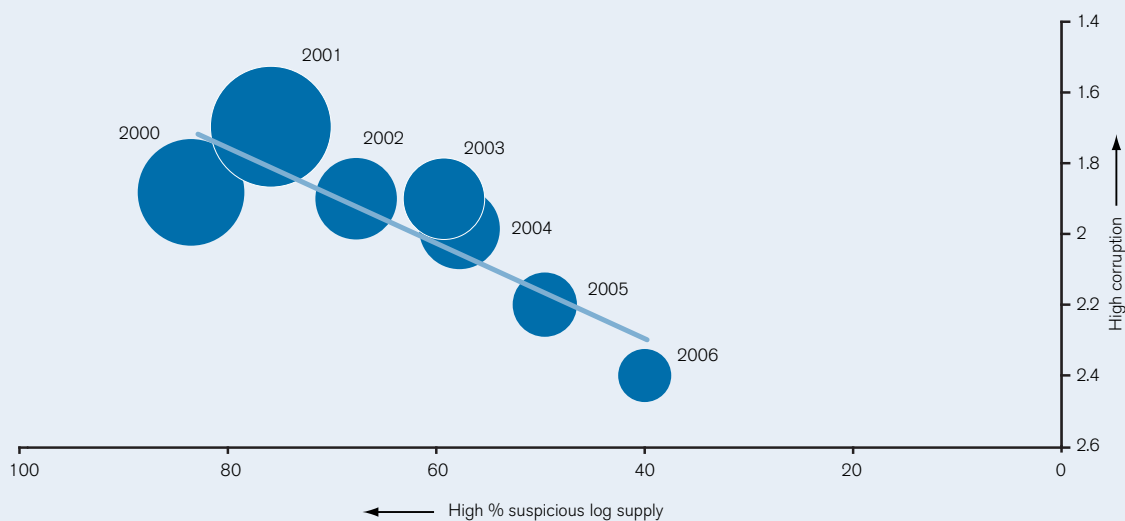
236 U. M. Persson and C. Azar, 'Preserving the World's Tropical Forests – A Price on Carbon May Not Do', *Environmental Science and Technology*, Vol. 44, No. 1 (2010), pp. 210–15. Discussed in: <http://www.carbonpositive.net/viewarticle.aspx?articleID=1894>.

In Indonesia illegal logging has fallen closely in line with corruption (see Figure 5.9), suggesting that improved levels of overall governance in the country were an important driver. This is supported by some of the anecdotal evidence from Indonesian national parks collected during the pilot phase of Chatham House's indicators study, though it also runs somewhat contrary to the expert perceptions survey, which suggested that corruption among those directly involved in enforcing forest laws had actually increased even as illegal logging had fallen (see Figure 5.4 and associated discussion in Section 5.1.1).

In Cameroon, by contrast, the reduction in illegal logging had not coincided with an equivalent reduction in the level of corruption, as measured by the CPI. The fact that illegal logging fell in Cameroon in spite of this continued corruption, and the fact that Cameroon's estimated rate of illegal logging is therefore out of step with broader poor governance, may stem in part from the role of the independent monitor and associated donor leverage, which has succeeded in forcing improvements in one sector in an otherwise poor governance environment. It may also stem from the importance of the EU as a market for Cameroonian timber, with market demands emanating from outside Cameroon driving large concession companies to improve performance regardless of domestic enforcement.

a Seneca Creek/Wood Resources, 'Illegal' Logging and Global Wood Markets.

Figure 5.9: Relationship between illegal logging and corruption in Indonesia



Source: Wood-balance analyses (see Section 5.1.2).

Note: Size of bubbles represents volume of illegal timber cut.

### 5.1.5 Current and future scale and impacts of illegal logging

The reductions in illegal logging documented in this paper must not be assumed to mean that illegal logging does not continue to be a major problem. If we assume that no reductions in illegal logging have occurred since 2002 in other producer countries,<sup>237</sup> it is possible to update past estimates of global illegal timber production using the revised figures for the countries examined in this study. While such an analysis suggests that illegal logging has fallen by around 22 per cent since 2002, it also indicates that, as of 2009, more than 100 million cubic metres of illegal timber were still being felled worldwide each year,

<sup>237</sup> Perhaps unlikely, but available evidence suggests that it is equally unlikely that similarly significant declines have been seen elsewhere, as this study has documented for Brazil, Cameroon and Indonesia.

degrading and perhaps leading to the eventual destruction of more than 5 million hectares of forest, and resulting in between 0.4 and 4.3 billion tonnes of annual CO<sub>2</sub> emissions. Such a volume of illegal logs, laid end to end, would encircle the globe more than ten times over.<sup>238</sup>

If this remaining illegal logging was slowly brought to a complete end within the next ten years, we project that a further 2–22 billion tonnes of CO<sub>2</sub> emissions might be avoided, not including repeat avoidance of emissions from illegal logging which has already been reduced.

## 5.2 Consumer and processing countries

### 5.2.1 *Import-source estimates of illegally sourced wood product imports over time*

While a number of methods exist for estimating illegal logging in producer countries, often the only way of measuring imports of illegal timber by consumer and processing countries is simply to multiply import volumes by levels of illegality in source countries. Almost all estimates of illegal timber imports commonly cited in the literature are calculated in this manner. Although useful as a means of obtaining ‘worse-case scenario’ baseline figures with which to garner attention and motivate action, this method as practised in the past has been so imprecise as to be of little value in measuring changes over time. As with wood-balance modelling, different methodologies have been used in different countries and at different times, making comparisons all but impossible.

To be useful as a measure of change, such analyses need to be conducted in a more sophisticated manner, using updated estimates for illegal logging in source countries, and adjusting the results to account for efforts by governments and the private sector to increase the proportion of legal timber in relevant bilateral trade flows.

In an attempt to obtain more useful figures, Chatham House has commissioned the first detailed analysis of this kind. The assessment examines all wood product imports, including pulp and paper and wood furniture, which have often been excluded in previous studies. The analysis uses estimates of illegally sourced timber content in individual wood flows, with variations across product groups and destination countries reflecting the effects of efforts made by importers in certain countries to clean up supply chains (including driving the expansion of independent certification and verification of certain suppliers) and reflecting the different types of wood source used in different products. In addition to direct flows from affected producer countries, estimates have also been produced of illegal wood in flows from key third-party processing countries such as China, based on a complex analysis which examines these countries’ own imports, their own domestic production, and how the proportion of these has changed over time.

Most importantly, the analysis includes estimates of how the proportion of illegal wood in specific wood flows has changed over time, as a result of changes in overall illegal logging rates in producer countries and of increased efforts made to clean up individual supply chains. In creating the estimates, the analysis has drawn on the wood-balance and survey data and the private-sector data collected by Chatham House for other indicators; it has also drawn on anecdotal information and in many cases very specific understanding of the nature of individual wood flows of specific product groups from specific countries, such as the fact that the bulk of wood furniture exported from Peninsular Malaysia is made from plantation-grown rubberwood which is unlikely to have been harvested illegally.

There is insufficient space here to provide the thousands of individual illegal wood proportions used in the analysis and detail the justifications behind them.<sup>239</sup> On balance, the estimates are reasonably conservative. For the largest and most crucial trade flows, the estimates have tended to align with the low end of published estimates of illegality in source countries. Importantly, the estimates have also, in most cases, set aside some issues, such as the potential illegality of allocation of rights to harvest, which,

238 Based on an average 50 cm diameter log. 100 million cubic metres of logs would stretch 510,000 km; the circumference of the Earth is just over 40,000 km at the equator.

239 A detailed summary of the methods and assumptions used is available as a supporting document on the Chatham House website: [www.illegal-logging.info/indicators](http://www.illegal-logging.info/indicators).

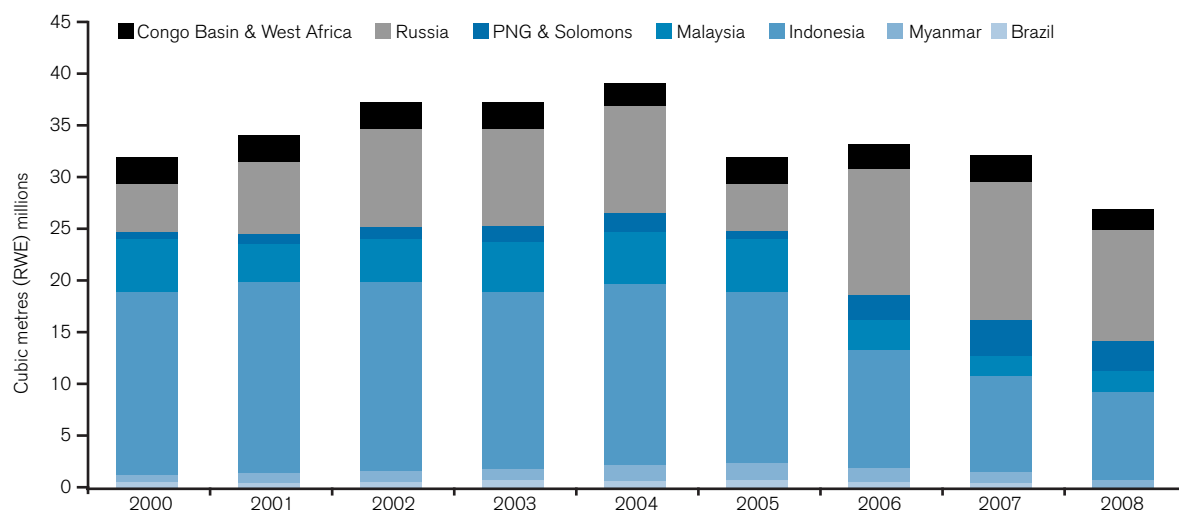
if considered, might serve to increase considerably the potential proportion of illegal timber assessed.<sup>240</sup> Since they are based on reported trade volumes, the estimates also do not capture timber which is smuggled across borders or under-declared and therefore not recorded in trade statistics.

### Summary conclusions

When all estimated imports of illegally sourced timber by the seven focus consumer and processing countries are looked at together, the figures suggest that imports of illegal wood products peaked in 2004 and by 2008 had fallen by around 30 per cent (see Figure 5.10) to 27 million cubic metres, worth around US\$6 billion. A large fall in 2005 is mostly attributable to a significant decline in illegal logging in Indonesia, assumed in the analysis to have occurred in that year, on the basis of wood-balance data, analysis of trade data discrepancies and anecdotal information, and reflecting the Presidential Instruction on Illegal Logging issued early in that year, which was followed by some of the largest enforcement operations against illegal logging ever carried out anywhere in the world. An even more significant fall in 2008 can be attributed in large part to the global economic slowdown, which reduced overall trade volumes considerably (particularly imports of logs from Russia to China).

The changes in rates of illegal logging in Indonesia and elsewhere, coupled with general economic shifts, have also seen the sources of illegally sourced wood consumption by the consumer and processing countries change significantly over the period. While the proportion of estimated illegal timber from Indonesia, Malaysia, Brazil and Burma (Myanmar) has declined, the proportion from Russia, Papua New Guinea and the Solomon Islands has increased. Forty per cent by RWE volume of the estimated illegal wood imports by the seven consumer and processing countries now originate in Russia, up from just 15 per cent in 2000. As well their source, the form of illegal wood-product imports is also changing (see Figure 5.11) – primary wood products (logs, sawn timber, plywood and veneer) now make up less than half.

Figure 5.10: Estimated illegal wood imports by consumer and processing countries studied from all producer countries, by source country, 2000–08



240 A notable exception in this regard is Papua New Guinea, where there is particularly strong evidence regarding the legality of concession allocation in published reports which the authors did not believe could reasonably be ignored in assessing the legality of the country's timber exports.

Figure 5.11: Estimated illegal wood imports by consumer and processing countries studied from all producer countries, by product group, 2000–08



### Processing countries

The import-source analysis suggests that China imported the roundwood equivalent of 20 million cubic metres of illegally sourced timber and wood products in 2008, worth around US\$3.7 billion, a significant decline from the previous year (Figure 5.12). This recent decline reflects a substantial fall in overall imports as a result of the global economic slowdown. China's imports of illegal timber have been falling since long before the recent slowdown, however. Between 2004 and 2007, they fell despite a continuing growth in overall imports. The main cause of the fall is the decline in illegal logging in Indonesia and the reduced imports of illegal logs from Indonesia misdeclared as Malaysian (see Section 5.2.2). A reduction in imports of illegal logs from Myanmar has also played a small part. These reductions have been offset to some extent by increased imports from Russia, Papua New Guinea and the Solomon Islands. Overall China's imports of illegal wood are estimated to have declined 16 per cent since their peak.

Figure 5.12: Estimated imports of illegally sourced wood products by China, 2000–08

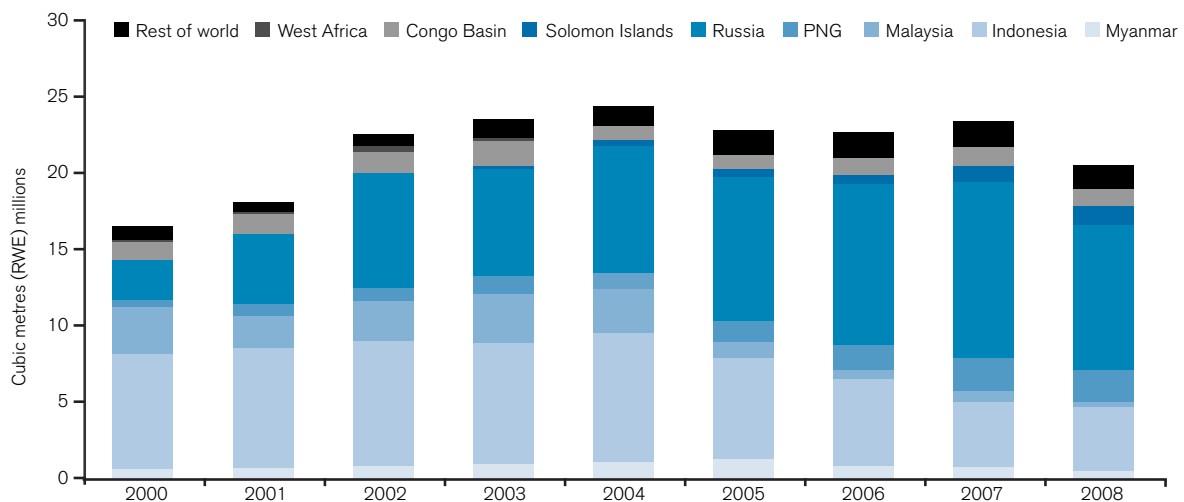
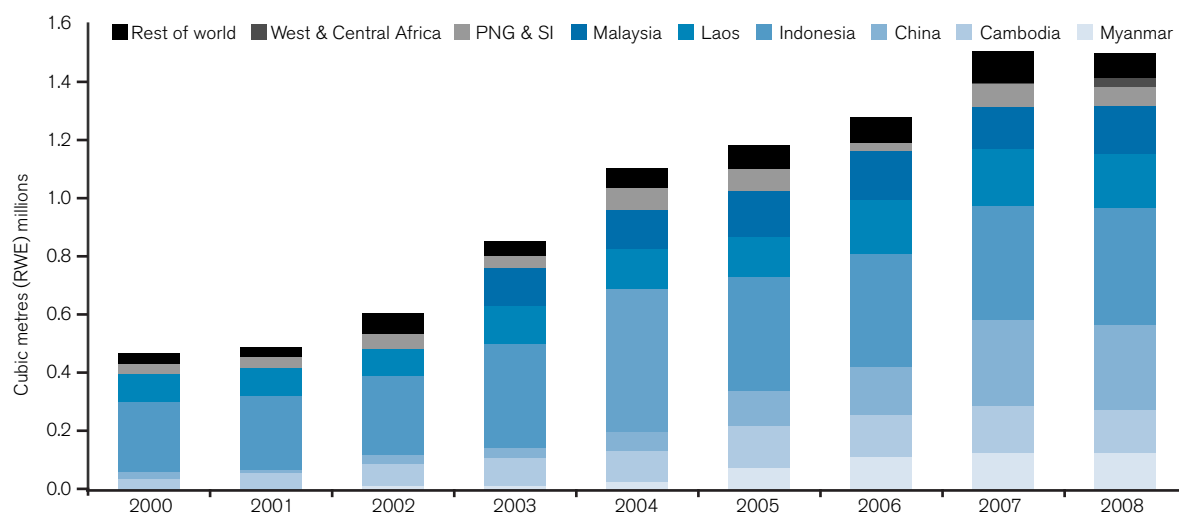


Figure 5.13: Estimated imports of illegally sourced wood products by Vietnam, 2000–08



Note: Y-axis scale varies between this figure and the equivalent figure for China above.

Vietnam's imports of illegally sourced wood, by contrast, have continued to steadily increase over the nine-year period, rising threefold between 2000 and 2007 (Figure 5.13). Only the recent poor economic climate, which had a dramatic impact on exports of Vietnamese wood furniture and resulted in reduced overall imports, served to keep illegal timber imports from increasing further in 2008. The increased illegal timber imports to Vietnam stem mostly from overall growth, although an increased proportion of imports from Myanmar and Laos are also factors. Although Vietnam's estimated imports of illegal wood (1.5 million cubic metres RWE) are much smaller than China's (20 million cubic metres), and a lower proportion of overall imports (17 per cent of Vietnamese imports, 20 per cent of Chinese imports), they are now slightly higher per capita. Illegal imports to both countries remain lower per capita than any of the consumer countries examined.

### Consumer countries

Estimated imports of illegally sourced wood products by the five focus consumer countries combined peaked in 2004 at 23 million cubic metres of roundwood equivalent volume per year, having stayed steady at around 20 million cubic metres per year during the earlier part of the decade (Figure 5.14). Since 2004 imports have fallen steadily back, with particularly large falls in 2007 and 2008. Imports in 2008 were the lowest yet in the decade.

This broad pattern stemmed mostly from changes in the estimated imports by the US and Japan, which are by far the largest consumers among the five countries examined. Japan's estimated imports of illegal timber have been falling steadily since 2004, and by 2008 had almost halved from their peak (see Figure 5.15). During the early part of the decade, approximately 50–60 per cent of Japan's estimated imports of illegal timber were originating in Indonesia, a much higher proportion than for the other countries examined. A massive reduction in Japan's overall imports from Indonesia since 2004, particularly of plywood, coupled with the declining percentage of illegality for timber from Indonesia, assumed in the analysis to be due to increased enforcement, have been the key factors in the decline in consumption of stolen wood in the country. Although Japan's per capita consumption of illegal wood has halved in the last few years, it nevertheless remains more than double that of France, the UK or the US (see Figure 5.20). Despite a considerable decline, Japan still has the highest estimated illegal percentage of overall wood products of the five countries: 9 per cent of the country's wood product imports are estimated to have been of illegal origin in 2008, compared with between 2 and 4 per cent for the other four consumer countries examined.

Figure 5.14: Estimated imports of illegally sourced wood products by consumer countries, 2000–08

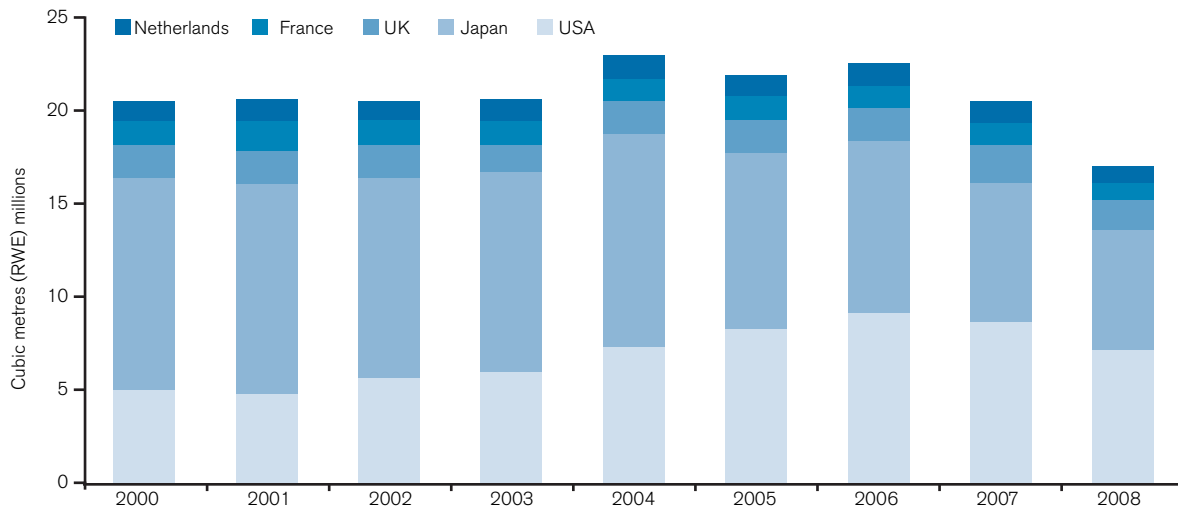
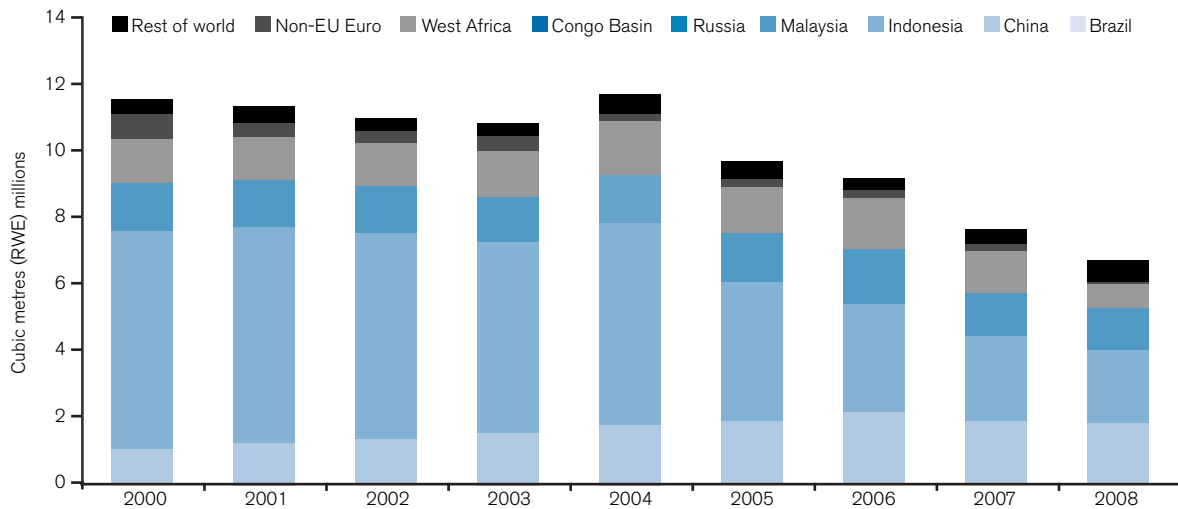


Figure 5.15: Estimated imports of illegally sourced wood products by Japan, 2000–08



Note: Y-axis scale varies between this figure and equivalent figures for other consumer countries below

Figure 5.16: Estimated imports of illegally sourced wood products by the US, 2000–08

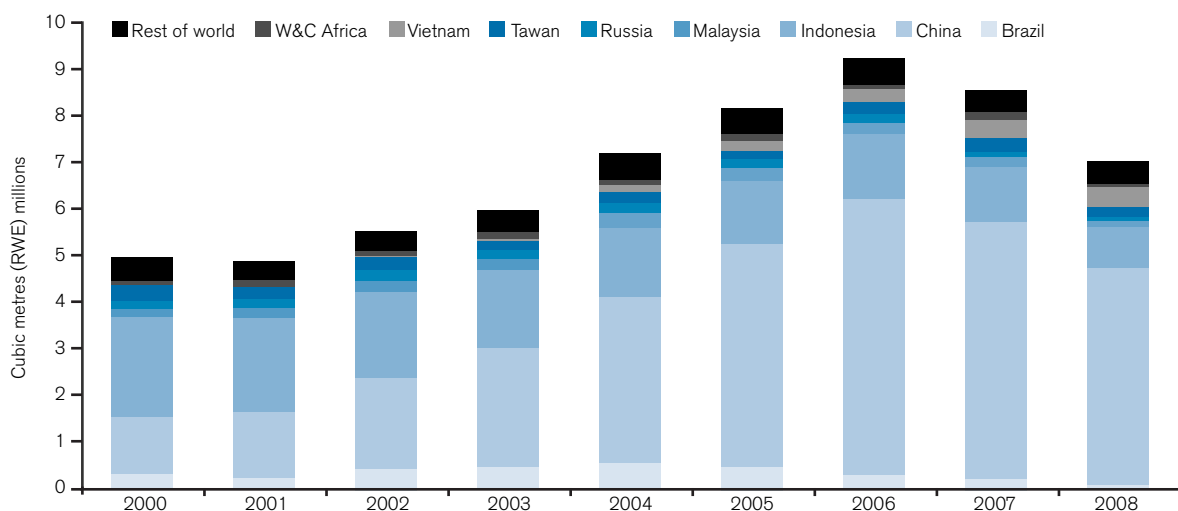
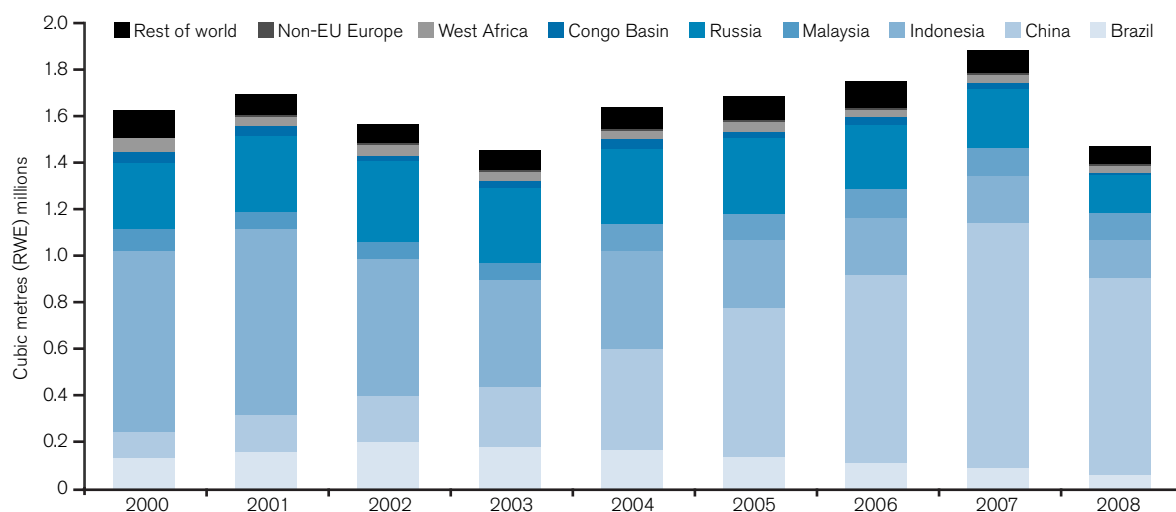


Figure 5.17: Estimated imports of illegally sourced wood products by the UK, 2000–08



The analysis suggests that US imports of illegally sourced wood products increased dramatically between 2001 and 2006, from less than 5 million cubic metres RWE to more than 9 million cubic metres (Figure 5.16). Though part of this estimated increase can be attributed to a growing population (and therefore growing overall demand), imports measured per capita also rose (Figure 5.20), as did illegally sourced imports as a proportion of overall imports. The increase stemmed from a huge growth of imports from China, particularly of wood furniture; retailers in the US which had previously been selling furniture made from North American timber of largely legal origin had shifted en masse to cheaper products from China. Given the estimates of illegality in timber flows in China, it is likely that the competitive advantage which drove this shift stemmed at least in part from cheap supplies of illegally sourced timber.

Beginning in 2007, the analysis indicates that US imports of illegal timber have been falling. This has been due to a large extent to the overall economic slowdown seen in the country, but also reflects the reduced illegal timber content in Chinese imports and re-exports (see section above on processing countries). The US Lacey Act amendment prohibiting the import and sale of illegally sourced wood products, which was passed in May 2008, may also have had an impact by shifting buyers towards less high-risk sources of supply.<sup>241</sup> It cannot be assumed that the Lacey Act will ensure that all wood products imported from high-risk countries are of legal origin, but it is likely that imports of illegally sourced wood products will fall further and faster in future in response to the new legislation.

The UK, like the US, saw a rapid increase in imports of wood products from China during 2004–06, much of the raw wood probably having been illegally sourced. Unlike in the US, however, much of the increase in illegally sourced wood imports from China was offset by a fall in illegally sourced imports from Indonesia (Figure 5.17). This was a pattern typified by the case of plywood: in 2003, Greenpeace led a campaign against major timber merchants in the UK for buying Indonesian plywood of suspicious origin; in response, many buyers shifted to suppliers in China, but these factories were using imported timber from high-risk regions including Indonesia themselves, so the imports of illegally sourced wood fibre continued. Estimated imports of illegally sourced wood by the UK peaked later (in 2007) than in any of the other consumer countries studied but, like everywhere else, fell dramatically in 2008, when an estimated 1.5 million cubic metres RWE, worth just over US\$1 billion dollars, were imported. The fall is due in large part to the recession, but increased efforts by UK buyers to source verified and certified wood have also been a factor.

241 Although the analysis factors such shifts in, alongside growth in certification and legality verification and other private-sector initiatives driven by the new law, it does not yet assume a further decline in illegal wood flows due to enforcement and efforts by importers to clean up supply chains, because the new legislation was only enacted halfway through the last year analysed, and such efforts can take some time to take effect.

Figure 5.18: Estimated imports of illegally sourced wood products by France, 2000–08

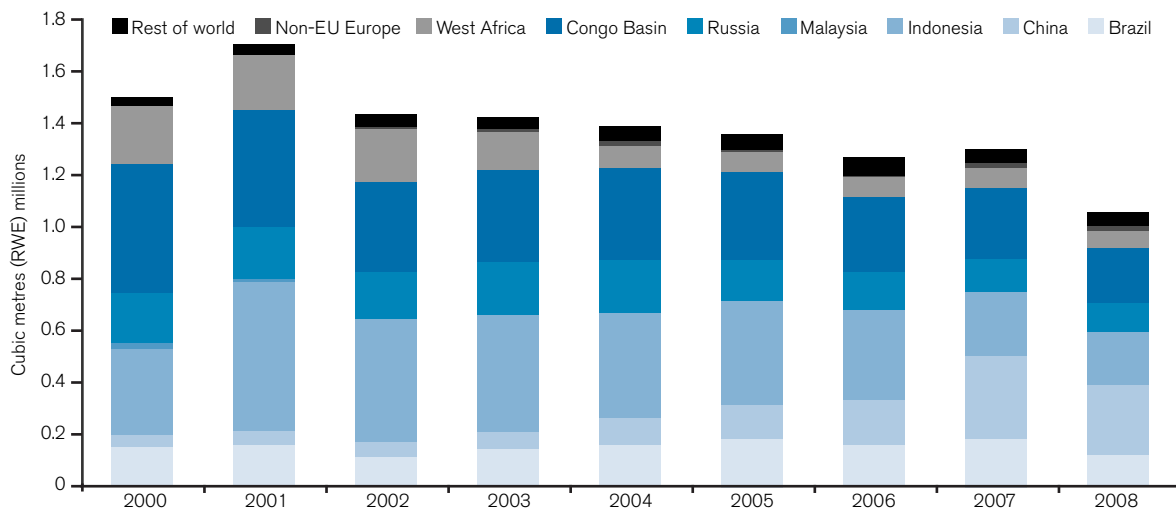
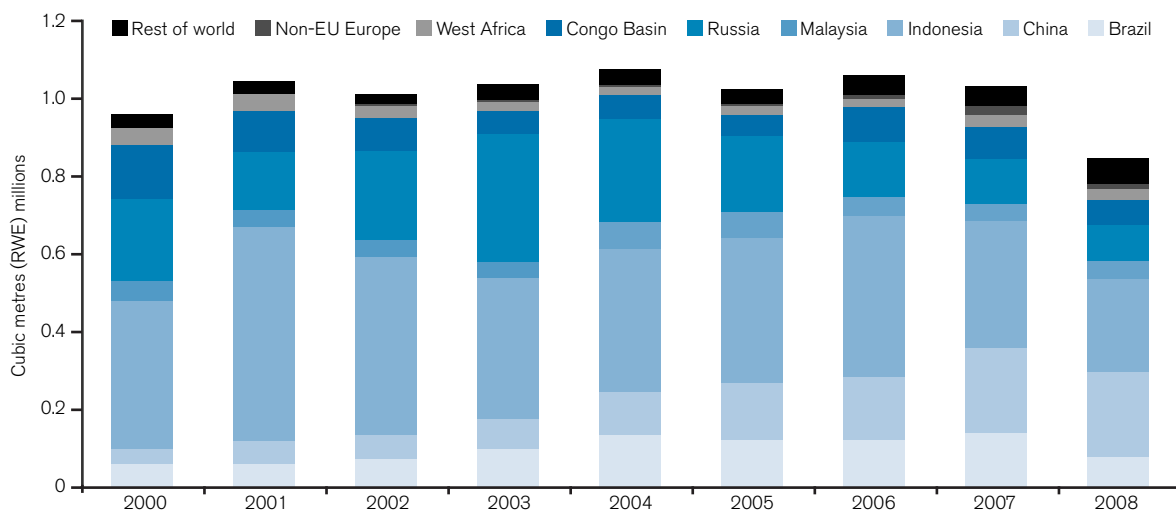


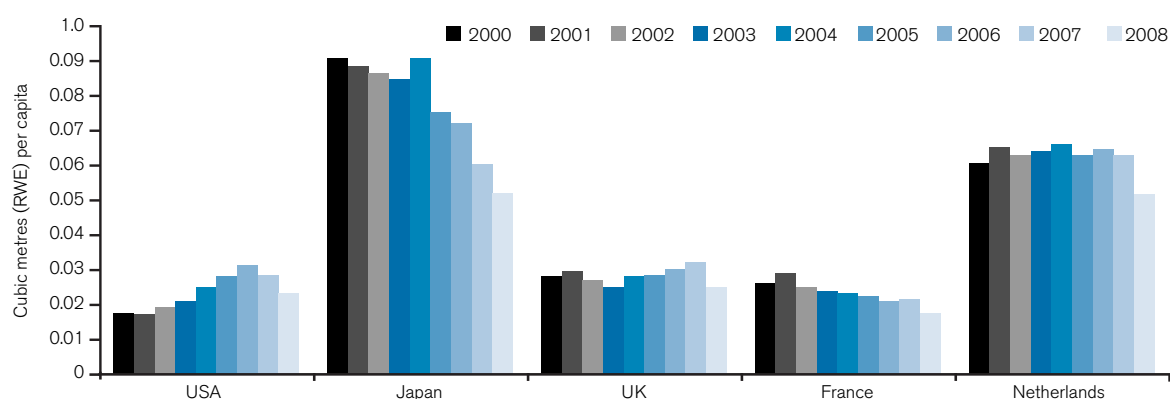
Figure 5.19: Estimated imports of illegally sourced wood products by the Netherlands, 2000–08



Imports of illegally sourced timber by France (Figure 5.18) peaked much earlier than any other consumer or processing country examined, and the country now has the lowest per capita illegal timber consumption and the lowest proportion of illegally sourced wood in overall imports (2 per cent) of any of the five consumer countries. This is because a much larger proportion of France's imports of illegally sourced wood at the beginning of the period were from the Congo basin, Indonesia and Brazil, which have all seen significant declines in illegal wood flows as a result of a combination of reduced overall illegal logging (in Cameroon, Indonesia and Brazil) and expansion of legality verification and sustainability certification (in Cameroon and elsewhere in the Congo basin).

As in France, a much lower percentage of estimated illegally sourced wood product imports by the Netherlands (Figure 5.19) originates in China; overall, the country saw a slight decrease in illegal wood imports between 2004 and 2007, followed by a dramatic decline in 2008. The Netherlands is an important entrepôt for timber destined for elsewhere in Europe, with approximately a third of recorded imports not actually consumed in the country. This results in misleadingly high estimates of per capita illegal wood consumption (Figure 5.20), and makes it quite difficult to comment confidently on changes in the Netherlands' imports of illegally sourced wood suggested by the analysis in terms of actions within the country itself.

Figure 5.20: Estimated illegal wood product consumption per capita in consumer countries



Source: Chatham House for import-source estimates of illegal imports; population data from the World Bank.

Note: The Netherlands is a major conduit for imports ultimately destined for other European countries (about a third of wood imports are re-exported, compared with 7 per cent in the UK), so real per capita consumption figures for the country can be expected to be considerably lower than shown here.

Table 5.7: Estimated illegally sourced wood product imports\* by consumer countries, 2000 and 2008

Country	Cubic metres RWE, millions		Value, US\$ billion		% of total import volume	
	2000	2008	2000	2008	2000	2008
USA	5.0	7.0	2.1	4.0	2.2	3.8
Japan	11.5	6.6	2.4	2.3	12.1	9.0
UK	1.6	1.5	0.5	1.0	2.6	2.6
France	1.5	1.1	0.4	0.6	2.7	1.9
Netherlands	1.0	0.8	0.3	0.5	2.7	1.9

\* Includes timber products, wood furniture and pulp and paper.

### 5.2.2 Trade data discrepancies

Another method which has occasionally been used to estimate the amount of illegal timber being exported by producer countries and imported by consumer and processing countries is the comparison of reciprocal import and export data for specific bilateral trade flows. Where importing countries register much larger volumes of certain wood products on import than the associated producer country records as being legally exported, one possible cause is illegal timber being smuggled out of the country.

In 2004 the International Tropical Timber Organization (ITTO) commissioned a number of studies of trade data discrepancies for timber from major producer countries affected by illegal logging. Though many of these studies found that illegal behaviour was a probable contributor, the studies also found that the discrepancies were a poor indicator of illegality because so many other factors contributed.<sup>242</sup>

Although trade data discrepancies can give an indication of illegally traded timber, they cannot be used to judge overall rates of illegal logging or the total amount of illegally sourced timber in trade (much of which will have been laundered prior to export). It is possible that a rise or fall in the volume of illegal exports from a producer country may reflect trends in broader forest governance; however, this is by no means always the case.

Nevertheless, the initial Chatham House study found that, in certain circumstances, such discrepancies can be indicators of illegal trade. Trade data discrepancies tend to be a more reliable indicator of illegal trade for large volume flows, for log and sawn timber flows, for direct flows from producer countries,

242 ITTO, 'Report on the Case Studies on Assessing Export and Import Data on Tropical Timber and Tropical Timber Products' (2004).

and for relatively short-distance regional trade. There can be particular confidence about the cause where the discrepancies are especially pronounced (80–100 per cent) and where specific products are entirely banned from export from producer countries.

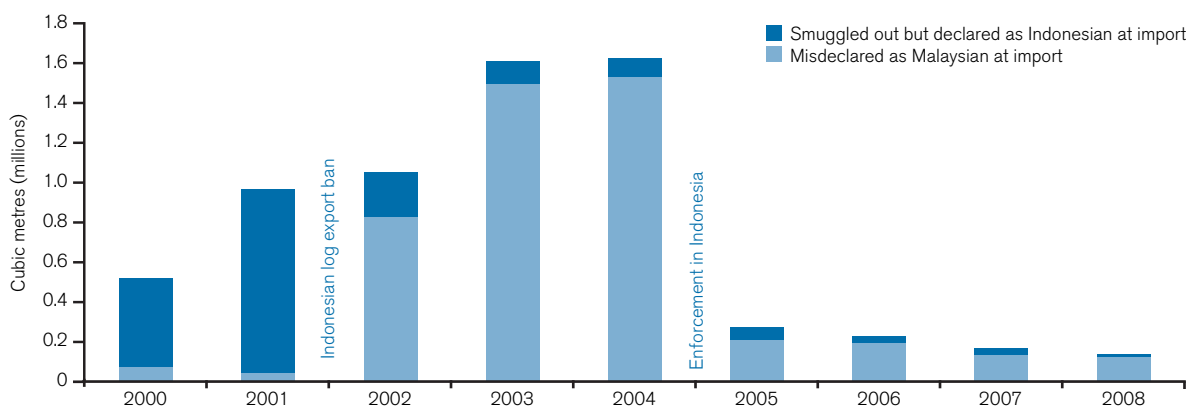
For the purposes of the full assessment, Chatham House commissioned an examination of trade data discrepancies for trade flows between the seven focus consumer and processing countries and major source countries, including but not limited to the five focus producer countries. The examination looked at discrepancies in reported volumes of imports (by consumer and processing countries) and exports (by source countries) of a number of major wood product types. We have sought to highlight those discrepancies which are most suggestive of illegal trade, and examined how these have changed over time.

### Processing countries

In late 2001, the Indonesian government banned the export of logs. The ban was implemented with the deliberate goal of aiding enforcement and reducing illegal logging and timber smuggling; trade data later showed that China reported importing up to 1 million cubic metres of logs from Indonesia in 2001 which were not reported as having been legally exported. Instead of halting the rampant smuggling, however, the ban served only to change the *modus operandi* of the smugglers. This is demonstrated by the fact that while the discrepancy in reported log trade volumes between China and Indonesia rapidly declined, at the same time that between China and Malaysia rapidly increased. This was because smugglers had begun laundering the illegal Indonesian logs and declaring them as Malaysian on arrival in China, a method which was confirmed to undercover NGO investigators in 2004.<sup>243</sup> A Chinese buyer told investigators, ‘*All the export of round log from Jayapura, from Indonesia, is like smuggling. They smuggle it. Using Malaysian shipping documents.*’<sup>244</sup>

In 2005, however, the very large trade data discrepancies related to the smuggling of illegal Indonesian logs declined, coinciding with a major enforcement operation by the Indonesian authorities in the main source areas. The combined discrepancies in Indonesia–China and Malaysia–China log trade data provide an excellent indicator of the scale of log smuggling from Indonesia to China (see Figure 5.21). At the peak in 2003 the data suggest that around 1.6 million cubic metres of illegal logs were being smuggled from Indonesia to China each year. Following the enforcement, this fell to around 0.25 million cubic metres. Although the volume has continued to fall, the data suggest that as of 2008 around 120,000 cubic metres of logs, worth an estimated US\$30 million, were continuing to be smuggled out of Indonesia to China each year.

Figure 5.21: Illegal log exports from Indonesia to China, 2000–08, based on trade data discrepancies



Source: Comparison of official trade statistics.

Note: Trade volumes reported at both export and import for China and Hong Kong are combined to eliminate discrepancies resulting from transit trade.

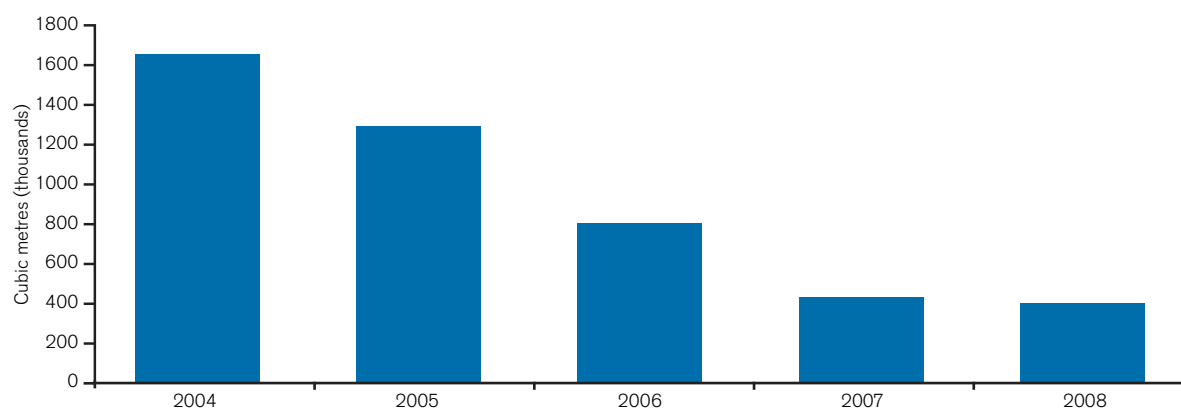
243 EIA/Telapak, *The Last Frontier*.

244 *Ibid.*, p. 24.

Three years after banning all exports of logs, in late 2004 the Indonesian government also banned the export of most forms of sawn timber. Prior to the ban, discrepancies in trade data suggested that large volumes of illegally exported Indonesian sawn wood were being imported by various countries, including China. As with the earlier log ban, the prohibition was specifically intended to aid enforcement. Also as with the earlier log ban, the trade data discrepancies suggest that to begin with illegal exports continued, but these discrepancies have steadily fallen. In 2004, the data suggest that as much as 1.6 million cubic metres of sawn timber was illegally exported from Indonesia to China; by 2008 the figure had fallen to less than 0.4 million cubic metres (see Figure 5.22).

Since in the importing countries concerned no legislation yet exists to prevent continued imports, the fall in smuggling of sawn timber from Indonesia to China and elsewhere in recent years suggested by the data is most likely attributable to increased enforcement in Indonesia.

Figure 5.22: Estimates of illegal exports of Indonesian sawn timber to China, 2004–08, based on trade data discrepancies



Source: Official trade statistics.

Note: Trade volumes reported at both export and import for China and Hong Kong are combined to eliminate discrepancies resulting from transit trade.

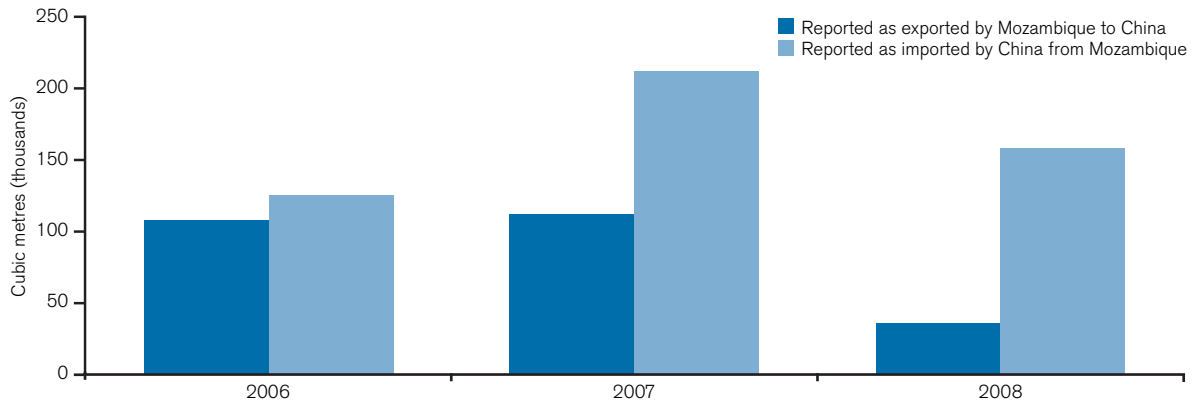
Although trade data discrepancies suggest reduced illegal trade between Indonesia and China, suspicious discrepancies in at least one other source country have grown. Data on trade in round logs between Mozambique and China have shown increasingly large discrepancies in recent years (Figure 5.23). By 2008, 80 per cent of the logs being reported by Chinese customs as imported from Mozambique – 120,000 cubic metres of timber worth around US\$60 million – were not recorded as legally exported. Other than illegalities related to log exports from Mozambique, another possible source of this growing discrepancy might be timber from nearby countries such as Tanzania being falsely labelled as originating in Mozambique. Other recent analysis does not support this, however.<sup>245</sup>

Analysis of trade data discrepancies for Vietnam is made difficult because the country does not publish statistics for timber imports in terms of quantity (weight or volume). Comparison of figures for trade value can provide some guide, however. Although import values can be expected to be significantly higher than export values (because they incorporate the cost of transporting the timber), the differences in reported trade values for logs and sawn timber between Indonesia and Malaysia and Vietnam during recent years are far greater than this could account for. In 2002, the value of log imports to Vietnam supposedly from Malaysia was almost 3.5 times the value of logs recorded as exported from Malaysia to Vietnam. As with the China–Indonesia trade discrepancies described above, this almost certainly derived from the log export ban enacted in Indonesia in 2002; indeed, accounts from traders during the period confirm that large

245 S. Lawson, 'Using Customs and Licensing Scheme Data to Identify and Measure Illegal Trade in Environmentally Sensitive Goods', paper for OECD, forthcoming 2010.

volumes of illegal Indonesian logs were being falsely declared as Malaysian on arrival in Vietnam during the period.<sup>246</sup> As with China, the data discrepancy in valuations fell back to normal levels in 2005–06, probably as a result of enforcement in Indonesia. Evidence also exists of illegal cross-border timber trade from Laos and Cambodia to Vietnam,<sup>247</sup> which might be expected to result in significant discrepancies in trade data, but the countries concerned do not publish the necessary data with which to make an assessment.

Figure 5.23: Discrepancies in trade data for logs shipped from Mozambique to China, 2006–08



Source: Official trade statistics.

Note: Trade volumes reported at both export and import for China and Hong Kong are combined to eliminate discrepancies resulting from transit trade.

### Consumer countries

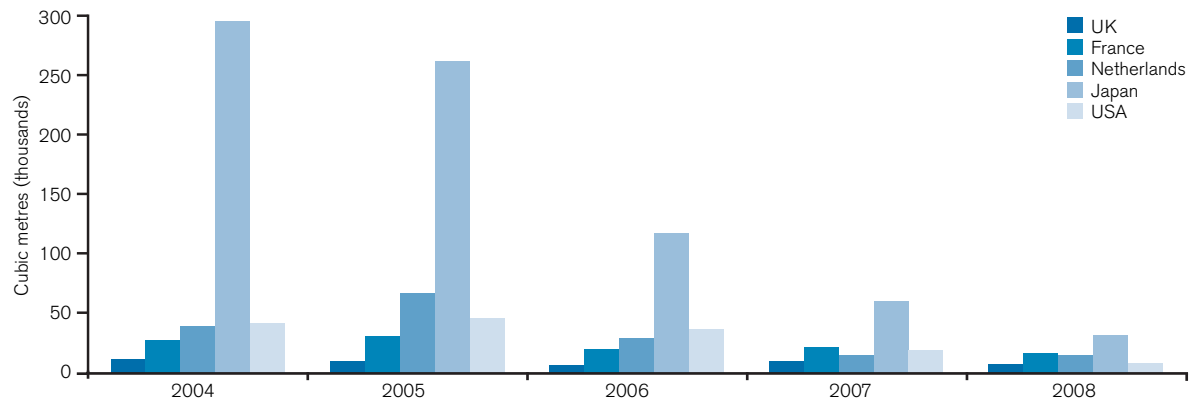
Since consumer countries tend to import more heavily processed products and often do so indirectly, trade data discrepancies are only rarely a useful guide to the amount of smuggled timber in trade. One exception relates to sawn timber from Indonesia, which, as explained above, was largely banned from export in late 2004. Though the quantities involved are very small relative to overall trade, they can provide some indication of trends. The year after the ban took effect, volumes of sawn timber being imported by the five focus consumer countries from Indonesia continued at roughly the same level, and in some cases actually rose. Since then, however, reported imports of sawn timber from Indonesia have declined for all countries (Figure 5.24), with the exception of the UK, where they have remained small. The continued and accelerated fall in the US in 2008 may be partly due to the new import controls, and partly to improved enforcement by customs officials in Indonesia, though other factors such as changing economic circumstances are likely to have contributed as well.

One possible exception relates to exports of logs from Central Africa to France, where French authorities have persistently recorded significantly larger volumes (by 30–40 per cent) of log imports from Cameroon, the Central African Republic and Congo-Brazzaville than were recorded as having been legally exported by the three countries (Figure 5.25). Because exports from CAR and Congo-Brazzaville often transit through Cameroon and might therefore be incorrectly recorded as originating there, it is not possible to disaggregate this discrepancy and say for sure which country is most likely to be responsible. The fact that an independent monitor has been checking log exports from Cameroon for some years would nevertheless suggest that the problem, if it exists, is likely to be elsewhere. Without further work it is impossible to be certain whether there are innocent reasons for this discrepancy. The data show that the excess volumes of imports have been declining in recent years along with overall trade.

<sup>246</sup> EIA/Telapak, *Stemming the Tide*.

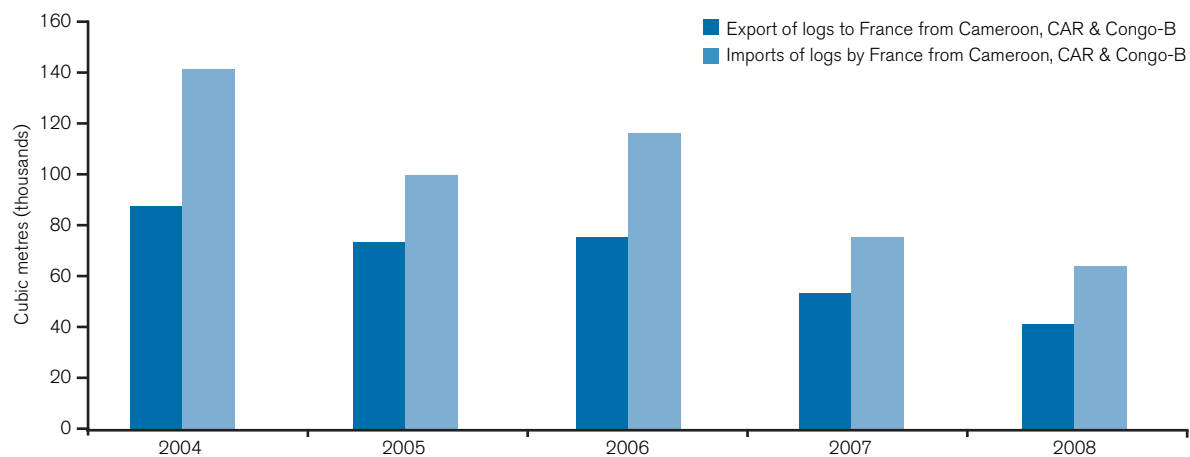
<sup>247</sup> For Cambodia, see Global Witness reports at [www.globalwitness.org](http://www.globalwitness.org); for Laos see for instance EIA/Telapak, *Borderlines*.

Figure 5.24: Estimated volumes of illegally exported sawn timber from Indonesia destined for consumer countries, 2004–08, based on trade data discrepancies



Source: Country trade data. Based on discrepancies between reported exports of sawn timber by Indonesia (where exports of almost all forms are banned) and reported imports of sawn timber from Indonesia by consuming countries.

Figure 5.25: Discrepancies in log-trade data between Central Africa and France



Source: Official trade statistics, various sources. Analysis by J. Hewitt for Chatham House.

# 6 Conclusions and Recommendations

## 6.1 Summary of indicator trends

Table 6.1 summarizes the trends in the various indicators over the most recent years assessed for each. It shows that the situation is improving in almost all aspects of the response in almost all countries – in many cases these improvements are significant. A major exception is the coverage of the illegal logging problem in the consumer-country and broader international media, which has been declining recently following many years of steady increase; the study suggests that this is due to the distraction of attention towards issues related to climate change and forests, combined with a reduction in NGO campaigning activity. It may also ultimately stem from the reduction in illegal logging seen in a number of producer countries and the improved demand-side response in consumer countries.

Table 6.1: Trends in indicators in all countries

	Trend																		
	Producer					Process		Consumer											
	Brazil	Cameroon	Ghana	Indonesia	Malaysia	China	Vietnam	France	Japan	Netherlands	UK	USA							
<i>Attention</i>																			
Volume of international media coverage	Improving					Improving		Worsening											
Volume of domestic media coverage	Improving					Improving		Improving											
<i>Government policy development &amp; implementation</i>																			
Policy assessment	Improving					Improving		Improving											
Enforcement & revenue capture data	Improving					Not relevant/not assessed		Not relevant/not assessed											
Expert perceptions of government response	Improving					Worsening		Worsening											
<i>Private-sector policy development &amp; implementation</i>																			
Certification & verification schemes	Improving					Improving		Improving											
Diversion to less sensitive markets due to response	Improving					Improving		Worsening											
Expert perceptions of progress by private sector	Improving					Improving		Worsening											
<i>Levels of illegal logging &amp; associated trade</i>																			
Balance between legal supply & demand	Improving					Worsening		Worsening											
Trade data discrepancies	Improving					Improving		Improving											
Import-source assessment of illegally sourced imports	Worsening					Improving		Improving											
Expert perceptions of scale of illegal logging & trade	Improving					Worsening		Worsening											
<table border="0" style="width:100%; text-align:center;"> <tr> <td style="width:15%;">Improving</td> <td style="width:15%; background-color:#4F81BD; height:15px;"></td> <td style="width:15%;">Worsening</td> <td style="width:15%; background-color:#A9C9E8; height:15px;"></td> <td style="width:15%;">Not relevant/not assessed</td> <td style="width:15%; background-color:#808080; height:15px;"></td> <td style="width:15%;">Pattern inconclusive/only baseline available</td> <td style="width:15%; background-color:#D9D9D9; height:15px;"></td> </tr> </table>												Improving		Worsening		Not relevant/not assessed		Pattern inconclusive/only baseline available	
Improving		Worsening		Not relevant/not assessed		Pattern inconclusive/only baseline available													

Aside from media attention, the only indicator which suggested a negative trend in the most recent year is trade diversion, where survey respondents in both Brazil and China felt that trade was shifting to less sensitive markets in response to increasing concerns regarding legality in more sensitive markets – a contention supported, in the case of Brazil, by trade data. If true, such shifts may serve to undermine the potential effectiveness of the demand-side measures being implemented in individual sensitive consumer countries, and make the case stronger for multilateral action.

## 6.2 Tackling illegal logging: conclusions and lessons for the future

This study has demonstrated that the response to illegal logging and associated trade has been considerable, and that this has led to significant reductions in the extent of the problem. Among the most important factors have been improved enforcement by producer countries, independent monitoring, campaigning by non-government organizations, government procurement policies in consumer countries and technical and financial support from international donors. Although they are only very recently being developed and implemented, import controls in the US and Europe are already having an impact.

The study has also shown, however, that the problem is still far from solved. If illegal logging is to be further reduced and eventually eliminated, it is important that attention is maintained and that the response is continued and expanded. It is also vital that lessons are learned and that efforts are redoubled in the areas where the response has been least effective so far.

The media review has demonstrated how attention in consumer countries to the issue of illegal logging is beginning to wane, partly owing to a shift in focus in the forest policy debate towards the role of forests in mitigating climate change. Although international initiatives to reduce emissions resulting from the destruction and degradation of forests are beginning to recognize the importance of forest governance, it is important that the successes documented in this study in tackling illegal logging and the potential of further efforts for cheaply reducing emissions are fully appreciated by policy-makers engaged in the climate change issue. The extent to which reducing illegal logging can be expected to reduce overall forest loss and degradation varies from country to country, and other factors are certainly important. Nevertheless, the response to illegal logging has also served to address wider forest governance problems and is therefore likely to be having a powerful impact on a wide range of other drivers of forest-related greenhouse gas emissions. In addition, many of the policy reforms promoted through efforts to control illegal logging – such as improving transparency and accountability, and implementing checks and balances – are essential if payments to developing countries for reducing deforestation and forest degradation are to be fair and effective. An appreciation of these connections should help to ensure that the climate change agenda for forests serves to reinforce the existing response to illegal logging and poor forest governance rather than distract from it.

The Chatham House analysis suggests that greater focus is now required on a number of areas of the illegal logging problem which have so far seen little response, and which have grown in importance as other areas have improved. These areas include illegal logging by smaller concessionaires, domestic producer-country markets for illegal wood products, illegal issuance of licences to harvest, failure to gazette forest concessions, illegal logging by companies with harvesting licences within their licensed area, illegalities related to the clearance of forest for agricultural or timber plantations or for opencast mines, and illegal logging in the Russian Far East. Many of these issues are harder to tackle than those which to a large extent have already been addressed, and confronting them may require new approaches. Clearly the enforcement of relevant existing laws must improve, but if these problems are to be tackled comprehensively and sustainably it is also crucial that greater efforts are made to improve legislation, regulations and policies in producer countries.

Despite improvements in relevant government laws, regulations and policies in producer countries, on the whole these remain inadequate. Reductions in illegal logging in Indonesia and Cameroon, for instance, seem to have occurred largely in spite of relatively weak regulations. This apparent inconsistency is likely to become increasingly important, for while simple increases in enforcement can relatively easily

tackle the most blatant forms of illegal logging (such as cutting trees in unlicensed areas or the smuggling of logs abroad), as these are reduced the more persistent and less easily detected types of illegality become more important as a proportion of the overall problem. This includes practices such as overcutting by licence holders within licensed areas and the illegal issuance of licences for forest clearance for agricultural or tree plantations. Addressing these forms of illegality, which now appear to represent the bulk of illegal logging in Malaysia, Cameroon and possibly also Indonesia, cannot rely on increased enforcement alone and requires a more profound overhaul of government policy and regulation than has so far occurred.

Demand-side-driven measures also have limits, though much more could still be done. While almost half of Cameroon's logging concession area has now been subjected to some form of voluntary independent legality or sustainability verification in order to meet the concerns of European buyers, the remainder is largely geared towards exports to less sensitive markets such as China. A rapidly increasing proportion of Ghana's wood exports is destined for regional markets where concerns over timber provenance are minimal – a shift which may explain why independent verification of legality and sustainability has made little progress. In Indonesia and Malaysia, meanwhile, the vast majority of exports are destined for less sensitive Asian markets which have seen little demand-side action. As production for export is increasingly legalized, domestic markets for stolen wood are becoming relatively more important too; domestic consumption is also expanding as a result of increased population and economic growth. The majority of illegal timber production in both Cameroon and Ghana is now consumed locally.

In all of these areas of concern – poor government policy and the failure to tackle more intransigent forms of illegal logging, and the continued consumption of illegal timber domestically and in less sensitive overseas markets – the European Union's FLEGT voluntary partnership agreements (VPAs) could have a crucial broader role to play beyond preventing illegal wood reaching member states. This study has shown that the VPAs currently being negotiated or implemented in four of the five producer countries examined have already had a significant positive impact on these countries' policies and regulations. The legality assurance systems being planned are likely to encompass a broader range of laws than most voluntary verification schemes and, most crucially, in many partner countries these systems are expected to cover all harvesting, processing and export, not just that destined for Europe.

So far the private-sector response in the consumer countries has largely been driven by NGO campaigns to influence the response of individual companies and by policies requiring proof of legality for wood used in government projects. While the US government does not yet have a policy on wood purchases, and the procurement policies in the other countries (especially Japan) could be improved, there are limits to how much more procurement policies and voluntary private-sector action driven by NGOs can achieve alone. The performance of only the biggest brand-name retailers are of interest to the media and NGOs, yet a large proportion of import and sale is carried out by small and medium-sized enterprises. Government purchases, on the other hand, represent only around 10–15 per cent of overall consumption (although procurement policies do have wider knock-on effects). With attention to the illegal logging problem apparently declining in all consumer countries and the limits of other demand-side measures being reached in many, if these countries are to reduce their role further, it is crucial that well-designed import legislation is enacted and properly implemented. In this regard Japan is the country of greatest concern; demand-side impacts on countries which rely heavily on Japanese buyers – Malaysia foremost among them – are likely to remain muted until greater action is taken there.

A growing challenge to the implementation of all demand-side measures in consumer countries is the changing pattern of trade. By 2008 more than half of the illegally sourced wood being imported by the five consumer countries was arriving indirectly via third-party processing countries, mainly China – a huge rise from just 15 per cent eight years earlier. Less than a quarter of the US's estimated imports of illegally sourced wood products now arrive directly from the countries of harvest. It is much more difficult for buyers to guarantee the legal origin of wood which has been processed in a third country, and also more difficult for enforcement officials implementing new import controls to carry out checks. Initiatives by European timber trade associations to try to clean up supply chains for products originating in China have encountered serious problems. Those involved have cited a lack of necessary skills, intense competition,

market fragmentation, complex supply chains, a price-focused business culture and an insensitive domestic market as all serving to seriously impede efforts to exclude illegal wood. Although many Vietnamese companies with a longer experience of dealing with concerns over legality and sustainability have done a better job of addressing them, they have often done so by shifting to plantation wood or timber from countries less badly affected by illegal logging, rather than verifying existing supplies.

If measures being taken in producer and consuming countries are to be effective it is therefore increasingly important that governments in processing countries take additional and more significant action.

### 6.3 Conclusions: measuring illegal logging and the response

#### 6.3.1 *Measuring illegal logging more precisely*

While this study has been able to draw some reasonably confident conclusions about the direction and extent of change in the rate of illegal logging in producer countries based on wood-balance assessments, surveys and other data, better information is required in future if a more precise and more complete picture is to be achieved.

For wood-balance analyses to be a more precise indicator, producer countries need to make greater efforts to collect reliable figures for legal timber production and consumption, and need to be more transparent with the information obtained. Producer-country governments also need to improve collection, analysis and dissemination of information on revenues captured from the timber sector and on enforcement activity. The policy assessment in Chapter 2 demonstrated that producer countries generally still have poor information management, financial management and transparency policies and systems in place, and these must be improved. It is essential that the FLEGT voluntary partnership agreements currently being negotiated between the European Union and a number of producer countries seek to leverage improvements in this regard, especially if the EU is to be able to measure the effectiveness of these agreements reliably.

However, even if the data which are fed into indicators on wood balance, revenue capture and enforcement can be improved, there are limitations to how effective these indicators can be in capturing illegalities. This is especially true where outright illegal logging (in excess of licensed production) is reduced or eliminated, and the bulk of illegality is increasingly infractions by logging companies within their approved annual cut. As mentioned in the wood-balance assessments for the various countries in Section 5.1.2, there is strong evidence to suggest that such infractions may now represent the largest part of the problem. Such infractions will not be captured by a wood-balance analysis, and in a country like Malaysia where revenues are normally captured on logs regardless of the legality of their production and where enforcement data on such forms of illegality are not produced, revenue and enforcement indicators would also fail to reveal them.

A more resource-intensive approach might seek to try to measure illegal logging directly, by comparing satellite imagery with official concession maps and harvesting plans. Such analyses have recently been shown to be very effective in identifying and measuring illegal logging in a cost-efficient way, particularly where they are supported by field inspections of a sample of sites. The method can be used to detect illegal logging in advance of the receipt of necessary approvals, outside of concession or coupe boundaries and in prohibited terrain such as steep slopes and near rivers. This method has been used in the past by NGOs and independent observers to identify illegalities in four of the five focus producer countries.<sup>248</sup> In Brazil and Cameroon, it has been used by NGOs working in partnership with governments; in Indonesia, a methodology of this kind has been proposed by the World Resources Institute, whereby such analyses would be conducted by the government (perhaps with outside assistance)

<sup>248</sup> In Cameroon, the independent monitor (REM) has made common use of this method; in Brazil, the NGO IMAZON has carried out very sophisticated analyses of this kind in recent years in partnership with the government of the state of Pará. In Indonesia, the focus of NGO efforts in this regard has been on discrepancies relating to clearance for oil palm development rather than concession-based selective logging; in Malaysia, this method has been used recently to identify illegalities by timber licensees in Sarawak (Earthsight Investigations field investigation report, 2009, unpublished).

alongside improved measurements of other key indicators.<sup>249</sup> To be useful as a measure of illegal logging more broadly (as opposed to an aid to enforcement), ideally such an analysis needs to be carried out in a systematic way repeatedly over time (for example, as assessments of a random sample of concessions, carried out every two years).

These analyses can only be conducted, however, where the necessary concession coupe and block maps, forest management plans and annual harvesting plans are made public. In Brazil and Cameroon, NGOs carrying out such studies have obtained privileged access under formal monitoring agreements, but in Malaysia and Indonesia such agreements do not yet exist and it is generally difficult or impossible to obtain the necessary documents. As Section 3.1.8 describes, transparency in most producer countries (with the exception of Brazil) remains very poor in this regard.

Of course, while such assessments could be expected to capture illegal logging more completely and precisely than existing indicators, they are still far from perfect. Satellite images cannot easily detect, among other things, whether a company harvests more trees than permitted within the area in which it is licensed to cut in a given year. The method also fails to capture downstream illegalities, or illegalities regarding concession allocation.

Possibly the most effective potential means by which to measure changes in illegal logging in its broadest sense is through the engagement of a formal independent monitor of forest law enforcement and governance, such as that which is in place in Cameroon. For such monitoring to be of maximum usefulness in assessing changes quantitatively over time, however, the monitor's mandate must be structured to require and enable this to be done.

### **6.3.2 Expanding, improving and repeating the assessment of the indicators**

Because it is a first assessment, this study has examined many indicators over a number of years, in some instances reaching back almost a decade. On the other hand, for some indicators, such as the policy assessments and the survey, the study has provided only baseline data. In future, Chatham House recommends that repeat assessments (including repeat surveys) should be conducted for focus countries every two years. Such repeat assessments would be cheaper and less time-consuming than the first assessment. The policy assessment in particular would need only to examine new developments. Although many improvements have already occurred and been captured in this report, there is still much that can be done. Repeat assessments may be particularly important in measuring the impacts of demand-side legislation in the US, Europe and elsewhere which is only now coming into effect.

The producer countries examined in this study represented only about 40 per cent of global illegal timber production in 2002,<sup>250</sup> and following the fall in illegal logging seen in Brazil, Cameroon and Indonesia this percentage may now have fallen to as little as 20 per cent. The bulk of illegal timber production has yet to be assessed. Similarly, the consumer and processing countries examined in this report represent only around half of global direct imports of illegally sourced timber from producer countries.<sup>251</sup>

Ideally, then, this assessment would be expanded to cover additional countries, to produce something closer to a true global picture of the illegal logging problem. Additional producer countries clearly worthy of attention include Russia, Papua New Guinea, Peru, Congo-Brazzaville and the Democratic Republic of Congo.<sup>252</sup> Major importers not yet examined include South Korea, Germany, Spain, Italy and Australia. India is another country which has received too little attention and yet is important as both a producer and consumer of illegal timber. Thailand is increasingly important as a processing country. Though it is unlikely that first assessments for additional countries would demonstrate the kinds of progress seen in those already examined, a broader picture would provide a useful baseline against which to measure future efforts, while enabling policy-makers to focus attention where it is most needed.

249 Brown and Stolle, *Bridging the Information Gap*.

250 Seneca Creek/Wood Resources, *'Illegal' Logging and Global Wood Markets*.

251 Chatham House calculation based on import-source analysis conducted by J. Hewitt.

252 Although these countries might arguably be priorities based on scale of wood production, there are many other countries which would merit attention, including but not limited to Liberia, the Central African Republic, Laos, Cambodia and the countries of Central America.

Additional and repeat assessments of the indicators could be carried out on a stand-alone basis if funding were available. Alternatively, the indicators (or a subset, such as the policy assessment and wood-balance estimates) could be incorporated into a broader process, such as the FAO's Global Forest Resources Assessment (which takes place every five years). The indicators could be of particular value to the European Union in assessing the impacts of voluntary partnership agreements with producer countries; some of the indicators of broader forest governance (particularly the policy assessment) may also be of value in assessing efforts to reduce emissions from deforestation and forest degradation. A selection of the most relevant current indicators could potentially be supplemented by additional indicators which seek to measure the ultimate end goals of reducing illegal logging – protecting the environment and reducing poverty. This study has also demonstrated that, despite being relatively resource-intensive, surveys of expert perceptions can be a very useful way of measuring a wide and varied range of aspects of the problem and the response which are difficult to assess in any other way. Some simple improvements could be made to a number of the indicators, including the survey and policy assessment, based on lessons learned during this full-phase assessment.

A very large volume of information was collected, collated and analysed for this study, far more than can reasonably be included in this report. In future, an interactive website could be created to house all the information collected on the indicators over the years, enabling readers to create bespoke reports examining specific areas in specific countries.

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# Appendix A: Definitions and Additional Detail on Methods

## A1 Definitions

### ***A1.1 Illegal logging and associated trade***

For the purposes of this report, we have generally applied the commonly used definition of illegal logging as being **when timber is harvested, transported, bought or sold in violation of relevant national laws.**<sup>253</sup> Illegal logging as defined in this manner is only one part of broader forest governance and enforcement. Other illegal activities related to forests, such as illegal burning or non-timber-related clearance for firewood or charcoal production, opencast mining or small-scale agriculture are also important drivers of forest destruction and degradation in many countries. Legal but unsustainable logging, whether it is excessive selective harvesting or legal clearance and conversion of forests to other land uses, may also be a serious problem, insofar as it degrades forests and adversely impacts on rural livelihoods. In some countries, including some of those producer countries examined in this report, these other forms of legal and illegal forest activity are arguably more important than illegal logging as causes of forest loss and degradation. This study has sought to assess some of these other aspects briefly in order to help judge their importance relative to illegal logging. Deforestation and illegal logging rates have also been compared in some cases for the same purpose. Other than this the focus has been on illegal logging alone.

How illegal logging is precisely defined can have quite a large impact on how widespread it is judged to be. Different indicators used in this report capture different aspects: the wood-balance estimates (see Section A2.3 for an explanation of these) only capture illegal logging in excess of overall licensed harvest volumes, while for the purposes of the import-source analysis (Section A2.3) we have in most cases chosen to set aside issues over the legality of the original allocation of licences to harvest (which in some countries would make 100 per cent of timber arguably illegal). For the perceptions survey (see Section A2.2), we did not try to impose an overall definition on respondents and there will probably have been variations in what people decided to include when making judgments.

The chosen indicators are nevertheless reasonable proxies to measure progress on broader forest governance issues.

Bringing greater attention to the issue of illegal logging in a country can also serve to increase attention on wider issues related to forests. As well as addressing illegal logging, many of the policies against which government regulations are assessed in this report also address broader illegalities and can serve to improve the way legal logging is carried out while also improving broader forest governance. Many of the private-sector initiatives measured seek to address legality as part of certification of broader sustainability. As noted in the introduction to the problem above, in terms of one ultimate goal – reducing deforestation – many studies have shown that in primary tropical forests, selective illegal logging is often the critical first step on the road towards eventual forest destruction. Reducing illegal logging can therefore be expected to have important broader positive effects on forests, the global climate and the livelihoods of forest-dependent people.

### ***A1.2 Producer, processing and consumer countries***

In many countries suffering from illegal logging, a large percentage of the timber produced is destined for export. Although domestic consumption is also very important, undiscerning demand in world

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<sup>253</sup> Relevant laws are those specifically related to forestry and timber and trade thereof. This includes forestry regulations which relate to the environment and rights of communities, in addition to those directly related to harvesting and forest management.

markets for cheap wood products of doubtful origin is an important driver of illegal harvesting, and efforts to tackle this demand and prevent trade in illegal wood have a key part to play in reducing illegal logging. For this reason, Chatham House has sought to examine progress by countries involved in importing and consuming illegally sourced wood as well as by the countries directly affected by illegal logging.

Chatham House has developed discrete sets of indicators for countries whose main role falls within one of three categories: forested ‘producer’ countries where illegal logging occurs; ‘consumer’ countries where products made from illegally sourced wood are ultimately used; and third-party ‘processing’ countries, which import illegally sourced timber for re-export as further-processed goods.

This broad-brush typology is of course a simplification, since most countries fulfil all three roles to some extent. For instance, there is evidence of significant domestic illegal harvesting within China (classed as a processing country); Malaysia (classed as a producer country) is an important importer of timber and re-exporter of wood products; while domestic consumption in Brazil (classed as a producer country) far outstrips exports. It should be borne in mind that since the indicators only seek to measure the response of a country in terms of its principal role, aspects of the response which relate to other roles will not be captured. Malaysia, for instance, has legislation in place to help prevent imports of illegal Indonesian logs, while the state of São Paulo in Brazil has an impressive government procurement policy designed to exclude timber from illegal sources. There have also been efforts in China and Vietnam to tackle illegal harvesting of these countries’ own forests.

### ***A1.3 Sensitive and less sensitive markets***

One of the indicators looks at the extent to which trade may be shifting towards less sensitive markets in response to demand-side measures to control imports and the consumption of illegally sourced wood in more sensitive markets. Respondents to Chatham House’s perceptions surveys conducted for this study were allowed to make their own judgments on which countries might be considered sensitive or less sensitive; for the analysis of trade data, the US, Canada, Australia, New Zealand and Europe (the European Union plus Norway and Switzerland) were considered to be ‘sensitive’ markets, while all other countries (including China and Japan) were considered less sensitive.

Evidence of the relative sensitivity of some countries could be drawn from the indicators themselves, including media attention, private-sector voluntary scheme take-up and government response. For other countries, a judgment was made based on a brief assessment of available information, including the response of government, the attention of non-governmental organizations and the media, and the actions of major importers and retailers. While Japan is increasingly sensitive, based on the other indicators assessed in this report it was assumed to be ‘less sensitive’ for the purposes of this study. Sensitivity in Europe varies considerably between countries, but for the sake of simplicity the study classed all of Europe as sensitive. Although this is a simplification, some demand-side measures do apply to all member states of the European Union.

## **A2 Methodology**

For brevity, this document does not go into extensive detail in assessing the indicators and their potential flaws, but a full discussion can be found in Chatham House’s 2007 study.<sup>254</sup> An initial list of indicators and verifiers were pilot-tested by Chatham House in an earlier assessment of a smaller range of countries, published in 2009.<sup>255</sup> A number of changes were made to the methodology based on lessons learned during the pilot. Some possible indicators and means of verification which were previously considered for inclusion or included in the pilot study have not been assessed, either because they proved to be unreliable indicators or because they were too difficult to measure effectively within available resources. Examples

<sup>254</sup> Lawson, *Illegal Logging and Related Trade*. This and other related Chatham House documents are available on the Chatham House illegal logging website at [http://www.illegal-logging.info/approach.php?a\\_id=186](http://www.illegal-logging.info/approach.php?a_id=186).

<sup>255</sup> Lawson and MacFaul, *Illegal Logging and Related Trade: 2008 Assessment of the Global Response*.

include forest governance aid, illegal logging rates in national parks, and the social impacts of both illegal logging and the response to it.

### ***A2.1 Policy assessment***

Chatham House has sought to structure and quantify an assessment of the response of governments using a list of policies judged to be necessary to tackle the illegal logging and associated trade in each of the country types. Chatham House worked with an advisory group to develop and reach consensus on the policy lists. Although the initial concept called for a simple Boolean ‘yes/no’ assessment, pilot studies showed that a more sophisticated approach was required. Chatham House has therefore sought to measure each policy in each country based not only on whether it exists (using a scale of 0–2, with 1 indicating partial coverage or a policy under development), but also how well designed and implemented it is (using a scale of 1–5). Considerable efforts were made to standardize the assessment framework to ensure consistency over time (when repeating the monitoring exercise), and comparability across countries.

In some cases, where a policy is under development or very new, we have been unable to make an assessment of design and/or implementation, in which case no score is given. To ensure fair comparison between countries assessed during the earlier pilot and current full phase of this study, the policy scores are based on the situation at the end of 2008 – though later developments are often noted in the associated discussion. Normally, where a policy is judged not to be in place, no scores are given for design or implementation. For the policy questions on transparency, however, Chatham House assigned scores for implementation (based on whether certain information is available in practice), even where transparency is not required in laws and regulations (and therefore where the score for existence is zero).

For producer countries, the final policy list included 51 separate questions and sub-questions under 12 major headings, such as high-level policy (questions on, for instance, whether a system exists for formal coordination of relevant agencies), transparency (questions on, for instance, whether copies of harvesting licences are publicly accessible) and enforcement (questions on, for instance, whether remote sensing is used to detect illegal logging). For consumer and processing countries, a smaller list of 16 questions was used, looking at areas such as import controls and procurement policy. In total, almost 900 individual scores were produced. The scores and shortened versions of the policy questions are provided in the relevant sections of the report. For presentation purposes, the questions in these sections are abbreviated; the full versions of the questions are longer and more restrictively defined, and provided as an appendix. In some cases, a score may seem inappropriate to the reader on the basis of abbreviated question, in which case it is important to refer to the full and precise policy question.

As well as drawing on their own extensive knowledge and experience, Chatham House researchers and partners used a range of primary and secondary sources to conduct the assessment of each country against the policy lists, including direct contact with relevant government officials and other experts as well as governmental and intergovernmental organizations, NGOs, research organizations, and academic reports and databases. In addition, enforcement data (in all countries) and revenue capture data (in producer countries) were collected from a range of sources, analysed and incorporated into the relevant sections of the policy assessment. Chatham House provided detailed, standardized guidance on how every aspect of every policy was to be assessed, and written justification to support the scores was provided in most cases. Scores and justification provided by partners were reviewed by Chatham House and compared between countries to try to ensure a fair assessment. Multiple phases of clarification were often required with partners. Despite this, some level of subjectivity was inevitable in the assessment of scores, particularly for design and implementation.

Although the policy list assessment was expected mainly to establish a baseline against which to measure future improvements, some information about when individual regulations and policies were implemented was also obtained, as was information on changes currently being discussed or proposed. This information allows some measure of the progress with the response to illegal logging.

To enable consistency and maximize objectivity, policy questions had to be formulated and scored in a strict and standardized manner. In reality, of course, not all chosen policies are equally important

in all countries and circumstances: if consumer-country import controls were sufficiently strong, a procurement policy requiring legal wood might arguably be of limited value, for example, and where a comprehensive independent assessment of the nature of the problem already exists it might arguably be unnecessary for the government to conduct its own. Such country-specific nuances cannot be reflected in the choice of scores without introducing additional subjectivity – the scores reflect only the reality of the situation (as can best be measured) against the precisely worded and standardized policy questions. Where resultant scores do not capture important considerations, Chatham House has sought to note these instead in the associated narrative.

Owing to resource and space constraints, not all of the policies which could have been included have been included: import legislation and procurement policy are also important in producer countries, for instance, but have not been examined.

## **A2.2 Expert perceptions surveys**

There is a dearth of information available with which to assess certain aspects of the response to illegal logging and associated trade, particularly with regard to the end goal, the actual level of illegal logging. To help fill this gap, Chatham House has commissioned surveys of perceptions of progress among experts considered to be knowledgeable about the issue in their countries.

Chatham House developed the survey questionnaires with the assistance of the advisory group, and some amendments were made following the pilot assessment.<sup>256</sup> In addition to questions relating to the nature, scale and trends in illegal logging itself, the survey also sought to garner information on the responses of government and the private sector. The main survey (which included a total of 16 questions) was carried out in the five producer countries and was targeted at a full range of respondent groups – government officials, timber industry representatives, non-governmental organizations and other experts. In addition, a small addendum survey was designed solely for private-sector respondents to answer. In processing countries a separate survey was used. This focused on the private-sector response and was answered by timber industry respondents.

There is a limited number of experts with intimate knowledge of illegal logging and the response in each producer country, so the survey aimed only to obtain around 30–40 completed surveys in each country. Partner organizations in each country provided lists of proposed expert respondents for review by Chatham House; the survey sought to identify individuals with significant personal experience of researching or attempting to tackle illegal logging and associated trade. Given the risk of bias, the survey aimed at a balance of respondents from government, the private sector and NGOs/other organizations (intergovernmental organizations, universities and research institutions and international donors). The results do reveal some evidence of bias, with government and private-sector respondents slightly more positive and NGOs more inclined to be negative (as might be expected given their respective roles), but on the whole there was a surprising degree of consensus between different respondent types on almost all of the questions.

The survey methodology, results, analysis and presentation have been reviewed by independent experts. A full detailed summary document and copies of the questionnaires are available on the Chatham House website.<sup>257</sup> It is perhaps inappropriate to calculate confidence intervals for the results of the survey given its nature and the small population of experts; the best attempt suggests that margins of error for individual calculated averages are a maximum of around +/- 15 per cent.<sup>258</sup> In most cases we have sought only to comment on differences which lie outside this limit. Such margins of error relate to how well the survey respondents represent the views of the broader population of experts, however, and such a

<sup>256</sup> Surveys were carried out in Indonesia, Cameroon and Vietnam during the pilot phase. The only major subsequent change to the survey following the pilot phase was to remove a large number of specific questions relating to different aspects of the government response (the results of which are not included in this report); this meant it was unnecessary to repeat the survey in the pilot countries during the full phase, though it should be borne in mind that results from these three countries represent perceptions in late 2008, while those of the remaining countries represent perceptions in late 2009.

<sup>257</sup> [www.illegal-logging.info/indicators](http://www.illegal-logging.info/indicators). Though the sample sizes were large and were split between different respondent groups, they were not randomized; in addition, partners in each country used different methods of contacting experts in order to obtain sufficient responses.

<sup>258</sup> 95 per cent confidence level.

measure of potential error is arguably of limited value given the much greater uncertainty regarding the extent to which the perceptions of experts may reflect reality.

The results mesh well with what can be derived from other indicators and from anecdotal information. Although some questions regarding trends were included in this initial survey, and can provide some initial measure of change, it is hoped that when the survey is repeated in future, differences between responses at different times will also provide an indicator of the direction and extent of developments. It is not yet clear whether the survey will be sensitive enough to pick up such differences reliably, however; this will only be known once follow-up surveys are conducted and the results compared. It should be borne in mind that the surveys in Indonesia, Cameroon and Vietnam were conducted during the pilot phase of this study in late 2008, a year earlier than in the other countries.

Results from the surveys (which relate to the government response, the private-sector response, and the extent and nature of illegal logging) are presented in relevant chapters (Sections 3.2, 4.1, 4.3 and 5.1.1). The survey results are sometimes presented as averages on a scale. In calculating averages, adjustments have been made to account for slight variations in sample size between respondent types and between countries.

### ***A2.3 Wood-balance and import-source estimates of illegal production and trade***

The two primary methods often used to estimate the extent of illegal logging and associated trade are wood-balance analysis and import-source analysis. Wood-balance analysis attempts to estimate the extent of illegal logging in producer countries by comparing legal supplies of logs (licensed harvesting and legal imports) with total demand for timber (the logs needed to account for total domestic consumption and exports).

Import-source analysis seeks to estimate the amount of illegally sourced wood being cut to feed individual consumer countries by converting wood products into roundwood equivalent (the volume of logs required to produce a given product), then multiplying the overall quantities of imports from individual producer countries by estimates of the rates of illegal logging in those countries.

Both of these methods have serious flaws, but are often the only way to estimate the extent and severity of illegal logging and the trade in illegally produced timber products. The pilot study for this report sought to use existing analyses of this kind for the focus countries to try to estimate change over time. This proved very difficult, however, because methodologies used were often poor and varied from country to country and year to year, and because too few individual studies were available with which to construct time-series. For this study, Chatham House has therefore conducted its own assessments. New wood-balance estimates for each country have been produced for at least two years and in many cases more, and import-source estimates of illegal timber imports by consumer and processing countries have been produced which extend over nine years (2000–08). The import-source analyses are more sophisticated and consistent than any previously carried out, using illegality percentage estimates for individual wood flows which vary over time, country destination and product group, and reflect the fact that the proportion of a country's exports from illegal harvesting and the proportion of its total harvest that is illegal may not be the same (since, for example, a disproportionate percentage of illegal timber may be being consumed domestically). These estimates have been able to draw on data collected by Chatham House on the other indicators (such as wood-balance assessments and extent of voluntary legality verification of forest concessions) as well as on existing studies and information.

Further information about the wood-balance and import-source methods is included in Chapter 5.

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# Appendix B: Detailed Policy Questions

This appendix provides the lists of questions developed by this study to assess the policy response by each country to the problem of illegal logging. The questions below are given in full (in contrast to those shown in the policy score tables in Chapter 3, which are abbreviated). Two standardized policy lists were developed to analyse the situation in the different country groups. One list was designed for the producer-country group, while the other covered both the consumer and processing-country groups. For a full discussion of the methodology see Appendix A.

The assessment framework used by the study measures each policy based on whether it exists, and also on how well designed and implemented it is. For most questions, additional specific criteria and advice were provided to guide research and scoring on existence, design and implementation. These criteria and advice are not included in the table below.

The results of some of the questions below were not included in the report, either because of difficulties encountered in the assessment process or for reasons of space. These questions are marked with an asterisk.

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## PRODUCER COUNTRIES

### *High-level policy arrangements*

1. Does the country have high-level political and governmental mechanisms in place to tackle illegal logging?
  - a. Has a review of the causes and severity of illegal logging been conducted by the government?
  - b. Is there a national action plan in place for tackling illegal logging?
  - c. Does a formal process exist for high-level coordination of action on illegal logging across departments and sectors (e.g. a parliamentary committee or inter-ministerial task force)?
  - d. Are there formal consultation processes in place for multi-stakeholder involvement in developing policy and legislation to tackle illegal logging? These processes should ensure that viewpoints of stakeholders affected by legislation are taken into consideration. (Such processes should take place at central and regional levels of policy development and implementation.)

### *Legislative framework and government structures*

2. Is forest legislation and regulation coherent and unambiguous?
  3. Are formalized forest laws and regulations consistent (non-conflicting) and harmonized with other laws and regulations affecting forests? (Formalized here is used to distinguish between laws designed and enacted by national government and customary practices/norms of indigenous peoples and local communities.)
  4. Are mechanisms (checks and balances) in place to ensure government fully applies forest law and regulations?
    - a. Does the law make provisions for protecting the right of the public to mount legal challenges against forest management decisions/practices and failure by government to apply forest law?
    - b. Does the law stipulate penalties for staff for corruption?
    - c. Does the law include clear limits to the power of forest ministers (or equivalent) or other senior government officials to override forest-related laws, regulations and procedures (e.g. concession allocation procedures) – i.e. does the law limit discretionary powers?\*
    - d. Does a parliamentary committee (or equivalent) have formal oversight over the national government forest service and associated agencies?
    - e. Is there a system in place through which relevant government departments and agencies carry out self-monitoring of their performance and internal corruption investigation (this could be carried out by an internal or external inspectorate) which includes making the findings public?
    - f. Is there an independent national forest monitoring system in place?
  5. Is customs specifically mandated to check that timber consignments meet the country's forestry-specific legal export requirements?\*
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**Legislation and regulations on illegally sourced timber\***

6. Does the country have adequate legislation and regulations in place to prevent illegally sourced timber from being imported or sold?

- a. Has additional legislation been enacted and regulations put in place to prevent illegally sourced timber from being imported or sold?

**International trade cooperation**

7. What level of international cooperation has been shown by the country?

- a. Does the country have formalized trade or customs arrangements with major trading partners e.g. FLEGT VPAs or Free Trade Agreements (FTAs) which include specific provisions on illegal logging?
- b. Does the country have a system in place for sending and receiving enforcement alerts regarding illegal shipments in transit to destination countries?

**Policies on demand and supply**

8. Do forest-related policies encourage legal timber production and discourage illegal timber production by ensuring that the level of demand does not exceed legal supply?

- a. Does the permitting system for primary wood processing facilities require evidence of sufficient legal sources of raw material?

**Tenure and use rights**

9. Are property, use rights and tenure arrangements clearly defined, documented and secure (including those of indigenous and local communities)?

- a. Does the law require that property, use rights and tenure arrangements are set out on publicly accessible maps (and/or GIS) and demarcated at ground level?
- b. Are there formalized mechanisms in place for resolving conflicting or overlapping property rights?
- c. Are there formalized mechanisms in place for accommodating customary rights in law and regulations?

**Timber chain of custody, transport and tracking**

10. Are there effective mechanisms in place to detect instances of illegal timber entering the supply chain?

- a. Is there a system in place designed to verify the origin of timber (i.e. forest management unit) in transport, transfer and delivery?
- b. Does the system design include the following components?
- i. independent monitoring procedures (independent government body or third party)
  - ii. reconciliation systems
  - iii. tamper-resistant documentation procedures
  - iv. computerized systems

**Transparency****— Institutional transparency**

11. Is there a unified document which describes the roles, responsibilities and controls for all agencies involved in regulating forest utilization and trade from harvest rights allocation to point of sale or export, and is it accessible to the public?

**— Transparency in resource allocation and management**

12. Do policies, laws or regulations contain provisions designed to ensure that resource allocation and management is carried out transparently?

- a. Do policies, laws or regulations stipulate that rules for resource allocation processes (e.g. concession allocation and competitions) are made publicly available?
- b. Do policies, laws or regulations stipulate that dates for when resource allocation processes are to be held are made publicly available?
- c. Do policies, laws or regulations stipulate that the results of resource allocation processes are made publicly available (e.g. bids and awards for concession allocation and competitions)?
- d. Do policies, laws or regulations stipulate that up-to-date summary data is published on harvesting, processing and international trade?

13. Do policies, laws or regulations contain provisions designed to ensure transparency in concession use?

- a. Do policies, laws or regulations stipulate that information on location of concessions, ownership and contact details is publicly available?

b. Do policies, laws or regulations stipulate that information on concession contracts, inventories and plans is publicly available (i.e. long-term and annual forest management and harvest plans)?

c. Do policies, laws or regulations stipulate that results of environmental and social impact assessments and mitigation measures are publicly available?

#### ***Transparency in enforcement activities***

14. Do policies, laws or regulations contain provisions designed to ensure that information on enforcement activities is publicly available?

a. Do policies, laws or regulations stipulate that data is published on forest crimes, including success rates on detection, interdiction, prosecution and conviction (including fines levied and fines paid) and volumes seized?

b. Do policies, laws and regulations stipulate that information on disposals of confiscated wood or results of public auctions of confiscated wood (or other kinds of public bidding) are publicly available?

#### ***Resource allocation procedures***

15. Do resource allocation regulations and procedures include measures consistent with good forest governance?

a. Is there a pre-qualification process which is designed to exclude inappropriate bidders from resource allocation awards?

b. Is there a competitive award process which is designed to be open to all eligible bidders?

c. Does the law require prior informed consent procedures or stakeholder consultations for local communities (with respect to logging interests and rights) to be carried out?

d. Are measures to protect and develop forest-based livelihood opportunities for local communities within concession areas built into concession contracts?

#### ***Institutional & operational factors in law enforcement***

16. Do policies, laws, regulations and procedures facilitate and promote effective law enforcement?

a. Are penalties and sanctions against illegal logging and forest-related crime proportionate and dissuasive?

b. Are there systems in place to ensure coordination between relevant ministries and agencies on illegal logging cases?

17. Do government institutions and agencies have sufficient capacity and resources to monitor forest areas and detect and suppress forest crime?

a. Are forest officials/law enforcement staff sufficiently resourced for monitoring and enforcement? (Relevant resources include budgets; numbers of staff; communications; transport; equipment; salaries; as well as training in understanding of regulatory framework and knowledge of techniques for monitoring and enforcement.)

b. Are the following non-forest sector officials who are involved in forest enforcement trained and kept up to date in relevant forest sector issues?

i. judges and prosecutors

ii. customs officials

18. Do government agencies systematically use appropriate information gathering tools in order to identify illegal activities?

a. Are remote sensing systems used for this purpose (such as satellite imagery and/or aerial surveillance)?

b. Are in-the-field investigatory tools used for this purpose (such as confidential diagnostic surveys, informants and NGOs)?

c. Are material flow analyses used for this purpose (such as wood input/output estimates, comparison of import/export data)?

d. Are log tracking and checkpoint systems used for this purpose?

#### ***Information and data management***

19. Is there an up-to-date, accurate and comprehensive information management system in place through which relevant government agencies can access data related to forest enforcement and management? This information management system could include elements such as forest inventories, remote sensing imagery and harvest permits and licences; forest management plans; centralized repository of maps; transportation documents; and processing licences and records.

#### ***Financial management***

20. Is there an effective financial management system in place for the forest sector?

a. Does the forest administration have a system for monitoring revenue collected from utilization of forest resources against revenue owed, as well as a procedure for investigating discrepancies?

b. Is there an audit of the forest administration whose findings are publicly available?

**CONSUMER AND PROCESSING COUNTRIES*****High-level policy arrangements***

1. Does the country have high-level political and governmental mechanisms in place to tackle illegal logging?
  - a. Has a review been carried out which both assesses how the country's market activities impact on the problem of illegal logging and related trade and also investigates the extent and sources of potential illegal imports?
  - b. Is a national action plan in place for preventing illegally sourced timber from being imported or sold?
  - c. Does a formal process exist for high-level coordination of action on illegal logging across departments and sectors (e.g. a parliamentary committee or inter-ministerial task force)?
  - d. Are there formal consultation processes in place for multi-stakeholder involvement in developing policy and legislation to tackle illegal logging? These processes should ensure that viewpoints of stakeholders affected by legislation are taken into consideration.

***Legislation and regulations on illegally sourced timber***

2. Does the country have adequate legislation and regulations in place to prevent illegally sourced timber from being imported or sold?
  - a. Has the country analysed its existing legislation and regulations on preventing imports of illegally sourced timber?
  - b. Has additional legislation been enacted and regulations put in place to prevent illegally sourced timber from being imported or sold?

***Institutional & operational factors in law enforcement***

3. Is training provided for customs in major import ports on existing timber import controls?

***International trade cooperation***

4. What level of international cooperation has been shown by the country?
  - a. Does the country have formalized trade or customs arrangements with major trading partners e.g. FLEGT VPAs or Free Trade Agreements (FTAs) which include specific provisions on illegal logging?
  - b. Does the country have a formalized system in place for sending and receiving enforcement alerts regarding illegal shipments in transit to destination countries?

***Procurement policy***

5. Is there a public procurement policy in place excluding illegal (and/or unsustainable) timber products from government purchasing?
  - a. What level of adherence does the policy require?
  - b. Does the policy cover all timber products, including paper?
  - c. Does the policy rest on independent certification or verification schemes (or equivalent) for identifying legal products?
  - d. Is assistance offered to government purchasers (advice, guidance, training, etc.)?
  - e. Is implementation of the policy systematically monitored and assessed?
  - f. Does the procurement policy apply to sub-national (provincial, regional, local) government?\*