PUBLIC SUMMARY REPORT

Scoping Study: Sourcing Legal Timber from Indonesia

Prepared by the UK



Based on a report by the



28st April 2004

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ACKNOWLEDGEMENTS

The UK Timber Trade Federation would like to thank all those who participated both financially and in other ways, in this study. Many of our members supported this study financially and, crucially, by working closely with their contacts and suppliers in Indonesia persuaded many to open their gates to the TFT.

The sixteen mills that eventually participated did so in the face of some local opposition and in many cases because they shared the vision of the TTF to promote a legal and sustainable timber trade. We are extremely grateful that they were prepared to work with us in this way, and hope to be able to continue to support such like-minded Indonesia timber producers in the future.

TTF's Forest Policy Adviser Ita Rugge (currently on maternity leave) deserves special mention for her crucial information gathering and analytical work in the development and initiation stages of the study.

Many thanks also to TTF's Vice-President John Tong and his Finnforest UK staff, especially Rachel Butler, who provided crucial impetus and support to this process early on.

Finally we would like to thank the Tropical Forest Trust for persisting against all the odds to complete this work and help us on the road to sourcing legal timber from Indonesia.

INTRODUCTION

Against an increasingly difficult background characterised by tough trading conditions and environmental activism over illegal wood, UK Timber Trade Federation (TTF) members met on June 4th, 2003 to discuss the prospects of securing legal wood from Indonesia. TTF members decided that continuing to trade with Indonesia makes good business as well as good environmental sense provided that TTF members could implement a secure process based on third party audits that will deliver verifiable legal timber. To achieve this TTF launched a ten-point plan (Annex 1) that included this Scoping Study. As a longer-term objective, TTF members hope to secure certified sustainable timber from Indonesian sources. After a meeting on July 7th, the TTF selected TFT to undertake the Scoping Study according to the Terms of Reference (Annex 2) and 18 UK timber traders sponsored the study.

TFT immediately made initial contact and held meetings with numerous organisations including APKINDO (Indonesian Wood Panel Association), Ministry of Forestry (MoF), Ministry of Industry & Trade, DFID (UK Department for International Development), APHI (Indonesia Forest Concessionnaires Association), BRIK (Indonesia Forest Industry Revitalisation Body) and WALHI, to inform them of the study, its objectives and planned timetable. At the same time, TTF members finalised a list of mills they would like visited and the TFT arranged mill visit dates.

From August 2003 to January 2004, the TFT conducted visits to 13 Indonesian plywood mills and 3 secondary processing factories – a combined total of 16 different mills. Of the initial list of nominated mills, only 5 declined to participate in the Study of whom some are undertaking their own processes aimed at securing verified legal timber.

THE SCOPE OF WORK

The key objective of the study was to explore and report on the current and future state of legality of existing and potential mills supplying the UK market. Secondary objectives included exploring and reporting on the feasibility of a common framework to assess and verify basic legality in Indonesia; scoping out and developing financing mechanisms and timeframes for buyers to source verified legal timber, and developing a set of options for trade action.

4 key activities were defined:

- Activity 1 Explore and report on the current and future state of legality of existing and potential mills supplying the UK market (up to 10 in 3 regions as indicated by the TTF), including aspects such as the current quantities of legal timber mills can supply, and which countries they are selling to;
- Activity 2 Explore and report on the feasibility of a common auditing framework for basic legality verification in Indonesia;
- Activity 3 Scope out and develop financing mechanisms and time frames, in a stepwise approach, for buyers to source audited legal timber into the UK. This work should use experiences from other trade-based initiatives in Indonesia and elsewhere; and
- Activity 4 Develop a set of options for trade action that will produce the expected results above, for review and agreement by the TTF group.

This Public Summary Report has been extracted from TFT's Final Report to Sponsors in order to share the non-confidential outcomes of this study.

MILL VISIT METHODOLOGY

The general approach was to visit each mill and do the following:

- Determine whether the mill has Central Government Quotas (CGQ);
- If so, check whether it is operating within them;
- Analyse the legality of the source forest's license;
- Calculate the degree to which the mill is in compliance with its log procurement quota;
- Check if the mill has a functioning, third party audited Chain of Custody (COC) system;
- Determine whether the mill is operating within the conversion efficiency limit set by BRIK.

The mills were scored according to their performance and the results summarised on Table 1 (for plywood mills) and Table 2 (for secondary mills) below. The table shows the

TTF Public Summary of the TFT Scoping Study: Sourcing Legal Timber from Indonesia methodology and weighting given, which for each mill resulted in an overall score of legality. More details of the mill visit methodology can be found in Annex 3.

KEY RESULTS

- The mill visits produced mixed results that served to clarify the problem of sourcing legal timber from Indonesia as well as identifying how individual mills were performing according to basic legality criteria.
- The UK TTF Sponsors are encouraged that so many mills opened their doors and expressed a readiness to meet the new demands of the UK market. However all the plywood mills were facing difficulties complying with Central Government Quotas and getting hold of logs from legal and ethical licence areas, and the secondary wood processing factories had little information on where most of their wood came from and thus currently have no way to verify the legality of their timber.
- As a result of this study UK TTF Sponsors now have a baseline and a clearer picture of the current situation regarding existing laws and their enforcement, and the difficulties mills are facing. The overall report provides anonymous benchmarking of the scores for each mill.
- Individual mills now have their own visit reports and know how they are performing according to the basic legality criteria and in relationship to each other.
- Without exception, all the plywood mills visited indicated a strong positive interest in implementing COC, developing wood procurement policies, buying from long-term legal sources and operating within their quotas.
- From a key markets perspective the fact that the mills did open their doors to the TFT team in response to requests from their UK customers does indicate that the mills take the UK market seriously, even if the UK only represents a small proportion of their total trade.

TABLE 1: INDONESIAN PLYWOOD MILL METHODOLOGY

					Ethical = % of % from Appro Score	0-25% 0-25% 26-50% 51-75% 76-99%	long-term li ces = % sour Legal 0 2 4 6	rced in line with Ethical 0 1 2 3	ONLY h CGQ Approved s 0 1 2 3		COC - Has BRIK Conv	Has wood pro Chain of Cus ersion Efficie		ithin the allo	BRIK 2 0	nit? CE 1 0
						100%	8	4	4				<u> </u>		Max ^m Score = 30	
			Quot	a Compli	Compliance Log Sources Long-ter			m Viability	Viability Other Issues				1			
Rank	Mill	Have CGQ	P'wood Prod ⁿ within CGQ	Log	Log Proc'ment within CGQ	Legal Score	Ethical Score	% From Approved Sources	FMUs	Installed capacity	Policies	COC System	BRIK Conv. Efficiency	CE Marking	TOTAL Score	%
								1								
		QUOTA COMPLIANCE CGQ = Central Government Quota P'wood Prod ⁿ within CGQ = Plywood production is in line the CGQ								LONG-TERM VIABILITY FMUs Is the mill linked to forests and so has some secure wood supply?						
		Log input within CGQ= Log input is in line with CGQLog Proc'ment within CGQ= Log procurement is in line with the CGQ								Score 1 Has FMUs 0 No FMUs						
		Score 1 In compliance 0 Not in compliance								Installed Capacity If Installed capacity/CGQ > 1.5, there is a serious risk to long term viability Score 1 <1.5					iability	
		All figures are annual forecast figures								220.0	0	>1.5				

TABLE 2: Secondary Wood Processing Factory Methodology

Max^m Score = 5

Rank	Mill	Legal Score	Ethical Score	Policies	COC System	Cooperation	TOTAL Score	%
1								
2								
3								

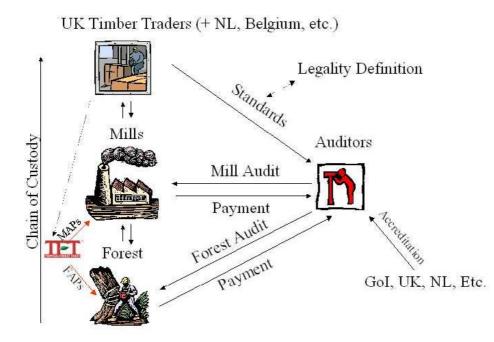
COMMON AUDITING FRAMEWORK

The purpose of the Common Auditing Framework work is to establish a standard framework for legality auditing by independent parties so that mills can hire auditor to assess the legality of their production. These audits would then be made available to traders to provide assurances to their customers.

As part of the Scoping Study TFT assessed the feasibility of developing a Common Auditing Framework (CAF) that could be applied throughout Indonesia and they concluded that the necessary elements for basic legality verification are not yet in place. In particular, functional and robust Wood Control Systems are lacking. The report concludes that nonetheless, that a CAF should be established in the first instance (Phase 1) using the same approach adopted in this study. Once functional and robust Wood Control Systems are available for routine application in Indonesia – and two alternative schemes are being tested concurrently in SE Asia at this moment – then these should be implemented and a more robust CAF (Phase 2) can be applied.

In discussions over the final report the Timber Trade Federation developed the following working model for a market-driven Common Auditing Framework.

DIAGRAM 1: A MARKET-DRIVEN COMMON AUDITING FRAMEWORK (TFT AS EXAMPLE INDUSTRY Service Provider)



Legend:
$\overline{MAPs} = Mill Action Plans$
FAPs = Forest Action Plans
GoI = Gov't of Indonesia
UK = United Kingdom
NL = Netherlands

KEY RECOMMENDATIONS

Key recommendations for trade action arising from the study are that:

- 1. TTF members implement a process such as that described in the TFT publication 'Good Wood Good Business'. In particular, TTF members should adopt individual actions to:
 - Dedicate a person or a team of people within their company to manage these issues;
 - Develop their own communications programme to deal constructively with stakeholders;
 - Refine their wood policy to define which mills they will trade with given the Scoping Study results;
 - Develop and support implementation of Mill Action Plans (MAPs) in the chosen mills;
 - Support CAF Phase 1 and 2 implementation; and
 - Provide financial support to MAP implementation through higher product prices and by setting aside a percentage of their product FOB price to finance activities in support of MAPs and forest management improvements.
- 2. The UK TTF:
 - Continue to support its members individual actions by maintaining its communication programme with external stakeholders;

- Coordinate the development of CAF standard with members and other stakeholders, supports its implementation, undertakes monitoring of its performance and extend its development to other producer countries;
- Monitor and engage in the dialogue surrounding adoption of an Indonesian legality definition;
- Monitor and inform its members of the results of Wood Control System pilots currently running in SE Asia;
- Enter into a dialogue with NGOs, DFID, the Indonesian Ministry of Forestry and other stakeholders concerning the issue of Central Government Quotas;
- Share these experiences and lessons with other partner organisations

Predicting a timeframe by which the TTF and its members' could achieve their goal of only using verifiably legal timber from Indonesia is difficult given the variables to the equation. Yet if the leading mills do implement MAPs with TTF member support and do move strongly forward, it is possible for these mills to achieve this milestone within a 6 to 12 month period.

CONCLUSION

This study has been a key part of the UK TTF's Ten Point Action Plan. It has enabled the UK trade to deepen its knowledge and understanding of the problems and solutions to sourcing legal timber from Indonesia. With the recommendations developed as part of this study, imports of verified legal Indonesian timber to the UK are a possibility in the medium term. If we work together with other similar markets, as we are actively doing with the Netherlands and other partners, faster progress is possible. We must also broaden the scope of this work to cover other sources of supply where illegal logging is a problem.

With a baseline to work from it is now possible for mills to establish targets and monitor progress through Mill Action Plans. If we can develop a credible Common Auditing Framework for legality then the market can get the assurances it seeks. There is much work to do in consultation with a range of stakeholders but if the business-to-business approach is to work it is crucial to agree clear incremental targets for legality that are achievable within a reasonable time frame.

ANNEX 1: UK TIMBER TRADE FEDERATION TEN POINT ACTION PLAN 1st July 2003

The Timber Trade Federation published a ten-point action plan to promote the sourcing of legal and sustainable timber from Indonesia. This follows a landmark meeting earlier in June 2003, which brought together for the first time a range of stakeholders including business, NGOs and government (1).

Only 4% of the Indonesian plywood exports is imported to the UK compared to 75%, which is exported to Japan and China but the Timber Trade Federation is determined to play its part in securing Indonesia's most important natural resource.

The approach preferred by the UK timber trade is to purchase from mills that can effectively separate streams of known, legal timber from unknown and potentially illegal timber, through certified chain of custody systems and to work closely with those mills to eventually eliminate all timber of unknown or dubious origin from their operation.

The immediate objective of the action plan is to secure third party audited legal timber for the UK market with the ultimate objective of sourcing certified sustainable timber. The aim is identify mills which are most likely to reach sustainability and which in the short term can supply the UK market with legal material.

It is hoped that the action plan will help to develop a common procurement policy that establishes third party auditing by individual members of their supply chains and a time frame for a step-wise approach to achieving full certification.

The action plan consists of the following:

- 1. Draw up a shortlist of mills supplying the UK.
- 2. Extend the membership of the Indonesia Buyers Group to cover all UK TTF traders with Indonesia.
- 3. Write to all major mills supplying the UK describing the evolving UK market and the TTF's approach to tackling illegal logging.
- 4. Write to the Indonesian Plywood Industry Association (APKINDO) and the Indonesian Forestry Ministry to obtain more information regarding BRIK the joint industry/government initiative and targets.

- 5. Set up a scoping study to develop a set of options and explore the feasibility of third party auditing for Indonesia Buyers Group.
- 6. Work with Tropical Forest Trust on finalising a buyer power study to explore leverage of the UK and other markets on Indonesia.
- 7. Hold another meeting of the Indonesia Buyers Group (7 July)
- 8. TTF delegation to visit Indonesia by the end of the year.
- 9. Promote a common procurement approach to other European markets.
- 10. Keep informed on developments in Indonesia.

It is the objective of the action plan and the work of the Indonesia Buyers Group to maximise the influence on Indonesian suppliers, to achieve supplies of legal and ultimately sustainable timber and timber products and to help to play a part in securing the future of Indonesia's forest sector.

ANNEX 2: TERMS OF REFERENCE FOR THE SCOPING STUDY

Introduction

TTF organised a meeting of UK buyers of Indonesian timber on the 4th June 2003 which was attended by 22 traders from 17 companies representing about 60% of the UK importers on Indonesian plywood. There were also 10 speakers and 16 guests from a wide range of organisations1 including the Indonesian Ministry of Forestry, DFID, TNC, WWF, TFT, Proforest, EIA, Telapak, and Greenpeace. APKINDO was invited but could not attend.

It is clearly difficult for UK traders to know whether they have credible evidence of legality of timber from Indonesia based on the existing systems of checks and control. However, with the initiatives underway (BRIK, MoF inspections, etc.) and current commitment of key stakeholders to work together in partnership, it is also not the best time to walk away from Indonesia – these forests are too important for that. A clear course of action has emerged for the UK timber trade, in spite of the turbulence of a decentralising, democratising government, and a restructuring forest industry in Indonesia.

The immediate objective of this work is to secure third party audited legal timber for the UK market, but the ultimate objective is to get certified sustainable timber. The way to achieve this is by establishing a common procurement policy for the buying group, consisting of auditing procedures for third party verification of legality.

Every mill in Indonesia is facing difficulties obtaining verified legal timber – some are sourcing mainly from the open market and relying on official documents as proof of legality – others are sourcing logs mainly from their own concessions. The approach preferred by the UK timber trade is to purchase from mills that can effectively separate streams of known, legal timber from unknown and potentially illegal timber, through certified chain of custody systems, and to work closely with those mills to eventually eliminate all timber of unknown or dubious origin from their operations.

The bulk of the UK trade from Indonesia is in plywood purchased from about 12 mills or groups of mills. Mouldings and door blanks are also traded but in smaller volumes from more fragmented supply chains. To simplify matters at the outset it has been decided to pilot work on plywood mills,

¹ DFID = UK Department for International Development, TNC = The Nature Conservancy, WWF = Worldwide Fund for Nature, TFT = Tropical Forest Trust, EIA = Environmental Investigation Agency, APKINDO = Indonesian Plywood Industry Association.

TTF Public Summary of the TFT Scoping Study: Sourcing Legal Timber from Indonesia initially, and consider other products in Indonesia later2. Indeed to be consistent it was strongly felt that the same procurement policies should apply to all contentious sources. It was also felt necessary to encourage similar procurement policies in other sensitive markets, such as the rest of the European Union and the United States, and so combine responsible buying power, and minimise the undermining effect of "environmental dumping" of cheaper illegal timber.

One of the action points arising from the trade-only section of the meeting was to get estimates from organisations to undertake a scoping/feasibility study on Sourcing Legal Timber from Indonesia.

Expected Results from the Action Plan:

- Identify the mills most likely to reach sustainability at some point in the future and so meet UK market needs in terms of legality in the short term, and certified sustainable timber (FSC or equivalent) in the long term – (December 2003)
- 2. Develop a common procurement policy, piloted in Indonesia, that establishes standards for 3rd party auditing by individual members of their supply chains, and a time frame for a step-wise approach3 to full certification (March 2004)
- 3. TTF Indonesian group adopts the same procurement policy, including monitoring arrangements, for all timber purchases from Indonesia (September 2004)

Scoping/pre-inspection Study

This study would complete Expected Result 1 above and contribute to Expected Result 2. Specifically, the organisation undertaking the study will be expected to:

- 1. Explore and report on the current and future state of legality of existing and potential mills supplying the UK market (up to 10 in 3 regions as indicated by the TTF), including aspects such as the current quantities of legal timber mills can supply, and which countries they are selling to.
- 2. Explore and report on the feasibility of a common auditing framework for basic legality verification in Indonesia
- Scope out and develop financing mechanisms and time frames, in a stepwise approach, for buyers to source audited legal timber into the UK. This work should use experiences from other trade-based initiatives in Indonesia and elsewhere, for example Home Depot, B&Q, Travis Perkins.

² Unless there are associated product lines such as mouldings and door blanks, that can sensibly be included ³ Stepwise approach implies working from the current levels of legality/sustainability towards full sustainable forest management in a series of small, manageable steps.

4. Develop a set of options for trade action that will produce the expect results above, for review and agreement by the TTF group.

Outputs

- 1. A confidential written report to TTF
- 2. A presentation to the TTF Indonesia Buyers Group

Organisations wishing to tender for this work should submit written expressions of interest to Ita Rugge, Timber Trade Federation, Clareville House, 26/27 Oxendon Road, London SW1Y 4EL. Emailed submissions can be sent to <u>irugge@ttf.co.uk</u>.

The submission should be concise and to the point, and include:

- a non-binding estimate of the cost of the work
- a description of the experience of the organisation relevant to the study
- a time frame and rough work plan to complete the study
- names and summary CV's of the study team
- any other general comments/remarks on the approach

The deadline for submissions is 27th June 2003.

Submitting organisations should note that this invitation to express interest does not represent a binding offer of work. The TTF reserves the right to change the terms of the invitation or cancel the whole process at any time and at no cost to the TTF.

Ita Rugge and Andy Roby, 20th June 2003

ANNEX 3: PLYWOOD MILL VISIT PROCEDURE

VISIT ARRANGEMENTS

PROCEDURES

- 1. A letter from a current buyer is sent to the Marketing Manager of the factory in question. The letter states the purpose of the proposed visit.
- 2. The *assessor* telephones/meets in person the Marketing Manager and introduces himself/herself. The purpose of the visit is discussed, the assessors role in the process clarified, and an overview of the auditing process presented.
- 3. A formal letter from the assessor is sent to the Marketing Manager to follow up telephone/meeting discussion points in which a date for the factory visit is suggested. The visit audit procedures and document request are appended to the letter.
- 4. Following confirmation of factory visit dates from the factory, the assessor requests the Factory Manager's contact information, and confirms visit logistics.
- 5. The assessor arrives at the factory at the specified date and time.

DOCUMENT REQUEST

The factory will require time to gather the relevant information for the visit and so the assessor should ask the Marketing Manager to ensure that the following key documents are available to the assessor:

- 1. Industrial business license(s);
- 2. EPTIK license;
- 3. Industrial Raw Material Use Plan [Rencanna Pemenuhan Bahan Baku Industri];
- 4. Log Stock Reports [Laporan Mutasi Kayu Bulat];
- 5. Official Forest Products documents and log lists [Surat Keterangan Sahnya Hasil Hutan & Daftar Hasil Hutan untuk Kayu Bulat & Daftar Hasil Hutan untuk Kayu Olahan];
- Management system certificates/management systems implemented in the factory (*e.g.* ISO, CE, COC, JAS *etc.*);
- 7. Company policies (social, environmental, wood procurement, health and safety etc.).

Depending on the time available to the assessor, the following supplementary documents can be reviewed for cross checking purposes:

- 1. Annual Production Plan as required by BRIK/Deperindag.
- 2. Quarterly Production Realization Reports as required by BRIK/Deperindag;
- 3. Annual Export Plan as required by BRIK/Deperindag.
- 4. Quarterly Export Realization Reports as required by BRIK/Deperindag; or Sales Report [Laporan Pemasaran]
- 5. Processed Timber Stock Reports [Laporan Mutasi Kayu Olahan or Laporan Mutasi Hasil Hutan Olahan Kayu]

VISIT PROCEDURES

Once in the factory it is important to make the factory staff to feel at ease. In this regard it is important that the auditor is an Indonesian national rather than a foreigner. The following sections highlight the activities that should be conducted during the factory visit.

DISCUSSIONS WITH FACTORY MANAGER

Discussions with the factory manager will reveal a host of information about the factory that can be cross referenced with other sources of information (*i.e.* from the document review). Information offered by the factory manager will provide key indicators of company awareness and commitment to environmental issues. If possible the following points should be discussed:

General Information

- Factory's installed capacity;
- Factory products;
- Species used/preferred;
- Annual/monthly log input volume;
- Annual/monthly product output volume;
- Recovery rates/conversion efficiency.

Licenses, Permits, Quotas

- ETPIK license;
- Industrial business licenses; and from which level of government;
- Provincial government recommendation;
- Central government quotas.

Wood Procurement

• Monthly volume procured;

- Form of wood procured (logs, sawn timber, veneer etc);
- Wood sources (% volume from HPH, HPHTI, IUPHHK, IPK, HPHH etc)
- Current company procurement policy and/or criteria;
- Forest resources associated with the company (*i.e.* HPH, HTI *etc.*);
- Planned future timber procurement mechanisms & criteria;
- Understanding of legal, transition, and certified timber.

Sales and Marketing

- Monthly sales volume by product;
- Export destinations;
- Export volumes to different destinations.

Management Systems

- ISO certificates;
- JAS certificates;
- CE Marking;
- Company policies;
- Standard operating procedures derived from company policies;
- Other certificates (*i.e.* FSC COC, Dutch KOMO, *etc*).

COC

- Current understanding of COC;
- Factory COC system and procedures;
- Supply chain COC from forest to finished product;
- COC components currently implemented in the factory;
- Plans to implement COC systems in the future (factory and/or supply chain COC);
- Factory willingness to move towards verifiable COC systems.

Problems Facing the Mill

- Raw materials;
- Environmental;
- Social;
- Political;
- Economic.

TOUR OF THE FACTORY

TTF Public Summary of the TFT Scoping Study: Sourcing Legal Timber from Indonesia The assessor should visit the factory to obtain an overview of the factory processing stages, the type and condition of equipment installed, and observe any chain of custody systems implemented in the factory. The tour will provide the auditor with subjective indications of the factory's overall management standards (*i.e.* tidiness, order, worker safety *etc.*).

DOCUMENT REVIEW

The document review is the most important part of the entire factory visit, and will take the longest time to complete. The two most important documents to review are the *Annual Raw Material Use Plan* (RPBBI), and the *Log Stock Reports* (LMKB).

RPBBI:

The RPBBI provides a wide range of information including:

- Central government quota;
- Provincial government recommendation;
- Factory ownership and shareholders;
- General Factory Information;
- Installed capacity;
- Factory licenses;
- Planned raw material purchase by source for the current year;
- Raw material purchased by source in the previous year;

LMKB:

The LMKB provides more detailed production oriented information including:

- Initial log stock volume;
- Log procurement sources;
- Log procurement volume;
- Log input volume;
- Product output volume;
- Final log stock volume;
- Product stock volume;
- Conversion efficiency (calculated from log input and product output);

SKSHH and DHH:

TTF Public Summary of the TFT Scoping Study: Sourcing Legal Timber from Indonesia SKSHHs (see Figure 1 for English translation of an SKSHH form) provide a summary of raw materials contained in the DHH. These documents provide the following information:

- Previous SKSHH number for all raw materials contained in the load;
- Place of embarkation;
- Transport destination;
- Summary of raw material species and volumes;
- Individual raw material dimensions and volumes;
- Supervising government official's details;

Licenses & Certificates:

These documents provide information about the licenses, permits and certificates held by the factory. Licenses can be used simply to confirm that the necessary licenses have been obtained and are still valid; certificates are proof that the factory meets the management standards of the issuing body.

Additional Documents:

Additional documents can be consulted to corroborate information obtained from discussions and the review of RPBBI and LMKB documents. The nature of the information that can be obtained from each document is evident from the document title.

LOG SAMPLING

The following procedure should be adopted when sampling logs⁴ in the log yard.

- 1. Twenty logs should be randomly selected in the log yard/log pond and the following measurements recorded from each log;
- 2. Two measurements of diameter should be made at right angles to each other at both ends of the log. The first diameter measurement taken on each end should reflect the smallest diameter of the cut surface through the centre of the log. The second measurement should be taken at right angles to the first measurement.
- 3. Average log diameter of each sampled log should be within 2 cm of the average log diameter stated on the log's associated log list.
- 4. Measure total length of each sampled log.
- 5. Log length of each sampled log should be within 30 cm of the log length stated on the log's associated log list.

⁴ It is usually not possible to verify sawn timber or veneer against associated SKSHH and DHH documents due to the anonymous nature of these raw materials. Tracing sawn timber or veneer is virtually impossible if they have already been unloaded, separated by quality, and mixed in with raw materials from different loads.

- 6. Log volume of each log should be calculated and cross checked against volume data for the same log number recorded on its associated log list.
- 7. The percentage difference between sampled log volume and log list log volume must be less than 5%.
- 8. The summed volume of all sampled logs must be within 5% of the summed DHH volume for the same logs.
- 9. The species of sampled logs should be the same as the species recorded on their associated log list.
- 10. The log number of sampled logs should be the same as the log number recorded on their associated log list.