INTRODUCTION

This report provides a framework for discussion of research ideas directed at the control of illegal logging. It is a summary resulting from a process to establish research priorities for combating illegal logging in Indonesia in cooperation with selected stakeholders. The overall process consisted of interviews with stakeholders, examination of existing reports, analysis of results from interviews, a preliminary report, workshop discussions, and these conclusions regarding research priorities.

As research organizations the Center for International Forestry Research and the Indonesian Forestry Research and Development Agency are interested in determining how research can help solve the illegal logging problem. By this we mean: “how can research help various agencies and NGOs fighting illegal logging to accomplish their goals more quickly and more easily?” Clearly, research alone is not an answer to the illegal logging problem, but hopefully research can help us find better approaches for stopping it. Because our focus here is on research priorities, we will not discuss the important issue of actions needed, except as related to research needs.

Illegal logging is a complex issue, and its nature is changing rapidly as forests disappear. It is important to quickly establish the research questions, whatever they may be, but at the same time implement control strategies that can work. While we cannot afford to wait for new research results, we should be able to incorporate new research into existing strategies to control illegal logging.

APPROACH USED

Interviews and Review of Information

Because many NGOs, government agencies, and donor organizations are attempting activities to combat illegal logging, we felt that individuals within those organizations were likely to have formed opinions as to what the problems are and how those problems might be solved. We therefore interviewed personnel from representative organizations with regard to their activities to stop illegal logging. Interviewees included environmental NGOs, government agencies involved with forest protection and related roles (e.g., log tracking), government agencies involved with law enforcement, forest industry personnel and industry organizations, representatives of donor country projects, some local politicians, villagers and small scale sawmill operators. Funding for interviews was limited and for this reason several detailed formal and informal reports on the illegal logging situation in the field were used as additional sources of data at the local level.

The basic approach during the interviews was to focus on recent activities of the interviewees and their perceived role and efforts (if any) to stop illegal logging. We attempted to focus on their successes and failures in these endeavors, ultimately asking how their efforts could be made more effective. This line of questioning was intended to bring out details of what factors prevent their effective action against illegal logging. The perceived impact pathway of the interviewees was also revealed.

For example, some NGOs prepare highly detailed, informative, investigative reports. These are presented to appropriate government officials, donors, and others with the hope that these will spur people to action against the perpetrators of the forest crimes. In our interviews we were also interested in learning about what subsequent actions had been taken and why these actions were, or were not, successful. This helped to identify roadblocks to effective action.

A Draft Report

A draft report summarized the information collected prior to the workshop, so that all workshop participants would have an idea as to what issues had been brought up. It was hoped that this would
enhance discussion at the workshop so that more informed, but focused, discussions could take place. This approach was only partly successful.

Stakeholder Workshop

The workshop was an informal discussion to allow people to present their ideas and opinions in an open and cooperative atmosphere. We attempted to pinpoint areas where research is needed. There are many other issues related to illegal logging where, for example, action rather than research is required. While these issues are extremely important, we asked the workshop facilitator to focus workshop discussions on those areas where we lack understanding and sufficient information to successfully carry out the various campaigns against illegal logging. We hoped that the workshop would focus on research needs to conclude with a prioritized list of research topics which could meaningfully contribute to solution of the illegal logging problem.

A draft version of the interview results was sent (in English and Indonesian) to workshop participants along with their workshop invitation. In some cases workshop participants had read this information prior to the workshop.

The workshop was in Indonesian and was run by an Indonesian facilitator. Following a brief discussion of the need, if any, for research to stop illegal logging, the basic workshop structure was:

1. Listing and discussion of key actions which, if implemented, would be able to solve the illegal logging problems (including the rationale for these actions).
2. Discussion of unresolved issues or reasons why key actions are not currently implemented to solve the illegal logging problem.
3. Discussion of knowledge and information needed to investigate unresolved illegal logging issues.
4. A brief discussion of priority research areas (as defined by workshop participants)
5. A brief discussion of comments related to research methodology and follow-up suggestions from workshop participants.

A Changing Situation

The situation with regard to illegal logging in Indonesia has changed over the past few years and is continuing to change rapidly. Some stakeholders have questioned whether we should focus only on strict-sense illegal logging or also on the evolving “quasi-legal” situation which has led to large scale over-logging. We believe that we must attend to the overall situation which we can call “illegal and quasi-legal logging.” This will allow us to deal with the drastic results of inappropriate manipulation of the legal and legislative systems at both the local and national level. Such manipulations have become a major cause of the current over-logging crisis. We should also realize that problems in the forest industry prior to the fall of Soeharto in 1998 were also a result of large scale manipulation of the legal and legislative system.

**Potential Research Topics Gained from Interviews and Workshop Participants**

Attached to this report is a list of research topics developed from stakeholders interviews. These were categorized into the following general groups:

1. economic issues and incentives
2. legal aspects, laws and regulations
3. issues related primarily to policy
4. issues related to socio-political situations
Following a review of workshop results (see attached workshop results) these earlier priorities were compared and revised. While the above general groupings have clear areas of overlap, they provide a basis for the commentary that follows. In writing this commentary we attempted to capture the views and ideas of the interviewees and workshop participants. Therefore this discussion reflects their views which are not necessarily the views of the authors.

1. Economic issues and incentives

At the community level the main problem is that the villagers are poor. More opportunities for employment would lead to an improved income level. Better education would also help in this regard. Villagers face uncertainty particularly with respect to their land and associated resources. How can this uncertainty in people's futures be mitigated? If uncertainty can be controlled or mitigated, then people will not need to cash in their resources for fear of losing them. On the other hand, there is the question of whether forests will be valuable enough for long term sustainability? Will income from sustainably managed forest resources be enough to provide needed income? If not, who will fund community based conservation and management over the long run to ensure sustainability? How should government, foreign donors, and NGOs be involved in such activities to ensure forests for the future?

Exports of illegal logs provided another area of research interest. Interviewees and workshop participants felt that a better understanding of international trade in illegal logs would help us to better manage the problem. What is the ultimate destination of illegal logs exported form Indonesia? What businesses and what countries receive these logs? What is the source of their demand?

Also, people wondered how illegal logging effects economic growth. What economic tools and incentives will work in chaotic economic situations such as we have seen in Indonesia over the past several years? Are there economic tools that can work when laws and normal economics are not functioning properly.

How might eco-labeled products limit illegal logging? What is the market demand with regard to eco-labeled products? Would documents for eco-labeled products merely be falsified creating illegally “certified” illegal products?

At the local level it is important to learn about the business, and other, relationships between entrepreneurs and local parliaments and local politicians. These are key relationships in the business arrangements, and everyone has pointed to them as a source of illegal activity and poor forest management. How are these arrangements made and how can they be controlled? What economic factors drive corruption and collusion? How can these be countered? Some believe that corruption is also linked to low government salaries and budgets which make individuals vulnerable to temptation from corrupting influences for personal gain, and also provide funds for real government needs such as cash to pay salaries and to carry out normal operations.

Finally, a major impediment to stopping illegal logging is the economic gain for people involved at all levels. At least in the short term, they have a strong incentive to continue their illegal activities.

2. Legal aspects, laws and regulations

Existing forest laws are believed to be far too complicated, and they need to be simplified. At present there are many overlapping forestry laws, especially if one considers national, provincial, district and traditional laws. This complicated situation creates an environment where many laws are ignored, allowing officials and entrepreneurs to take advantage of a legal vacuum. We need legal and political techniques to untangle the many overlapping laws and to formulate understandable enforceable basic forest laws which mesh at all levels.

Interviewees also pointed out that there are many different types of illegal logging. This creates inaction even among groups wanting to act. Which type of illegal logging is most damaging? Which types can be easily defined legally? Where should action be targeted? A related suggestion
concerned the development of indicators to determine the extent of illegal logging. Interviewees believed that we need better ways to define and measure illegal logging.

Often illegal logging cases cannot be successfully prosecuted in court. The present legal system must be changed to make prosecution of legal cases more likely. How can we create such a system? What factors are limiting the creation of a \textit{workable legal system}?

The \textit{failure of law enforcement} is, for many people, the primary cause of illegal logging. It seems that many factors limit the effectiveness of law enforcement. What would actually be needed to have the police effectively enforce the law? As one interviewee commented: “we cannot rely on ‘traditional values’, and we can't use the police or military, because they are corrupt.” Thus some feel that \textit{alternate forms of law enforcement} must be developed.

The \textit{relationship between the military and police, their finances, and illegal logging} is of major concern. Has the Indonesian reform era, and decentralization, contributed to corruption within the military and police by limiting their funding? What factors are allowing the military and police to gain access to funds from illegal logging? What methods and approaches could be created to allow, or to require, the police to carry out their jobs effectively, and within the law?

Mixed with the role of the police and military is the \textit{role of local government}, especially local government leaders, and the legal and illegal financing of their official and unofficial needs. How are such illegal arrangements made, and why is it so easy for them to make such arrangements? How can this be controlled? \textit{Transparency within government and business}, especially at the local level, needs to be improved. Arrangements are needed to prevent government officials and entrepreneurs from taking most benefits for themselves.

A related issue is the strengthening of \textit{villagers’ rights}. Many believe that stronger rights for villagers are a key to stopping illegal logging and creating better forest management. Is this true? Can local peoples’ rights be recognized and improved while also providing necessary regulation and protection for forests over the long term?

\textbf{Ownership of illegal mills and logging equipment}, and laws pertaining to the definition of illegal operations need to be clarified. What procedures can be used to close illegal mills. How can clear, enforceable legal requirements be made for milling operations, especially small scale milling.

\textbf{Illegal trade} in Indonesian logs is of legal interest. Sanctions should be applied to countries which are engaged in buying illegal logs. How can such a system be implemented? Could illegal logs be identified? What are the legal responsibilities, if any, of receiving countries? How can this legal framework be improved. What should be the role of ASEAN, ITTO and other regional and international organizations in stopping trade in illegal logs, and how can their role be strengthened?

A major cause of the unworkable legal system is \textit{corruption at all levels}. This is an underlying problem facing those attempting to stop illegal logging. In fact many other aspects of the illegal logging problem would be easy to address in the absence of the fog of corruption that permeates them all.

\textbf{3. Issues related primarily to policy}

There is a strong need to be able to \textbf{analyze policy options} in a realistic and accurate way. Approaches that allow “what-if” analysis of various policy options are, in a sense, a method of predicting the future. Can we predict future problems and be ready for them when they arrive? Can we anticipate what resources will be scarce in the future, and which resources will have potential value? We should have tools to help us predict what will happen.

In this connection we should have some \textbf{ideas for the future of Indonesia’s wood products industry}. At a minimum, we should be able to examine various policy options on a regular basis. If X happens, what will be the result? It seems surprising that the wood products industry does not have its own research and development programs. Can the wood products industry develop its own research and development initiatives, or be encouraged to do so?
In any case, policies are needed to reform the wood products industry. We need research to examine various reform possibilities. But, even if better policies are proposed, Indonesia also needs to have the political will and desire to implement new strategies. What government changes are necessary to create and employ this political will?

As an example, one major policy question is the idea of a log export ban. Is it feasible or not? What would be its effects? Similarly, what could be the role of any increased export tax, if it could be enforced? Such policies must be examined with respect to the effect on industries in other countries, the effect on the international flow of plywood, and the effect on the price of plywood (for example). A log export ban has been suggested as an option to limit illegal logging. What other policies might be useful? Are limitations on the export of raw material the only possible answer? How can this issue be linked to sustainable development? What would be the consequences long-term? Can the idea of logging or export bans realistically be linked to sustainable development, or do they merely allow us to avoid attempting realistic harvest policies?

Should Indonesia attempt to support its processing industry by limiting (raw material and partially processed) exports? What would be the ramifications for World Trade Organization agreements? Can there be compatible taxation programs which will prevent (for example) export of uncertified products?

How can we analyze sets of policies such as the impacts of lowered export tax or the impacts of a log export ban? What sets of policies are the most suitable for Indonesia? Which combination of policies will best combat illegal logging? What methods are most appropriate for doing such analysis? Can Indonesian timber and wood processing industries be encouraged to have more positive role in establishing sustainable forestry practices?

At present certification of timber products can work reasonably well, but mostly on the small scale, at the community level. How can the certification approach be scaled up and still be workable? We need to implement certification in a realistic and practical manner on a broader scale. Some feel that the current certification system is too confusing, with too many options. Is this true? Would simplification allow widespread use of certification, and would this lead to less illegal logging? There is a danger of certification systems being used to certify illegal, and other inappropriate, timber products. How can certification be kept "clean", especially if the value of certification increases?

What would be the effect of allowing only logging from areas which were certified? Would there be a growing trend in illegal certification? How could that be kept under control?

Is log tracking feasible in Indonesia and under what circumstances? How can it work? What are the problems with the government's current log flow administration program? What are the lessons that can be learned from that program that can be used to create an improved log tracking system?

With decentralization a fact, forestry management practice at the local level must be improved. In particular procedures to prevent the granting of questionable harvest contracts need to be established. What options are likely to be most successful? What is needed to carry out meaningful forestry reform at the district and sub-district level?

Is a logging moratorium necessary to allow time for implementation and application of good forest policy, or is it merely another unrealistic hope for the control of rampant criminal activity which would be unaffected anyway.

What can be done to convert government owned land to true local control? What are the options and how can these options be analyzed? How can land tenure issues be addressed? How can we minimize the risk of land alteration and conversion of forests to non-forest uses? Will local control merely lead to more over-logging because local people need or desire quick cash?

Problems caused by decentralization have contributed greatly to illegal logging. Participants wondered how these problems can now be solved in the absence of a strong central government, especially since much of the existing forestry expertise is still at the national level. How can district level forestry be professionalized?
4. Issues related to socio-political situations

Two related points brought up during our discussions were the question of **improving moral attitudes** and the question of **controlling corruption**. There is a moral obligation on the part of government officials to serve the people in an honest and transparent manner, but this is rarely seen. There may be methods of improving these attitudes via better supervision, making transactions more transparent, and by the rotation of personnel. What realistic policies can be developed and applied to improve transparency and morality of government officials? Of particular concern was the better understanding of the role of local autonomy in causing changes in social values. How are these political changes changing the perceptions of people toward their resources and their government? There was also the underlying question of moral behavior on the part of the timber and wood processing companies.

**Community control** is often cited as an answer to the many questions surrounding the problem of illegal logging. But there appears to be so much information that some find it confusing. Some interviewees felt there was a need to summarize existing research results regarding community forest management. Also, it was pointed out that communities need income, and that income from sustainable forest management, or from total protection of key conservation areas is somewhat limited, even under the best circumstances. How much, and what, do communities want in exchange for conserving land? What is needed to establish long term contracts with communities? What role should the government play in these arrangements? How can such arrangements be made binding?

Sadly, there are increasing **conflicts over resources** at the local level and often these present difficulties for traditional leaders as well as government officials. Overlapping claims of traditional rights to forest have become more common as profits from timber sales have moved to the local level. What techniques can be used to help determine which claims are valid?

**Conclusions**

The approach used provided a good review of issues needing the attention of researchers. There appear to be many unanswered questions that research could address. No outstanding single issue emerged as high priority, and the final priority list from our workshop (see Attachment 2) did not mesh particularly well with the list of unresolved issues. Thus we believe that the best guide for researchers interested in developing programs to help solve illegal logging problems in Indonesia is to examine the above discussion, the list of issues from interviews (Attachment 1) and the unresolved issues listed during the workshop (Attachment 2).
<table>
<thead>
<tr>
<th>Grouping</th>
<th>General Research Need - Description</th>
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</thead>
<tbody>
<tr>
<td>economics</td>
<td>With regard to illegal logging what is the picture outside of Indonesia? <em>Where are illegal Indonesian logs going? To whom? To what businesses? What countries?</em> Are these countries re-exporting Indonesian logs? Through what channels? What demand pulls these products?</td>
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<tr>
<td>economics</td>
<td>What economic tools will work in a chaotic economic situation? We need tools that can work when laws and normal economics are not working properly. <em>We have a situation of very raw supply and demand mechanisms. Under these situations what economic tools might work?</em> (Need for understanding butterfly economics —referring to the way a butterfly flies erratically).</td>
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<tr>
<td>economics</td>
<td>Study market demand with regard to ecolabeled products and with regard to the technology for medium density fiberboard.</td>
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<tr>
<td>economics</td>
<td>Examine the relation of economic growth to illegal logging. (This was based on comments related to correlation studies which showed less illegal logging in countries with high economic growth).</td>
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<tr>
<td>economics</td>
<td>We needed to study market discrimination with respect especially to Japan and China.</td>
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<tr>
<td>economics</td>
<td>At the community level the main problem is that the communities are poor. More opportunities for employment would lead to improved income level, and better education would also help.</td>
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<tr>
<td>economics</td>
<td>What is the overseas demand for Indonesian logs? Where are these logs going, especially the smuggled logs? Are these logs merely taken over to Malaysia and then sent elsewhere? <em>What is the responsibility of the receiving countries?</em></td>
</tr>
<tr>
<td>economics,</td>
<td>It is important to learn about the relationships between entrepreneurs and local parliaments and other local politicians. These are key relationships in the business arrangements at the local level, and everyone has pointed to them as a source of illegal activity and bad forestry management. How are these arrangements made and how can they be controlled?</td>
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<tr>
<td>legal</td>
<td>How can uncertainty in people’s futures be mitigated? The point here is if uncertainty can be controlled or mitigated, then people will not need to cash in their resources for fear of losing them.</td>
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<tr>
<td>economics,</td>
<td>Who will fund community based management over the long run? How should the government be involved in this?</td>
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<tr>
<td>socio-political</td>
<td></td>
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<tr>
<td>legal</td>
<td>The existing forest laws are far too complicated and they need to be simplified. How can the complicated operational procedures facing legitimate forestry firms be simplified?</td>
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<tr>
<td>legal</td>
<td>There are many subsets of illegal logging. What is the extent of each type and where are the major problems occurring? <em>Which type of illegal logging needs to be examined the most closely? Where should action be targeted?</em></td>
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<tr>
<td>legal</td>
<td>What is the enabling environment that is needed so that cases will be successfully prosecuted in court?</td>
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<tr>
<td>legal</td>
<td>Can additional research topics be formulated by legal experts? Many of the problems are legal problems.</td>
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<tr>
<td>legal</td>
<td>How can the system be changed to make prosecution of legal cases more likely? How can we create a system that will force prosecution?</td>
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<tr>
<td>legal</td>
<td>How can the many overlapping existing laws be clarified and standardized so local officials cannot take advantage of the situation?</td>
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## Summary of Results from Interviews

<table>
<thead>
<tr>
<th>Grouping</th>
<th>General Research Need - Description</th>
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<tbody>
<tr>
<td>legal</td>
<td>What methods can be developed for tracking illegal arrangements at the local level?</td>
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<tr>
<td>legal</td>
<td>A thorough review of a national district and sub-district laws is needed.</td>
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<tr>
<td>legal</td>
<td>How can illegal logs be identified?</td>
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<tr>
<td>legal, economic</td>
<td>Why is it that outside groups (other countries) can buy illegal logs but local businesses cannot do this? <strong>How can this issue, illegal trade in logs, be addressed?</strong> What sanctions can be applied to other countries who are engaged in buying illegal logs?</td>
</tr>
<tr>
<td>legal, economic</td>
<td>What is the relationship between the military and police, their finances and the situation regarding illegal logging and decentralization? Has the reform era contributed to corruption within the military and police by limiting their other sources of funds? <strong>What factors are allowing the military and police to gain access to funds from illegal logging? How can this be changed?</strong></td>
</tr>
<tr>
<td>legal, enforcement</td>
<td>What alternate forms of law enforcement can be developed? It appears that we cannot rely on &quot;traditional values&quot;. Thus there is a need for some form of law enforcement. We can't use the police or military because they are corrupt. Some village leaders were asking WWF to help enforce the laws, and they even asked for help to enforce these laws within their own communities - implying that local values and traditional methods were not able to do the job.</td>
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<tr>
<td>legal, enforcement</td>
<td>Why is enforcement not working? What would it take to have the police work properly? What is needed?</td>
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<tr>
<td>legal, policy</td>
<td>How can the problem of illegal certification be controlled? <strong>How important and what is the effect of using a “certified” label on illegal logs?</strong></td>
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<tr>
<td>legal, policy</td>
<td>What methods and approaches can be created to allow, or to require, the police to carry out their jobs effectively, and within the law?</td>
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<td>legal, policy</td>
<td>What arrangements are needed to prevent local officials and entrepreneurs from arranging everything to benefit themselves? How can we create forced transparency?</td>
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<tr>
<td>legal, policy</td>
<td>Legal, political</td>
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<tr>
<td>legal, policy</td>
<td>How can transparency at the local level be improved?</td>
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<tr>
<td>legal, policy, political</td>
<td>How can villager's rights be protected while also protecting the forest and its long term management?</td>
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<tr>
<td>legal, policy, political</td>
<td>How can peoples rights be improved and recognized while also providing necessary regulation and protection for forests over the long term?</td>
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<tr>
<td>policy</td>
<td>What will happen next? Is there a way to predict what will happen in the future, after the chaotic period is over. Can we anticipate what resources will be scarce in the future and which resources will have potential value? Can we prepare for that? Will these markets create the same situation again? <strong>How can we predict what will happen - what instruments can we use to make these predictions?</strong></td>
</tr>
<tr>
<td>policy</td>
<td>At present certification of timber products can work reasonably well, but it works well on the small scale, at the community level. <strong>How can the certification approach to be scaled up and still be workable?</strong></td>
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<tr>
<td>policy</td>
<td>How can we minimize the risk of land alteration and conversion to non-forest uses?</td>
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<tr>
<td>policy</td>
<td><strong>How can we make certified forest products from Indonesian tropical hardwoods.</strong> In general these products are a better quality then similar products made from softwoods, however they can only compete on the market...</td>
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<tr>
<td>Grouping</td>
<td>General Research Need - Description</td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>How could Indonesia comply with a forest stewardship council - like system.</em></td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>The log ban question: Is it feasible are not? What are the effects? How can this be analyzed?</em> Similarly, what could be the role of any increased export tax.</td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td><em>Is log tracking feasible in Indonesia and under what circumstances?</em> How can it work?</td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>How can we analyze sets of policies?</em> What sets of policies are the most suitable for Indonesia? Which combination of policies will best combat illegal logging? We need systems to analyze policies so that we can make reasonable decisions.</td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>Examine a log export ban policy with respect to the effect on industry in other countries, the effect on the flow of plywood, and the effect on the price of plywood.</em></td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>Develop indicators that could be used to determine the extent of illegal logging.</em> <strong>How can illegal logging be measured?</strong></td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>How can we predict the future of the wood products industry? Why doesn't the wood products industry have its own research and development programs which include this type of work?</em> <strong>How can the wood products industry develop its own research and development programs or be encouraged to do so?</strong></td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td><em>National Forest program. How can the nation limit the export of raw material?</em> Can this be done with a log ban? (How can this issue be linked to sustainable development. What would be the consequences long-term? Can the idea of logging export bans be linked to sustainable development?)</td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td><em>We need to review government policies related to the wood products industry. We need to examine possibilities of policy reform for wood related industries.</em> (This would be similar to the review done regarding the local area laws and regulations related to forestry.)</td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td><em>What are the problems with the government's log flow administration program? What are the lessons that can be learned from that program that can be applied to a log tracking system?</em></td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>How can political will and a desire to implement new strategies be reinforced?</em></td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>How can forestry management practice at the local level be improved?</em> What options are likely to be most successful?</td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>What is needed for full forestry reform?</em> In other words, if the handbook was written for the district chiefs, what would it contain?</td>
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<tr>
<td><strong>Policy</strong></td>
<td><em>What support do the Bupatis need?</em></td>
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<td><strong>Policy</strong></td>
<td><em>How can Indonesian timber and wood processing industries be encouraged to have a more positive role in establishing sustainable forestry practices.</em></td>
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<tr>
<td><strong>Policy, Economics</strong></td>
<td><em>If there were a logging moratorium what would be its effect?</em></td>
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<tr>
<td><strong>Policy, Economics</strong></td>
<td><em>What would be the effect of allowing only logging from areas which were certified?</em> Would there be a growing trend in illegal certification? How could that be kept under control?</td>
</tr>
<tr>
<td><strong>Policy, Legal</strong></td>
<td><em>How can we implement certification in a realistic manner?</em> Now the system is too confusing with too many options. These need to be coordinated. How can this coordination be done?*</td>
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<tr>
<td>Grouping</td>
<td>General Research Need - Description</td>
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<tr>
<td>policy, legal</td>
<td><strong>How can certification be kept &quot;clean&quot; if the value of having certification increases?</strong> Will the current certification system work? Note: the current system distributes power to several entities in order to avoid these problems.</td>
</tr>
<tr>
<td>policy, legal</td>
<td>What can be done to <strong>convert government owned land to local control?</strong> <strong>What are the options</strong> and how can these options be analyzed? How can land tenure issues be addressed?</td>
</tr>
<tr>
<td>policy, legal</td>
<td>How can we make exports more difficult? In other words <strong>how can we increase local wood processing by limiting (raw material and partially processed) exports?</strong> This has ramifications with regard to the World Trade Organization regulations. Can there be compatible taxation programs which will prevent (for example) export of uncertified products? (It seems that there might be an opportunity here to look at banning log exports if logs are from unsustainably managed forests).</td>
</tr>
<tr>
<td>socio-political</td>
<td>We need a better <strong>understanding of changing social values and the role of local autonomy.</strong> How are these changes changing the perceptions of people toward their resources?</td>
</tr>
<tr>
<td>socio-political</td>
<td>The major point brought up while we were discussing possible approaches using research was the question of <strong>improving moral attitudes.</strong> In a sense, this means looking at ways to implement various. Also <strong>strongly suggested here was research on how to reduce corruption.</strong></td>
</tr>
<tr>
<td>socio-political</td>
<td>Within the government authorities they emphasize the moral obligation of government officials and felt that this could be improved by providing better supervision, making transactions more transparent, and by rotation of personnel. <strong>What policies can be developed and applied to improve transparency and morality of government officials?</strong></td>
</tr>
<tr>
<td>socio-political</td>
<td>There is a need for better law enforcement, but also <strong>improved moral behavior on the part of the companies.</strong></td>
</tr>
<tr>
<td>socio-political, economic</td>
<td>There's a need to <strong>summarize existing research results regarding community forest management</strong> and to use this information to influence forest policy.</td>
</tr>
<tr>
<td>socio-political, economic</td>
<td>How much, and <strong>what, do communities want in exchange for conserving land?</strong> What is needed for long term contracts with communities in and near protected areas?</td>
</tr>
</tbody>
</table>
Attachment 2: Summary of Workshop Results
### Key actions which, if implemented, would be able to solve the illegal logging problems

- Law enforcement is implemented correctly
- Prosecution of forest crimes is effective
- There is a regional commitment to combating the international illegal wood trade
- Corruption is eradicated
- Laws and regulations are improved and clarified (national laws, law implementation, presidential decrees, and local regulations (UU, PP, Kepres, Perda))
- Government provides incentives and encourages businesspeople to established forest plantations
- There is implementation of a log audit policy
- Government provides good incentives for forestry employees in the field and provides appropriate punishment when necessary
- There are new commitments for improved forest jurisdiction and better management at local levels
- Log supply and demand are kept in balance
- The wood industries are restructured at the district and provincial level
- People have been educated about and are aware of the importance of the forest
- Communities are empowered so that they have increased roles in resource management

### Reasons why the above actions will lead to less illegal logging and better forest management

- Forestry employees will be motivated to do their jobs properly
- Government employees and forest workers will do their tasks within existing laws and regulations
- Democracy will be based on rules and regulations
- The population will be educated in a future-oriented manner
- There will be a clear differentiation between businesspeople who do, and do not, use illegal wood
- There will be determined efforts for solving domestic wood supply problems
- There will be legally binding multilateral commitments among ASEAN countries for combating illegal logging.
- There will be consistent legal action under the law
- The implementation of laws and regulations will be under proper control
- There will be an increasing sense of belonging among multiple stakeholders
- There will be an increasing political will within the central and local governments, within industry and at the community level
- There will be a consistent effort to develop sustainable forest management policies.
Why are the key actions not currently implemented to solve the illegal logging problem? (unresolved issues)

**Legal Issues**

It is very difficult to eradicate corruption, collusion and nepotism. 

Law enforcement institutions do not work properly.

Communities do not pay attention to law enforcement

Both the laws on which forest management is based and the enforcement of these laws have been weak

There are only unclear regulations regarding the use of chainsaw and heavy equipment at several district levels

There is considerable confusion over the which laws apply with regard to illegal logging. Which laws apply? National? Regional? Local? traditional?

There is a lack of clarity regarding the local jurisdiction over forest management

No clarity regarding the relationship between decentralization and land tenure

The National Army (TNI) and Police (Polri) are directly and indirectly involved in illegal logging both as actors and as back-up

There is no detailed description and definition of law enforcement actions that should be taken

The many different definitions of illegal logging cause confusion for law enforcement.

**Policy Issues**

There is a low level of commitment and training at the local level

There are too many institutions involved, and intervening in, forest management

There is no research to support the restructuring of forest industry

There has been no further action to solve the problems of traditional rights over lands and resources

There is no database available for monitoring illegal logging cases

**Social and Political Issues**

Conflicts are widespread among the multiple stakeholders involved in forest management

There is a low morality among law enforcement personnel

There is no political will among ASEAN countries to stop illegal log trade

Corruption collusion and nepotism create poor governance, poor attitudes, and poor incentives to sustain the forest

There is a lack of responsibility on the part of wood consuming countries

There are increasing ethnic and horizontal conflicts

**Other Issues**

Government budgets are extremely limited

Actions for combating illegal logging are limited because many people gain economically from it

Illegal logging is a very complex problem
Knowledge and information needed to clarify unresolved illegal logging problems:

**Generally Related to Legal System Improvement**

What legal process and procedures will bring illegal logging cases to a successful conclusion?

How can the legal system be reformed?

**Actors**

What are the relationships between the forestry civil servants and entrepreneurs involved in illegal logging?

What are the actual relationships and mechanisms among the law enforcement personnel, prosecutors, and judges?

Who are the main actors carrying out illegal logging?

What actually is the modus operandi for illegal logging (pattern, actor inter-relationships, number of people involved)?

What is the role of TNI and Police in illegal logging?

**Village Level Laws**

What processes are required to successfully create approved and acceptable village land use maps?

How can the law regarding land tenure be made consistent?

How can the process of making local regulations be made more transparent?

What means can be used to solve conflicts over land claims between villages?

**Illegal Exports**

What is the total amount of illegal exports by destination country?

We need better data on illegal wood supplies.

**Illegal Operations**

We need a clear identification of illegal sawmill in terms of ownership and size of operation.

How can we identify where wood is being obtained and used illegally?

What procedures can be used to identify and close illegal sawmills?

What mechanisms can be used to control the licensing of small concessions? (IPK etc)

What data exists or should exist on the amount and kind of equipment used for logging activities?

**Overlapping Laws**

We need a clear summary of what regulations are needed for combating illegal logging compared to
which of these already exist (TAP MPR, UU, Keppres).

We require a review of forest laws and regulations to define the local rights and limitation vs national rights and limitations.

How can we clearly define responsibilities and accountability measures for central, provincial, district and sub-district governments?

An analysis of forestry laws and regulations can determine which should be kept and which can be discarded

**Generally Related to Policy**

**Government Institutions and Policy**

What is the specific role of the decentralization process in each region?

What is the relationship between regional autonomy and illegal logging?

We need a review of Agenda 21 for Indonesia with emphasis on Agenda 21 activities at the district level.

How can the reforestation fund be accessed and funds distributed in a beneficial way?

What is the best approach for foreign cooperation in the protection and management of forests?

We need to balance the (budget of the) wood administration system with the duties on timber products.

What was the effect of the reformation era on illegal logging? Why?

A forest industry master plan is needed.

We need methods for the revitalization of forest industry (restructuring, closing down, downsizing).

There is a need for information about possible alternative raw materials (from agriculture and estate crops).

We need a review of both central and local government policies.

Under what situations is it appropriate to use the reforestation fund for poverty alleviation, and how should that be done?

What is the appropriate balance between the requirement for qualified forest rangers and funding available for forest protection? (i.e., salaries related to educational level)

**Traditional and Village Level Concerns**

How can traditional regulations be used for appropriate management of forest resources?

We need better evaluation of IPK in village forest areas

How can community based participatory forest resource management be successfully implemented over the long term?
How can the fight against illegal logging make best use of existing government institutions at the village level?

**Business and Policy**

How can businesspeople be given incentives to use legal wood sources?

What should be the role of independent institutions to assess and control the wood exports? (e.g. SUCOFINDO)

**Supply and Demand**

How can the potential wood supply in each district serve as a limitation on wood exploitation? (AAC)

What is the relative supply and demand for wood from different types of forest management?

**Better Data**

Better social and cultural data is needed regarding the local communities.

We need a better forestry database.

What is the wood supply and demand situation both domestically and abroad?

We need a forest industry database.

How can the role of public media in broadcasting illegal logging news be enhanced?

What investigative tools can be developed for reporters and the public?

We need a forest industry survey of existing (legal and illegal) businesses.

**Related Mostly to Social Issues**

We need to learn how to implement self-reliant community programs.

Clear identification and analysis of social and economic questions related to village forests is needed.

What are the main causes of illegal logging?

**Related Mostly to Economic Issues**

We need better calculation of the relative costs and benefits of sustainable forest utilization compared to the losses caused by illegal logging and environmental destruction.

We need better data on the overall economic, social and environmental benefits and costs of the wood products industry.

We need to identify the incentives for both illegal and legal logging.
### Priority Research Areas
(as listed by workshop participants)

- Natural resources conflict mapping (related to illegal logging)
- The relationship between illegal logging and poverty
- Compilation of existing illegal logging research
- Develop "tools" for illegal logging investigation (for local news reporters)
- Define the role, jurisdiction, and responsibility for various stakeholders regarding forest management (especially illegal logging).
- An analysis of legal and illegal wood marketing and distribution.
- An analysis of land tenure (including tenure security) with regard to the type of forest management on the land.
- An analysis of power networking among partners involved in forest resource utilization including illegal logging.
- The development of a correct policy making process complete with appropriate legal and political procedures.
- Clarity of jurisdiction among forest institutions with responsibilities for stopping illegal logging.
- Prevention of illegal logging within protected forest areas

### Notes on methodology / effective research methods
(as listed in the workshop)

- Local participation is needed especially for finding good solutions to illegal logging at the local level
- Researcher must carry out his/her job independently and professionally.
- The use of participatory action research is needed to solve illegal logging cases.
- Researcher should be selected in accordance with research aims when dealing with sensitive and dangerous research (e.g., police, forest guards, and spies).
- Research activities should also strengthen local research institutions (university, NGO) so that research can be synchronized with desired changes at local level.
- Develop collaborative research at other research institutions (Statistical Bureau) when dealing with wide research areas or the adoption of new methods.
- Develop strategic and integrated research which is site specific, collaborative, multidisciplinary, and multi-stakeholders.
- Develop research with good output and outcomes
- Develop promotion, communication, social marketing tools to package research findings and provide these findings to the appropriate target group.