

## Wide Scope of Forestry Issues and The Way of Thinking Thereoff

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An event, situation or condition can be explained differently through different aspect of science and knowledge. There are various theories and approaches, which will differ in depth and point of view. As to this point, understanding of forestry and its policies, particularly in Indonesia, tend to be analyzed from management and law perspective. Therefore, there have been so many bills passed in the hope that the sustainable forest management would be attainable. In addition, rational choice and institutional approach have also been notably used, alongside materialist, (post) positivist, interest-based and resource-oriented foundations, all of which have been subjected to popular criticism. Alternatively, discourse theory has been discussed and applied as well in forestry policy analysis (Arts & Buizer, 2009).

It is essential to make the correct choice to explain any of the event, situation and condition, due to the fact that forestry issues need more than technical and objective solutions; it needs more contextual and subjective socio-political solutions both within and outside the forestry sector itself. The width of the forestry issues spectrum brings forth the issue of assembling and executing forestry policies, its obstacles as well as the supporting forestry research fields.

In the 3,630 pages of **TROPICAL FORESTRY HANDBOOK** (2016) compiled and edited by Laslo Pancel and Michael Kohl was mentioned the importance of variation of approach both to stop the destruction of rainforest and to sustain the forest as provider of different function and service as part of the ecosystem. The book mentioned that the scientific background to rainforest was established in the 19<sup>th</sup> century, with the dawn of systematic forest management, as introduced and documented by Sir Dietrich Brandis (1824–1906) et. al.<sup>1</sup> In addition to the previously mentioned professionals, the management of rainforest is also supported by institutions contributing to a more wholesome

understanding of the subject. Department of Forestry, FAO, ITTO, ICRAF, CIFOR, IUFRO, and CATIE, all of which have committed international researches regarding rainforest and published related developments professionally.

However, why do degradation and deforestation of rainforest continue to happen in wider scale?

**Spectrum of forestry issues** The book can be summarised as an explanation to a wider scope of forestry, beyond what has been known and developed as basic forestry science.<sup>2</sup>

*First*, in regards of policy error. In every tropical country, the government set rules and regulations regarding state and owned forest. General review of those rules and regulations exposed their weakness, which often brings forth undesired effect, in addition to encouraging contradictory community behavior. The limitation has not only been in terms of rules and regulation of forestry matters, but also, more importantly, in the framework of law and policy of other economy-related sector, such as agriculture, land-use, and infrastructure development, all of which have serious consequences in regards to forest management.

In some countries, land rules and regulations bring forth strong incentive for deforestation. For example, according to Brazil Constitution 1988, squatters have special privileges to stay in unused state-owned land, to which the deed will be released after more than five years. One effective way to prove the squatters' occupation is to have them proceed with deforestation. Other tropical countries commonly have similar policies to encourage deforestation.

*Second*, the abandonment of rights of local and traditional societies. Any woodland that is being managed by local and traditional community is considered as uninhabited and unmanaged. Therefore, those land, which traditionally owned, managed, and was useful to the community would be

### Note:

<sup>1</sup> The book explained about professionals related to rainforest, i.e., Andre Aubreville (1897–1982), a French forester specializing in botany and silviculture, Carlos Flinta and lately Julian Evans who contributed in plantation forest, Hans Lamprecht (1919–2012), who systemized tropical silviculture and contributed to the understanding of stand structure dynamics, Lamberto Golfari helped in understanding the required rainfall in determining the species for plantation forest, and Paul Westmacott Richards with its work about tropical rainforest ecology, as well as the systematic work of Heinz Ellenberg (1913–1997), which enabled the ecological classification of forest worldwide and P.K. Ramachandran Nair, who set solid scientific background for agroforestry.

<sup>2</sup> The book elaborated the basic science of forestry, woodland monitoring, silviculture, forest planning, engineering, economy/management, and human resources in its 3,270 pages.

taken over by the government. It enables concession and other permits to be made and distributed as forest tenure to extractive companies. By extension, the traditional wisdom and rights were being discarded. In many countries, the situation has continued to this day.

*Third*, implication of the weakness of forest and land rights. Regardless of the ethical implication of the abovementioned abandonment of community rights, which impacted in the volatility of forest economy, there are negative consequences in regards of sustainable forest management, which will be a significant factor encouraging forest resource abuse as well as deforestation. When there is a possible uncertainty of future economic benefit, there will also be a limitation to the long term management of the forest. In this case, governments' policy of giving deeds to concession company transformed into a strong motivation for the communities that lost their bargaining power to proceed with deforestation and to liquidify their commercial resources.

In addition, illegal and unsecured land will not be able to be mortgaged, nor can it be used as a base for safe and secure transaction. Land security also cost an enormous sum to enforce the rights to the land (i.e, fence, patrol, etc.), in which most often the only way is through violence. The difference in perspective regarding land use rights between traditional and local community on one hand and the government alongside concession companies on the other hand has caused intense conflict in many tropical countries. These conflicts hinder sustainable forest management.

*Fourth*, implication of the strength of rights of land and forest. As proven, rights to a secure land provide better opportunities to create profit and economic efficiency, as well as to gain better environment management. Local community control is linked to local wisdom regarding proven and tested management system in order to maintain forest productivity. Traditional and local communities have been managing forest resources historically well, as source of food, medicine, wood, and fuel without exhausting them through a complex management system. In many cases, management community has proven effective, or more effective, in preventing deforestation than government-managed protected area. It proves that from economic point of view, land security can reduce uncertainty, therefore provides incentive for manpower and time investment of sustainably beneficial activities.

Community empowerment, by enforcing their rights of land is key, as one of the most effective tool to reduce poverty and developing rural population condition. This is due to the fact that many of the worlds' poorest population depends to forest as their livelihood. Many countries have designed policies to give land use permit, or even forest deeds to traditional and local communities due to the increase of awareness that community forest management yield better benefit, as compared to government-managed forest.

*Fifth*, bribery and corruption issue. Former rules and regulations generally do not specify the election of the concession company, nor the fee and cost as well as the execution of unspecified points in the concession contract. The vague condition causes bribery and corruption done by state officials authorized to sign concession agreement. During the past few years, most countries have applied a

more transparent regulation regarding the issue. In many cases, competitive and open bidding as well as appointed tender has been set to avoid making decision entirely free from the governments monitor. The results have been varied. As a rule of thumb, gratuity needs to be tightly controlled to minimize collusion between bidders and to ensure a healthy competition is at play.

*Sixth*, the government of tropical countries generally fail to collect the economic interest, which defined as an economic value that is more than the cost of collecting and marketing the woods, which includes risk and profit analysis needed to attract investors. In tropical countries with highly valued wood species, the deed could be higher, thus the opportunity for the government to collect it. However, the concession scheme implemented in Indonesia and other tropical countries has not yielded its proper share. Often, the government lacks the capacity to do a detailed inventory to the concession area offered, alongside the know-how to effectively estimate the cost and income opportunity.

This failure to collect economic interest has caused the concession holder to race in harvesting the most valuable species there is, which change the remaining forest condition for worse. Logging and road access then facilitate migrations of farmers with no land, and penetrate area previously inaccessible, thus starting deforestation. Due to the remote location and the extent of the concession area, there has been challenge for public administration to monitor the development in the concession area, not to mention that the light sentences for perpetrator will encourage illegal activity involvement. There is also the fact that the high profit from concession contract will provide more than enough financial resources to bribe the respective supervisor.

*Seventh*, round log export ban. The purpose of this policy is to reduce reckless harvesting of valuable species, legal and illegally, to create incentive to export processed items with higher added value, and to encourage the development of domestic industrial forest. Several tropical countries have adopted the policy to limit the trade, specifically round log export through export tax policy or direct ban. For example, Gabon, Brazil, Indonesia, Ivory Coast, Cameroon, Liberia, Malaysia, Papua New Guinea, and the Philippines has applied various export limitation, where some ban export of various types of log, while others selectively ban it.

It has been debated whether the ban of round log export has achieved its intended purposes. Experience shows that the ban generally has not been effective in reducing excessive logging, as well as in creating an economically efficient forestry products processing industry. The long term effect is even more complex. With the decrease of round log price, there will be more incentive to sustainably manage the forest, due to lower profit expectancy. This may lead to forest conversion into a more profitable alternative use. The effect will be stronger when there is a significant difference between the financial benefit level of forest and alternative land use. Moreover, because round log is cheaper, industries tend to use it profusely and inefficiently to supply both domestic and overseas market.

*Eighth*, forestry crime. The general cause of degradation of rainforest is lack of local land use permit, which means small incentive for local communities as well as commercial operator to legally and sustainably manage the forest.

Because the cause and process are different, the strategy and program to overcome the problem also differ. To effectively handle forest degradation, it has to be seen not as the beginning of the process, but as part of bad forest governance, which means it needs to be upgraded to maintain the forest and its productive capacity. In many cases, those produces of forest will be harvested, taken, processed, and sold illegally, thus making them forestry crime.

Forestry crime is caused by uncertainty regarding land use and its changes, land deeds and rights, as well as weakness in forestry law and policy framework. In general, the enforcement of rules and regulation in tropical countries has been weak, with corruption in many fields, lack of transparency, and authority abuse, as well as lack of information regarding forest source. A recent report shows how illegal logging links to humanity conflict, tax fraud, and loss of tax income for government. These factors also pose a serious challenge to a committed government to uphold law and end corruption. Lack of obedience to forestry law and good governance has wider consequences, environmentally, socially, and economically, causing political instability, widening of income gap, and the loss of biological diversity. Without comprehensive political goodwill to increase obedience to forestry law, whatever action taken will have limited success probability.

**Policy implication** The book of PRIVATE OR SOCIALISTIC FORESTRY? Forest Transition in Finland vs. Deforestation in the Tropics, 2012; Series Editors: Matti Palo dan Erki Lehto; 481 pages, states a study with objective to reconstruct the theory of sustainable forest governance. The term of forest transition is used to describe the transitioning process from forest destruction to forest preservation, presenting the case of Finland and 72 tropical country, where Finland managed to phase through the forest destruction crisis, while the topical countries mostly failed.

The result in summary shows that high forest value (high log price), clear deeds/tenure of forest and land, combined with effective policies had supported the transition process in Finland. In contrast, low forest value (usually to protect domestic industry) and corruption in policy execution had prevented the transition process in tropical countries. The question remains to determine the factors to support the rise of Finland forestry, which has happened since the beginning of the 20<sup>th</sup> century.

In line with the scope of forestry analysis in the previous book, this book states the integration of several theories to determine the success factor of Finland as well as contemporary modeling to learn more about the cause of rainforest deforestation. The approach analyses the application of:

- (1) context or the influence of social politic situation,
- (2) transitional theory by analyzing the development of agriculture, i.e., competition in land use,
- (3) ecological economic theory, analyzing sustainability and co-evolution theory,
- (4) institutional economic theory, analyzing enforcement issues,
- (5) changes in institution and path dependency, power, government, and market;

- (6) property rights theory, includes the phenomenon of open access and transaction cost,
- (7) Kuznets curve,
- (8) efficiency property structure theory, and
- (9) the concept of devolution of property rights.

In Finland, the focus of forestry policies lay on 12 aspects simultaneously. Those aspects are ecological factors, knowledge institutions, property institutions, market institutions, community institutions, state regulatory institutions, enforcement of institutions, forest-based development, coevolution of forestry and society, inter-sector impacts, international impacts, and non-corruptive conditions.

The scope of the theory and the concept reflect the scope of forest preservation issue in a country. It means that to change deforestation into sustainable forest development one needs to solve the related problems, such as the development of land use sectors, the adjustment of produce sustainability by taking into account the social, political, economic, and technological development, stronger law enforcement, the consideration of social political dependence from previous administration, analyze main figures' attitude as result of gained rights and paid transactional cost, as well as the consideration of efficiency as result of the changes to the rights to the forest resources. Presently the focus has been shifted to key role of tenure rights (private vs. state), corruption, poverty, GNP/area, trade and productivity of agriculture as the main cause of forest transition (Chapter 5).

Forest management in Indonesia, for example, generally has not been able to meet all the approach mentioned above, because so far, the focus has ever only been to the sustainability approach in the concept of ecological economics, which so far has been done only statically with no regards to co-evolution as an effect to the changes of the strategic environment. The same thing applies to other natural resources management. One of the reasons is the weakness of counter discourses fought as new point of view in forest management (Khan, 2010).

To face the abovementioned situation, forestry policy should consider multiple factors. It should also be realized that in the process of policy making, there are interest clash and discourses, by multiple figures, involving resources and rules applied. The discourses meant are interpretation scheme, starting with formal policy concepts to popular narration texts and storylines, which give meaning to the discussed policy issues (Arts & Buizer, 2009). The way to analyze the ongoing forestry policies to be changed by a new, more comprehensive policy in line to the width of the forestry scope discussed in this book will contrast each other. The differences and competitions between new idea and status quo will cause polarization within group with the same discourses to counter groups of other discourses.

The analysis on how to improve forestry policy needs enrichment to forestry policy research orientation. These researches should be able to answer the question of what kind of coalition needed to frame forestry issues in wider scope, how to communicate the result, as well as how new policies and decisions are discussed and made. Other issue includes through which part of government the move should be started to improve the policies effectively. Generally,

authority is considered as the figures' ability to mobilize the resources to reach the intended improvement to forestry policy. Only then the dynamics will be well understood. (Arts & Buizer, 2009).

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