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Case study of national timber legality systems as global efforts to prevent illegal logging

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Abstract

Global society has been putting efforts together to prevent forests from rampant deforestation and illegal logging worldwide since sustainability is a common goal for the Earth. At the World Summit on Sustainable Development (WSSD) called Rio+10, global efforts of timber importing countries and private sectors to restrain illegal logging were discussed in 2002. As a market instrument to eradicate illegal logging, timber legality systems in consumer countries have been implemented, starting with the United States since 2008, the European Union (EU) since 2013, Indonesia since 2016, Australia since 2017, Japan since 2018, and the Republic of Korea since 2019. In the implementation stage of the timber legality, the due diligence system plays a role in reducing the risk of illegally logged timber in a supply chain. This study investigated the due diligence system of Australian timber legality as a good practice and analyzed it according to the standard of risk management of International Standard Organization (ISO) consisting of 1) risk identification, 2) risk analysis, 3) risk assessment, 4) risk treatment, and 5) monitoring and review. As a result, the due diligence system of Australia was compatible with the risk management criteria of ISO. The timber legality in Australia was established based on relevant laws and regulations. Its system stepwise was composed of risk assessment and mitigation as well as risk identification and analysis of illegal logging possibility in accordance with origins and species. Eventually, this study clarified the structure of due diligence systems and evaluated the crucial points of these systems based on standards of ISO risk management. Results of this study will contribute to our understanding of timber legality towards sustainable development.

Keywords: International Standard Organization (ISO), Timber Legality System, Due Diligence, Risk Management

Introduction

Global society set sustainable development as a goal for present and future generation at the United Nation Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992. Sustainable development is “a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations” (World Commission on Environment and Development, 1987). According to Principle 11 of Rio’s Declaration on Environment and Development, which was agreed upon by 108 states, states shall enact effective environmental legislation to achieve sustainable development and a higher quality of life for all people (World Commission on Environment and Development, 1987).

The illegal logging has been pointed out for a long time as a major driving force of global deforestation, and ‘sustainable consumption and production’ is being emphasized as a way to solve it (Jang et al., 2015). In this regard, ‘sustainable consumption and production’ was established as the no. 12 goal of Sustainable Development Goals (SDGs) at the 2012 UN Conference on Sustainable Development (UNCSD, Rio+20) (UN General Assembly, 2015). Target 12.2 of SDGs no. 12 aims to achieve efficient use and sustainable management of natural resources by 2030 (UN General Assembly, 2015). As a specific measure to solve the problem of global

deforestation, the forest certification system was introduced as a market instrument to provide environmental information such as timber legality to consumer through environmental labeling such as Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC). To prevent global deforestation, this system has linked stakeholders throughout the global supply chain including companies and consumers as well as forest owners and timber producers. The basis for inducing forest management through sustainable consumption was established through this voluntary forest certification system. This system showed the possibility of eradicating illegal logging in forests of developing countries by taking an integrated approach including market and forest management into one management line if market in developed countries consumes wood products that satisfy the timber legality. However, the limitations of the voluntary system, the pace of preventing deforestation around the world has been slow. This has raised a need to promote widespread participation through regulatory instruments (World Summit on Sustainable Development, 2002). In this context, some developed countries implemented a timber legality system that imposes an obligation to prohibit the supply and use of illegal timber on producers and distributors of timber and wood products. This system was introduced sequentially in several countries, starting with the United States in 2008 and following EU (2013), Indonesia (2016), Australia (2017), Japan (2018), and South Korea (2019). The system is operated slightly differently in each country according to national circumstances.

Due diligence system

The due diligence system plays a critical role in managing the risks related to illegal logging within the timber legality system. The operation of the timber legality system in each country differs from country to country, so the level of the due diligence system is also built differently. In the case of the United States, where timber legality was first introduced, the due care system was adopted. Due care system operates effectively through imposition of punitive penalties. On the other hand, EU or Australia adopts the due diligence system and can import and distribute wood and wood products only after proving compliance with the timber legality within the Chain of Custody. The due diligence system in the EU Timber Regulation (EUTR), consists of three stages: information collection, risk assessment and risk mitigation. Entrepreneurs who wish to import timber into EU territory should be obliged to collect and report information, and can only import if the risk of illegal timber is low by establishing information to prove timber legality. Australia's due diligence system consists of a four-stage due diligence system: timber legality framework (e.g FSC or PEFC), compliance with national guidelines, risk assessment and risk mitigation.

Korea introduced timber legality system on a pilot basis in 2018 and it was officially launched in 2019. Korea benchmarked timber legality systems of Australia, the US, and the EU to design system's framework. Korea has reached a point where it is necessary to design the due diligence system and key elements for each stage of timber legality system.

In the absence of sufficient policy information or case studies on the establishment of the due diligence system in the timber legality system, research to explore and analyze best practices based on the relevant standards is essential to properly establish the theory related to the due diligence system. In this context, this study analyzed the due diligence system of Australia, which was the target of benchmarking among countries that are well operating the timber legality system.

Companies within the sphere of influence of the timber legality system have their sub-suppliers apply the timber legality standards of the company's due diligence system in respond to timber legality (Bai & Sarkis, 2010). The due diligence system of the timber legality system introduced at the national level can be understood as a standard for companies to manage risk of illegal timber in the supply chain. Although a recognized standard for supply chain risk management in the timber legality system has not yet been established, the ISO 31000 risk

management standard of the International Standard Organization (ISO) is being used to prepare supply chain management standards (Oliveira et al., 2017).

In this study, by analyzing Australia's due diligence system based on ISO risk management standards, the implications for the establishment of a due diligence system in Korea's timber legality system, the legal timber trade promotion system, were presented.

Analytical framework

An analysis framework was established according to the ISO 31000 risk management standard. We evaluated the due diligence system of Australia's timber legality system based on the analytical framework below.

Table 1: Analytical framework

Step 1	Risk definition	·Definition of risk purpose and scope ·Definition of Risk criteria
Step 2	Risk assessment	·Risk identification ·Risk analysis ·Risk evaluation
Step 3	Risk treatment	·Selection of risk treatment options ·Preparing and implementing risk treatment plans
Step 4	Monitoring and review	·Monitoring and review
Step 5	Recording and reporting	·Recording and reporting

Results and Discussion

Australia's timber legality system defines risk as to the timber and wood products which are harvested illegally and has a due diligence system to ensure that illegal timber is not included in the territory of Australia. Importers who wish to import timber and wood products into Australia in accordance with the illegal logging risk assessment procedures provided in the Illegal Logging Regulations in the case they did not be passed through timber legality framework (e.g FSC or PEFC) or national guidelines. This study analyzed the due diligence system in accordance with ISO risk management standards targeting Australia among the best practices for managing timber legality. The due diligence system of Australia's timber legality system effectively manages the risk of illegal timber by using the existing forest certification system and national guidelines, while managing the risk of illegal timber through the risk assessment and risk mitigation process. This Australian due diligence system was in line with ISO risk management standard according to five steps criteria (risk definition, risk assessment, risk action, monitoring and review, recording and reporting).

Australia's due diligence system authorizes timber imports prior to risk assessment if the legality of the timber has been demonstrated in accordance with FSC, PEFC and national guidelines prior to risk assessment. Compared to the EUTR, which lacked linkage with the external forest certification system such as FSC or PEFC at the beginning of the introduction of EUTR, Australia's due diligence system utilized the existing forest certification

system usefully. In connection with the forest certification system widely used in business, it was designed so that the existing system could be usefully linked to the timber importers to prove the timber legality (Seol et al, 2015). This provides important implications for developing Korea's due diligence system in that it can alleviate the burden of the new regulatory system. In addition, an institutional mechanism is being prepared for importers to easily prove the legality of timber, using the national guidelines prepared in cooperation with countries exporting timber to Australia. Korea established guidelines for each country of origin while benchmarking Australia's timber legality system in the early stages of the system's introduction. The establishment of country-of-origin guidelines makes it use useful for importers to manage the risk of illegal logging in the origin of wood products. It helps to efficiently manage the risk of illegal timber through a device that allows the import of timber that has met the legality of timber according to the national guidelines and the standards of FSC and PEFC without a separate risk assessment for illegal timber.

We found out there is room for improvement in the operation of the timber legality system in South Korea. In the area of risk assessment, it is necessary that detailed guidelines for risk analysis and risk evaluation, are provided as ancillary assistance. In the risk treatment, it would be recommended to provide practice guideline including information that is supplementary for selection of risk treatment options and implement of risk treatment plans.

Table 2: Comparison of Due Diligence between South Korea and Australia

Category	Australia	South Korea
risk definition	- having the purpose of eradication of illegal timber	- having the purpose of eradication of illegal timber
	defining risk purpose and scope	- having a scope with all importing wood to the country
	- having a scope with the specific importing wood products to the country	- having a scope with the specific importing wood products to the country
	- including the domestic produced wood products	- excluding the domestic produced wood products
definition of Risk	- defining the risk as to the timber and wood products which are harvested illegally	- defining the risk as the timber and wood products which are harvested illegally
risk assessment	risk identification	- risk to species and country and region of origin
	- risk due to the complexity of supply chain	- the candidate criteria have been researched but no specific guidance has suggested yet
	risk analysis	- risk level analysis of origin: corruption perception index, FSC global risk registry, disputed areas, and analysis of illegal logging issues
	- analyzing the possibility of illegal logging in the origin with a logging confirmation certificate etc.	- the research to analyze the risk level of illegal logging by the origin but no specific guidance has suggested yet
	- analyzing the risk of the complexity of supply chain with mapping and checking the quantity and species of supply chain	- no specific criteria and guidelines for analyzing the possibility with the specific documents in illegal logging in the origin
risk evaluation	- evaluating the illegal logging possibility of the species and origin	- no specific criteria and guidelines for analyzing the complexity of the supply chain
		- no specific guidance for evaluating the illegal logging possibility of the species and

		and deciding whether to allow import or not according to the level of risk	origin and deciding whether to allow import or not according to the level of risk
risk treatment	selection of risk treatment options	- supplementing evidence for risk assessment - replacing the supplier, species and origin	- no specific guidance of risk treatment yet
	preparing and implementing risk treatment plans	- suggesting the measures to mitigate the risk through verification of additional documents of origin, species, and supply chain for timber legality	- no specific guidelines to treat the risk for illegal logging yet
monitoring and review		- suggesting the checklist for audit and monitoring in the desk-based and onsite	- no specific guidelines for the monitoring and the review yet
recording and reporting		- imposing obligations on timber importers to establish a due diligence system and collect information	- imposing obligations on timber importers to establish a due diligence system and collect information

Australia's due diligence system specified the scope of the management of illegal logging risks to the entire domestic and overseas timber supply chain. South Korea differs from Australia in range of wood products that require timber legality. In South Korea, wood products produced in the domestic wood industry are excluded from the scope of achieving wood legality. The timber legality of scope is limited to seven wood products which have a large amount of imports as follows: roundwood, sawn wood, preservative wood, flame retardant wood, laminate, plywood, wood pellets. It would be necessary to increase effectiveness of the timber legality system by including both domestic and imported wood products. One prior consideration for promoting the timber legality system is the need for multifaceted support for small-medium enterprises (SMEs). In Australia, the ATIF and TDA provided toolkit report including detailed guidance on how businesses follow the regulation to manage the risk of illegal logging. In South Korea, the Korea Timber Association supports technical consultancy for SMEs. The National Institute of Forest Science and the Korea Rural Economic Research Institute developed the timber legality index, and the illegal logging risk level evaluation by country was calculated to establish basic data to evaluate the illegal logging risk for the origin of timber (An, 2021). In addition, various policy instruments will be required such as information sharing, financing measure, economic incentives, and the establishment of a web-based system that can be easily processed. IKEA, Multinational company, has established an online system for risk assessment of origin to assist sub-suppliers in assessing risks for illegal logging (IKEA. 2014). In addition, it is necessary to introduce policy measures that companies can utilize the timber legality system as opportunity for corporate social response and Environmental Social Governance (ESG). The role of the private business sector for sustainable development is being emphasized. As a specific measure, the importance of ESG to manage risks related to various potential issues related to the environment and human rights, both inside and outside of a company's business activities, has recently been highlighted.

The use of illegal timber in the industry directly or indirectly affects deforestation and armed conflict in developing countries. Eliminating illegal timber from the supply chain by companies using timber resources protects the company's reputation from the risks of illegal timber. Timber legality system may encourage the business to establish the ecosystem that manages illegal timber risk throughout the enterprise's business

downstream supply chain by requiring a due diligence system to prevent the supply of illegal timber to downstream supply chains in the long term.

Conclusions

This study provides the theoretical framework necessary for the establishment of the due diligence system and analyzes the status of the construction of the due diligence system in the case of Australia, drawing a point to enhance key elements for each stage of timber legality system of South Korea. The results show that the due diligence system of Australia is comparable with standards of ISO risk management in five criteria of the risk definition, risk assessment, risk treatment, monitoring/review, and recording/reporting. It is appropriate for benchmarking for establishing the due diligence system of South Korea to manage the timber legality effectively.

The timber legal system aims to reduce global deforestation by preventing illegal logging as a market instrument. Global coalition is needed for market instruments to be successful as they must eliminate leaks from which illegally harvested timber is traded in other market where do not require timber legality. In this regard, global governance is needed to prevent deforestation through the timber legal system. Australia played a role as a peer pressure in introducing Korea's timber legality, and Australia's timber legality system was benchmarked in designing the timber legality system of South Korea. At the national level, best practices of timber legality systems play a very important role in diffusing the system to other countries. An important point to pay attention to the due diligence system is that it greatly affects the effectiveness of the timber legality system. Although Japan and Indonesia have introduced timber legality systems, there is room to be operated more effectively. In this context, this study identifies the major components constituting the due diligence system and provides important information on the role of each component in managing the risk of illegal timber inflow. This study may contribute to provide important policy information for the operation of Korea's legal timber trade promotion system by providing an important theoretical framework for establishing Korea's due diligence system.

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