Identifying relevant international forest regimes for South Korea based on their issues

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HIGHLIGHTS

• South Korea’s interest in international forestry has continued to increase over time, especially in various forms of world forestry governance.
• Six main international forest issues in South Korea can be derived from international forest regimes: Sustainable Forest Management (SFM), Sustainable Development Goals (SDGs), forest land degradation and desertification, climate change, illegal logging, forest biodiversity, and species conservation.
• South Korea tends to adopt new policies rapidly as a response to calls from international forest regimes.
• South Korea contributes to international forest regimes in order to achieve domestic goals for the issues derived from the regimes.
• South Korea also stimulates other countries’ participation to deal with the issues by using incentives.

SUMMARY

South Korea has focused on bilateral agreements to supply timber since the 1990s which requires cooperation with forest-related international organisations. This study analysed the relationship between South Korean and international forest regimes by identifying the issues these regimes face and analysing South Korea’s contribution to these regimes. The study used data from an in-depth content analysis of key policy documents between South Korea and each of the regimes. The results confirm six forest-related international issues: Sustainable Forest Management, Sustainable Development Goals, forest land degradation and desertification, climate change, illegal logging, forest biodiversity, and species conservation. South Korea contributed to these regimes through cooperative initiatives and projects. This contribution, furthermore, directs other countries’ participation to confront the issues. Most of the international forest-related issues in South Korea are derived from external elements such as international agreements or governances. South Korea also uses international regimes to encourage national goals.

Keywords: international forest governance, international forest issues, forest policy, South Korea, Sustainable Forest Management

Identification des régimes forestiers internationaux pertinents à la Corée du Sud, et basés sur leur situation

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La Corée du Sud s’est concentrée sur des accords bilatéraux pour fournir du bois de coupe depuis les années 90, ce qui nécessite une coopération avec les organisations internationales liées à la forêt. Cette étude analyse la relation entre les régimes forestiers sud-coréens et internationaux en identifiant les défis auxquels ces régimes font face, et en analysant la contribution de la Corée du Sud à ces régimes. L’étude utilise des données provenant d’une analyse approfondie de documents de politique clés entre la Corée du Sud et chacun de ces régimes. Les résultats confirment six questions internationales liées à la forêt: la gestion forestière durable, les buts de développement durables, la dégradation de la terre forestière et la désertification, le changement climatique, la coupe illégale, la biodiversité forestière et la conservation des espèces. La Corée du Sud a contribué à ces régimes par des projets et des initiatives de coopération. Cette contribution a de plus dirigé la participation d’autres pays désireux de faire face à ces défis. La plupart des questions internationales liées à la forêt en Corée du Sud dérivent d’éléments extérieurs, tels que les gestions ou les accords internationaux. La Corée du Sud utilise également les régimes internationaux pour encourager ses buts nationaux.
Identifying international forest regimes for South Korea based on issues

H. KIM, H.M. KANG, S.I. CHOI and S. JEON

South Korea has been a major participant in international forest regimes, especially in various forms of world forestry governance. This is largely due to the country’s strong interest in international forestry. Over time, South Korea’s interest in international forestry has continued to increase, especially in various forms of world forestry governance. The relationship between South Korea’s domestic forest policy and its international forest regimes is a timely yet under- scrutinised topic. Therefore, this study aimed to: i) identify international forest policy issues in South Korea corresponding to international forest regimes, and ii) analyse South Korea’s contribution in these regimes based on its international forest concerns.

THEORETICAL FRAMEWORK

The study analysed the relationship between South Korea’s domestic policy and international forest regimes and its contribution to these regimes by identifying specific issues. Member states in such regimes can affect the regimes’ policymaking process as influential actors by introducing their own formal and informal interests to these regimes (Gehring 1994, Hasenclever et al. 1997, Krott 2005). By contrast, the outputs from the international regime, especially on SFM and natural resource conservation, raise a new issue at the national level (Andonova 2008, Cortell and Davis Jr. 2000, Püzl and Rametsteiner 2002). According to Singer (2008), the international forest regime and national forest-related policy mutually adjust to each other despite this relationship being differentiated by region, thus hindering tree growth. In this regard, South Korea has had a close relationship with many countries to fulfil its domestic demand for timber and forest products through bilateral agreements and participation in international governance.

South Korea started overseas plantations in 1993 to allow for continuous timber supply, and it reached a scale of 484,558 ha in 2019 (KFS 2019f). Currently, the Korea Forest Service has signed bilateral agreements on forestry cooperation with 28 countries (details in KFS 2019c). South Korea has also increased its participation and cooperation in forest-related international organisations in keeping with international trends, such as environmental conservation and SFM, since the 1990s (KFS 2019b). Over time, South Korea’s interest in international forestry has continued to increase, especially in various forms of world forestry governance.

The relationship between South Korea’s domestic forest policy and its international forest regimes is a timely yet under- scrutinised topic. Therefore, this study aimed to: i) identify international forest policy issues in South Korea corresponding to international forest regimes, and ii) analyse South Korea’s contribution in these regimes based on its international forest concerns.

INTRODUCTION

International regimes are generally defined as a set of interrelated norms, rules, and procedures that structure the behaviour and relations of international actors in order to reduce the uncertainties and facilitate the pursuit of common interests (Le Prestre 2017). Regime theory, in the context of world politics and international cooperation, began to emerge in the early 1980s. This theory represents a means of national-level policy to optimise domestic interests that result in transformation at the international level to promote collective, shared interests (Smouts 2008).

Major forests-related debates are conducted under international regimes that cover both global and regional regimes. International forest governance by global forest-related regimes has been the main focus of world forest politics, for example, regarding sustainable forest management (SFM) (Dimitrov 2005, Gale and Cadman 2014, Singer 2008), environmental topics such as biodiversity and climate change (McDermott et al. 2010a), trade, Criteria and Indicators (C&I), and other forest-related issues (e.g. Arts and Babili 2012, Giessen 2013, Humphreys 2012, McDermott et al. 2010, Rayner et al. 2010). As a consequence of the abundance of various international regimes, forest issues have been addressed in various ways. This status quo of regime fragmentation and complexity occurred because of the multiple interests of actors from different sectors and the particular interests of states (Giessen 2013). Accordingly, regional regimes have considered forest issues, either directly or indirectly, and they have drawn valuable attention from political and academic points of view in recent years (e.g. Arts et al. 2010, Cashore and Stone 2012, Gale and Cadman 2014, Giessen and Sahide 2017, Nurrochmat et al. 2016, Sahide and Giessen 2015, Sahide et al. 2016, Varkkey 2014).

The terrestrial ecosystems of South Korea have an abundance of species with high biodiversity since the country’s forest cover is approximately 64% of its total land area (KFS 2019e). The forest in South Korea is characterised by temperate forests with annual mean rainfall from 600 mm to 1,800 mm (KFS 2019c). However, rainfall distribution is seasonal and seasonal and...
an unconvincing means to access the regimes’ effectiveness. Therefore, this policy analysis framework provides insights that allow us to observe the overall depiction of the interaction between South Korea’s international forest policy and the forest regime.

International forest regimes and South Korea

Krasner (1982) defined the international regime as “sets of implicit or explicit principles, norms, rules, and decision-making procedures wherein actors’ expectations converge in a given (issue) area of international relations.” The number of discussions regarding forest concerns and conflicts in the context of world politics increased after the Rio Earth Summit in 1992, which was the catalyst for state-based forest regimes based on conventions or protocols in the 1990s (Guneau and Tozzi 2008, Humphreys 2012, Kunzmann 2008, Levin et al. 2008, Overdevest and Zeitlin 2014). Since then, the international regime concept has been considered to be effective for empirical analyses in international forestry (Arts et al. 2013, Giessen and Sahide 2017, Rayner et al. 2010). As a consequence, in recent decades, many international forest regimes have been launched, especially in the fields of SFM and forest conservation (e.g. Humphreys 2012, McDermott et al. 2010, Rayner et al. 2010). The number of international forest regimes only pertains to ‘forest-related’ rather than exclusively ‘forest-focused’. In contrast to forest-focused regimes that establish forests as their main issue, forest-related regimes consider forests as a non-primary but formal issue (FIGURE 1).

International forest-related policies in South Korea have been developed, while the contemporary global trend in forestry has been reflected since the early 1990s (Park and Lee 2014). The outputs from the international regimes, especially on SFM and natural resource conservation, has raised a new issue at the national level (Andonova 2008, Cortell and Davis Jr, 2000, Pülzl and Rametsteiner 2002). In other words, sets of principles, norms, and rules related to specific issues and enacted through international regimes have been codified into the international forest policy in South Korea.

Issues in forest policy

An issue in forest policy is defined as a specific problem that introduces the policy process (Sadath and Krott 2012, Wibowo and Giessen, 2012). Such issues place either high or low on the political agenda dependent on the actor’s will to achieve their goals (Bernstein and Cashore 2012, Bernstein et al. 2010, Krott 2005). Over the last two decades, various forest issues have been discussed at the international level of forest governance (Edwards and Giessen 2014, McDermott 2014) and have demonstrated the regime’s dynamics (Smouts 2008). Since international forest regimes deal with internationally debated forest-related issues, understanding the issues in which they are interested is a way to further understand the regimes’ ultimate impact.

METHODS

Social science methods for document analysis and empirical content analysis were conducted to verify the hypothesis in this study. Qualitative content analysis is a widely and effectively applied method of data analysis in political science that opens social reality through both manifest and non-manifest contexts (Burns and Giessen 2016, Kreuger and Neuman 2006, Rahman and Giessen 2014). Moreover, the qualitative method increases the reliability and the validity of the data and supports a sound empirical basis for cause and effect analysis in the policy field (Giessen et al. 2016, Rahman et al. 2016, Sarker et al. 2017, Schusser et al. 2012, Schusser et al. 2015), including foreign policy (Gallhofer et al. 1996). Consequently, documents from the Korean Forest Service (KFS) and international forest regime documents were analysed to verify the hypothesis. Such programs consist of public statements regarding the most critical issues. Sahide

FIGURE 1 Regime types based on the issue (Giessen et al. 2016)
et al. (2018) argued that the analysis of these documents is one of the fundamental methods to assess forest policy.

For empirical data, this study relied on the online-based reportorial resources of the international forest governances, which were reviewed based on the discovered issues. A repository is a physical online warehouse of materials (e.g., documents, data, information) for reporting, analysis, and sharing (Bernstein and Dayal 1994, Rahayu et al. 2019). Rahayu et al. (2019) mentioned that online-based repositories guide researchers in their collection of critical empirical materials and to conduct their studies in an efficient, effective manner. A web-based open-source system produced by an organisation or institution acts as a repository for intellectual outputs (research and educational materials) (Tansley et al. 2003).

Firstly, the last two national reports were used as significant principal sources for analysis to identify international forest policy issues in South Korea corresponding to international forest regimes (i.e., the 6th National Forest Plan and Achievements and 2018 Footprints of International Forest Cooperation). The documents from the KFS cover all the forest issues because the KFS is the only governmental agency specialising in forestry and is charged with developing and implementing forest policies in South Korea. Secondly, several legal instruments were collected to identify the relationship between domestic policy and international regimes for a robust observation (i.e., charter/constitution, projects, conventions, agreements, action plans, declarations, principles, statements, decisions, resolutions, annual reports, publications, memorandums of understanding, and others). Public media were considered as supplementary data to enrich this analysis as another source of empirical materials. However, almost nothing was found to be relevant and consistent for this study. This is because South Korea lacks public attention in international forest issues and such discourses are a network provided by the media; where topics and problems between politics and society are processed into focused opinions (Kleinschmit and Krott 2008).

INTERNATIONAL FOREST ISSUES IN SOUTH KOREA

After scrutinising the relationship between South Korea and the international forest regimes that most recently cooperated with South Korea, six main international forest issues were identified: Sustainable Forest Management (SFM), Sustainable Development Goals (SDGs), forest land degradation and desertification, climate change, illegal logging, forest biodiversity, and species conservation. These six issues are explained in further detail in the following sections.

Sustainable Forest Management

United Nations Conference on Environment and Development (UNCED) and the Montreal Process

According to the definition from the FAO, SFM is defined as the sustainable use and conservation of forests to maintain and enhance multiple forest values through human interventions (FAO 2019). The non-legally binding Rio Forest Principles adopted at the UNCED in 1992, offer recommendations for SFM (UN 2019), which are the starting point of the SFM paradigm. After the principles, an increasing number of the concepts from the Criteria and Indicators (CandI) process gained attention for evaluating the achievement of SFM at the global, regional, country, and management unit level (Baycheva et al. 2013, Caswell et al. 2014, Linser et al. 2018a, Linser et al. 2018b). The Montreal Process is a national-level CandI process for temperate and boreal forests. South Korea is one of the founding members participating in its annual meeting and submits Country Reports by using the agreed MP CandI to identify shared goals and improve capacities (Montreal Process 2015). Furthermore, South Korea has introduced SFM into policies and systems, such as forest legislation, since the end of 1994. South Korea has considered SFM as the basis of its national forest management since the 4th National Forest Plan (1998–2007), and in the Framework Act on Forestry in 2001 (KFS 2018).

Sustainable Development Goals

Food and Agriculture Organization (FAO)

The Committee on Forestry (COFO) is the highest FAO Forestry statutory body that aims to identify emerging forest policies and issues around the world so that FAO member countries and other forest organisations can take appropriate action. Since the first committee in 1972, the biennial sessions of COFO have been held at FAO headquarters in Rome, Italy (FAO, 2020a). South Korea placed its name on the list of COFO members as a member state of FAO. The 22nd session of COFO, on 23–27 June 2014, introduced the contributions that forests can make to the SDGs (FAO, 2013). SDGs are the 17 goals adopted by the United Nations (UN) on 25 September 2015 (UN 2020). The resolution’s aim is to achieve the goals by 2030 to end all forms of poverty, fight inequalities, and tackling climate change while ensuring that no one is left behind. According to the 6th National Forest Plan 2018–2037, the Korea Forest Service (KFS) has managed SDGs, emphasising the importance of multilateral forest cooperation and official development assistance (ODA). For example, to achieve the SDGs, the KFS plans to expand forest ODA to 25 billion won by the last year (2037) of the plan (KFS 2018).

Forest land degradation and desertification

United Nations Convention to Combat Desertification (UNCCD)

The UNCCD was signed in June 1994 and entered in force in December 1996 to prevent desertification and protect the global environment through financial and technical international assistance to areas affected by drought and desertification (KFS 2019b). Since the achievement of UNFCCC membership in August 1999, South Korea has addressed assorted forest land degradation and desertification issue-related policies (KFS 2019b). Following the 6th National Forest Plan 2018–2037, this issue is being dealt with as one of the main
tasks. Although this issue does not directly apply to the forests in South Korea, the KFS remains part of the UNCCD to develop new national forest cooperation projects to prevent land degradation, improve air quality in Northeast Asia, and expand cooperation between nations and organisations.

Climate change

**United Nations Framework Convention Climate Change (UNFCCC)**

Following the foundation of UNFCCC in 1992, the 2016 Paris Agreement was enforced to preserve forests as carbon sinks, encourage reducing emissions, deforestation and forest degradation, promote the role of conservation, sustainable forest management, and enhance forest carbon stocks in developing countries (REDD+), as well as achieve Nationally Determined Contributions (NDCs) in climate change negotiations (UNFCCC 2019). Therefore, the country has aimed to participate in a long-term GHG reduction of 37% (25.7% domestically, 11.3% overseas) of Business As Usual (BAU) (852 million tons) by 2030 (KFS 2018). Therefore, based on the Act on the Management and Improvement of Carbon Sinks, Korea intends to increase the use of domestic wood and replace fossil fuels with forest biomass to increase the absorption of greenhouse gases in forests and expand new carbon absorption sources. Expanding the REDD+ business and secure carbon emission rights is also necessary to achieve overseas reduction targets (11.3%). In this context, South Korea increased the cooperation of related ministries, including the forestry sector and linkages with emission trading schemes in NDCs, and simultaneously executed pilot projects to implement all the processes of REDD+ in the four Southeast Asian countries to accumulate expertise and improve the availability of the results (KFS 2019a).

Illegal logging

**Asia Pacific Economic Cooperation (APEC)**

Illegal logging, especially in tropical forests, has been receiving increasing attention from policymakers worldwide. APEC started to address illegal logging and associated trade in 2010, which is the year that APEC leaders promised to strengthen cooperation on the promotion of SFM and rehabilitation (APEC 2019). Since 2011, APEC has addressed the issue under the Experts Group on Illegal Logging and Associated Trade (EGILAT), and lately, member states have adopted the EGILAT Multi-Year Strategic Plan 2018–2022 (ibid). Also, illegal logging that is common in export countries is a frequently debated topic in national forest policy since South Korea is an APEC member economy, as well as a country reliant on imports to fulfil 83% of its total demand for wood (KFS 2019). Notably, the amendment to the Wood Use Law was issued in 2017. Moreover, specific standards for the legal logging of imported timber and wood products were enacted and announced in 2018 (ibid). Additionally, several related policy programmes have been planned or are under execution to protect the domestic timber industry by utilising illegal wood trade restriction systems and responding to non-tariff barriers, such as foreign trade restrictions on illegal logging (details in KFS 2019a). The Legitimate Timber Trade Promotion System is the most significant impact that the APEC has on South Korea regarding illegal logging and is the system behind the specific standards for legal logging of imported timber and wood products. Some actors, including the KFS, expected that the system would improve the transparency of the administration and establish the distribution order of wood trade by supplementing the shortcomings in the reporting and inspection of imported wood (Song 2020, Kim 2020). However, there are many problematic aspects to implementing this system. For example, the extended customs clearance period would lead to substantial damages, and although there is a legal document from the importer, there is a blind spot, which is the difficulty in determining the authenticity of the documents (Kim 2019).

Forest diversity and species conservation

**Convention on Biological Diversity (CBD)**

Forest biological diversity encompasses tree species diversity and the multitude of plants, animals, and micro-organisms associated with forest areas (CBD 2019a). Because forest biological diversity covers multilateral ecosystems, landscapes, species, populations, and genetics, these forest biological diversity losses make it difficult to manage the changing environmental conditions. CBD is an international legally binding treaty with the goals of conservation and sustainable use of biological diversity. Through the adoption of the CBD by UN member states in Rio de Janeiro in 1992, the issue of forest biological diversity loss has been considered in world politics. South Korea became a member of the CBD in 1994. Following CBD, South Korea has or will promote the systematic conservation through the 3rd National Biodiversity Strategy (2018–2022), Forest Genetic Resource Reserve Management Basic Plan (2013–2017), and the Endangered Conifer Species Conservation Measure (2016). Moreover, the country launched the National Forest Seed Variety Center on 12 August 2020, which is an agency affiliated with the KFS (KFS 2019b). The Center supports the development of new varieties of flora with high-quality seed production and distribution, as well as cooperates with the International Union for the Protection of New Varieties of Plants (UPOV) and the FAO Commission on Genetic Resources for Food and Agriculture (CGFRA) to establish a cooperative system among countries related to the protection of species varieties in forests.

SOUTH KOREA’S CONTRIBUTION TO INTERNATIONAL FOREST REGIMES

South Korea contributes to international forest regimes through the following cooperative initiatives and projects based on the issues identified above. This contribution is significant, from a domestic point of view, and focuses on managing the issues by international cooperation, and to internationally stimulating other countries’ participation to deal with the issues by using incentives.
### TABLE 1 AFoCO projects and programmes (AFoCO Secretariat 2017, 2018)

| Project and Programme                                                                 | Duration (Year) | Budget (USD) | Main Actors                                                                 |
|--------------------------------------------------------------------------------------|-----------------|--------------|----------------------------------------------------------------------------|
| Village-based Forest Rehabilitation in Lao PDR                                       | 10 years (2016–2025) | 1 500,000    | KFS, and Lao PDR                                                           |
| Rehabilitation and development of mangrove forest ecosystem in Thai Binh province, Vietnam | 10 years (2015–2024) | 1 500,000    | KFS, and Vietnam                                                           |
| Establishment of Forest Genetics Research Center for Restoration of Major Timber Species in Cambodia | 10 years (2016–2025) | 1 500,000    | KFS, and Cambodia                                                          |
| Capacity Building for Landscape Approach to Support the Sustainable Natural Resources Management in Brunei, Indonesia, Philippines and Singapore | 3 years (2016–2019) | 539,726      | KFS, Brunei Darussalam, Indonesia, the Philippines, and Singapore         |
| Domestication of Endangered, Endemic and Threatened Plant Species in Disturbed Terrestrial Ecosystems in Malaysia and Thailand | 6 years (2016–2022) | 1 200,000    | KFS, Malaysia, and Thailand                                                |
| Developing High Valuable Species in Vietnam and Thailand as a Mechanism for Sustainable Forest Management and Livelihood Improvement for Local Communities | 3 years (2016–2018) | 720,000      | KFS, Vietnam, and Thailand                                                |
| Facilitating the Participatory Planning of Community-based Forest Management Using GIS and RS Technologies in Forest Resources Management in the Philippines, Indonesia and Thailand | 5 years (2015–2019) | 1 500,000    | KFS, Indonesia, the Philippines, and Thailand                              |
| Promotion of Forest Rehabilitation in Cambodia and Vietnam through Demonstration Models and Improvement of Seed Supply System | 5 years (2015–2019) | 1 000,000    | KFS, Cambodia, and Vietnam                                                |
| Capacity Building on Improving Forest Resources Assessment and Enhancing the Involvement of the Local Communities to Address the Impact of Climate Change | 2.5 years (2013–2016) | 1 000,000    | KFS, Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Thailand, and Vietnam |
| Reclamation, Rehabilitation and Restoration of Degraded Forest Ecosystems (RRR-DFE) in Mekong Basin Countries | 2 years (2013–2015) | 539,726      | KFS, Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam                    |

### Multiple Issues

**Asian Forest Cooperation Organization (AFoCO)**

South Korea’s leadership established AFoCO on 27 April 2018 (Mofa ROK 2018). South Korea strengthened cooperation with member countries through a leading role in operations such as actively supporting the operation of the secretariat. The ASEAN-ROK forest cooperation, as a matrix of AFoCO, was signed at the 14th ASEAN-ROK Summit held in Bali, Indonesia (KFS 2011). However, the ASEAN-ROK Commemorative Summit held in 2009 expanded its membership from ASEAN to across Asia (Mofa ROK 2018). KFS currently implements various cooperative projects with member countries through AFoCO (see TABLE 1), and they signed comprehensive Memorandums of Understanding (MOU) to promote the 2030 strategic plan.

**Forest and Landscape Restoration**

**Food and Agriculture Organization (FAO)**

The FAO project, Implementation of the Forest and Landscape Restoration Mechanism (FLRM) was established in November 2014 with the financial support of the KFS (FAO 2020b). The project aims to provide support for the implementation, measurement and reporting of the forest and landscape restoration at the national level. The national work plans were implemented in tropical areas of Africa and dry areas in Southwestern Asia from 2014 to 2020. Through the use of KFS’s financial resources of US$4.2 billion, technical assistance and monitoring actions for forest and landscape restoration implementation have been conducted in Cambodia, Guatemala, Lebanon, Peru, the Philippines, Rwanda, Uganda and the Democratic People’s Republic of Korea (KFS 2020a).

**Forest land degradation and desertification**

**United Nations Convention to Combat Desertification (UNCCD)**

The Changwon Initiative was launched in 2011 at the 10th Conference of the Parties of UNCCD as a series of action plans that the KFS, UNCCD and UNEP carry out together for reforestation in Asia and Africa (KFS 2020b). This partnership then led to the Greening Drylands Partnership (GDP) Project. The objective of the project is to support developing countries to promote action programmes for reversing desertification, land degradation and drought, as well as...
reforestation and forest rehabilitation in degraded lands. Projects were annually implemented from the first phase in 2013 to the sixth phase in 2018 in Ghana, Morocco, Tunisia, Peru, Ecuador, Benin, Ethiopia, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, Armenia, Belarus, Cameroon, Togo, and Niger (KFS 2020a).

Desertification, Land Degradation and Drought Northeast Asia Network (DLDD-NEAN)
The Land Degradation and Drought Northeast Asia Network (DLDD-NEAN) is a regional cooperation platform among South Korea, China, and Mongolia (UNCCD 2019). The DLDD-NEAN is an official reporting entity to the UNCCD and is operated by a Steering Committee that meets annually in conjunction with fora to discuss thematic sub-regional issues. The first Forum held on 19 November 2012 in Seoul, South Korea spoke for capacity building and exchange of experiences and best practices regarding combating desertification, land degradation, and drought. The KFS takes a secretarial role in the DLDD-NEAN. A feasibility study on the ‘Joint demonstration project for prevention and control of dust and sandstorms’ originated in Erlinhote, China and Zamiin Wood, Mongolia source areas was conducted between 2012 and 2013 in collaboration with the UNCCD secretariat (UNCCD 2019). Moreover, South Korea intends to continuously contribute to the improvement of air quality in Northeast Asia by discovering new projects to reduce yellow dust and fine dust through the DLDD-NEAN (KFS 2019a).

Forest diversity and species conservation

Convention on Biological Diversity (CBD)
Forest Ecosystem Restoration Initiative (FERI) was proposed and adopted in October 2014, at the 12th Conference of the Parties of CBD in PyeongChang, Korea (KFS 2020a). The Forest Ecosystem Restoration Initiative (FERI) is supported by the KFS and implemented by the Secretariat of the Convention on Biological Diversity (CBD) which aims to support parties in developing countries involved in ecosystem conservation and restoration. The CBD has selected and implemented projects in Guatemala, Chile and Columbia, in collaboration with international organisations, including Bioversity and International Tropical Timber Organization (ITTO).

DISCUSSION
The results of this study indicate that six main international forest issues in South Korea can be derived from international forest regimes. South Korea also stimulates other countries’ participation to deal with the issues by using incentives.

International forest policy in Korea driven by international forest regimes

International forest-related policies in South Korea have been developed to actively cope with changing international circumstances since these policies in South Korea have been driven by international negotiation, governance, and policies rather than domestic concerns (Park and Lee 2014). Following the increase of international state-based forest regimes which search for potentially useful methods to define and assess SFM, which was mainly the result of the Rio Earth Summit in 1992 (Holvoet and Muys 2004, Humphreys 2012), South Korea has expanded its participation in these regimes. In the early 1990s, it joined global-based organisations such as the UNFCCC and Conservation on Biological Diversity (CBD; ibid), and in 1994, it contributed to the development of Candl by supporting the creation of the Montreal Process for SFM (Montreal Process 2015). Additionally, South Korea reflected this SFM paradigm in its domestic policy in the 4th National Forest Plan (1998–2007), adopting SFM as the primary goal of the plan (KFS 2018). By the early 2000s, the focus on illegal logging emerged as a primary global forest concern relating to forest governance (Singer 2008). South Korea, as a foundation member of APEC, agreed to adopt new issues and applied it to the national level. In response, the Law on Sustainable Use of Wood was amended in March 2017, and the Legitimation Wood Trade Promotion System was implemented in October 2018.

This study also found that South Korea tends to adopt the new policies rather rapidly as a response to calls from international forest regimes. Some issues such as SFM, climate change, and forest biodiversity have been reflected in domestic affairs for about 20 years by various policy instruments in terms of strategy plans, legislation, cooperation with other ministries, the foundation of related centres, and more. However, the radical policies have overlooked domestic considerations, which could be one of the problematic aspects of continuously developing the policies. Such an issue can be seen in the case of the Legitimation Wood Trade Promotion System followed by the APEC’s illegal logging issues; wherein the commencement of the system without considering the domestic market led to conflicts between the government and industries. Thus, it remains to be seen how the details can be worked out.

International forest regimes reflected in South Korea’s cooperation with other countries

Domestic policies created by external influences may also contribute to the policy initiatives or projects of international forest regimes, while each country introduces their own formal and informal interests to the regimes (Gehring 1994, Hasenclever et al. 1997, Krott 2005). South Korea contributes to the international forest regimes to achieve the domestic goals for the issues derived from the regimes. The Forest and Landscape Restoration Mechanism (FLRM) project under FAO and the Changwon Initiative under UNCCD are models of these findings. These initiatives and projects attract the interest of other developing countries in such issues by incitivation. The study also found that South Korea realised the importance of the international forest regime in strengthening international cooperation. South Korea proposed and took a leadership role in the foundation of Asian Forest Cooperation Organization (AFoCO) and Land Degradation and Drought
Northeast Asia Network (DLDD-NEAN), to impose its interests in the Southeast Asian region and Northeast Asia, respectively. The general purpose of international regimes may be to resolve a variety of problems in several problem areas, however, some other regimes are confined to one specific problem area (Diehl and Frederking 2001). AFoCO covers most of South Korea’s international forest issues related to regional regimes, except for illegal logging. In other words, the international forest regime AFoCO may become one of South Korea’s main international forest policy initiatives.

CONCLUSION

It was found that South Korea adopts international forest issues driven by international governances and efficiently develops the policies to apply them to national-level policies. This adoption is often rapid, which has led to some conflicts in implementation. It is, however, acknowledged that the adopted issues encourage policy initiatives in international forest regimes and promote the establishment of new governance (e.g. AFoCO). Moreover, through the international forest regimes, South Korea supports developing countries to take part in the issues by using incentives, which is also a means for South Korea to improve cooperation in forestry with other countries.

REFERENCES

AFoCO Secretariat. 2017. AFoCo ANNUAL REPORT 2016. http://afocosec.org/wp-content/uploads/2019/08/2016_AFoCo-Anual_Report.pdf
AFoCo Secretariat. 2018. AFoCo LANDMARK PROGRAM ANNUAL REPORT 2017. http://afocosec.org/wp-content/uploads/2019/08/2017_AFoCOLP_Annual-Report.pdf
ANDONOVA, L.B. 2008. The climate regime and domestic politics: The case of Russia. Cambridge Review of International Affairs 21(4): 483–504.
APEC. 2019. Experts Group on Illegal Logging and Associated Trade. https://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Illegal-Logging-and-Associated-Trade (accessed on 23. Oct. 2019)
ARTS, B., and BABILI, I. 2012. Global forest governance: Multiple practices of policy performance. In Forest and nature governance (pp. 111–132). Springer.
ARTS, B., GIessen, L., and VISSEHEN-HAMAKERS, I. 2013. International Forest Policy and Europe: Four pathways of mutual influence. Forest Governance, 37.
ARTS, B.J.M., APPELSTRAND, M., KLEINSCHMIT, D., PÜLZL, H., VISSEHEN-HAMAKERS, I.J., ATYI, R.E., ENTERS, T., MCGINLEY, K., and YASMI, Y. 2010. Discourses, actors and instruments in international forest governance. Embracing Complexity: Meeting the Challenges of International Forest Governance. A Global Assessment Report. Prepared by the Global Forest Expert Panel on the International Forest Regime, 57–74.
BAYCHEVA, T., INHAIZER, H., LIER, M., PRINS, K., and WOLFSLEHNER, B. 2013. Implementing Criteria and Indicators for Sustainable Forest Management in Europe. European Forest Institute. 2013. European Forest Institute.
BERNSTEIN, P.A., and DAYAL, U. 1994. An overview of repository technology. VLDB 94: 705–713.
BERNSTEIN, S., and CASHORE, B. 2012. Complex global governance and domestic policies: Four pathways of influence. International Affairs 88(3): 585–604.
BERNSTEIN, S., CASHORE, B., ATYI, R.E., MARYUDI, A., MCGINLEY, K., CADMAN, T., GULBRANDSEN, L., GOEHLER, D., HOGL, K., and HUMPHREYS, D. 2010. Examination of the influences of global forest governance arrangements at the domestic level. (Vol. 28). IUFRO (International Union of Forestry Research Organizations) Secretariat.
BEZERRA, J.C., SINDT, J., and GIESSEN, L. 2018. The rational design of regional regimes: Contrasting Amazonian, Central African and Pan-European Forest Governance. International Environmental Agreements: Politics, Law and Economics 18(5): 635–656.
BURNS, S.L., and GIESSEN, L. 2016. Dismantling comprehensive forest bureaucracies: Direct access, the World Bank, agricultural interests, and neoliberal administrative reform of forest policy in Argentina. Society and Natural Resources 29(4): 493–508.
CASHORE, B., and STONE, M.W. 2012. Can legality verification rescue global forest governance? Analyzing the potential of public and private policy intersection to ameliorate forest challenges in Southeast Asia. Forest Policy and Economics 18: 13–22.
CASWELL, S.J., TOMASELLI, I., and HIRAKURI, S.R. 2014. Indicating progress: Uses and impacts of criteria and indicators for sustainable forest management. ITTO Technical Series-International Tropical Timber Organization, 42.
CBD. 2019. What is Forest Biological Diversity? https://www.cbd.int/forest/what.shtml (accessed on 23. Oct. 2019.)
CORTELL, A.P., and DAVIS Jr, J.W. 2000. Understanding the domestic impact of international norms: A research agenda. International Studies Review 2(1): 65–87.
DIEHL, P.F., and FREDERKING, B. 2001. The politics of global governance: International organizations in an interdependent world. Lynne Rienner London.
DIMITROV, R.S. 2005. Hostage to norms: States, institutions and global forest politics. Global Environmental Politics 5(4): 1–24.
EDWARDS, P., and GIessen, L. 2014. Global forest governance—Discussing legal scholarship from political science perspectives. Forest Policy and Economics 38: 30–31.
FAO. 2013. Committee on Forestry 2012. http://www.fao.org/forestry/cofo2012/78121/en/
FAO. 2019. About sustainable forest management. http://www.fao.org/forestry/sfm/85084/en/
FAO. 2020a. COFO Terms of Reference and List of Members. http://www.fao.org/unfao/govbodies/sbhome/committee-cofo/en/ (accessed on 28. June, 2020)
FAO. 2020b. *The Forest and Landscape Restoration Mechanism*. http://www.fao.org/in-action/forest-landscape-restoration-mechanism/our-work/projects/kfs/en/ (accessed on 07. July. 2020)

GALE, F., and CADMAN, T. 2014. Whose norms prevail? Policy networks, international organizations and “sustainable forest management.” *Society and Natural Resources* 27(2): 170–184.

GALLHOFER, I.N., GALLHOFER, I.N., and SARIS, W.E. 1996. Foreign policy decision-making: A qualitative and quantitative analysis of political argumentation. Publishing Group GmbH.

GEHRING, T. 1994. Dynamic international regimes. *Institutions for International Environmental Governance*, Frankfurt AM.

GIESSEN, L. 2013. Reviewing the main characteristics of the international forest regime complex and partial explanations for its fragmentation. *International Forestry Review* 15(1): 60–70.

GIESSEN, L., and SAHIDE, M.A.K. 2017. Blocking, attracting, imposing, and aligning: The utility of ASEAN forest and environmental regime policies for strong member states. *Land Use Policy* 67: 13–26.

GIESSEN, L., SARKER, P., and RAHMAN, M. 2016. International and domestic sustainable forest management policies: Distributive effects on power among state agencies in Bangladesh. *Sustainability* 8(4): 335.

GUNEAU, S., and TOZZI, P. 2008. Towards the privatization of global forest governance? *International Forestry Review* 10(3): 550–562.

GWANGSEOP SONG. 2020, June 6. KFS, “Increased transparency of imported wood inspection.” *The Korea Farming Newspaper*. http://www.youngmong.co.kr/news/articleView.html?ndescr=sandsource=webandlandc=1jaandudct=8anndvdd=2ahUKewjyzocnC631AhUzmEKHlKRBFwQfJAgAqGiAhACandurl=http%3A%2F%2Fwww.forest.go.kr%2Fkfsweb%2F%cmn%2F%2Fms%2FBoardFileDown.do%3Bjsessionid%3DUSUx8h4P401xdraW1ZxSxSMAmGWNc4y3BGs7Bee5yroftS2dy1uajNisan8TAVSKX. frswas01_%servlet_engine5%3FatchFileId%3DFILE_000000740014%26fileSn%3D%26dwldHistYn%3DN%26bbsId%3DBBSBSTR_1065andnusg=AoVoVaw2o25hGJlsKaGxRj8eLK

KFS. 2019c. *Bilateral Cooperation*. http://english.forest.go.kr/newkfsweb/html/EngHtmlPage.do?pg=esh/policy/UI_KFS_0102_060100.html&mn=ENG_02_06_01 (accessed on 30. Oct. 2019)

KFS. 2019d. *Climate*. http://english.forest.go.kr/newkfsweb/html/EngHtmlPage.do?pg=esh/koforest/UI_KFS_0101_010200.html&mn=ENG_01_01_02 (accessed on 29. Oct. 2019)

KFS. 2019e. *Location and Topography*. http://english.forest.go.kr/newkfsweb/html/EngHtmlPage.do?pg=esh/koforest/UI_KFS_0101_010100.html&mn=ENG_01_01_01 (accessed on 29. Oct. 2019)

KFS. 2019f. *The Status of Overseas Plantation*. http://www.forest.go.kr/newkfsweb/html/HtmlPage.do?pg=/resource/resource_050502.html&mn=KFS_02_06_05_02

KFS. 2020a. *Achievements and Footprints of International Forest Cooperation in 2019*. http://www.forest.go.kr/kfsweb/cmm/fsms/BoardFileDown.do?atchFileId=FILE_00000020028709andfileSn=0anddwldHistYn=YandbbsId=BBSMSTR_1065

KFS. 2020b. *Changwon Initiative under UNCCD*. http://english.forest.go.kr/kfsweb/kf/efscms/cmsView.do?cmId=FC_002085andmn=UENG_06_03_02 (accessed on 07, July. 2020)

KLEINSCHMIT, D., and KROTT, M. 2008. The media in forestry: Government, governance and social visibility. *Public and Private in Natural Resource Governance: A False Dichotomy*, 127–141.

KRASNER, S.D. 1982. Structural causes and regime consequences: Regimes as intervening variables. *International Organization* 36(2): 185–205.

KREUGER, L., and NEUMAN, W.L. 2006. *Social work research methods: Qualitative and quantitative approaches* with Research Navigator. Pearson/Allyn and Bacon.

KROTT, M. 2005. *Forest policy analysis*. Springer Science and Business Media.
LE PRESTRE, P.G. 2017. Studying the effectiveness of the CBD. In Governing Global Biodiversity (pp. 57–90). Routledge.

LEVIN, K., MCDERMOTT, C., and CASHORE, B. 2008. The climate regime as global forest governance: Can reduced emissions from Deforestation and Forest Degradation (REDD) initiatives pass a dual effectiveness test? International Forestry Review 10(3): 538–549.

LINSER, S., WOLFSLEHNER, B., ASMAR, F., BRIDGE, S.R., GRITTEN, D., GUADALUPE, V., JAFARI, M., JOHNSON, S., LACLAU, P., and ROBERTSON, G. 2018. 25 years of criteria and indicators for sustainable forest management: Why some intergovernmental Candi processes flourished while others faded. Forests 9(9): 515.

LINSER, S., WOLFSLEHNER, B., BRIDGE, S.R., GRITTEN, D., JOHNSON, S., PAYN, T., PRINS, K., RAŠI, R., and ROBERTSON, G. 2018. 25 years of criteria and indicators for sustainable forest management: How intergovernmental Candi processes have made a difference. Forests 9(9): 578.

MCDERMOTT, C., CASHORE, B.W., and KANOWSKI, P. 2010. Global environmental forest policies: An international comparison. Earthscan.

MCDERMOTT, C.L. 2014. REDDuced: From sustainability to legality to units of carbon—The search for common interests in international forest governance. Environmental Science and Policy 35: 12–19.

MCDERMOTT, C.L., HUMPHREYS, D., WILDBURGER, C., WOOD, P., MARFO, E., PACHECO, P., and YASMI, Y. 2010. Mapping the core actors and issues defining international forest governance. (Vol. 28). IUFRO (International Union of Forestry Research Organizations) Secretariat.

MOFA ROK. 2018. Agreement on Establishment of Asian Forest Cooperation Organization to be Brought into Force. http://www.mofa.go.kr/eng/brd/m_5676/view.do?seq=319802&andsrchFr=andsrchTo=andsrchWord=Outcome&andsrchTp=andmulti_itm_seq=0&anditm_seq_1=0&anditm_seq_2=0&andcompany_cd=andcompany_nm=&andpage=1&andtitleNm=

MONTREAL PROCESS. 2015. The Montréal Process Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests. https://www.montrealprocess.org/documents/publications/techreports/MontrealProcessSeptember2015.pdf

NURROCHMAT, D.R., DHARMAWAN, A.H., OBIĐZINSKI, K., DERMAWAN, A., and ERBAUGH, J.T. 2016. Contesting national and international forest regimes: Case of timber legality certification for community forests in Central Java, Indonesia. Forest Policy and Economics 68: 54–64.

OVERDEVEST, C., and ZEITLIN, J. 2014a. Assembling an experimentalist regime: Transnational governance interactions in the forest sector. Regulation and Governance 8(1): 22–48.

OVERDEVEST, C., and ZEITLIN, J. 2014b. Constructing a transnational timber legality assurance regime: Architecture, accomplishments, challenges. Forest Policy and Economics 48: 6–15.

PARK, M.S., and LEE, H. 2014. Forest policy and law for sustainability within the Korean Peninsula. Sustainability 6(8): 5162–5186.

PÜLZL, H., and RAMETSTEINER, E. 2002. Grounding international modes of governance into National Forest Programmes. Forest Policy and Economics 4(4): 259–268.

RAHAYU, S., LARASWATI, D., PRATAMA, A.A., PERMADI, D.B., SAHIDE, M.A., and MARYUDI, A. 2019. Research trend: Hidden diamonds—The values and risks of online repository documents for forest policy and governance analysis. Forest Policy and Economics 100: 254–257.

RAHMAN, MD S., and GIESSEN, L. 2014. Mapping international forest-related issues and main actors’ positions in Bangladesh. International Forestry Review 16(6): 586–601.

RAHMAN, MD SAIFUR, SARKER, P.K., and GIESSEN, L. 2016. Power players in biodiversity policy: Insights from international and domestic forest biodiversity initiatives in Bangladesh from 1992 to 2013. Land Use Policy 59: 386–401.

RAYNER, J., BUCK, A., and KATILA, P. 2010. Embracing complexity: Meeting the challenges of international forest governance. A global assessment report. (Vol. 28). IUFRO (International Union of Forestry Research Organizations) Secretariat.

SADATH, M.N., and KROTT, M. 2012. Identifying policy change—Analytical program analysis: An example of two decades of forest policy in Bangladesh. Forest Policy and Economics 25: 93–99.

SAHIDE, M.A.K., FISHER, M.R., MARYUDI, A., DHIUALHAQ, A., WULANDARI, C., KIM, Y.-S., and GIESSEN, L. 2018. Deadlock opportunism in contesting conservation areas in Indonesia. Land Use Policy 77: 412–424.

SAHIDE, M.A.K., and GIESSEN, L. 2015. The fragmented land use administration in Indonesia—Analysing bureaucratic responsibilities influencing tropical rainforest transformation systems. Land Use Policy 43: 96–110.

SAHIDE, M.A.K., MARYUDI, A., SUPRATMAN, S., and GIESSEN, L. 2016. Is Indonesia utilising its international partners? The driving forces behind Forest Management UNITS. Forest Policy and Economics 69: 11–20.

SARKER, P.K., RAHMAN, M.D., and GIESSEN, L. 2017. Empowering state agencies through national and international community forestry policies in Bangladesh. International Forestry Review 19(1): 79–101.

SCHUSSER, CARSTEN, KROTT, M., DEVKOTA, R., MARYUDI, A., SALLA, M., and YUFANYI MOVUH, M.C. 2012. Sequence design of quantitative and qualitative surveys for increasing efficiency in forest policy research. Allgemeine Forest Und Jagdzeitung (AFJZ) 183(3/4): 75–83.

SCHUSSER, CARSTEN, KROTT, M., MOVUH, M.C.Y., LOGMANI, J., DEVKOTA, R.R., MARYUDI, A., SALLA,
M., and BACH, N.D. 2015. Powerful stakeholders as drivers of community forestry—Results of an international study. *Forest Policy and Economics* **58**: 92–101.

SINGER, B. 2008. Putting the national back into forest-related policies: The international forests regime and national policies in Brazil and Indonesia. *International Forestry Review* **10**(3): 523–537.

SMOUTS, M.-C. 2008. The issue of an international forest regime. *The International Forestry Review* **10**(3): 429–432.

TANSLEY, R., BASS, M., STUVE, D., BRANSCHOFSKY, M., CHUDNOV, D., MCCLELLAN, G., and SMITH, M. 2003. The DSpace institutional digital repository system: Current functionality. 2003 Joint Conference on Digital Libraries, 2003. Proceedings, 87–97.

UN. 2019. *Environment Glossary: United Nations Conference on Environment and Development*. https://unstats.un.org/unsd/environmentgl/ (accessed on 21. Oct. 2019)

UN. 2020. *Guidelines for Sustainable Development Goals*. https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf

UNCCD. 2019. *The Global Land Outlook: Northeast Asia Thematic Report: Partnerships to Achieve Land Degradation Neutrality*. http://catalogue.unccd.int/1218_GLO_Northeast_Asia_Report.pdf

UNFCCC. 2019. *The Paris Agreement*. https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement (accessed on 25. Oct. 2019)

VARKKEY, H. 2014. Regional cooperation, patronage and the ASEAN Agreement on transboundary haze pollution. *International Environmental Agreements: Politics, Law and Economics* **14**(1): 65–81.

WIBOWO, A., and GIESSEN, L. 2012. Identifying international forest-related issues in Indonesia based on actors’ statements in public and expert deliberations. *International Journal of Social Forestry* **5**: 1–30.